Small-sided games and integrating physical preparation

100 training games

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Use of the masculine gender in this manual

Although, for reasons of simplicity, the masculine gender is used in this manual to refer to coaches, players, officials, administrators, etc., it applies to both genders.

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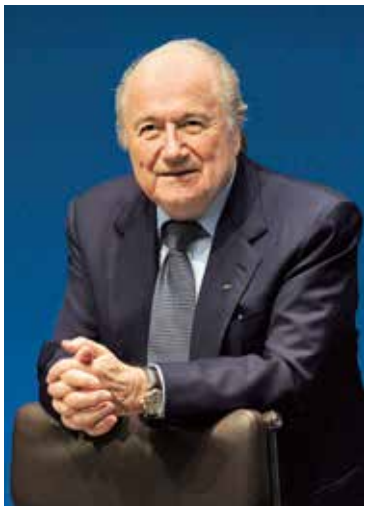
Foreword



FIFA is constantly striving to improve the range of its programmes and information for its member associations to support them in their work. We are therefore delighted to present this manual, which will strengthen the existing documentation available to the technical departments of all of our members.

Physical activity is vital to children's growth and fitness plays a key role in modern football, which is why it is essential that footballers have the best tools at their disposal to improve the skills needed for their actions on the pitch.

The information and knowledge in this document will enable all coaches to shape the physical development of their players.

Each stage of development in the training exercises has its own physical characteristics, and the extent to which exertion is stimulated depends essentially on the knowledge and experience acquired. Coaches will also find instant solutions that deploy playful situations with a view to guiding their players towards predefined objectives.

This manual aims to apply scientific theory to actual game situations and convey the message that every activity on the pitch involves different physical factors that contribute to the player's development.

Ultimately, the game itself must remain the principle tool with which to attempt to improve a player's physical potential, and the value of this manual lies in the way that it combines football with the development of the physical capacities that are so important to playing it.

For the Game. For the World.

Joseph S. Blatter
President of FIFA

About this manual

Apart from in top-level football, where the massed ranks of technical staff enable the team coach to rely on a large number of assistants, experts and specialists in their field, most coaches and their assistants are often confronted with the same issues:

– How to maintain and develop the players' physical qualities, which are so vital to performance;
– How to improve the team at a technical and tactical level, which is key to supporting a particular style of play and to ensuring a permanent balance of the formation by recovering the ball as a unit, keeping it and circulating it efficiently and thus optimise finishing.

Making technical and tactical adjustments is painstaking, repetitive work that requires numerous training sessions focusing on both the players' technical skills and their football intelligence.

How, therefore, can coaches rationally organise their work in a week of training between two competitive matches to achieve their ultimate aim: to win everything by playing good football – and enjoy it at the same time?

Apart from the fact that one session devoted specifically to physical preparation is not sufficient, it represents time that could be spent on tactical adjustments. Add to that the constant need for the coach to keep his players interested by arranging varied and enjoyable sessions, and it is not hard to understand just how challenging it can be to organise training sessions geared towards purely football demands. The great majority of coaches therefore favour "mixed" sessions that integrate a range of performance objectives.

This manual – *Small-sided games and integrated physical preparation* – is intended to be a tool for coaches everywhere, one that can be considered an essential reference on the pitch.

Its aim is to provide coaches with all the information they need to organise mixed training sessions.

The 100 training games contained in the manual will enable coaches to plan and develop training sessions that integrate all performance-related parameters: technical, tactical, physical and mental.
Improve or maintain players' physiological potential in close conjunction with the technical and tactical aspects of football.
The central theme of this manual is the concept of integrating motor skills specific to football into a player's physical training via small-sided games.
After a brief résumé of how physical preparation has developed through different systems, the first part of this manual focuses on the theory behind the sessions and covers the basic points, such as the demands of top-level football, the physical qualities of young footballers to be developed and worked on and the problems associated with quantifying the training load, along with a summary on planning the training programme.

The second part contains the practical football-orientated exercises, i.e. a significant number of situations based on small-sided games, outlining the organisation of the work, the playing surface and the number of players required.
The technical and tactical themes covered and the physical qualities targeted and developed are defined in accordance with the targeted training loads.
This tool can therefore be adapted by anyone with experience of football and football training to their own specific needs.

1. A brief history of physical preparation in football

A brief history of physical preparation in football

To perform to a high level in football in the early 1950s, it was first and foremost necessary to be an athlete because "the body must be able to produce the effort required for the player to win the ball and thus to dictate the play" (Baquet, 1957). Young players were told to follow these instructions in the required order. The essential qualities were resistance, endurance, jumping, speed, strength and skill. "Resistance and endurance enable improvement in technique through the physiological development of the heart and lungs." Qualities like jumping and speed were considered innate: "Strength depends on physique, and accuracy is perhaps a quality that can be perfected." (Baquet, 1957)

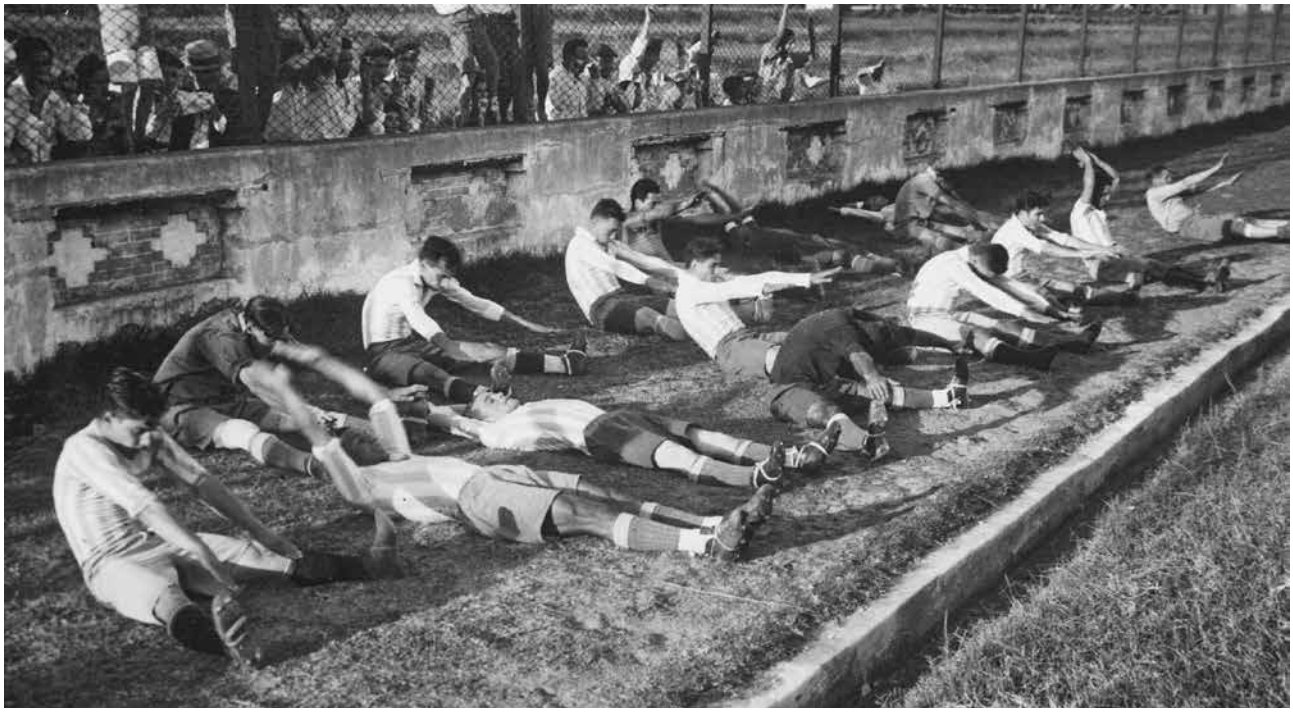
Sessions devoted to athletic preparation were mainly analytical and about 45 minutes long. They would start with a warm-up of running or walking involving arm movements, followed by exercises to develop the muscles and flexibility performed alone or in pairs, sometimes using a medicine ball.

Short exercises "for agility and courage", some for "football technique without the ball, in the form of a mime" and for regaining composure by means of walking slowly and breathing exercises would round off the session.

The end of the 1950s saw an increase in the frequency of training sessions from a few per week to one, sometimes two or three sessions a day, resulting in the systematic development of footballers' physical qualities.

Reflections on athletic preparation highlighted the need to not focus solely on speed, accuracy, resistance and strength, but to include jumping, flexibility, balance and tempo to the physical qualities being worked on. The prevailing view was that all of these attributes could be perfected through repetition and the amount of physical work. An article from the University of Pennsylvania in 1958 entitled "Ninety-nine exercises for strength-flexibility: all sports" showed the universal nature of athletic preparation. (Doherty, 1958)

In football, highly diverse training methods were rewritten. They were mainly based on analytical methods like those practised by young Yugoslav footballers (Baron, 1951), whose training sessions comprised a combination of athletic work based on accuracy, flexibility and endurance, performed by the player with the ball: "suspended ball",



"circuit between sandbags", "corridor" (running with the ball down a narrow corridor), hitting the ball in a "tunnel" so that the ball rebounds in all directions.
From the early 1960s to the 1980s, the athletic approach was replaced by a more physical one that applied scientific theory based principally on physiology to sporting practice. The trailblazers for physical preparation enabled practitioners to benefit from basic research mainly in the cardiovascular, respiratory, muscular and neurophysiological fields.

At the end of the 1950s, Reindell and Roskham combined cardiovascular (and respiratory) functioning with exertion and its application on the pitch by introducing interval training (workout/rest). The work of P.O. Astrand in the 1960s led to the introduction of methods for developing various energy processes to training by applying the physiological processes of interval training and intermittent training (dividing up the running distances), the aim being to improve the athlete's lactic capacity (Astrand and Kaare, 1980).
The manual by Fox and Matthews (1974) called The Physiological Basis of Training would serve as a reference point for generations of coaches in their training planning and content. The sessions became more specific and control tests were implemented. Ideas of maximal aerobic speed, VO_2max, anaerobic thresholds and heart rate began to set the standard for training sessions.
The work on muscular activity carried out by A.V. Hill, winner of the Nobel Prize for Medicine in 1922, focused on understanding the mechanical work produced in muscles and culminated in the approval of a muscle model corresponding to all of a muscle's characteristics (Hill, 1927). In 1987, the model, which comprised three elements (series elastic element, parallel elastic element and contractile element) was adopted by Shorten (1987), who combined the connective structures with the contractile structures of the muscle. This model corresponded to the physiology of the muscle and is still used for reference purposes today.
Significant advances in methodologies for muscle development emerged principally in countries of Eastern Europe after the 1960s, and were based on works produced

by giants in the field of physical preparation: Zatsiorsky (1966), Kuznetsov (1975), Platonov (1988), Letzelter (1978), Weineck (1983) and Matveyev (1980).
From then on, football would endeavour to define specific fundamental physical qualities, such as endurance, speed, flexibility, coordination and strength, and combined qualities including endurance-speed, strength-speed, power and even proprioception.

– Energy exertions and muscle groups were studied. The concept of maximal aerobic speed (MAS) was applied in practice to measure the intensity of exercises. Laboratory evaluation tests, such as setting aerobic and anaerobic thresholds by analysing exhaled gas and field tests focusing on energy or muscles, enabled medicine and technology to be brought together, and thus also the activities of the coach.

Physical preparation becomes the norm.

In the 1990s, however, the place of physical preparation in football would be constantly defined and redefined, leading to a collision of different concepts and methodologies and sparking lively discussions in a sport dominated by technical and tactical qualities:

Is a fitness coach a general physical trainer or is he a football specialist?

Is there one basic physical quality to be placed above all others? Is there a set order for developing physical qualities?

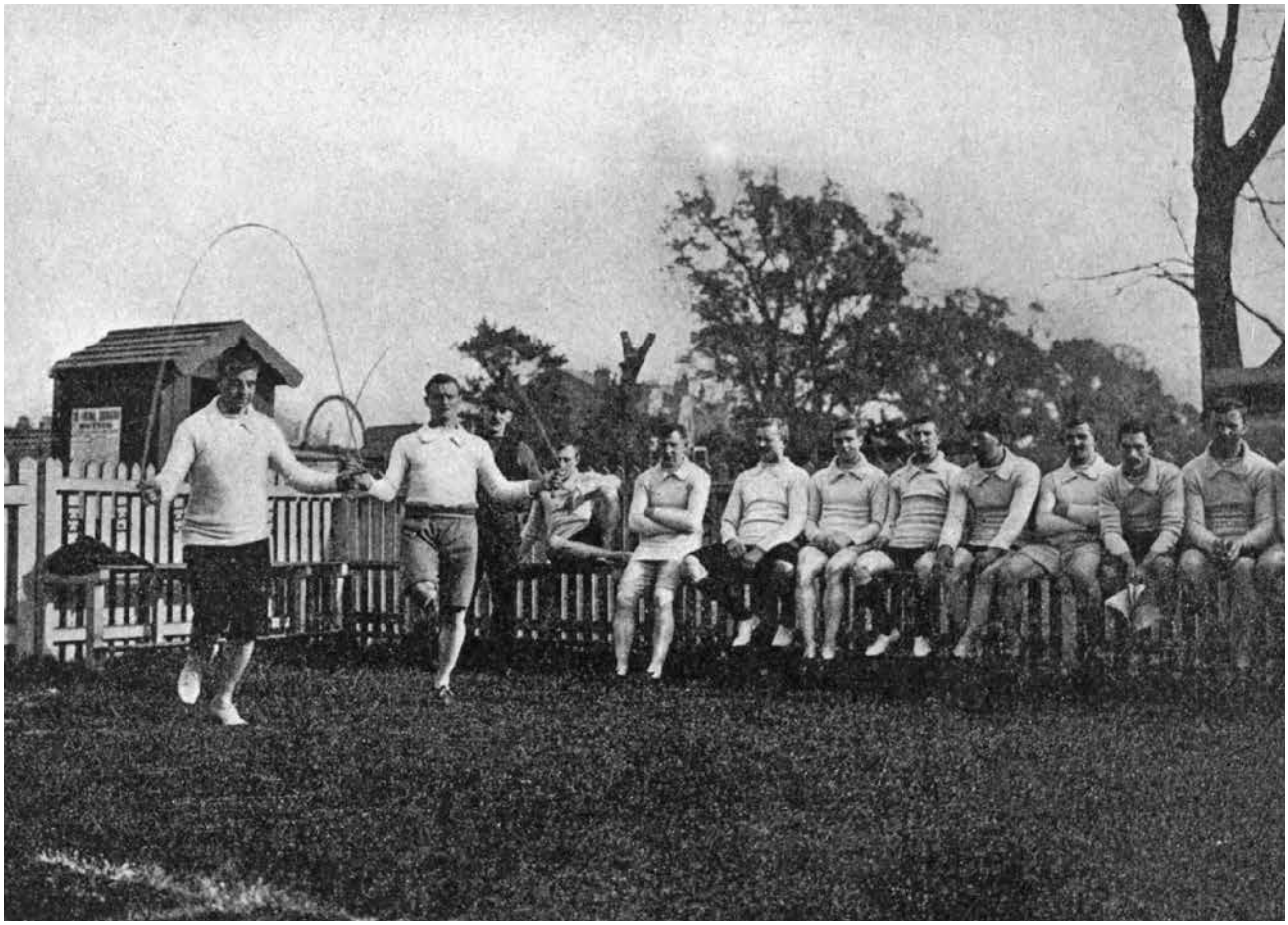
The quality of endurance based on the number of repetitions has thus long been accepted as a basis of physical preparation in the form of a pyramid, in which different levels increase the amount of effort as the number of repetitions decreases. In 1966, Zatsiorsky advocated reversing this pyramid logic by starting with maximum effort that would generate little fatigue, followed by progressively reducing the intensity and increasing the repetitions. The two ascending/descending pyramid methods would jostle for position for 30 years, each focusing on a particular type of in-demand physiological preparation.

Gradually, using analyses of football matches and of the players' exertions during them, it became possible to define the player's activity as a series of brief and intense movements.

Meticulous analysis of matches and ongoing technological progress highlighted the amount of effort and intensity of the players' activity along with the distance covered on the pitch in accordance with their position.

Thus, a player's explosiveness, speed and endurance became tacitly accepted as the basic qualities that a footballer should possess.

Given the growing difficulty for coaches to manage the time devoted to training, a concept of "integrated" physical preparation appeared, enabling physical qualities to be incorporated into match situations specific to football. "Athletic" training was still important, but footballers were also required to have other skills (technique, reading of the



game, decision-making, etc.), which led to the development of athletic sessions focusing on football.
Integrating these concepts involved creating football-specific training including the individual technical dimension and the tactical dimension with team-mates and opponents together with a strong athletic focus, all in the same session.
This type of integrated preparation necessarily called for small-sided games.

At the same time, the development of footballers' athletic preparation was accompanied by a gradual increase in specialist technical staff. The idea of the general coach "in charge of everything" was over and has since been replaced by a manager surrounded by specialists. Initially a team of two (head coach and assistant), the coaching staff was enhanced by the arrival of a goalkeeping coach, then, more recently, a fitness coach.
Today, integrated physical preparation is assuming an increasingly important role as it combines physical qualities, the work cycle and technical-tactical aspects.

The balanced development of physical qualities is now a constant aim of top fitness coaches.

As a result, this modern approach to a footballer's physical preparation has changed the profile of the fitness coach. Previously associated with athletics or individual sports, today's fitness coach is a former practitioner – not necessarily an ex-player who played at a high level but someone who has a lengthy practical experience of football and who can quickly grasp match situations and integrate them easily into training sessions.

2. Role of the fitness coach

Role of the fitness coach

The balanced development of physical qualities is a constant aim of top fitness coaches today.
Fitness coaches must master various methodologies and be highly skilled in implementing training content. They must also bring together the sporting project, the group of players and the environment of the club. It is a position that calls for an ability to adapt quickly to unforeseen circumstances and have an alternative available that will meet everyone's interests, regardless of the fitness coach's plans and programmes.
Their work consists of presenting a realistic and effective project that dovetails with the main project.
The fitness coach is the intermediary between the medical staff and the coach, an assistant to the coach and hands-on scientist rolled into one, and a member of the technical staff. **The fitness coach is a key figure for performance on the pitch**.
Their relationship with the other members of staff must be based on trust, loyalty and respect. They relay the head coach's instructions both on and off the pitch, ensuring compatibility with the physiotherapist, the doctor and the technical staff.
Their job is to drive home the arguments of the sporting project through practice and through their interaction with others. They must be neither too friendly nor too authoritative and need to manage conflicts involving hurt feelings. They are as involved in the players' performance as they are in their reduced energy levels.
As players do not always want to do highly intensive and tiring training, fitness coaches must make difficult work seem pleasant. They must encourage players to get involved for themselves and for the squad, anticipating their concerns regarding the difficulty of the training. They need to motivate the players and be understanding. Deploying all the available data, they must anticipate players' questions and provide individual, concrete and constructive answers to protect and energise players, providing explanations where needed and support in moments of doubt and even failure.
Their job is to create a sense of relative independence, focusing on the individual for the benefit of the team. They motivate players to improve, to try harder, even to be the best.

This involves identifying players who are more susceptible to tire during a match by analysing their actual physical capacities in competitive situations or by quantifying the training load and carrying out tests in order to individualise the player's training. They prepare the players so that they can perform frequent high-intensity runs and repeat their exertions for the entire match and throughout the season.

They need to create a group road map to monitor the performance of the players as a whole. The data gathered on a regular basis should be used as a basis for building specific physical preparation programmes during periods of competition and rest.
Fitness coaches must be able to make use of criteria and indicators from the pitch that correlate the physical demands of the match with the quality of physical preparation proposed.
As a matter of course, they must take into account the following in their analysis:

- The style of play (formation, game plan, team tactics, etc.)
- The physical capacity (effective playing time, positions, experience of the players, etc.)
- The season and its different phases (pre-season, competition, breaks and resumptions, frequency of matches, etc.)
- Management of the squad (players, replacements, injuries, suspensions, etc.)

They are also fully involved in the preventative approach with regard to muscle strengthening, core conditioning, recovery, nutrition and healthy living in training and in a match.
Physical preparation now contains multiple objectives, depending on the stage of the season and the characteristics of the players:

- Physical (or general) pre-season training is a period of around five to six weeks, during which the player should reach peak physical condition in terms of explosiveness, endurance, speed strength and proprioception. The weights room can be open next to the pitch to make it easier to alternate between different forms of training. Integrating physical preparation into football via small-sided games enables a better control of individual exertion

and workloads. This phase corresponds to the period when the player's physical potential is evaluated.

– The second phase, or competition phase, is when the busy match calendar makes it more difficult to accumulate loads. Here, the fitness coach must makes choices in line with the coach's technical-tactical choices, the aim being to improve the strong points, work on the weak points and ensure preventative strengthening.
– Another of the tasks of the fitness coach is to return to action players who are injured or ill (or out of action for a lengthy period) by means of reconditioning or rehabilitation programmes. A further objective is to remedy weaknesses revealed by physiological and musculo-articular tests and evaluations to promote the physical development of the younger players as they mature and to ensure the physical well-being of players with a long career behind them.

Over time, the fitness coach has therefore become a key member of the technical staff, and it is becoming increasingly common for coaches moving to a new club to insist on bringing their own technical team, including the fitness coach.

3. Physical demands of top-level football

Physical demands of top-level football

Analysing competitive performances is considered to be a way of delivering objective data on players' individual and collective characteristics.
Qualitative and quantitative analysis reveals key aspects, such as physical capacity, technique and tactics. The qualitative data objectivised by analysing the movements of the group enable the tactics to be visualised by style of play, movements on and off the ball and by dead-ball situations. The technical data details the player's involvement in the match and enables statistical summaries to be produced, including the number of favourable and unfavourable actions, shots on goal, passes, etc.
Quantitative data on distance travelled, the number of sprints, the number of one-on-ones and the number of actions throughout the match reveals the different types of run used and the type of energy exerted. Each player within the team deploys his or her individual qualities for the benefit of the collective strategy. Athletic qualities are in evidence throughout the game, albeit in different quantities when it comes to shots, jumps, one-on-ones and sprints. Aerobic qualities enable footballers to maintain a high tempo for as long as possible during a match and come to the fore in the second half and during any extra time. Anaerobic qualities characterise the player's ability to perform a large number of sets of sprints.
This objective analysis of the demands of the activity at the physical and technical-tactical level conditions the physical preparation. Coaches thus rely on the objective reports and analyses produced by the fitness coach to choose their tactics according to individual player and collective characteristics when creating a style of play. For the fitness coach, the aim is also to have enough information in advance to develop a specific physical programme in harmony with the technical-tactical work of the group. The analysis of the performance may also help in recruiting players and in identifying the game strategies of model teams and opponents.

Summary: development of the game, technical-tactical aspects

All of football's technical-tactical aspects (possession, transition, switching play, finishing, etc.) depend on the players' physical qualities. Physical preparation is therefore directly related to the requirements imposed by the development and construction of the style of play.

Development of the game

The major events in football, such as the FIFA World Cup™, the interclub continental competitions and the other continental championships, highlight the development of the modern footballer and enable future models to be envisaged. The aim of the technical staff is thus to prepare for the demands of the game and the needs of the players.
With their effectiveness and modernity, tracking tools deliver precise data on the activity of players and teams in competition. The new technology supporting football analysis highlights the increasing trend towards a higher tempo, more entertainment and the increasing versatility and physical strength of modern players.
Analysis of football reveals the speed of the game and the importance of winning one-on-ones, as well as the fact that the most successful teams are those that dominate play while endeavouring to display minimal defensive vulnerability. Today's top teams no longer necessarily have the best defence, which is increasingly vulnerable to attack down the flanks, but use their attacking midfielders and full backs to outnumber the opposition.

Technical-technical aspects

Transition

Other trends concerning the game – and particularly players – indicate that the teams that take hold of the match focus on transition to ball-recovery, pressing actively to launch a counter-attack as soon as they have regained possession. The objective is to catch the opposing defence off guard before it can reorganise. This is often the only time when space can be found. The counter-attack used to be considered negative but it has become successful as it is an integral part of the tactics of the top teams. As well as retaining

possession, such teams quickly place the accent on defence as soon as they lose the ball to restrict their opponents' opportunities and regain possession as soon as possible.

Positive possession

Positive possession means holding the ball while waiting to catch the opposing team off guard (either partially or completely). For example, the Spanish game is primarily based on its mastery of positive possession, retaining the ball even if the current situation in the game does not immediately present any opportunity to threaten the opposition. This enables the team to avoid sitting back while waiting for the right moment to build moves designed to disrupt the opposition's balance, working and moving together as a unit and creating gaps by quickly circulating the ball forwards, thus introducing an element of depth to the game. In general, the big teams win their matches by dominating their opponents in a key area: possession. This style of play is based on outstanding timing in triangular moves during phases of the match when the player with the ball receives support high up the pitch, with team-mates creating opportunities in the spine of the opposition defence.

Ball possession							
Positions of players	Number of subjects analysed	% of successful passes	Number of forward passes	Number of times ball in possession	Ratio ball loss/ possession	Time in possession in seconds	Average no. of touches of the ball
Strikers	724	70.12%	7,79 ± 3,05	43.04 ± 7.6	0.37 ± 0.13	54.19 ± 16.0	2.01 ± 0.55
Attacking midfielders	76	80.40%	13,06 ± 3,40	57.12 ± 8.3	0.26 ± 0.13	76.09 ± 18.4	2.24 ± 0.45
Wide midfielders	50	79.58%	14,46 ± 4	56.24 ± 8.9	0.27 ± 0.13	77.85 ± 22.4	2.24 ± 0.54
Defensive midfielders	1356	77.17%	14,52 ± 3,90	53.22 ± 9.5	0.26 ± 0.12	60.76 ± 16.2	2.01 ± 0.46
Full backs	132	80.58%	20,30 ± 4,28	58.88 ± 8.9	0.20 ± 0.11	59.76 ± 13.8	1.84 ± 0.79
Central defenders	1704	74.67%	15,16 ± 4,52	41.22 ± 10.1	0.27 ± 0.16	41.72 ± 15.4	1.74 ± 0.39

Figure 1: Different types of ball possession by position – examples taken from the English Premier League – Amisco data 2010-2011

Perfecting the art of finishing

The development of the game is essentially based on finishing moves, with teams that perfect the art of moving forward and positive possession having greater opportunities to score. The various types of finishing show that more than 80% of goals are scored without controlling the ball or with a maximum of two touches. If we look at the last two FIFA World Cups™, in Germany 2006, 67% of goals were scored with one touch and 16% with two touches (total 83%), while in South Africa 2010, 68% of goals were scored with one touch and 16% with two touches (total 84%). This indicates the speed of the game. These actions are performed despite packed defences and a marked lack of space, hence the need for strikers to be highly skilled in terms of agility, speed and accuracy. Shots from distance represented 18% of goals scored during South Africa 2010, highlighting the quality of the shot.

Over 50% of goals came from the flanks (centres, throw-ins, corners, etc.). Long crosses made up the majority, as they open up defences when space and the options for circulating the ball are limited.

Certain periods of the match are more favourable than others for scoring goals. On average, 35% of goals are scored in the last 30 minutes, a figure which increased to 40% for the 2010 FIFA World Cup™, half of which were in the last fifteen minutes

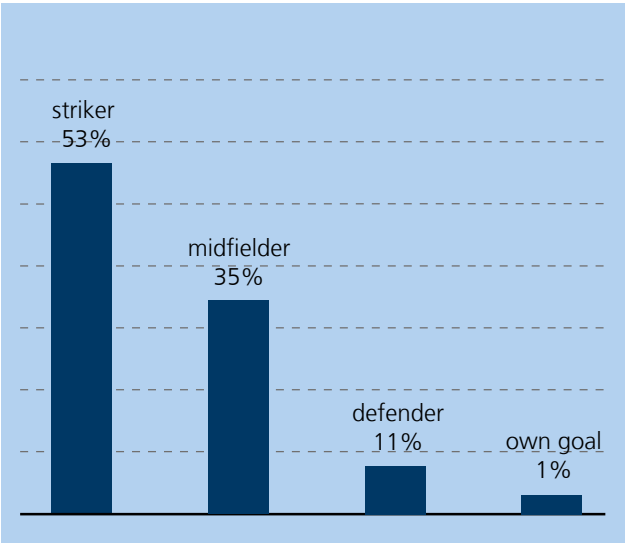


Figure 2: Goals scored by position at the 2002 FIFA World Cup™

Furthermore, 55% of goals are scored in situations where defence outnumbers attack. Thus 23% are scored after a period of ball retention or of positive possession accompanied by acceleration. 20% of goals scored from open play have been rehearsed, i.e. combination play practised on the training ground and applied in a match. Thus, at the 2010 FIFA World Cup™ alone, 21% of the goals were created from passes into space from the middle of the pitch.

Asymmetry

Both connected and complementary, positive possession and asymmetric play, when well executed, can break down the most robust of defences through players making runs in behind a defence that has been drawn towards the other side of the pitch. When the action takes place on the right-hand flank, the left-sided attacking midfielder (or left winger) moves to the centre and the left back takes his place on the left wing. Conversely, when the action is taking place in the left channel, the right-sided player moves to the centre and the right back takes his place. This is the use of a support/back-up player followed by a switch for a run in the opposite direction behind the defence. The supporting player often has more time and opportunity to pass the ball long towards the opposite channel to the arriving full back. This also takes place in the centre, through possible runs behind the defence, or via a long ball towards the same channel with a view to bypassing the defence.

Using the width of the pitch

A significant amount of the action in modern football takes place in the middle of the pitch, always followed by rapid movements towards the flanks to create opportunities for opening up the defence. The aim is to draw out the defence, thus creating space and the potential for through-balls towards the goal.

- Wing play involves use of the flanks by full backs and wingers, who spread the play when the team has the ball. The objective is to stretch the opposing defence and create space to facilitate rapid runs behind it and outnumber it.
- Asymmetry-switch: asymmetric play helps to unsettle defences by running behind them after a move on the opposite flank and involves switching the run of the support/back-up player. When the action takes place on

the right flank, the left-sided midfielder moves to the centre and the left back takes his place on the left wing. Conversely, when the action is taking place on the left flank, the right winger moves to the centre and the right back takes his place.

The move involves passing the ball back to a supporting defender, who often has more time and choice, facing the game, to play a long ball towards the full back who is on the opposite flank, or down the centre behind the defence, or even deep to create space in front of the opposing goal.

Distribution of play according to the zone where possession is regained

The transition from regaining possession to counter-attack takes place on average in 18 seconds and involves five passes before reaching the goal. When transition is made from midfield, it takes 14 seconds and involves three passes on average. However, when the transition starts in the zone of "instability", the average amount of time is six seconds and only one pass is involved.

Individual and collective mental quality

In order to limit the amount of uncertainty in football, players must develop their mental capacity and strength of character alongside their physical qualities with a view to increasing their involvement in the game. A winning team is a unit that plays well and has total commitment.

To achieve this, players must be able to adapt to and anticipate changes in situation, exploiting their potential to the full despite the stress and the challenge this involves. They must be inventive and unpredictable to create doubt in the minds of their opponents, and pass accurately and with precision timing to make swift exchanges of passes, dribbles and shots, even when tired. They must exert themselves with maximum commitment and controlled aggression and generally have a communicative approach within the group. They must possess two basic complementary qualities:

intelligence and desire. Their ability to read the game quickly and anticipate gives them time to prepare for their attacking or defensive actions. Players are both specialists and jacks of all trades, and must be able to play elsewhere on the pitch for the benefit of the team even if they have been assigned a specific position. For example, a lone striker could switch to the wing to provide defensive cover.

Quantitative and qualitative analysis of matches

Players and actual playing time

In a match lasting 93 to 98 minutes, the average actual playing time per player has gone from 50-55 minutes in 1990 to over 60 minutes today.

The actual playing time can deliver important data on players' involvement. By excluding actions outside the actual playing time, the objective data per player shows an upward trend. Ranging from 49 to 68 minutes, the actual playing time has increased (figure 3), putting more strain on the body via the proportionate increase in the distance covered. This rise also impacts on the number of sprints and intense movements.

International players nowadays play 60 to 70 matches a season (club, country, pre-season friendlies, etc.) and young international players (16-to-20-years-old) play 50 to 60 matches a season, with ten months of competition, while the figure for trainee players is 35 to 40 matches.

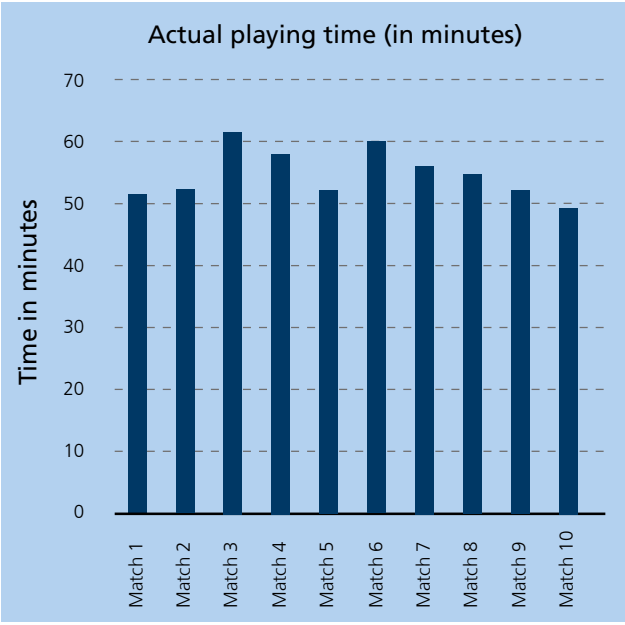


Figure 3: Actual playing time in ten matches of Ligue 1 in France

Quantitative and qualitative data from analysis of matches

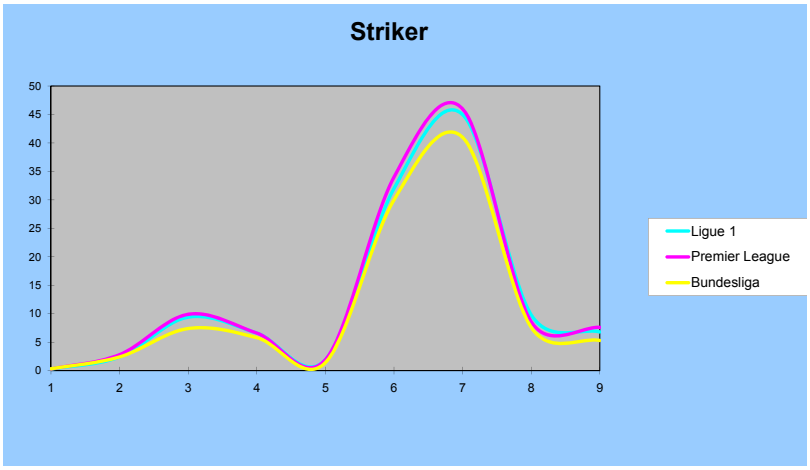
The quantitative analysis of football activity based on an objective evaluation of the position and movements of the players and ball for the whole of the match using sensors in the stadium provides useful data for physical preparation. The resulting quantitative and qualitative data enables a detailed analysis of a player's activity in terms of intensity of running, movements achieved and actions performed on and off the ball. This type of analysis allows a player's entire physical parameters to be studied in direct relation to technical-tactical data for an entire football match.

The analysis provides insights into the nature of exertion demanded in the game and shows that most of the effort put in by a player is slow or at average speed, whereas brief, rapid (i.e. explosive) effort only represents a low percentage of playing time. Modern football is thus an intermittent activity that can be defined as a succession of active or passive periods of effort and recuperation. This has led to an interest in specialist intermittent-type training in football.

Technical averages

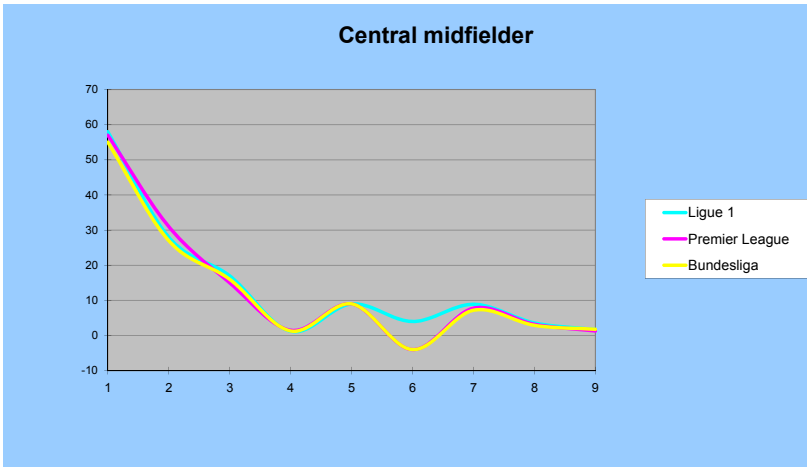
Three European leagues (France, England, Germany) in the 2010-2011 season. Data analysed from 380 matches (Amisco).

	Striker	Ave. ± SD
1	Goals	0.29 ± 0.03
2	Shots	2.53 ± 0.23
3	Shots/goals scored	8.90 ± 1.32
4	Entering final third of pitch	6.33 ± 0.46
5	Crosses	1.73 ± 0.29
6	Passes	32 ± 2
7	Individuel possession	44 ± 2.65
8	One-on-ones on the ground	8.67 ± 1.10
9	One-on-ones in the air	6.57 ± 1.17

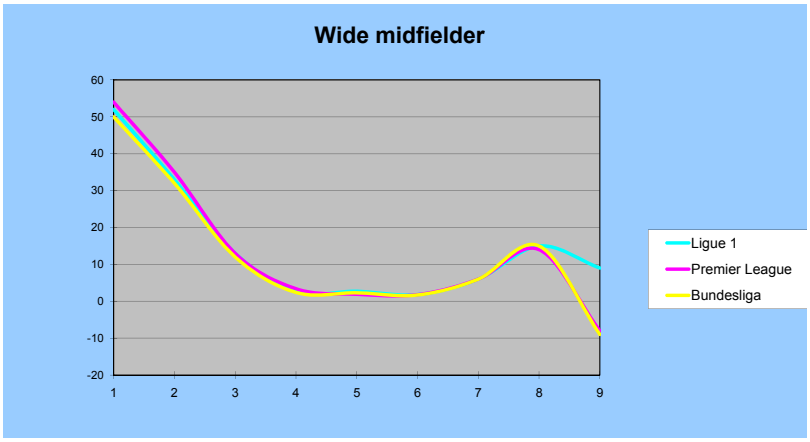


* Ave. ± SD: Average ± standard deviation – these averages only include players who played in the entire match

	Central midfielder	Ave. ± SD
1	Individual possession	56.67 ± 1.53
2	Individual possession in opponents' half	28.67 ± 2.08
3	Forward passes	16 ± 1
4	Shots	1.33 ± 0.15
5	Balls won	9 ± 0
6	Balls won – balls lost	-1.33 ± 4.62
7	One-on-ones on the ground	7.97 ± 0.86
8	One-on-ones in the air	3.32 ± 0.35
9	Fouls committed	1.60 ± 0.26

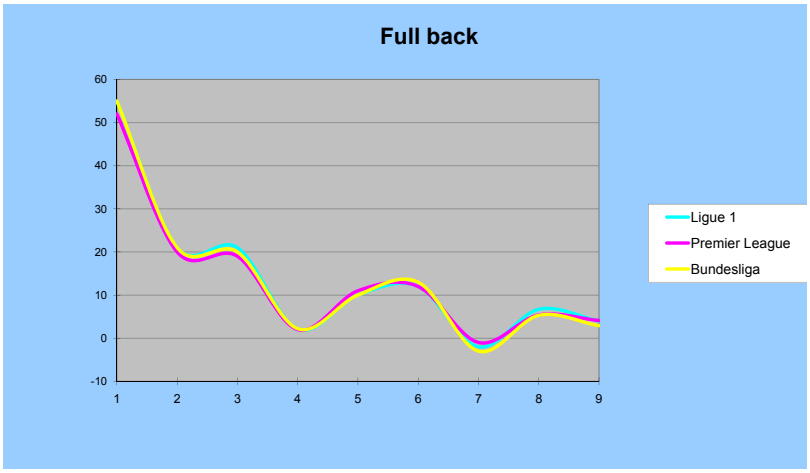


	Wide midfielder	Ave. ± SD
1	Individual possession	52 ± 2
2	Individual possession in opponents' half	33.33 ± 1.53
3	Forward passes	12.67 ± 0.58
4	Crosses	2.80 ± 0.53
5	Dribbles	2.30 ± 0.40
6	Shots	1.70 ± 0.06
7	Balls won	6 ± 0
8	Balls lost	14.67 ± 0.58
9	Balls won – balls lost	-2.67 ± 10.12

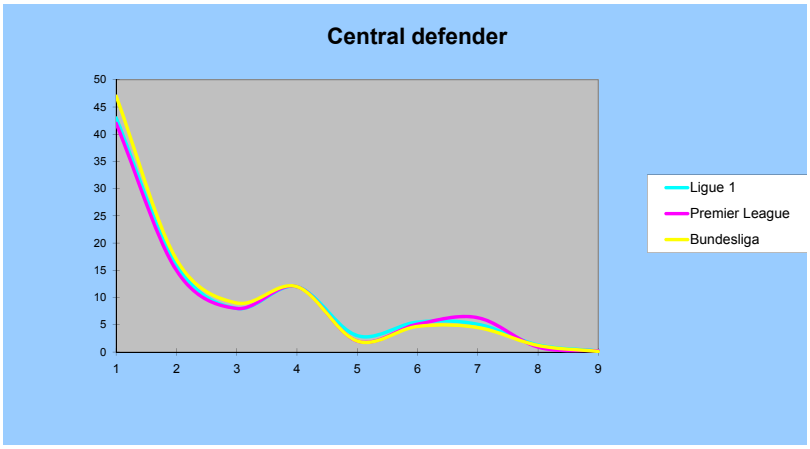


* Ave. ± SD: Average ± standard deviation

	Full back	Ave. ± SD
1	Individual possession	54 ± 1.73
2	Individual possession in opponents' half	20.67 ± 0.58
3	Forward passes	20 ± 1
4	Crosses	2.10 ± 0.10
5	Balls won	10.33 ± 0.58
6	Balls lost	12.33 ± 0.58
7	Balls won – balls lost	-2 ± 1
8	One-on-ones on the ground	5.80 ± 0.78
9	One-on-ones in the air	3.67 ± 0.67



	Central defender	Ave. ± SD
1	Individual possession	44 ± 2.65
2	Forward passes	16 ± 1
3	Very long passes (+ 30m)	8.33 ± 0.58
4	Balls won	12 ± 0
5	Balls won – balls lost	2.33 ± 0.58
6	One-on-ones on the ground	5.10 ± 0.40
7	One-on-ones in the air	5.30 ± 0.92
8	Fouls committed	1.13 ± 0.21
9	Yellow cards	0.17 ± 0.06



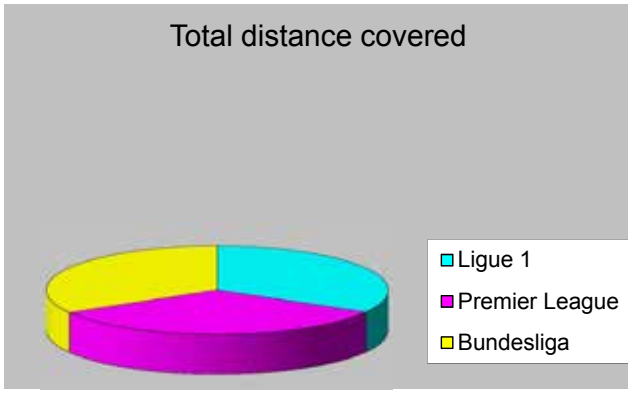
* Ave. ± SD: Average ± standard deviation

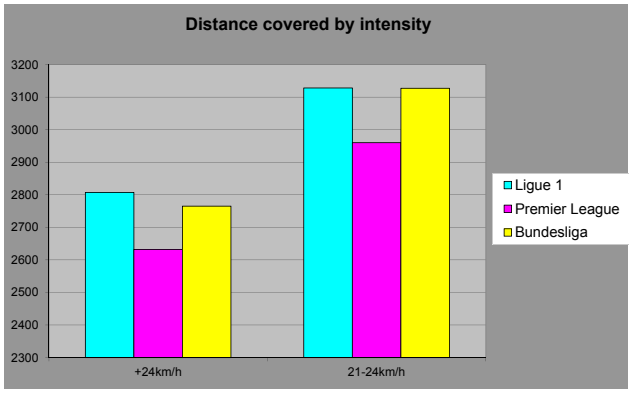
Profile of top-level football team

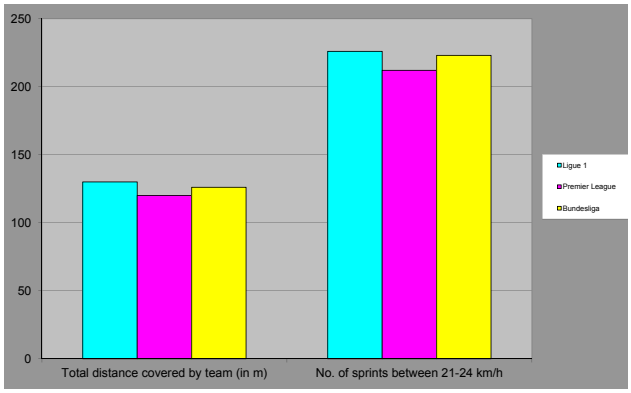
Average distance, intensity and number of runs per match in three European leagues (England, France, Germany) in the 2010-2011 season.
Data analysed from 140 matches (Amisco). These averages only include players who played in the entire match.

Team	Ave. ± SD
Total distance covered by team (in m)	115767 ± 371
+ 24 km/h (in m)	2734 ± 91
21-24 km/h (in m)	3072 ± 97
No. of sprints at over 24 km/h	123 ± 4,24
No. of sprints between 21-24 km/h	217.5 ± 7.78

* Ave. ± SD: Average ± standard deviation



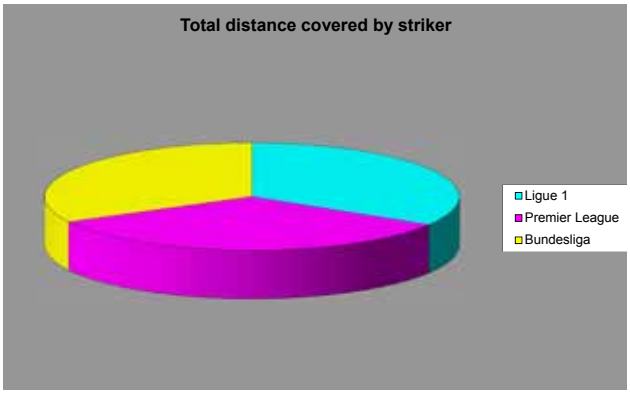


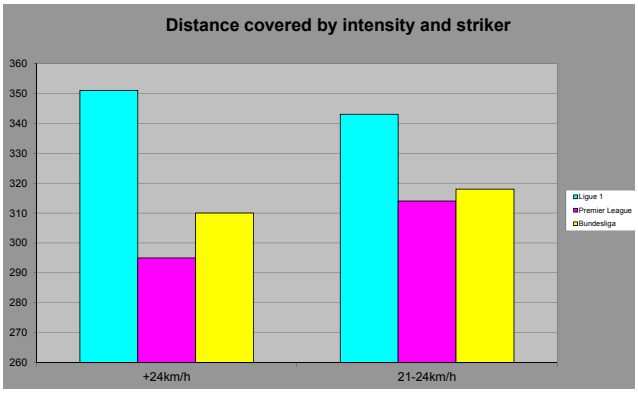


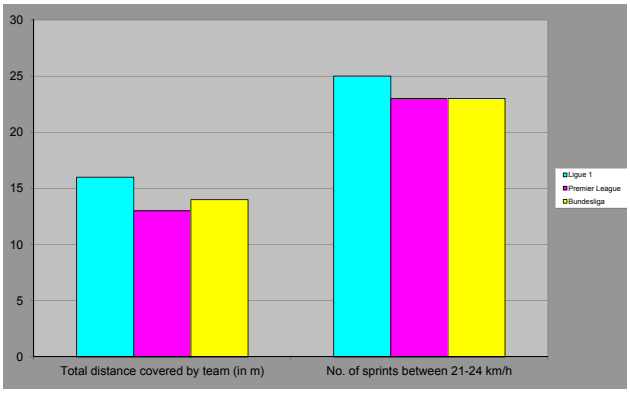
Profile of top-level striker

Striker (average for all positions)	Ave. ± SD
Total distance covered (in m)	10979 ± 163
+ 24 km/h (in m)	318,67 ± 29
21-24 km/h (in m)	325 ± 16
No. of sprints at over 24 km/h	13,5 ± 0,71
No. of sprints between 21-24 km/h	23 ± 0

* Ave. ± SD: Average ± standard deviation



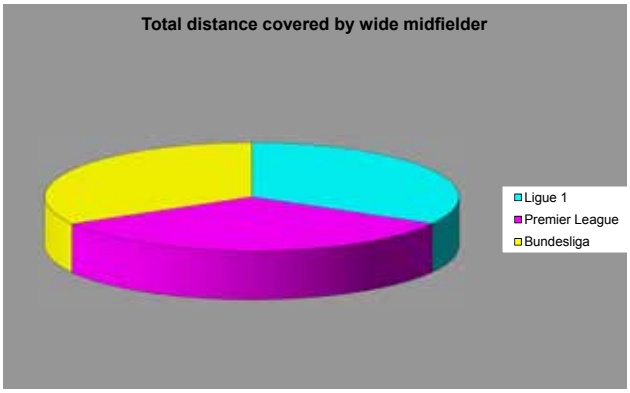


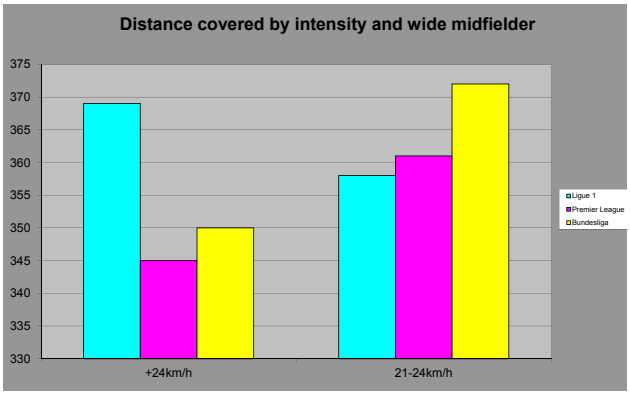


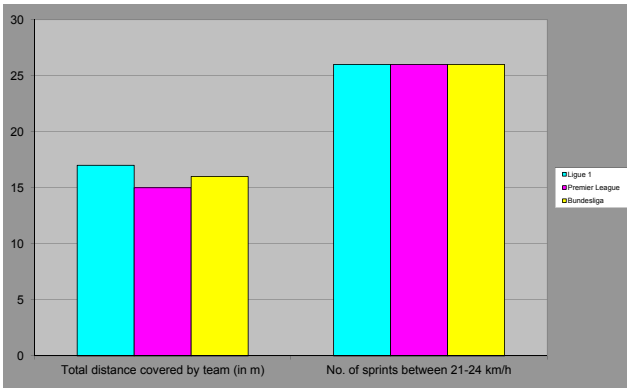
Profile of top-level wide midfielder

Wide midfielder	Ave. ± SD
Total distance covered (in m)	11366 ± 50
+ 24 km/h (in m)	354,67 ± 13
21-24 km/h (in m)	363,67 ± 7
No. of sprints at over 24 km/h	15,5 ± 0,71
No. of sprints between 21-24 km/h	26 ± 0

* Ave. ± SD: Average ± standard deviation



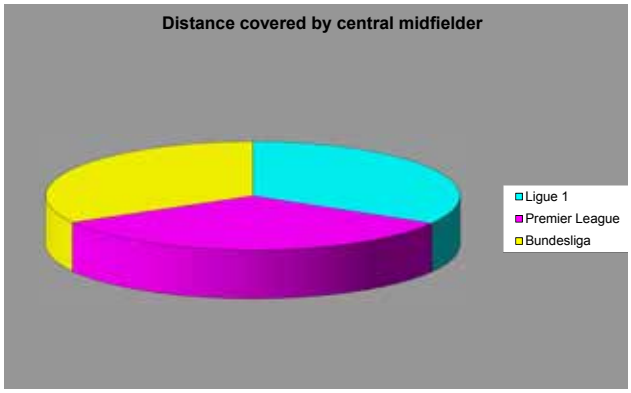


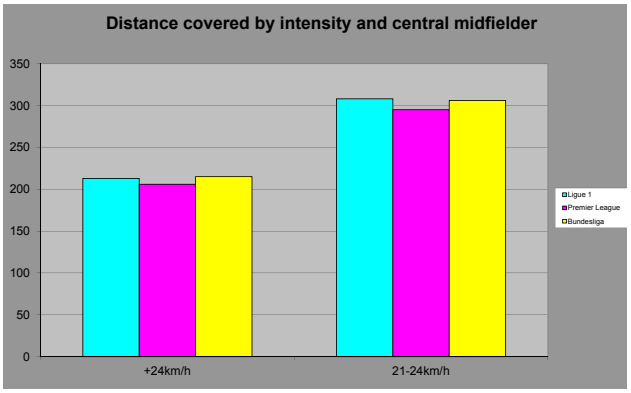


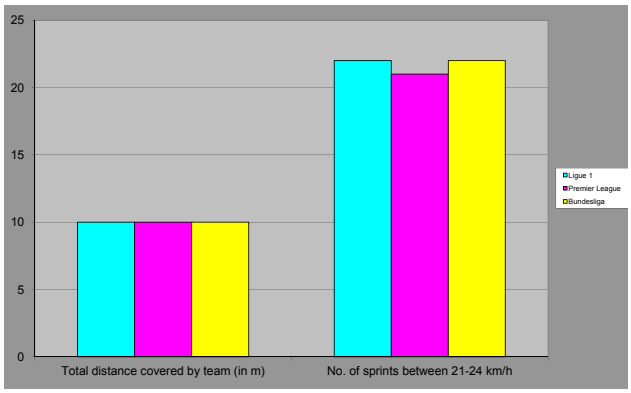
Profile of top-level central midfielder

Central midfielder	Ave. ± SD
Total distance covered (in m)	10979 ± 163
+ 24 km/h (in m)	318,67 ± 29
21-24 km/h (in m)	325 ± 16
No. of sprints at over 24 km/h	13,5 ± 0,71
No. of sprints between 21-24 km/	23 ± 0

* Ave. ± SD: Average ± standard deviation



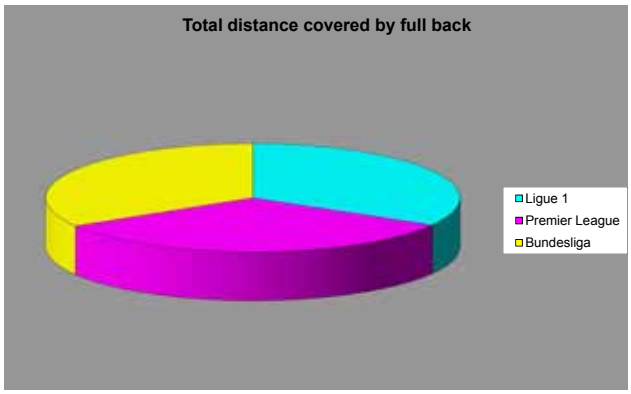


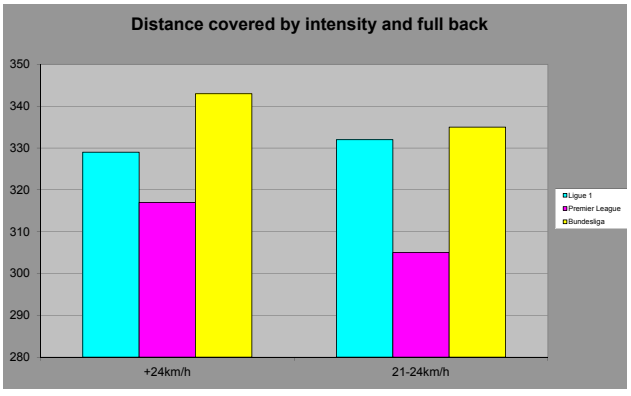


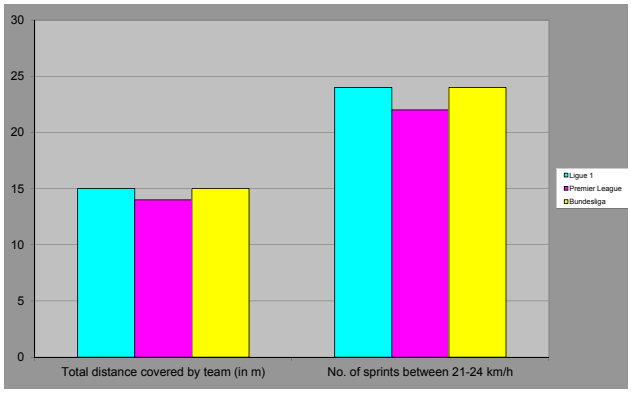
Profile of top-level full back

Full back	Ave. ± SD
Total distance covered (in m)	11366 ± 50
+ 24 km/h (in m)	354,67 ± 13
21-24 km/h (in m)	363,67 ± 7
No. of sprints at over 24 km/h	15,5 ± 0,71
No. of sprints between 21-24 km/h	26 ± 0

* Ave. ± SD: Average ± standard deviation



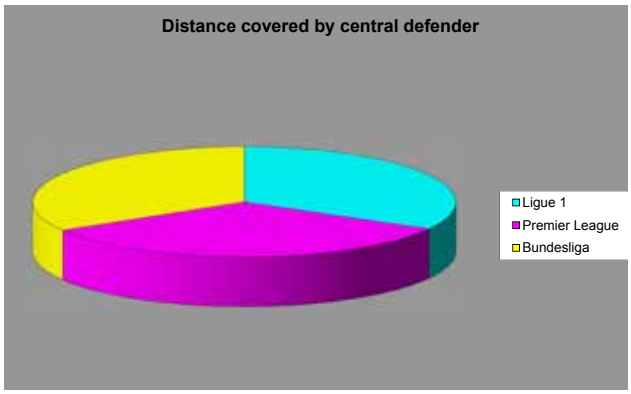


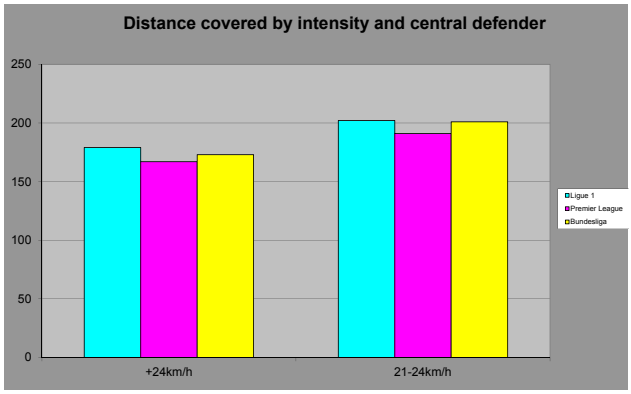


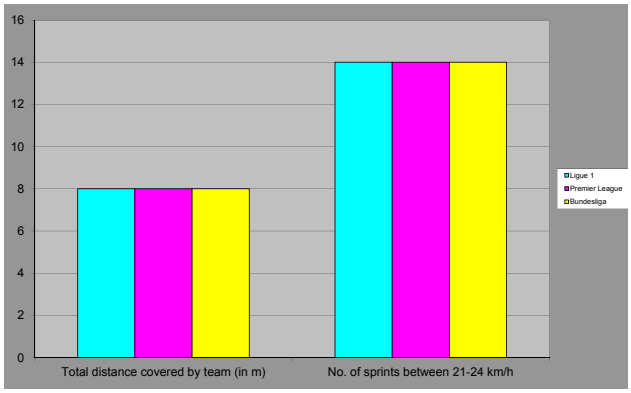
Profile of top-level central defender

Central defender	Ave. ± SD
Total distance covered (in m)	10979 ± 163
+ 24 km/h (in m)	318,67 ± 29
21-24 km/h (in m)	325 ± 16
No. of sprints at over 24 km/h	13,5 ± 0,71
No. of sprints between 21-24 km/h	23 ± 0

* Ave. ± SD: Average ± standard deviation







Qualitative and quantitative summary of matches in European leagues

	Team	Striker	Wide midfielder	Central midfielder	Full back	Central defender
Average distance covered (in m)	11,577	10,979	11,366	11,563	10,898	10,116
Distance sprinted over 24km/h (in m)	273	325	355	211	330	173
Individual possession		44	52	56.7	54	44
One-on-ones on the ground		8.7		8	5.8	5.1
One-on-ones in the air		6.6		3.2	3.7	5.3
Balls won/lost			-2.7	-1.3	-2	+2.3

Figure 4: profile of top-level footballer in Europe

Football is essentially a sport of duels and communication.

The medium through which communication is made is the ball, and the players' movements are always directly related to their position on the pitch. The basic technical qualities – control, dribbling, shooting, passing (direct and indirect play) – represent the non-verbal expression of this communication.

The distance covered in the three leagues studied is around 10,000 to 12,000 metres per match without any significant difference between positions (figure 4). This supports the theory that football is an intermittent aerobics-based activity that tests the player's aerobic capacity and power and lactic anaerobic capacity (speeds of between 21 and 24km/h). A player's ability to repeatedly sprint at over 24km/h (endurance specific to footballers) depends on his aerobic qualities, regardless of the league. The key technical qualities (one-on-ones, shooting, heading, tackling) and physical qualities (energy, velocity, speed off the mark, acceleration) thus depend on qualities of power and speed. The technological and scientific evolution shows that a footballer's physical preparation must be geared towards the simultaneous and cohesive development of aerobic qualities along with his strength, speed and explosiveness.

Football is a combination of technique and speed.

Today's top-level footballers are able to synchronise their speed qualities with their technical qualities so as to avoid situations where they confuse speed for haste. Conditioned by speed of thought, a player's reactions and anticipation call for outstanding reflexes and involve very little time in which to take the necessary action. Speed is responsible for the intensity of the game and makes the difference when it comes to decisive actions in a match. Of course, ball control is still essential for decisive, unexpected acceleration designed to disrupt and unbalance opponents.

The anaerobic alactic system supports the running speed at its highest intensity but with successive sprints it is more a matter of speed endurance, where the aerobic system functions alternately to enable maximum participation of the two anaerobic alactic and lactic systems.

Described as "mental" speed or "reflexes", a top-level footballer's reactions are the basis of other types of speed, such as:

- Speed off the mark
- Speed of movement
- Speed required to return to defensive position
- Speed of execution
- Speed of anticipation
- Speed of action
- Speed of ball delivery.

The future of football will continue to be built on collective play combining technique, speed and acceleration.

4. Physical qualities of top-level footballers

Physical qualities of top-level footballers

The physical qualities that are specific to footballers are strength, speed, endurance and flexibility, qualities that ensure brief, intense and repeated exertions throughout the match and allow players to express themselves in every game situation.

In the current context, physical preparation is a high priority in top-level football. It enables a physical potential to be created for the whole season and personalised for individual players in terms of their physical optimisation, prevention and reconditioning. The science and technology now available to fitness coaches provides for a more refined way of working and involves the coherent development of strength, speed, explosiveness and endurance (see figure 3). The aim is to achieve a level of performance in line with the potential of each player for the good of the team as a whole. The development of players' physical qualities must dovetail with the sporting and professional objectives. To this end, the technical staff apply themselves to guiding their players towards a regular and constant level of fitness as the season progresses.

Endurance or aerobic capacity

Developing the aerobic capacity is an excellent way of preparing the "psychological terrain" of a footballer, who can then develop all of the other qualities in complete safety. As illustrated in figure 3, the capacity of the energy systems is represented by the reservoirs and power is represented by the tubes (AP, ALP, AAP). The aerobic capacity represents the ability of the system to last over time by using the aerobic system to provide energy.

The aim is to develop the glycolytic potential and the enzyme activity specific to glycolysis. The cardiovascular system, called into use on a sustained basis at this intensity, will in the long run show an improvement in cardiovascular capacity by increasing the capillary and mitochondrial surfaces and densities. One can also observe an increase in the density and activity of the aerobic system's catalytic enzymes at the level of the muscular groups most needed.

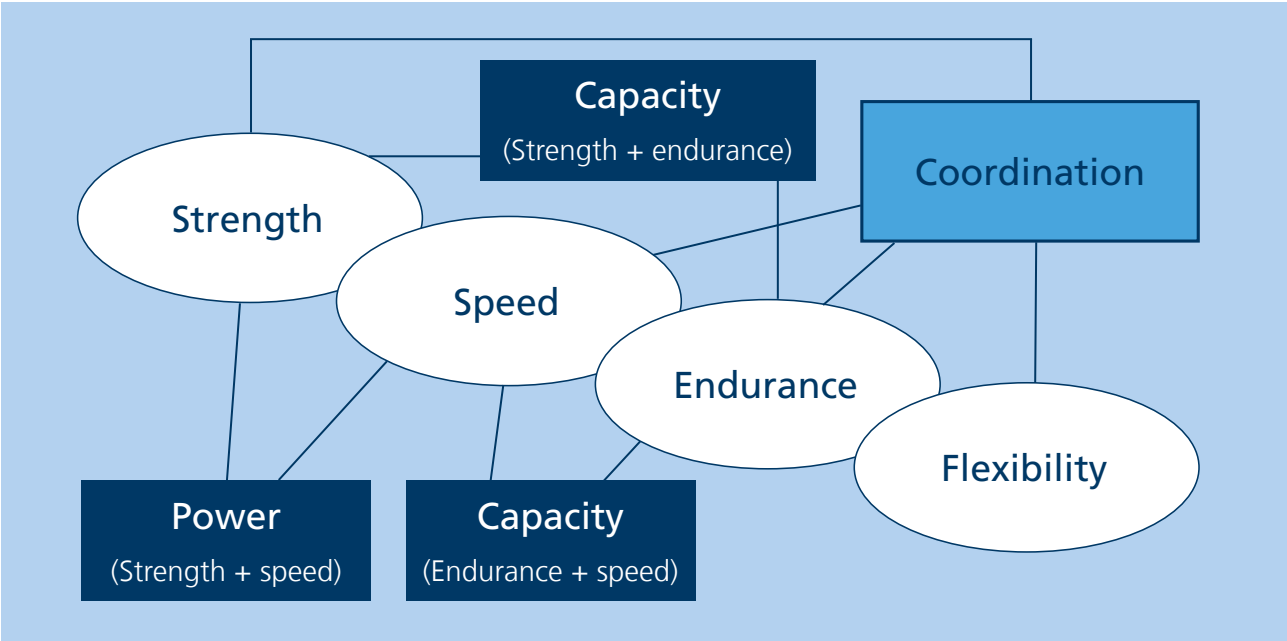


Figure 1: the relationship between physical qualities

Endurance

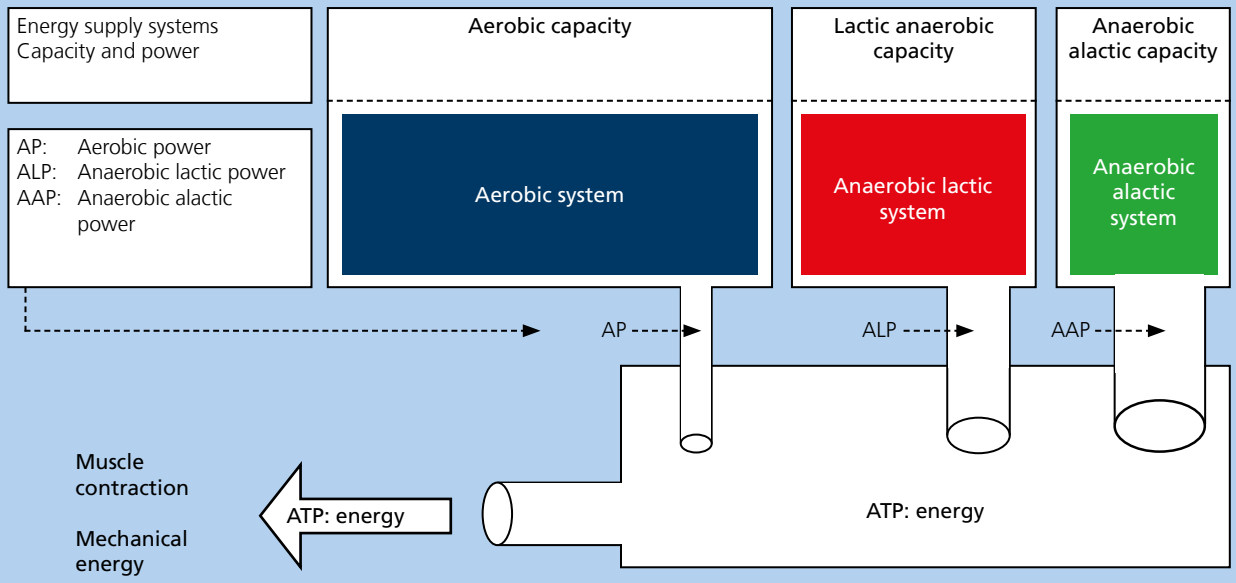
Endurance is an essential quality in football, enabling players to last the match and to express their technical and tactical qualities.

It is also crucial to the optimisation of other performance factors, such as strength and speed, and to developing all of the other performance factors in football.

Endurance training takes many forms, depending on the desired aim: basic endurance, aerobic capacity, aerobic power, resistance, optimising the maximal aerobic speed (MAS) or even the speed associated with VO_2max.

The various forms of endurance

The various forms of endurance can be prioritised depending on the training period. Each form of training is developed at a specific rhythm or speed that is tailored to the MAS corresponding to the lowest speed associated with reaching the VO_2max or the maximum heart rate (HRmax). These values are calculated via ongoing or periodic preliminary tests.



The three systems are deployed together when exertion commences.

- The anaerobic alactic system enables powerful, intensive actions, yet it quickly runs out (in less than 20 seconds).
- The anaerobic lactic system enables actions of a higher intensity without reaching the limit, and runs out after about three minutes, emitting lactic acid as an end product. In this case, glucose is the substrate responsible for synthesising the ATP.
- The aerobic system enables long-lasting actions to be produced. Its maximum intensity is determined by the maximum aerobic power (MAP), the maximum oxygen consumption (VO_2max) or the maximum aerobic speed (MAS). This system uses glucose, lipids and a fraction of amino acids combined with O_2 as substrates. It emits lactic acid, water and carbon dioxide as an end product.

Figure 2: diagram showing the activation of the different energy systems

Basic endurance

Basic endurance training involves a speed higher than 50% of the MAS. This type of training is normally used at the start of the season in order to get the player to a level of basic physical fitness so as to carry out more specific physical preparation sessions. The aim here is for players to return to their ideal weight. Basic endurance sessions may be used over the season to maintain a necessary level of basic endurance.

Aerobic capacity

Aerobic capacity training involves a speed of between 70% and 85% of the MAS, and it is advisable to base it on heart rates of between 150 and 170 beats per minute. It is also used at the start of the season in the form of jogging to prepare the physiological ground, to develop endurance-specific physiological structures and to find the level at which the player can breathe easily. The cycle is very short, around two or three weeks. Aerobic capacity is also recommended as well as intensity for the purposes of recuperation. Work on aerobic capacity is based on the heart rate, the MAS or the thresholds. Regular matches and training sessions help to maintain the aerobic capacity at its optimum level. Aerobic exercise represents the energy system that enables players to perform very long exercises of medium intensity. It is characterised by two qualities – aerobic endurance and aerobic power.

The aim is to prepare the physiological ground by testing a range of components of the cardiovascular system at a rate of three, four or five training sessions per microcycle, or even more, with a view to making physiological modifications that enable an efficient response to the demands on the footballer's "capacity", thus developing the aerobic potential to be used as the basis of physical qualities such as speed, strength and endurance.

Aerobic power

Aerobic power represents intensity, which is used to optimise the endurance potential. It corresponds to the capacity to maintain high-intensity runs and involves a speed of between 90% and 120% of the MAS. It is developed from the second to the third week of training by increasing the intensity and the duration and number of the training blocks and forms. The most frequently used exercises are intermittent exercises of short runs, firstly for a single distance and then on a "shuttle" basis, over the course of the season. These are basically intermittent exercises as follows (seconds of training-rest): 30-30, 45-15, 20-20, 15-15, 10-10 and 5-25.

Endurance training

The period of endurance training is generally seven weeks of preparation: two weeks of basic endurance and aerobic capacity, four weeks of specific work on the aerobic capacity and aerobic power, and one week of fine-tuning to prepare for competition.

Work on thresholds

Working on lactate 1 (aerobic) and lactate 2 (anaerobic) thresholds is a method that is very often used to increase endurance levels. To determine the desired training intensity, values for lactic acid, heart rate or speed are compared with the thresholds (see figures 3 and 4). This makes it easier to work from data for the heart rate or speed in order to provide a means of controlling the intensity, the exercise load or the training.

Lactate threshold 1 corresponds to levels of intensity of between 80% and 90% of the maximum heart rate or 65% to 75% of the MAS, and lactate threshold 2 to levels of intensity of between 90% and 97% the maximum heart rate or 80% to 90% of the MAS.

Basic endurance (or recovery) training involves a level of intensity of between 50% and 60% of the MAS. Levels of intensity exceeding 90% of the MAS correspond to aerobic power training. However, the anaerobic system generally requires a minimum training intensity of 100% of the MAS.

Endurance and integrated physical training

Optimising endurance is a prerequisite for improved performances over the entire football season. There are several methods of improving endurance: continuous or intermittent training, interval training or integrated physical preparation. Training in the form of small-sided games enables players to develop their endurance qualities in the same way as continuous or intermittent training. Small-sided games have the advantage of increasing the maximum oxygen uptake (VO_2max) while enabling the tactical and technical aspects to be worked on for the player and team. As the name suggests, small-sided games involve fewer players per side (which may or may not have the same number of players) than in a normal match, for which the rules are changed accordingly. They also enable players to improve their aerobic capacity. The average heart rate values obtained in such games represent 85% of the maximum heart rate (HRmax).

The heart rate values obtained from a 5 versus 5 training game are equivalent to those from short, intermittent exercises, while 6 versus 6 and 3 versus 3 games enable heart rate values to be obtained that are 85% and 90% respectively of the maximum heart rate.

The level of intensity in small-sided games can be varied by changing a number of factors, such as playing with or without a ball or goalkeeper, pitch size, type of opposition, use of support players, length of game, number of ball touches, availability of balls, length of training and breaks, use of small or large goals or restriction to specific zones. As a rule, the level of intensity increases if the pitch size reduces or if there are no goalkeepers, more players are introduced, play is restricted to zones, or where there are multiple balls, the goals are small and the opposition consists of a single player.

Concept of threshold-specific training

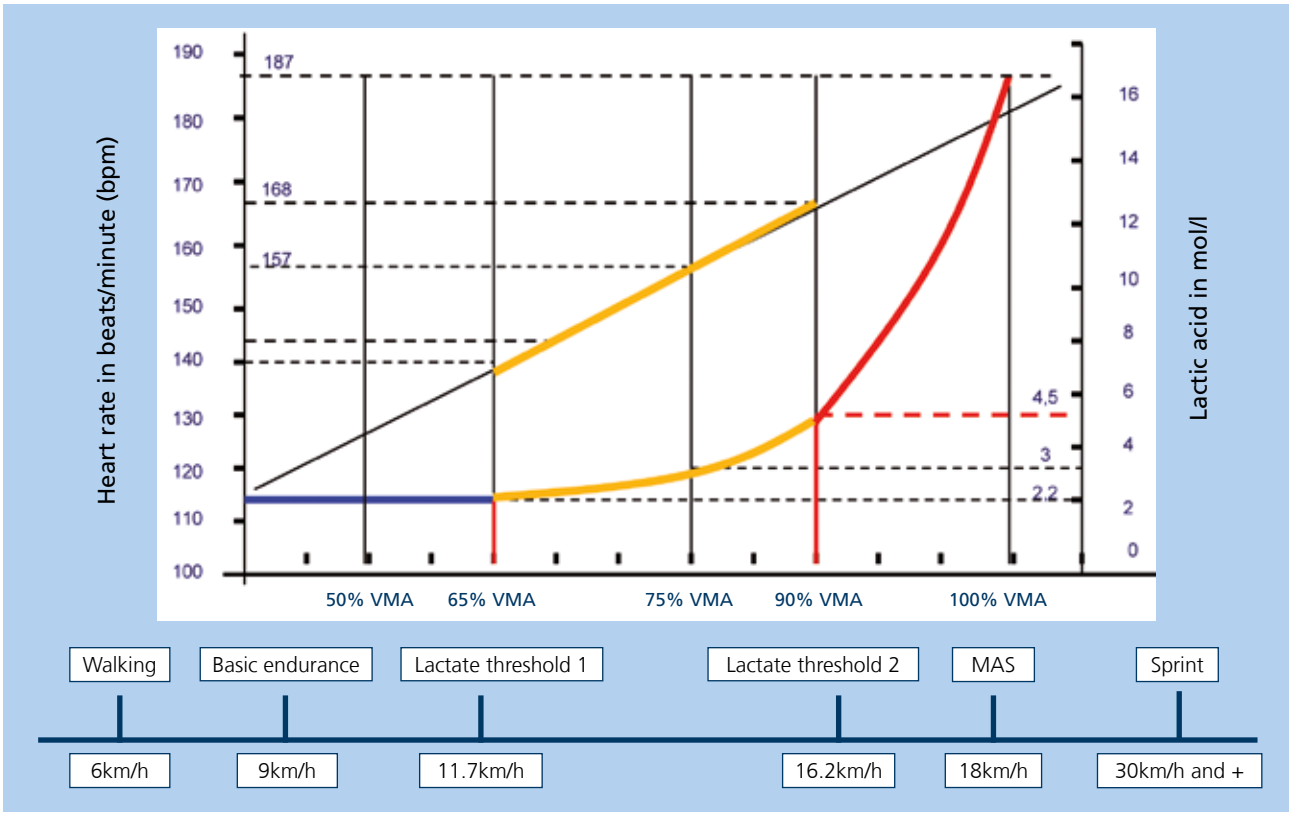


Figure 3: Threshold-specific training according to MAS

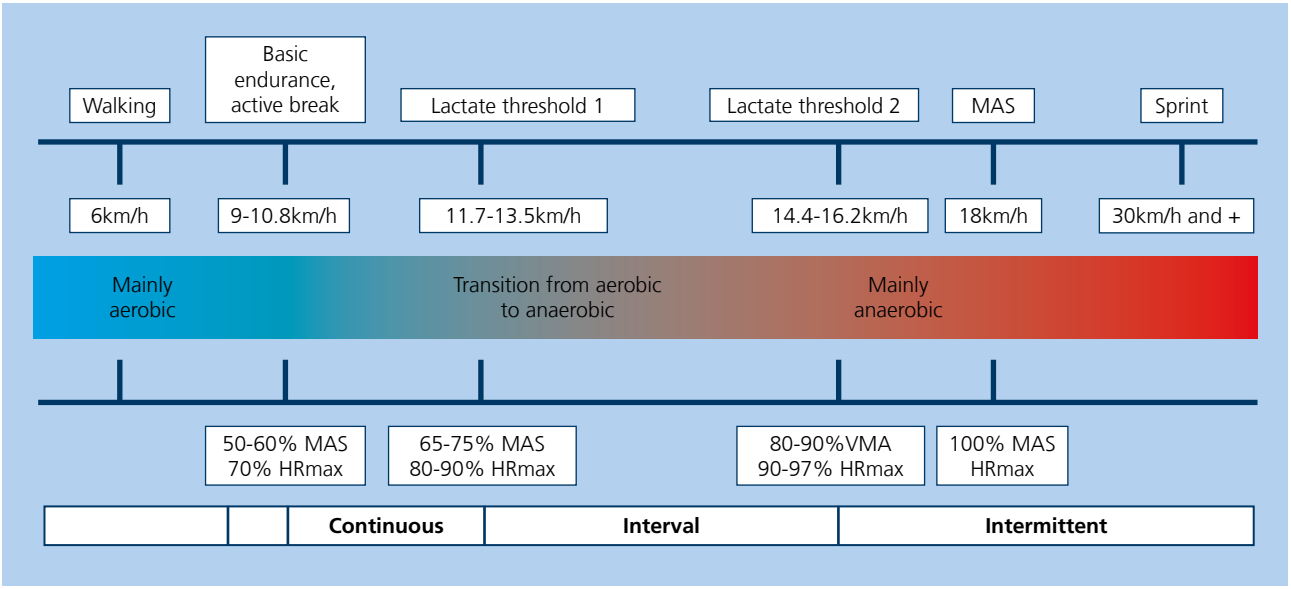


Figure 4: Physiological threshold-specific training according to intensity and mode of exercise

Speed

This represents the ability to repeat sprints at the highest level. Speed training is introduced around halfway through the initial training session, when the player is able to withstand it without restriction. This training focuses on explosiveness, strength and speed, the main objective being to maintain explosiveness for as long as possible in a match. It involves the ability to repeat series of sprints for the entire match without a significant loss of performance.

A footballer's physical performance is very often linked to his ability to repeat sprints at an optimum level. The speed and energy levels of top players are crucial to their performance. Speed is thus essential to modern football. During a match, a player sprints for a total of around 600 metres at a speed of over 20 km/h. Speed is a multifaceted quality that requires suppleness, flexibility, coordination and strength.

Different forms of speed

Factors affecting the development of a player's speed are reaction times, speed of leg and arm movements and frequency of leg and arm movements.

Speed has many factors and exists in different forms:

- **Maximum speed.** This is the maximum speed a player can reach when sprinting or accelerating, and varies from individual to individual as well as from distance to distance, depending on the player's position and how the game is organised.

  A player reaches his maximum speed after 18 metres, regardless of his position .
- **Short speed.** This encompasses the player's acceleration capacity and ability to achieve maximum speed over short distances (5-20 metres), directly influenced by his ability in terms of reactions, anticipation and actions. Because of football's changes of direction and rhythm, these short actions call for a high quality in terms of maintaining one's footing and of frequency of leg and arm movement.
- **Agility.** This concerns an athlete's ability to perform rapid actions within a few metres while changing direction quickly. The ability to maintain footing, rhythm and frequency of arm and leg movement is essential at this level.

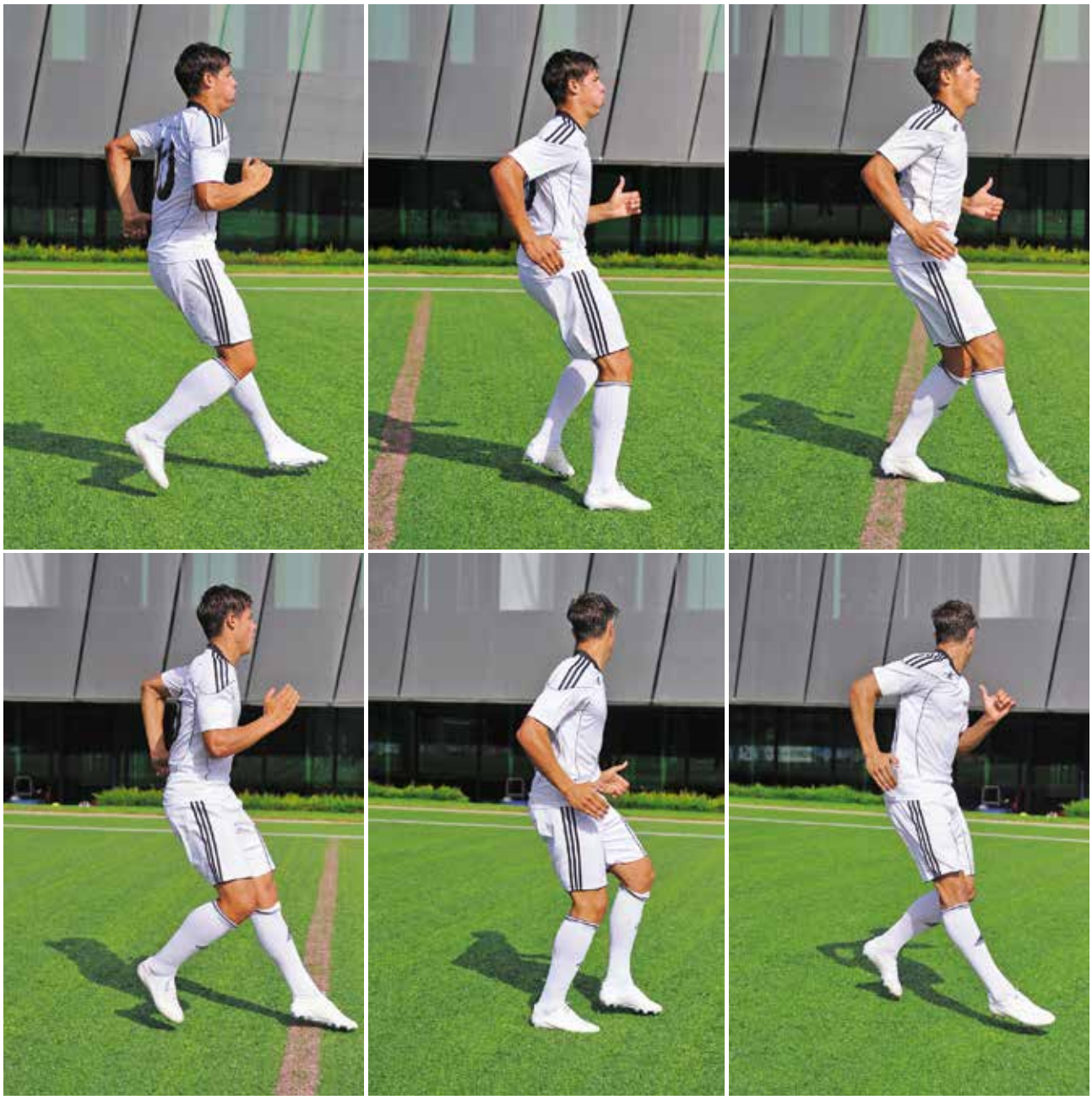
  Agility is regularly worked on the day before a match, with exercises focusing on maintaining footing and changes of direction while combining different types of visual or aural stimuli or movements.
- **Speed coordination.** This describes the ability to perform actions economically in predictable (automatisms) or unpredictable (adaptation) situations, and to quickly learn movements at a certain speed.

  The exercises focus on technical actions and movements (dribbling, control and pass, etc.) at optimum speed.
- **Overspeed.** Overspeed consists of running faster than the optimum speed so that players become accustomed to new frequencies of arm and leg movement and to other technical speed elements. The exercises are generally carried out on a slope with a maximum gradient of 3% to 5%.
- **Speed endurance.** This represents the player's ability to repeat short or long sprints without losing speed. The exercises enable sprints to be repeated and to maintain maximum speed for as long as possible. This form of speed can be included in short, intense, intermittent exercises in which players perform a certain number of sprints with a predefined recovery time and a measured performance to be attained.
- **Speed strength.** A player's speed strength is directly influenced by the strength of his legs and pelvic girdle muscles, which is why speed training should be accompanied by strength training. Other training methods enable work to be carried out on both strength and speed by means of various rapid actions, with players being subjected to a load (or equivalent), such as speed resistors, resistance bands, muddy surfaces, working on a slope, sand pits or even the weight of another player.
- **Speed power.** This can be worked on using slopes with a gradient of 10% to 15% or during step training on low steps.

Backwards running

Even if it is only for a short time, it allows quick regrouping as soon as possession is lost and during the subsequent defensive retreat. It enables the runner to continue to be aware of his position in relation to the ball, his opponents, his team-mates and the goal.

In duels, it is also indispensable to ensure a good retreat from the player in possession, and may enable the opponent to be directed towards a zone to isolate him. Backwards running also avoids crossing feet. The average distance covered by backwards running during a match is 600m. At the biomechanical level, backwards running is characterised by an increase in bending movement of the hip combined with maximum extension of the knee. Contact with the ground is made first with the toes and then with the heel, propelling the foot backwards, leading to significant strain being placed on the triceps surae when bending the foot. Practising backwards running may improve balance and



Direction of movement

proprioception; in certain cases it may also be used for athletes returning to sport after injury or breaks. In terms of energy, running backwards at the same speed as running forwards increases the heart rate, VO_2 and respiratory rate.

Strength

The lack of continuity caused by footballers' full and irregular schedules means that strength-development training is difficult. The process for developing strength takes place:

- in a isolated manner by increasing weights in the weights room,
- in an integrated manner by creating muscular tension through additional weights followed by exercises that are more dynamic or explosive.
- integrated into the training, through small-sided games working particularly on speed off the mark, reaction strength and solid footwork in different directions.

Specific muscle-building programmes for the most-used muscle groups are used in the pre-season and inter-season periods, and then as refresher programmes depending on the individual needs of the players (strengthening, stretching, proprioception). It is therefore difficult to put together a reliable and tailored programme. Nevertheless, within the context of muscle-strengthening and injury prevention, strength tests aimed at evaluating and monitoring players are regularly scheduled in order to flag up any muscle weaknesses and/or imbalances resulting from joint instabilities. Data from physiological and biomechanical tests can be of use for possible physical reconditioning programmes, re-education or rehabilitation. However, as the fixtures are set in advance, the muscle-building programme is spread over the medium and long term throughout the season and tailored to the players' individual profiles. Muscle strengthening aimed at increasing players' physical potential is preferably carried out during periods when the frequency of matches is decreasing, allowing muscular plasticity so that the consequences of muscle-strengthening do not have any adverse effect on performance.

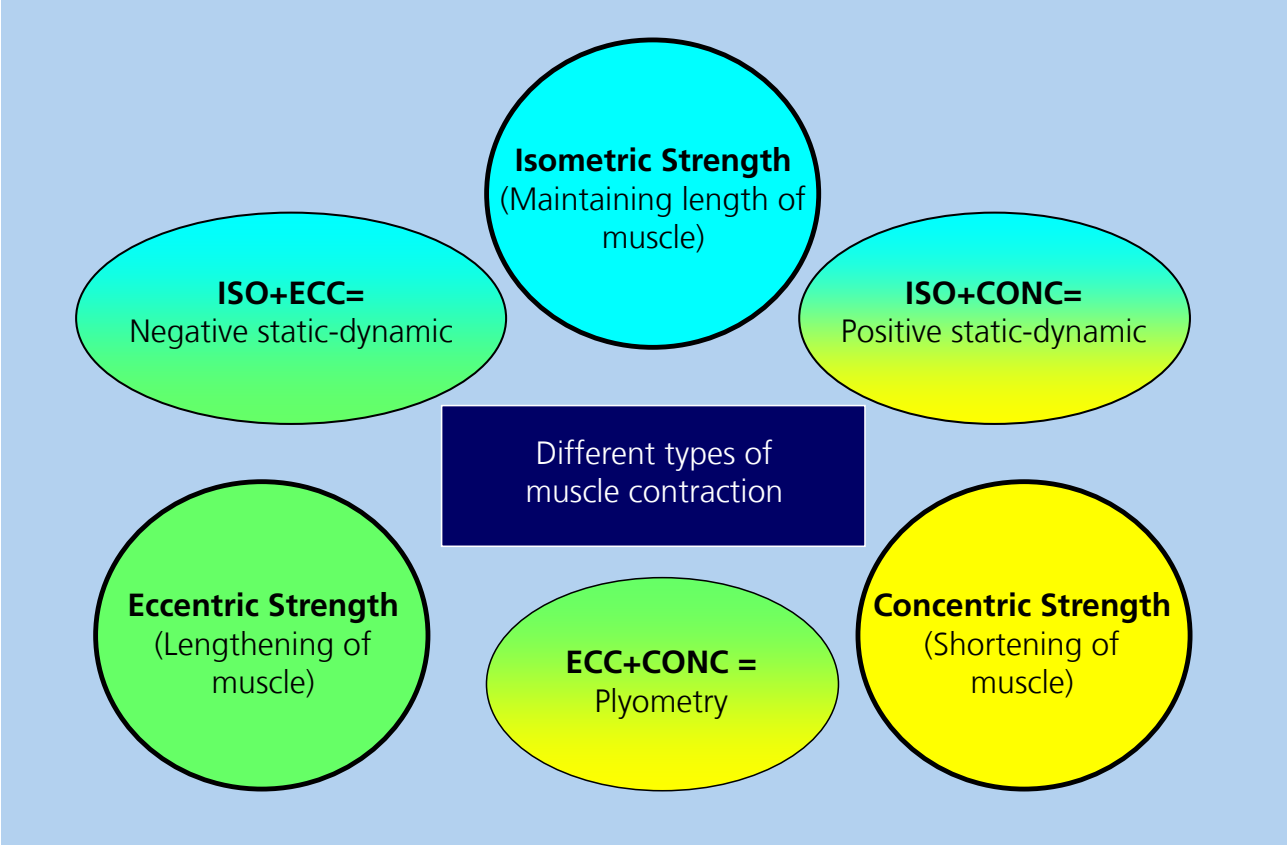


Figure 5: different types of muscle contraction

Strength development methods

Maximum efforts **Maximum loads** **Nerve factors**	90 to 100% of 1 MR Reps: 1 to 3 Break: 2 to 3' Speed: <30% of max. speed Sets: 3 to 5 2 sessions 24 to 48 hrs apart Concentric method	> to 130% of 1 MR Reps: 2 to 4 Slow speed Break: 4 to 7' Sets: 2 to 3 2 sessions more than 72 Eccentric method	80 to 130% of 1 MR Reps: 2 to 6 Duration of contractions: 3 to 5" Break: 20" to 3' Sets: 4 to 8 2 sessions 48 to 72 hrs apart Isometric method
Repeated efforts **Until tired** **Maximum tension** **Hypertrophy**	70 to 80% of 1 MR Reps: 8 to 12 Speed: 30 to 50% of max. speed Break: 2 to 4' Sets: 8 to 10 2 sessions 24 to 48 hrs apart Concentric method	110 to 130% of 1 MR Reps: 3 to 4 Slow speed Break: 1' Sets: 5 to 7 2 sessions 72 hrs apart Eccentric method	50% of 1 MR Reps: 10 to 12 Extra slow speed (>3") Break: 2 to 4' Sets: 6 to 8 2 sessions 48 hrs apart Extra slow concentric method
Dynamic efforts **Non-maximum loads** **Power-strength**	45 to 60% of 1 MR Reps: 4 to 6 Speed: 50 to 60% of max. speed Break: 3 to 5' Sets: 3 to 4 2 sessions 24 hrs apart Concentric method		
Dynamic efforts **Non-maximum loads** **Power-speed**	30 to 45% of 1 MR Reps: 4 to 8 Speed: 50 to 60% of max. speed Break: 3 to 5' Sets: 1 to 3 2 sessions 24 to 48 hrs apart Concentric method		
Dynamic efforts **Non-maximum loads** **Strength-endurance**	30 to 60% of 1 MR Reps: 15 to 35 Speed: 40 to 50% of max. speed Break: 30" to 2' Sets: 5 to 10 2 sessions 24 to 48 hrs apart Concentric method		80 to 100% of 1 MR Reps: 2 to 4 Duration of contractions: 10 to 15" Active break: 30" to 1' Sets: 1 to 2 2 sessions 48 to 72 hrs apart Isometric method

Figure 6: different methods of strength development (C. Tourny)

Japanese studies have shown that performing extremely slow concentric contractions for more than three seconds promotes muscular hypertrophy by increasing the plasma concentration of anabolic hormones.

Low-intensity training applied to the isolated muscle and to the entire body at 50% of maximum intensity has led to muscular hypertrophy comparable to higher-intensity training at 80% of maximum intensity at normal speed.

Goto et al., 2009, Tanimoto et Ishii, 2006

Methods for developing explosive strength

Static-dynamic	Plyometry	Heavy-light	Pulling loads
Static: 10" at a given angle **Concentric:** 50 to 70% of MR 3 to 6 reps Maximum speed Break: 2 to 3' 2 sessions 48 hrs apart	**Change** in height 40 to 80 cm Load: body weight Reps: 6 to 8 Break: 3 to 4' 2 sessions 48 hrs apart	**Heavy load:** 2 to 4 MR **Light load:** 40% of MR Reps: 6 to 8 Light-heavy sequence without stopping Sets: 3 to 4 Break: 3' 2 sessions 48 hrs apart	**Elastic load** strapped around pelvis Maximum running speed Speed must be greater than or equal to 50% of max. speed Return running backwards

Figure 7: development of explosive strength in footballers

Example I A mixed session: muscle-building and small-sided games

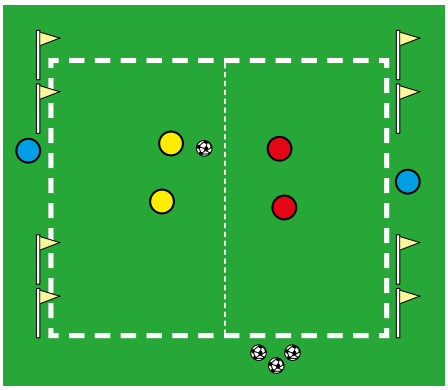
Exercise 1: heavy-light muscle-building combined with 2 versus 2 – small-sided game.

Heavy-light: (3 x heavy + 6 x light) x 2 – break = 1'30"

Physical quality: aerobic power (MAS)

2 versus 2 without goalkeeper with central support and back-up player
Attack: attacking 2 small goals
Defence: defending 2 small goals

Organisation: pitch: 25 x 15m – 2 versus 2 – two-person play and two-person play for a third player – using pitch length
Procedure: free game. Attack and defend 2 small goals with 1 neutral central support player and 1 neutral central back-up player.
Instructions: use the partner as direct assistance and the neutral players as indirect assistance.
Working time 1'30"



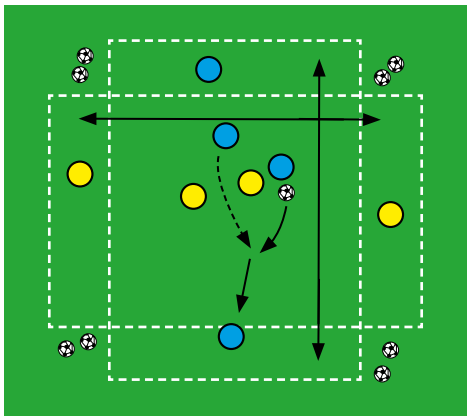
Example II Muscle-building with sled-dragging combined with 2 versus 2 – small-sided game

15m run pulling weight – 15m return walk – 15m backwards run – 15m run pulling weight x 2 – break 1'30"

Physical quality: speed and acceleration based on MAP

2 versus 2 without goalkeepers + support players and back-up players
Attack: keeping possession of ball between support players and back-up players
Defence: intercepting and regaining possession of the ball

Organisation: 2 intersecting rectangles with a 15 x 15m central zone for keeping possession of the ball in a 2 versus 2 with support players and back-up players (15 x 5m zones for support players and back-up players)
Procedure: the blues keep the ball using their support player and back-up player in one direction. The yellows must intercept, regain possession (regaining possession possible with one of the two yellows being permitted to go into the support or back-up zone) and keep possession of the ball and then use their own support and back-up players in the other direction.
Instructions: to keep the ball, use the spaces and the gaps in the direction of the game. In defence, anticipate in order to press the receiver.
Variant: each time the ball goes out, throw in a new one. Only 1 touch for support and back-up players – or they must take 2 touches.
Working time 1'30"



Combination of physical qualities to be developed in football players

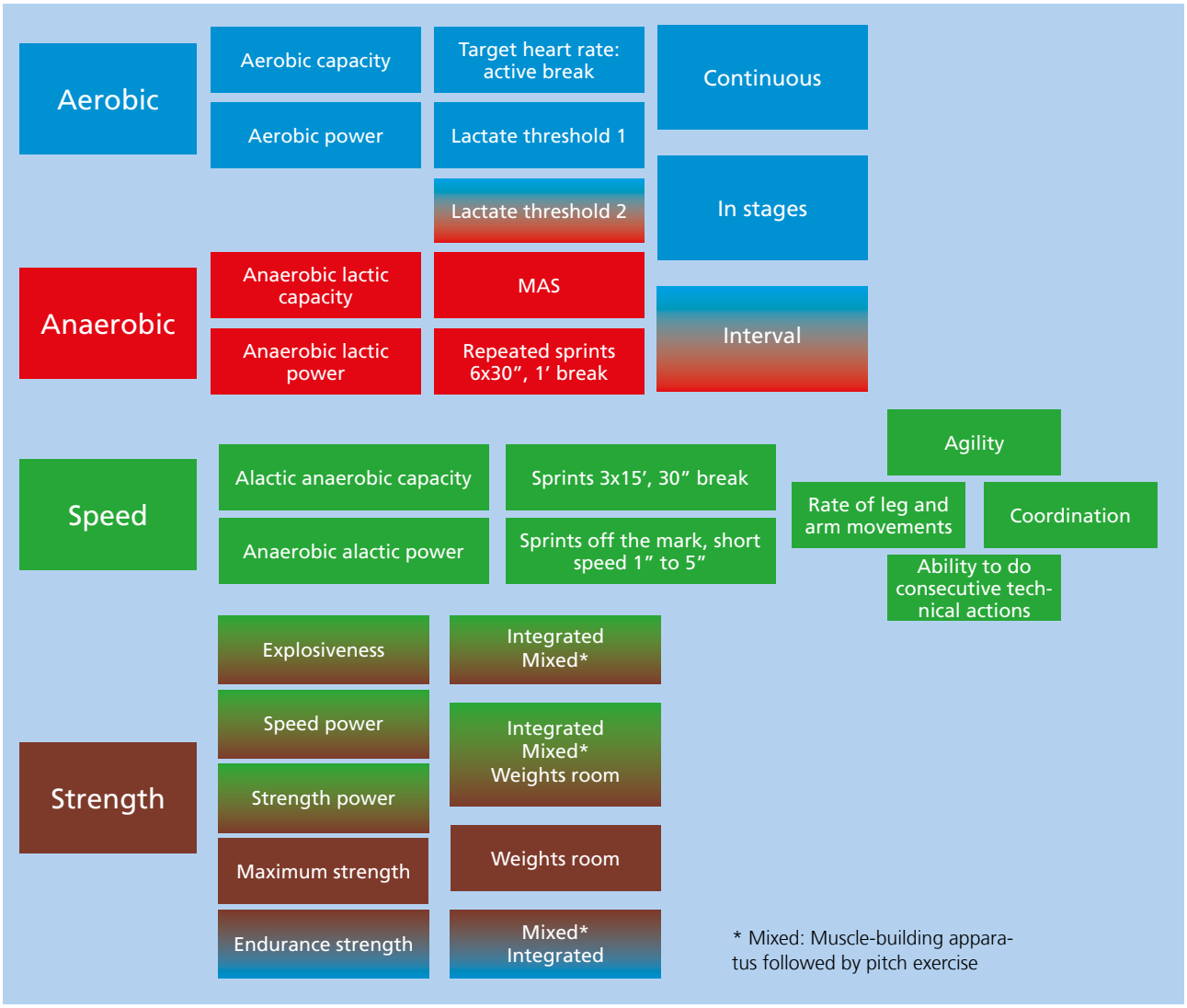


Figure 8: summary of aerobic, anaerobic, speed and strength exercises

5. Advantages of small-sided games in integrated physical preparation

Advantages of small-sided games in integrated physical preparation

The benefit of small-sided games for the coach is that they can offer an insight into real game situations. This type of activity has multiple objectives and draws upon different energy pathways as well as skills and tactics specific to football. Small-sided games are difficult to quantify in terms of intensity, but they enable the different aspects of players' potential in specific match situations to be evaluated.
The fewer the number of players, the more they will be individually exposed to the demands of the game and the greater the exertion.
Small-sided games can be played with equal or unequal numbers of players and with the organisation and procedure defined according to the chosen objective. They reproduce a specific playing system situation. The exercises are selected according to the time available, the number of players and the surface used. The demands on the players are intended to replicate as closely as possible the actions used in a match. Based on data relating to players' cardiac activity, various studies show that small-sided games, from 3 versus 3 to 5 versus 5, achieve maximum heart rate percentages which are similar to those achieved during intermittent or continuous endurance training exercises (figure 1).
Comparing data from small-sided games with data obtained from intermittent exercises of identical ratios (30-30 and 15-15) at 100% of MAS with active breaks shows a similarity with small-sided games of 6 versus 6 on half a pitch or 8 verus 8 on three-quarters of a pitch.
The results of a comparative analysis between small-sided games (1 versus 1, 2 versus 2, 4 versus 4, 8 versus 8 and 10 versus 10 with or without goalkeepers) and short intermittent exercises (30" activity – 30" active or passive break, 15-15 with passive break and 5-20 with passive or active break) show the physiological similarities between these two types of activity. Therefore, some small-sided games can provide a form of activity that is similar to short intermittent exercises. Taking into account the high intensity and technical demands placed on footballers, combining technical-tactical components with physical activity enables small-sided games to be assimilated into football-specific integrated physical training. However, although physiological data shows that there is a similarity between some types of small-sided games and some types of intermittent exercises, to our knowledge there is no valid data concerning the peripheral muscular response. Despite data showing that they meet many objectives, small-sided games cannot match the precision of traditional physical exercises or the longer and more controlled strenuous physical exertion that the latter entail, and should not completely substitute these.
The use of lactic or alactic anaerobic systems depends on the duration of rest periods between the repetitions. For the same overall amount of time using the aerobic system, it has been observed that the shorter and more repetitive the opposing stages, the more demands are made on the lactic and alactic anaerobic systems. This depends on the pace of the match.
The combination of the different types of small-sided games used in the session should add up to a total distance covered of between 3,600m and 4,200m. The intensity should preferably be in the range of 6' to 45" in duration.

Example of a 4 versus 4 game: impact on the energy, cardiac and muscular demands placed on the football player

Organisation: 40 x 33m playing area (2 penalty areas)		
First game: 4 versus 4 in six periods of 3′ (18′)	break 2′ (10′)	total 28′
Second game: Five periods of 4′	break 2′	total 28′
Third game: Four periods of 5′	break 2′	total 26′

The three configurations induce exhaustive stress on the aerobic system. The first and second games show higher levels of lactic acid with high muscular fatigue of the legs.

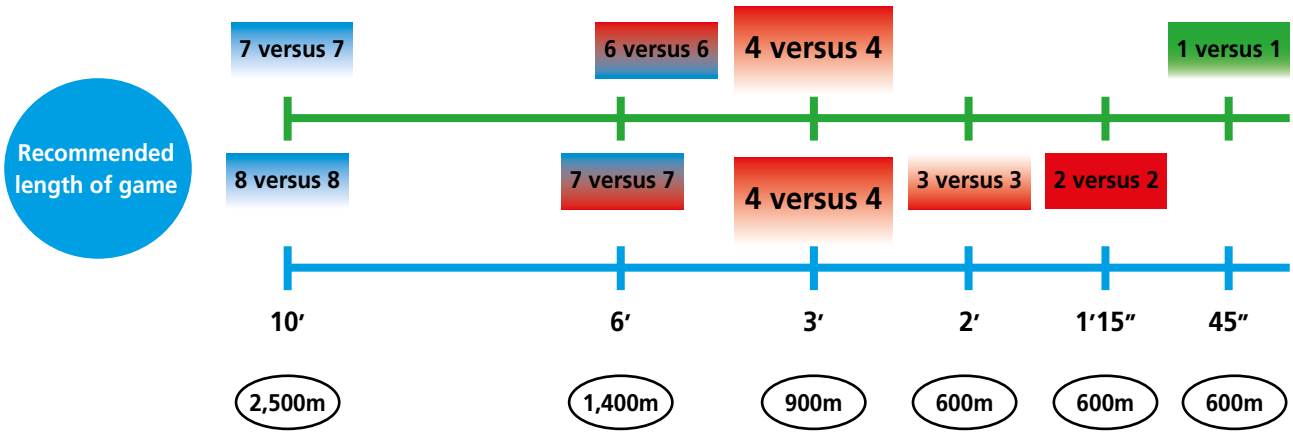


Figure 1: small-sided games quantified by duration

4 versus 4 structure

4 versus 4 is the smallest form of a full match

Using a diamond-shaped formation, which allows many game situations in groups of three in triangles, enables the coach to use this form of small-sided game to develop the tactical sense and behaviour of his players and to constantly provide them with the attacking and defending situations that they would find in an 11 versus 11 game.
Likewise, when used during physical preparation, playing a 4 versus 4 game deploys all the energy processes, thus enabling the coach to develop and/or to maintain the physical qualities required for an 11 versus 11 match.

By adjusting the dimensions of the pitch, the working time, the length of break, the number of repetitions or even the number of sets, the coach or fitness coach can easily regulate the amount of energy that he wants the players to expend while remaining in a "football context". Therefore, the small-sided 4 versus 4 game may be said to be the "meeting point of methods".

Evaluation and tests

Aerobic test to check the level of intensity

In order to split players into exercise groups, it is important to perform various endurance tests at the beginning of the season. The aim is to obtain correlating accurate and reliable physiological data from the laboratory tests (analysis of exhaled breath) and the field tests. The exercises will increase in volume and then progressively in intensity in order to rapidly evolve into intermittent exercises with the aim of naturally reproducing the specific nature of football.
The test is performed on a football pitch (68mx105m) with a 300m lap marked around it (figure 2). It allows the intensity of running at speed to be determined while monitoring the heart rate to develop the player's endurance potential (Chanon and Stephan, 1986).

After warming up, the player completes three stages:

PS1 : run 1,000m in 6' (i.e. 1'48 per 300m lap) at a speed of 10km/h
→ 1' break

S2 : run 1,000m in 5' (i.e. 1'30 per 300m lap) at a speed of 14km/h
→ 1' break

S3 : run 1,500m as fast as possible
→ Complete break

The heart rate is measured at the end of each stage, and every 30" during the complete break.
These three stages form a series, and the maximum heart rate at the third stage allows the VO_2max index to be estimated.

VO_2max (ml/min/kg) = 3.5 x speed (km/h)

The maximum speed of the third stage corresponds to the maximal aerobic speed (MAS).

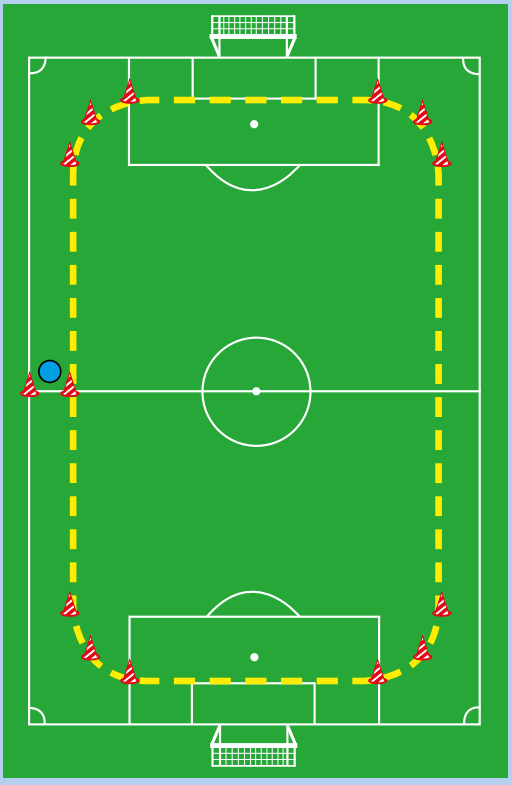


Figure 2: 300m lap on football pitch

Example:
A 20-year-old footballer with a resting heart rate of 60 beats per minute (bpm) completes:

- Stage 1 with a heart rate of 150 bpm (checked during the minute of break time),
- Stage 2 with a heart rate of 175 bpm (checked during the minute of break time),
- Stage 3 with a heart rate of 190 bpm (checked during the complete break),

After the one-minute break at the end of S3 which he ran in five minutes (18km/h), his heart rate is 140 bpm and it goes down to 100 bpm after three minutes. The graph below shows three corresponding zones of effort:

- Zone 1: between S1 and S2 at the aerobic threshold (AeT) or lactate threshold 1
- Zone 2: corresponding to the aerobic capacity (AC) during S2
- Zone 3: corresponding to the maximal aerobic power (MAP).

The heart rate is measured every 30" during the five minutes of break time to evaluate the recovery index, which is calculated as follows:

Heart rate at end of S3 - heart rate after 1' break

A good recovery rate would be a lowering of the max HR to the threshold HR (Z2) in less than 45 seconds, or a lowering of 50 bpm in one minute. The recovery rate serves as an indicator for monitoring the quality of recovery during the repetitions and during the sets. When the heart rate at the end of the repetition or between the sets is higher than the recovery rate, it means that the activity is too strenuous and the number of repetitions can then be reduced, or the break period extended in order for the heart rate to return to the value indicated by the recovery rate. These recovery rates allow us to find out how much effort is being exerted in training situations.

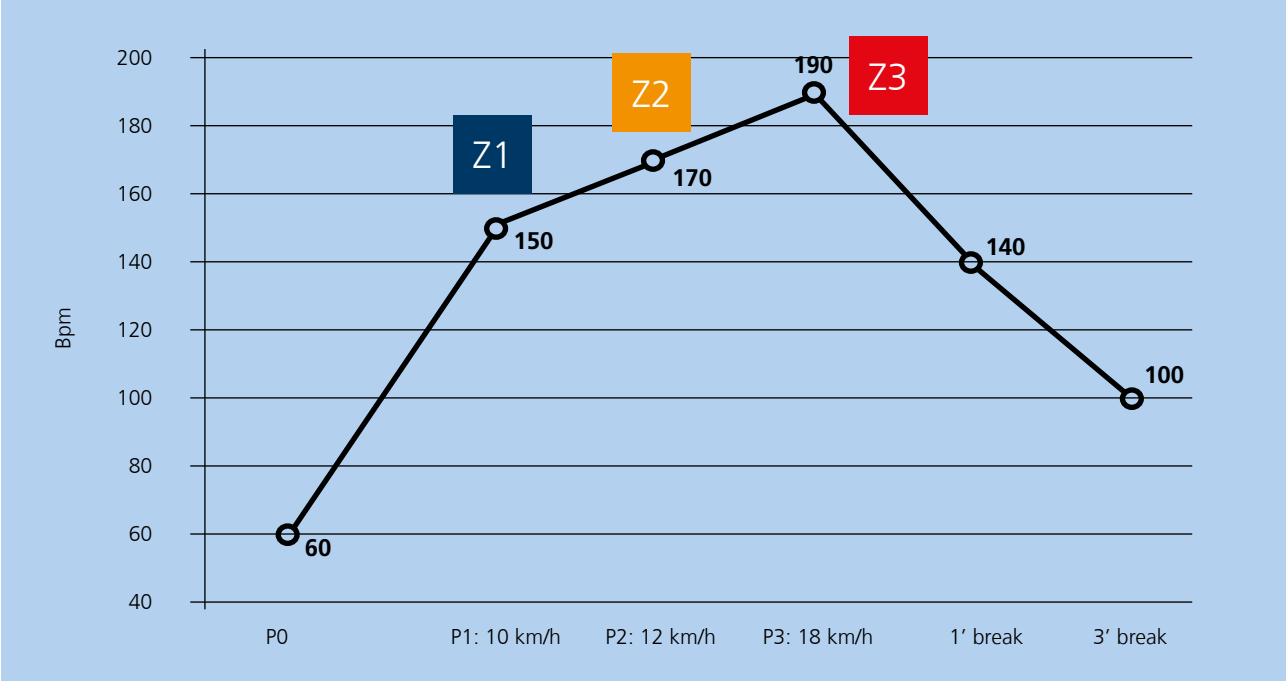


Figure 3: heart rate and recovery rate

Exercises with balls and aerobic capacity games

Examples of threshold activity

3′ game / 1′30″ break 6 - 8 times
4′ game / 2′ break 4 - 5 times
6′ game / 2′ break 3 - 4 times

Principle: not to go below 130/140 bpm before starting again.

Note: to reach the objective of the activity at lactate threshold 2 in an adult, extend the playing time as, in general, the longer adults play for, the less energy they will expend.

Basic aerobics ---> improvement in physical capacity
Example: (the time will depend on the fitness of the player)

12′ x 2 ---> (4′) } Speed: 70% MAS
} Pulse: 160

And increase the duration of the exercise: ----------> 30 to 45 min
Then, increase the intensity: 70% ----------> 75% ----------> 80%

Aerobic endurance → improving the threshold:

To improve the lactate threshold, effort should be exerted close to the threshold:

2 x 12′ at anaerobic threshold (break 3′ at 50% MAS)
3 x 12′ at anaerobic threshold (break 3′ at 50% MAS)
2 x 15′ at anaerobic threshold (break 3′ at 50% MAS)
2 x 20′ at anaerobic threshold (break 3′ at 50% MAS)

Step training

10′ at 70% MAS
10′ at 80% MAS
10′ at 70% MAS
10′ at 80% MAS
5′ at 85% MAS

10′ break at 60% MAS

Staircase structure

10′ at 70%
10′ at 75%
10′ at 70 %
10′ at 80 %
10′ at 70 %
5′ at 85%

10′ break at 65% MAS

How to mark out a 300m lap on a football pitch?

Practical tips:

– Mark out a line 60m in length along the 5.5m line, stopping 4m from the touch line at either side.
– Mark out a line 95m in length at right angles to the other line and 4m from the touch line.
– To round off the lap at the four corners, plot the angle arc 2.5m from the right angle on the angle bisector. The bend will then measure 8m.

The player starts running at the halfway line and runs:

– 42m along the length,
– 8m on the bend,
– 50m along the width,
– 8m on the bend,
– 84m along the length,
– 8m on the bend,
– 50m along the width,
– 8m on the bend,
– 50 m de largeur,
– 8m on the bend,
– 42m along the length, back to the starting point (halfway line). Each circuit is 300m which can be divided into stages of 50 – 100 – 150 – 200 and 250m.

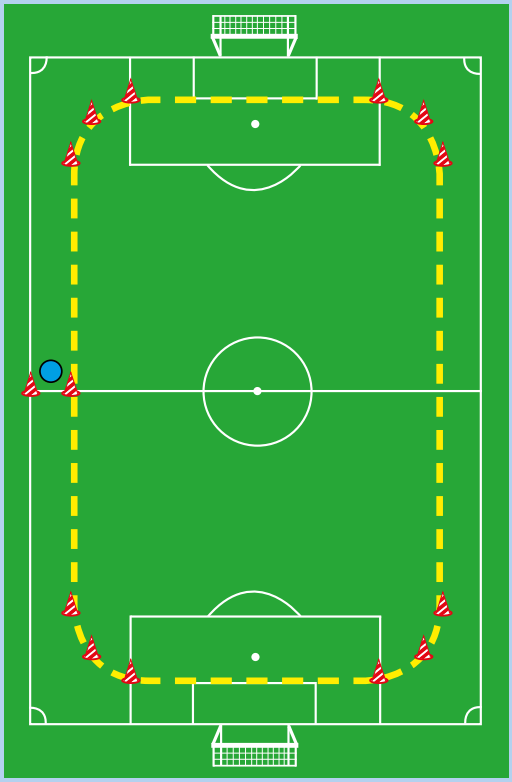


Figure 4: 300m track on a football pitch

Speed test: IPTS-FB

Intermittent performance test specific to football

The physiological development of footballers plays a crucial role in their physical potential and is a decisive factor for performance. Research has largely shown that improving aerobic and anaerobic capacity plays a major role in a football player's success (Bangsbo, 1994).

Analysing the demands placed on footballers has revealed the intermittent nature of actions in a game and the necessity of being able to repeat high-intensity exercises. At the physiological level, training through intermittent exercises makes demands on the aerobic and anaerobic metabolism at the same time. It has been shown that improving the oxidative capacity of enzymes and reaction times has an impact on the peripheral components of performance (Lemmink and Visscher, 2005).

Traditional physiological responses in intermittent shuttle-type exercise tests with single-distance races are well known (Prommer et al., 2007; Pradet, 2002).

However, football involves a lot of changing direction and dribbling combined with explosive actions and rapid acceleration and deceleration. Such changes in speed and direction affect the muscular development of the football player and have an impact on the amount of energy used. In comparisons with tests using normal running, higher physiological responses were recorded (Dellal et al., 2011).

Field tests on footballers have enabled the maximal aerobic speed to be measured (such as the Probst test suggested by Labsy et al., 2004), involving changes of direction. Moreover, the various technical skills required of football players during a match may be altered by metabolic modifications, in particular the quality of sprints and passes, and accuracy of shots.

Field tests such as the Loughborough intermittent shuttle test have been used to create training sessions that make the same physical demands on a footballer as a match situation (Ali et al., 2010; Magalhaes et al., 2010; Nicholas et al., 2000).

The intermittent performance test specific to football (IPTS-FB) is a test to evaluate the physical-technical criteria for the analysis of anaerobic-type qualities specific to football.

Good performance in football depends on the coherence and complementarity of the qualities of different players within a group. Thus, one single player, however talented, cannot alone combine all the technical and physical qualities required to ensure regular good results and performance.

By gathering information about repeat-sprinting ability, the IPTS-FB makes it possible to update the distribution of performance criteria across the group. This involves classifying players according to various performance criteria and distributing these criteria depending on the group of players and positions.

The random nature of the IPTS-FB, combined with the speed of execution and the information included, pushes players to organise their decisions and their motor actions by successive steps according to their quality of observation. The effect of fatigue is decisive in this context (Labsy et al., 2012).

The focus is on performance criteria specific to football, such as speed endurance or the ability to sprint repeatedly, on observing rates of fatigue and its effect on technical qualities, and on taking into account coordination factors relating to speed and game skills.

Results of tests have several objectives:

- To evaluate the physical and technical activity carried out throughout the season according to the age of the players;
- To identify players' strengths and weaknesses according to selected criteria;
- To perform an objective distribution of physical and technical qualities according to the players and their positions;
- To obtain an objective classification of performance criteria specific to the players;
- To identify players according to the most relevant criteria for each position;
- Finally, to create a database organised by age group in order to have points of comparison between different schools and countries.

Data, performance criteria and conditions for carrying out the IPTS-FB

Performance criteria	**Conditions for carrying out the test**	
Maximum speed	20m change direction	Without ball
Maximum speed	15m change direction	Slalom with ball then shot at target
Average speed	On 20m change direction	Without ball per exercise
Average speed	15m	With ball 2 cones then 1 shot per exercise
Maximum speed	35m	In a row
Average speed	As per exercise 1	
Average speed	As per exercise 2	
Speed endurance rate	Best time/average time of 6 attempts	
Accuracy rate	(100 – average time for exercise)/ number of errors	The more accurate the player, the higher the rate
Speed off the mark	10m standing start	
Backwards running speed	10m standing start	

Figure 5

IPTS: procedure

- Football skills (FS): three successive sprints including one FS with a 30" active break (walking) between the sprints.
- Time of exertion in football (TEF): 30m walking, 10m standing start sprint, 20m walking, 30m jogging, 10m backwards sprint, 20m walking.
- Football skills: three successive sprints including one FS with a 30" active break (walking) between the sprints.

IPTS with photocells (five gates) and three ball sources – overview

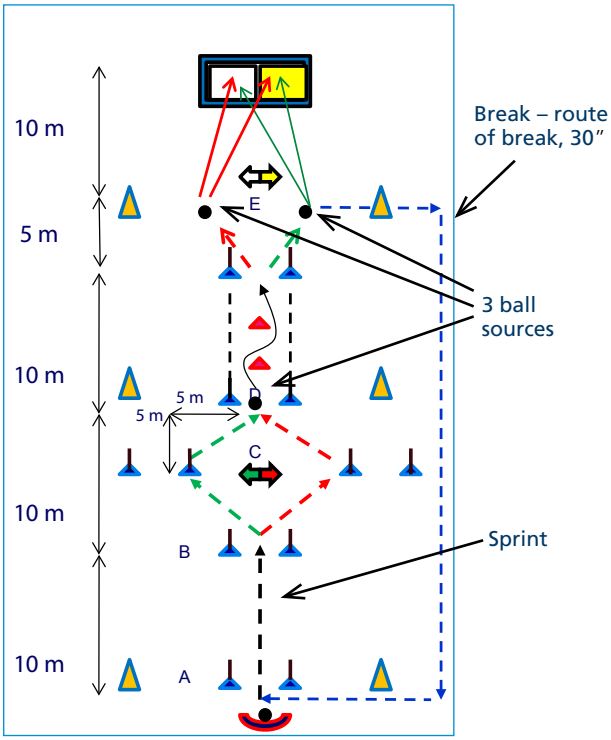
Procedure for football skills section (FS)
Instructions to players
First signal = start: (the player must remember three things with one signal)

1- start
2- choice of change in direction (**left** – right)
3- choice of ball to kick at the end of the circuit.

➔ Number 3 will be the **opposite direction** of the first change in direction (left – **right**). If the first change in direction is to the right, the ball to be kicked at the end of the circuit will be on the left (and vice versa).

➔ **Second signal during the slalom:** choice of direction of kick (to the right-hand or left-hand side of the goal). The player should **look up** to see the signal telling him which side of the goal he should aim at.

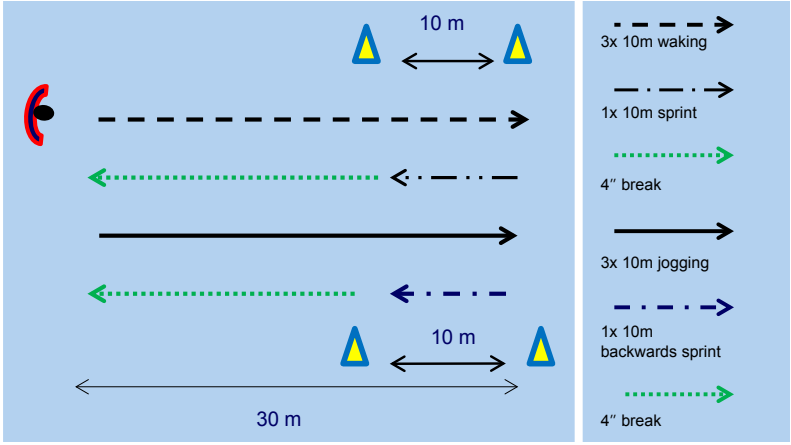
➔ After the first change in direction, the player must complete a 10m slalom without stepping outside the limits, without touching the cones, **stop the ball** between the two last cones of the circuit and then move without the ball towards the **ball situated on the side opposite** to the side already taken during the first change in direction. Lastly, kick in the direction indicated.



Football skills section

Time of exertion in football (TEF) section:

– 30m walking
– 10m sprint
– 4″ break (20m walking)
– 30m jogging
– 10m backwards sprint, 20m walking
– 4″ break (20m walking)



Intermittent exertion section

Figure 6

IPTS data (figure 6)

- Maximum speed 20m with change in direction without ball
- Maximum speed 15m with ball (slalom two cones then shot at target)
- Average speed 20m with change in direction without ball per exercise
- Average speed 15m with ball (two cones then shot) per exercise
- Maximum speed 35m in a row
- Average speed for exercise 1
- Average speed for exercise 2
- Speed endurance rate: best time/average time of 6 attempts
- Accuracy rate: (100 – average time for exercise)/number of errors: the more accurate the player, the higher the rate
- Speed off the mark: 10m standing start
- Backwards running speed: 10m standing start

IPTS-FB with manual timing and only one source of balls

Football skills (FS)
Three successive sprints with 30" walking break.
– Timing 1: from start/take ball when it is reached/kick the ball (35m from start).

Details:
One single ball source at the start of the ball dribbling area. The player continues to move right or left with the same ball before kicking it.

Time of exertion in football
– Timing 2: 10m sprint off the mark from when the foot leaves the ground
– Timing 3: 10m backwards running off the mark from when the foot leaves the ground

Simplified analysis of IPTS-FB data
– Maximum speed 35m of FS
– Average speed over 35m per exercise
– Speed off the mark: speed at 10m standing start at the TEF
– Speed backwards running: speed at 10m standing start at the TEF

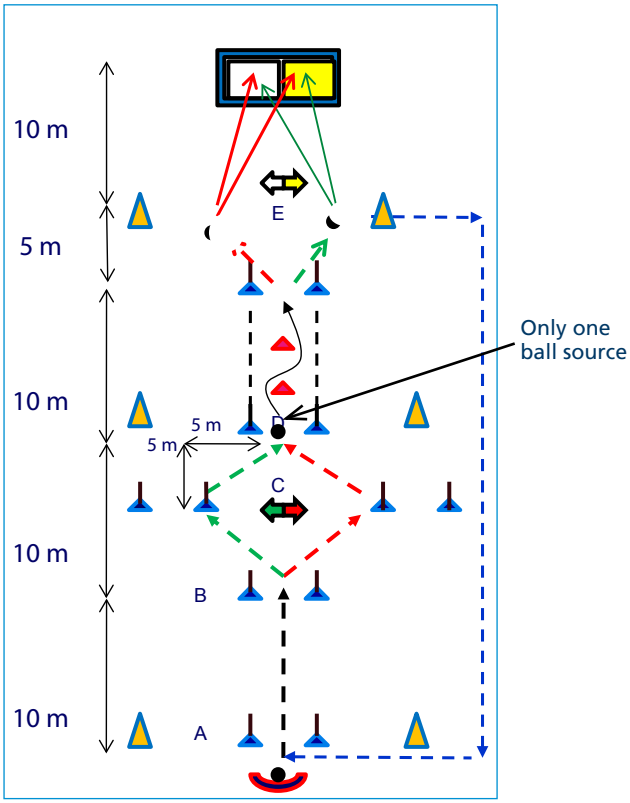


Figure 7: IPTS with manual timing and only one ball source

6. Quantifying the training load

Quantifying the training load

During the last 20 years, the workload imposed on football players has risen relentlessly. The training load may be influenced by the level of physical fitness, injuries, illness, environmental conditions and psychological state of the player. Quantifying the load is thus of great importance in modern training programmes for physical preparation, monitoring performance, preventing injuries and when returning to sport after injury.

Quantifying the load must take into consideration the combination of physiological and psychological aspects. Physiological indicators are essentially found in the intensity, frequency and duration of matches and training sessions. During a match or training session, the physical effort causes physiological stress in the player, which characterises the internal load that is generally seen in the physiological responses of the body to the effort exerted. The external load represents the physical work that has actually been done, which is determined by the combination of the intensity, duration and frequency of the training or match. Psychological factors (cognitive, affective and perceptive) may also influence the energy metabolism required during training sessions or matches, and are therefore additional factors to be taken into consideration when quantifying the load. Psychological indicators are generally based on the amount of perceived effort using analogue scales.

Physical effort generally consists of three components: frequency, duration and intensity of training sessions. In football, the duration and frequency of training sessions or matches are easy to quantify. This is not the case for intensity.

At the physiological level, because of the linear relationship between expenditure of energy (VO_2) and heart rate for all levels of intensity, the heart rate is very often used to estimate the intensity of the workload on the pitch; as it is easy to measure, it is a tool that allows the rhythm of the intensity of the activity to be monitored and adjusted.

At the psychological level, the rating of perceived exertion (RPE) described by Borg (1970) has numerous sporting applications. The perceived difficulty of effort increases linearly according to the intensity and duration of the activity. It serves as an indicator of physical capacity as well as a valid method of estimating, specifying and monitoring the intensity of the exercise.

Quantifying the training load, very often combining physiological and psychological factors, is carried out in group sports such as football using the "TRIMP" (training impulse) method developed by Banister et al. (1975) and the perceived exertion method (Borg, 1977) modified by Foster et al. (1996). These methods have shown their effectiveness in quantifying the load when evaluating different training sequences.

Studies using the RPE show strong correlation with changes in the heart rate during training.

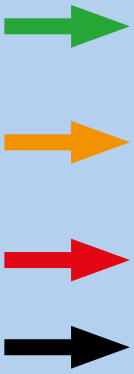
Measuring perceived exertion: RPE

The rate of perceived exertion (RPE) is a method of monitoring the training load in which each athlete estimates the amount of perceived exertion of each session, with the training time also recorded (Foster et al., 2001). To calculate the intensity of a session, footballers are asked to respond to the following question during the cool-down part of the session (often the last ten minutes):
"How did you feel during the training session?"
In 1990, Borg developed a 15-level scale to describe the intensity of exertion during physical exercise, with the intensity going from rest to maximum exertion (from six to 20, i.e. a heart rate of 60 bpm to 200 bpm). He created the following formula for the relationship between heart rate and perception of exertion:

HR = RPE x 10

The perception of exertion largely depends on the degree of strain felt by the muscles or by breathlessness and the degree of exertion experienced.
Six signifies "no exertion at all" and 20 signifies "maximum exertion".

Example – rating 9: perceived exertion very light. 13: perceived exertion slightly hard but the subject feels able to continue. 17: perceived exertion very hard. 19: perceived exertion at an extremely tiring level of intensity (figure 1).



6. No exertion
7.
8. Extremely light
9. Very light
10.
11. Light
12.
13. Slightly hard
14.
15. Hard
16.
17. Very hard
18.
19. Extremely hard
20. Maximum

Figure 1

Practical tips for use:
Instructions for the player: "Evaluate your feeling of exertion, ignoring the objective data about the actual physical demands. Do not overestimate or underestimate. It is your own feeling of exertion that is important, you should not be influenced by how other people say they feel. Ignore the opinions of others. "
Tip: use a double-sided piece of paper; the player should write without communicating with the other players, the training is on the front, the rating of perceived exertion is on the back, the coach writes the value on the front.

Evaluating an integrated physical preparation session

A session is prepared and evaluated in terms of arbitrary units and calculated according to the formula:

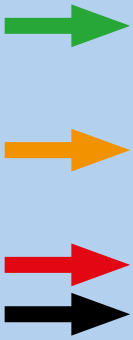
RPE x time of exertion (in min) = value in arbitrary units (AU)

This quantification may be analytical or global; evaluation of the RPE is done at the end of the session. This calculation of the training load in arbitrary units is done by the coach and by the players. The difference between the intensity of the sessions indicates whether the coach's objectives match the amount of exertion perceived by the players.

The total weekly training load should be between 3,200 AU and 4,000 AU not including matches.

An estimate shows that the risk of injury increases when the load is greater than 4,500 AU per week (excluding matches). A monotony index is calculated, which corresponds to the difference between the daily loads. The smaller the difference, the more monotonous it may seem.
These quantification methods also enable the individual loads for each player during a training period to be measured. Each missed session is counted as 0. Replacement sessions following injury are evaluated as well as individual additional sessions. All the individual sheets are compared with the group sheet and allow the state of fitness of the player to be observed and the necessary adjustments to be carried out.

To complete these reports, it is possible to ask the player before each session about any delayed onset muscle soreness (DOMS), in order to evaluate the DOMS using a verbal scale (Hooper scale, figure 13) converted to a numeric value from 1 to 7 (Hooper et al., 1995).



1. No pain
2. Very slight muscle fatigue
3. Slight muscle fatigue
4. Muscle fatigue
5. Slight muscle pain
6. Medium muscle pain
7. Severe muscle pain

Figure 2: Hooper scale, muscle soreness

Quantifying the training load

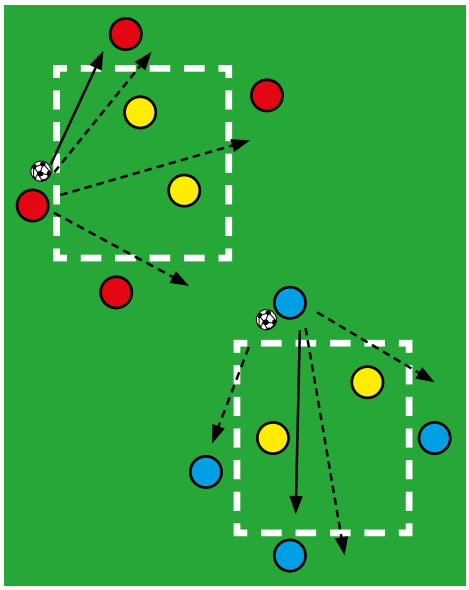
Session type / TOTAL AU: 496 / DOMS: 3/7

Physical quality: aerobic capacity

Without goalkeeper. 2 or 3 groups of 6 players : PIGGY – 4 versus 2
Attack: keeping the ball, changing side compulsory
Defence: intercepting passes in the square

Warm-up: 10' RPE : 7 x 10' → 70 AU	Heart rate check	Resting heart rate at end of sets
Organisation: 2 groups of 6 players. 10 x 10m pitch – 4 versus 2		
Procedure: 4 players around the square. 2 players inside the square. The players outside the square have two touches of the ball. If the ball is intercepted or lost through a bad pass, the passer goes into the middle. After completing a pass, players may switch sides.		
Instructions: look up to receive information. Use gaps – play on the move. Play accurate passes – anticipate runs – execute rapidly. Constant concentration.		
Variantes: Increase or reduce the number of touches – play 4 versus 3		

Working time	Length of break	Number of repetitions	Type of break
5'	Time for changing sides	2	Semi-active

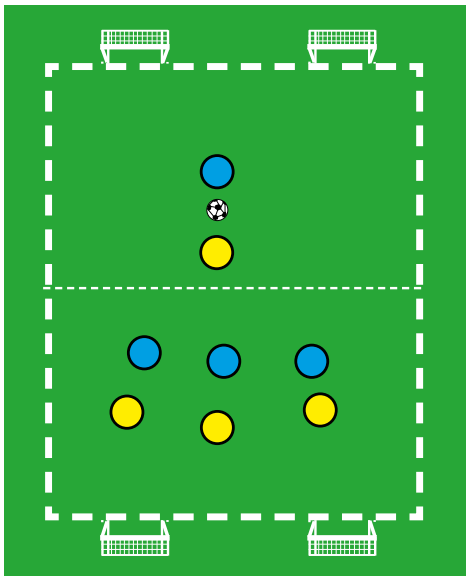


Physical quality: aerobic power 4 versus 4

4 versus 4 without goalkeepers and with two mini-goals – play using the width of pitch
Attack: using the width and depth of the pitch
Defence: defending zones using lateral movements

RPE: 18 x 12' → 216 AU	Heart rate check	Resting heart rate at end of sets
Organisation: 40 x 25m pitch – 4 groups of 4 players		
Procedure: opposition and play using the width of the pitch with 3 touches of the ball. A goal is only awarded if all of the players in the attacking team cross the halfway line. Play the offside rule.		
Instructions: use actions of support/back-up/runs into space and switches of play to create gaps in the opposition's defence.		
Variantes : 2 touches in the defending half and free play in the attacking half		

Working time	Length of break	Number of repetitions	Type of break
2'	1'	6	Semi-active



Physical quality: work in transitional zone (between LT1 – LT2)

Technical-tactical: 8 versus 8 with goalkeepers

Attack: using the width and depth of the pitch

Defence: defending zones, moving laterally and cutting off trajectories

Activity time: 14' RPE: 15 x 14' → 210 AU	Heart rate check	Resting heart rate at end of sets
Organisation: surface: half-pitch with 2 channels: 8 versus 8		
Procedure: goals scored from a pass from a channel count double.		
Instructions: rapid sequences. Varied angles of passes. Look for gaps. Use the width. Cut off trajectory. Close down spaces. Pack defence.		

Working time	Length of break	Number of repetitions	Type of break
7'	1'	2	Cool down

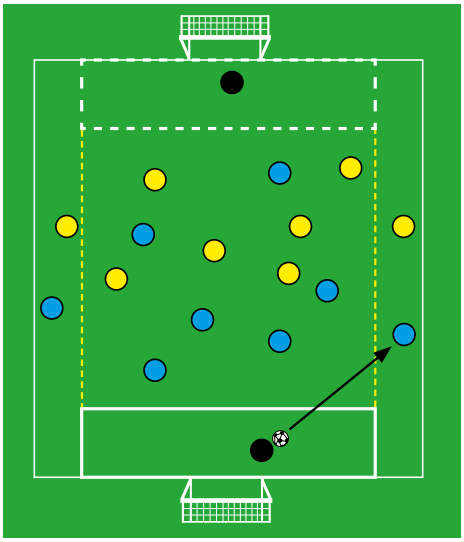


Figure 3: example of sheet for quantifying team training (session-type)

Evaluating and quantifying the training load is an effective factor in analysing collective performance

7. Development of physical qualities according to the age of the players

Development of physical qualities according to the age of the players

The level of development in puberty of the player must be taken into account when planning physical preparation and the development of physical qualities. Although it is difficult to plan physical preparation specific to the stages of maturity and the bone age of players, it is possible to plan the development, optimisation, frequency of training and injury prevention according to age category.

In training centres or academies, young players are generally grouped into U-15 and U-19 categories. The main objective for young players is to develop their physical qualities.

Coaches should work on the entire motor repertoire specific to football in order to minimise motor deficiencies.

Above the age of 20, work on various physical qualities should be optimised and monitored. Optimising a player's strengths becomes a priority alongside working on weak points through small specific stimulation exercises. For players with a long career behind them, recovery between matches is fundamental and specific training is essentially aimed at preventing injury, taking into account previous injuries suffered. Technical experience, excellent motor skills and tactical qualities are the strengths of these players.

Their overall workload should be reduced and the reduction should be greater the older the player.

As the development of physical qualities is affected by the level of maturity, it is important to recognise when is the best time to work on them. The level of training load combined with puberty accelerates the development of certain physical qualities such as strength and speed. Similarly, the training load may negatively affect performance through the prevalence of injuries around the time of puberty or in older players.

Thus, combining scientific data from the literature and practical experience of planning the careers of professional players has enabled us to understand the question of how to build and maintain players' physical qualities as they become experienced players.

In the U-15 to U-19 categories, aerobic power exercises may be performed separately or in an integrated manner. Each of these methods has advantages. In U-15s, aerobic power exercises done in an integrated manner may involve more playful activities with the ball. The fitness coach may combine aerobic power exercises with a coordination exercise, such as running circuits with the ball and taking decisions. However, this method carries a greater risk of injury.

Performing aerobic power exercises separately allows the training to be more individually tailored, thus enabling the MAS percentage to be quantified. The problem with this method is the difficulty of then transposing it to a game situation, but the advantage is that the players are less exposed to injury.

Maintaining and developing aerobic potential is usually done in two ways, one centred on developing maximal aerobic power and the other on aerobic capacity. The level of aerobic potential determines the ability of the player to recover between periods of activity and training sessions. Maintaining a high MAS throughout the player's career can help to optimise performance.

Exercising at the level of lactate threshold 2 is preferably only started in the U-17 age group. It may be done with younger players (14 years plus), depending on their stage of

development. This type of activity requires precise evaluation of the threshold: although in theory it is between 80 and 90% of MAS, there may be wide individual variations in this age group. A test for maximum effort carried out in a laboratory or with a portable device for analysing exhaled breath should be prioritised for U-17s in order to accurately assess the thresholds, the target heart rate and the areas of activity of the players. Exercising at lactate threshold 2 may be performed separately or in an integrated manner. While the heart rate is always monitored, the following factors may vary from session to session: time of effort, MAS percentages, the duration and the number of blocks/ units, as well as the type and length of the break. This lactic activity is mainly done with post-pubescent players, however simple modifications to the forms played may be implemented for younger players with small-sided game situations such as 2v2. At top-level training it is imperative that the players' activity "thresholds" are accurately measured at least once a year.

Mixed training sessions with short and medium-length intermittent exercises may be used in all age groups, replicating the intermittent activity of a match: 10-20, 15-15 and 30-30, with ball control skills. Depending on the aims of the session and on peripheral or central fatigue, the intensity of the game and the number of balls touched or the running time may be increased.

Speed, agility and coordination activities: the development of speed of leg and arm movements before and during puberty is essential, but it is around the age of seven that it is most important to increase the frequency and speed of movement. If this quality is not sufficiently developed at an early age, it is difficult to develop after puberty. Making rapid movements increases neuro-motor plasticity, which has the effect of developing coordination abilities, improving complex motor skills and increasing learning ability. Thus, by practising these types of motor skills, young footballers gain transferable motor skills that they can use and adapt to reduce learning time and improve effectiveness of technical moves.

It is the quantity and quality of these prior learning experiences that give the footballer a very high level of coordination. To achieve this effect, agility ladders, skipping, hurdles and hoops can be used regularly in circuits for the development of coordination and motor skills. Coordination exercises with a ball for more specific motor skills include forward and backward movement, suggested or forced changes in pace (smart speed) with different types of information: visual, aural, opposite or additional; changing direction on both sides. Speed of leg and arm movements is an important factor in mastering more complex coordination skills. Studies carried out at the FC Barcelona training centre have shown the positive effect of targeted complex coordination training on the level of technical football skills.
The aim for players in the U-17 and U-19 age groups is to improve motor skills and gain broad coordination skills, and to be able to play on the right and the left (symmetry being preferable). For mature players, it is preferable to optimise their strengths.

The development of muscular strength in the young footballer is dependent on his level of maturity. Strength increases in a more or less linear correlation with age. Muscle-strengthening and strength endurance training may start to be practised in the U-15 age group. Muscular strength is proportional to the sum of the muscle cross sections, i.e. the more footballers increase their lean body mass, the stronger they become. In fact, from the U-15 age group, muscle-building with small additional weights is possible. This type of training may be begun relatively early, as learning the techniques is fundamental. Body weight and small apparatus (medicine ball, weighted wristbands, empty barbells, traction belts) are often used for core conditioning and muscle-strengthening exercises and sessions take the form of circuit training. In the U-15 age group, low-intensity plyometric training can be very useful by applying the force of gravity in order to increase bone mineral density. These mechanical stimuli affect the growth of the long bones, as the newly formed trabeculae (inner part of the bone: lamellae, cervical fasicles and trabeculae) move according to

the direction of the predominant mechanical forces so as to optimise the resistance of the bone tissue to stresses. This stimulation of the bones by exercise can partly be explained by the increase in the diameter of the blood vessels. The impacts generated by kicking, receiving the ball, running and shooting all require good bone and vascular development.
Starting from the U-17 age group, after growth has peaked, developing maximum strength and explosiveness are the priorities. This physical quality benefits from the increasing levels of testosterone in this age group. This effect, combined with the increased level of training load, will help to accelerate tissue and cell growth. Thus, in the U-17 and U-19 age groups, young footballers move from muscle-strengthening to muscle-building. Muscle building must be done progressively and taken into account when calculating the training load. Muscle strength or explosiveness training (which combines strength and speed) can take place in the weights room or on the field or even in mixed situations. This activity may vary depending on the objectives and the individual characteristics or positions of players.
In players over the age of 30, strength training is similar to training to maintain fitness or reconditioning after a break. Because of its prophylactic aspects, muscle-building is generally done in short targeted sets. The eccentric method can improve the resistance or volume of connective tissues such as fasciae and tendinous structures. In experienced players, good self-awareness usually leads to a reduction in the training load and optimisation of the regeneration and recuperation processes.
This reduction in training load should also be applied to young players who have recently started at training centres, as going from two sessions a week to seven or nine sessions can cause over-training injuries. The prevalence of groin injuries, which often begin with pains in the adductors, hamstrings and iliopsoas, should be borne in mind. The reasons for these pains are due to the physical demands specific to footballers, such as flexion of the trunk on the leg when shooting, tackling and use of the adductors when stretching out the leg or changing direction. The characteristic stiffness of players after the peak in growth of the hamstrings, the psoas and the quadratus lomborum combined with a lack of strength of the oblique muscles, can cause shearing at the pubis, creating localised pain of the symphysis pubis. Additional stretching and core conditioning exercises can help to prevent the occurrence of pain.

Development of proprioception is a recent idea in the world of football; it is aimed at improving balance and coordination and can help prevent ankle and knee injuries. Exercises for developing proprioception may be started from the U-15 age group with floor work, ball-juggling, exercising on sand or playing football barefoot, all being good for the development of proprioception. Starting from the U-17 age group, more challenging proprioception exercises may be introduced, with the use of balance balls and gym balls, while maintaining a high level of safety. These proprioception exercises should be done every week in blocks of 20 minutes on average. For more expert players, the exercises can be done while standing with the gym ball, coordination then reaching its peak. Proprioception, coordination and motor skills are closely linked; these qualities may be exercised in warm-ups, as an alternative to the laps of the pitch that are still a too-common fallback for coaches.

Physical qualities to be developed according to the age of the players

	U-13	U-15	U-17	U-19
Aerobic aptitude	Aerobic capacity +++ Intermittent ++ Continuous +	Aerobic capacity ++ Lactate threshold 1 ++ Maximum aerobic power +++	Aerobic capacity ++ Maximum aerobic power ++	Aerobic capacity Maintaining fitness Maximum aerobic power ++
Activity at lactate threshold 2	++ Intermittent (games: 6 versus 6, 7 versus 7, 8 versus 8)	++ Intermittent – long (games: 6 versus 6, 7 versus 7, 8 versus 8) (4 versus 4) +	+++ Intermittent – medium (games: 6 versus 6, 7 versus 7, 8 versus 8) (4 versus 4) ++ (2 versus 2, 3 versus 3) +	+++ Closer to MAS (4 versus 4) (games: from 1 versus 1 => 8 versus 8) +++ (4 versus 4) +++
Anaerobic aptitude	Sprint off the mark Agility Frequency of movement	++ max. development Intermittent – short	+++ max. development Intermittent – short Repeated sprints with or without ball, changing direction	++ lactic activity Enable recovery
Muscle development	Reinforce general core conditioning In the form of circuit training	Muscle building Endurance strength Low-intensity plyometric training	Maximum hypertrophic strength (upper and lower body) Speed power Explosiveness	Maximum strength Integrated planning Strength power Strength speed Explosiveness
Coordination	+++ Motor skills circuit	Football technique Agility ladders change in direction +++	Football technique Complex coordination with ball +++	Widening the range of max. coordination +++
Proprioception	Global balance Barefoot football	Ball-juggling balance Practising on sand Tennis ball	Balance board	Complex balance Balance board and gym ball

Figure 1

8. Managing the training load

Managing the training load

Physical preparation must take into account in particular characteristics linked to the age of the players (young players within the professional group or players over the age of 30), the level of expertise (number of matches per week), the level of the competition (cup match, national championship or international matches), players' previous injuries and finally the weekly timetable (training sessions and number of matches per week).

Young players who are part of the professional group should have more training time, with extra sessions and/or a specific additional activity at the end of the regular session. The coach may provide approximately two to three extra sessions per week depending on the number required to achieve the necessary level. Depending on the needs identified, the coach may set objectives with the player in order to estimate the time required to achieve the desired progress. Training sessions may therefore take the form of muscle-building sessions, sessions based on speed or aerobic-based sessions, for the physical aspects, and may also look at the technical, tactical and psychological aspects. In all cases the training is individually tailored in these sessions. General training sessions should be planned with some whole-group activities and some more tailored activities.

Another purpose of physical preparation is of course to reduce the risk of injury. Previous injuries and the position and profile of the player should be taken into account. The risk of injury is greater in older players, players with previous injuries, tired players and players who do not have strong muscles. It is therefore necessary to assess the level of possible risk of injury. The most frequent injuries in football involve the hamstrings, the adductors, the ankles, the knees

and the quadriceps, in that order. After this assessment, a tailored training programme aimed at reducing these risks should be drawn up based on the eccentric strengthening of the muscles at risk of injury and on proprioception.
Proper recovery is essential to ensure that training sessions and also matches can be performed under the best possible conditions. Taking a cold bath immediately after intense sessions or matches can reduce recovery time. The day after a match, a session can often involve the exercise bike or ergo bike to avoid the body impacting against the ground.
When training is scheduled twice a day, physical training can either be done in the morning or afternoon session, with the technical-tactical training taking place during the other session. However, chronobiological studies have shown that technical-tactical work is more effective if carried out late-morning, while physical activity is more effective if performed in the late afternoon. The opposite order, i.e. physical activity in the morning and technical-tactical work in the afternoon, can be chosen with the aim of creating reflex actions which require less motor intelligence than technical-tactical work. The disadvantage is that the participants will come to the technical-tactical session feeling tired (Labsy et al., 2009).

However, if technical-tactical work is carried out in the morning and physical activity in the afternoon, players will be physically and mentally fresh, enabling them to understand and resolve the tactical problems in game situations presented by the coach during the session, and the effectiveness of the physical activity in the afternoon will also not be impaired. Nowadays, coaches are usually encouraged to integrate physical activity into a

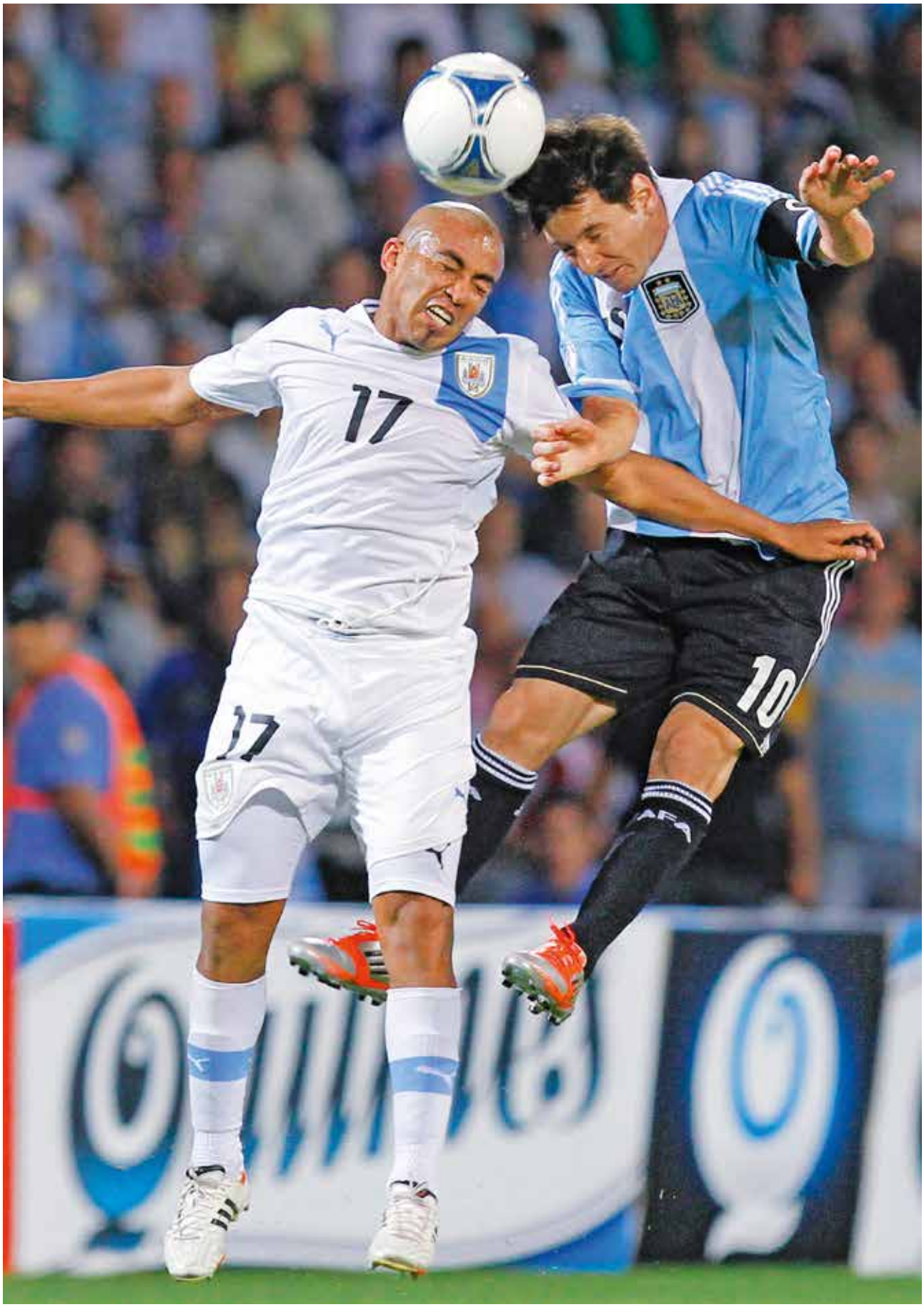
technical-tactical session. Furthermore, in the majority of cases in top-level football, it is rare to organise two sessions a day when clubs are often faced with matches every four days.
The **"integrated"** solution is a possible response to this problem, particularly at top-level clubs where the calendars are often overloaded.

At the very beginning of the season, when training has just restarted, sessions may be extended to two hours. In this case, many precautions must be taken not to incur serious muscle fatigue. For example, the adductors may suffer decompensation as a result of frequently stopping abruptly, which may over-expose the player to injuries.
How a session should be divided up in terms of physical, technical or tactical parts is decided in collaboration with the coach, and the intensity or volume of the training is then decided upon.

Physical preparation the day before a match should take place during a one-hour session of moderate intensity (RPE average 13). The aim here is to prevent pain and muscle injuries.
Explosive actions may be practised while being careful to avoid using up too much energy, with very few long sprints – for example, 10m sprints with the ball and shooting.
Swerving runs should be used to avoid stopping abruptly when changing direction.
High-impact and high-energy situations, exercises requiring a high MAS and very long small-sided 4 versus 4 or 3 versus 3 games should be avoided. Energetic play and rapid stops are preferred, with playing time limited to eight minutes, four of which can be used for dynamic and short small-sided games not requiring maximum intensity.

Post-match recovery depends on the amount of time each player was on the pitch. Immediately after the match, the lower limbs can be bathed in cold water (around 12°C) for between seven and eight minutes, this process having analgesic and vasoconstrictive effects that aid recovery. The day after the match is usually a rest day and cold water baths are taken again. Hydration and glycogenic repletion (eat and drink products with high sugar content) should be prioritised. It should also be remembered that good-quality sleep is fundamental to the recovery process, as the growth hormone is secreted at night.

More specifically, two days after the match, players who have played for less than 60 minutes should recover actively by exercising on an ergo bike for 20 minutes at an intensity of between 40 and 50% of MAS. This activity may be accompanied by core conditioning exercises with upper body muscle-strengthening.
Players who did not play or who played for less than 30 minutes should complete a one-hour high-intensity session (RPE average 17).
If two matches are played in the same week, recovery should consist of a 20-minute run at 60% of MAS on the day after each match, preferably in the afternoon.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17
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9. Small-sided games

Small-sided games

Key

Path of the player without the ball

Path of the player with the ball

Path of the ball (from a pass or shot)

Coach

The training process is recorded in an annual programme made up of linked periods of time that are as coherent as possible.

The pre-season period is split into two stages: the basic stage and the pre-competition stage, with the competition period being the longest. It may include some first-leg matches and possibly even second-leg matches.

The "winter" and "spring" break periods are interspersed with two large competition blocks.

The training session should take into account the results of assessments, tests or matches. Its objectives should be based on volume of activity, characteristics of the players and social or environmental conditions.

- The training session. Spread over several days, the sessions are intended to meet particular objectives corresponding to the stages outlined in the general preparation.
- The microcycle is a group of training sessions taking place over the course of approximately one week (weekly timetable).
- The mesocycle is a group of two, three or four microcycles applied coherently and progressively.
- The macrocycle is a group of mesocycles (and microcycles) making up a season or part of a season. It enables specific physical, technical and tactical qualities to be developed.

The training load

The overall training planning should take the activity load into account. It must strike a balance between the amount of work required and the demands of the activity load. It is calculated from the quantity of activity multiplied by the intensity required and the relationship between the volume and the intensity.

Load = volume x intensity

The volume is the number of repetitions multiplied by the number of sets.

The intensity can be measured using the percentage of the maximum heart rate (% HR max) or of the RPE or the maximal aerobic speed (% MAS).

Heart rate

Heart rate (HR), a tool for measuring training and adaptation to exertion:

– Enables targeting intensity
– Enables evaluating the quality of the recovery

Evaluation of the training load using the reserve heart rate (max HR – HR rest)

Intensity	HR at rest (HR rest) + % reserve HR (res HR)	Maximum amount
Low +	HR < HR rest + 60% res HR	
Medium ++	HR rest + 60% res HR < HR < HR rest + 80% res HR	2 x 20' at lactate threshold 2
High +++	HR > HR rest + 80% res HR	2.5 x time for which the MAS is maintained (15' max.)

Measuring recovery

– The heart rate measured 3' after exertion has ended is a good indicator of physical condition.
– A difference of 40 to 70 bpm between exertion and recovery indicates proper recovery.
– Another indicator is when the heart rate drops from 180 to 120 bpm in 1', indicating proper recovery.

Using the HR/MAS relation (based on the Karvonen method, 1957)
Working with percentage heart rate:

max HR – HR rest = reserve HR
Target HR = HR rest + reserve HR x % MAS

Example: For 80% MAS, HR rest = 60 bpm and max HR = 190 bpm:

Target HR = 60 + [(190 – 60) x 80%] = 164 bpm, i.e. 16 AU
For a 22-year-old player with: HR rest = 60 bpm if the intensity = 80% MAS
max HR (in theory): 220 – age => 220 – 22 = 198 bpm
reserve HR = max HR – HR rest => reserve HR = 198 – 60 = 138 bpm

HR at 80% MAS = 60 + (138 x 80%) = 170 bpm
= 60 + 110 = 170 bpm

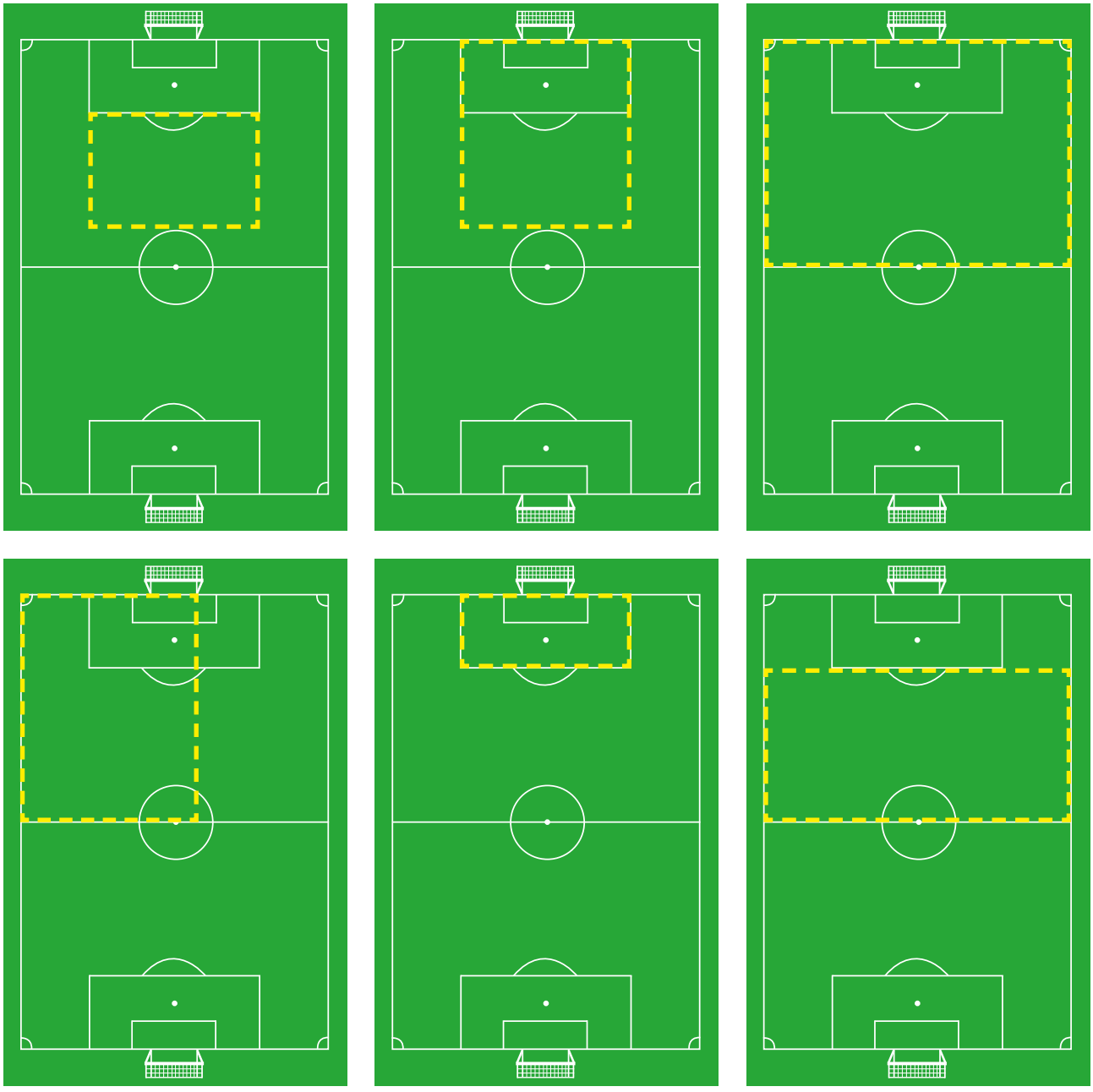
Direct method:
Reserve HR = 198 x 80% (0.8) = 158.4 bpm (70% MAS)

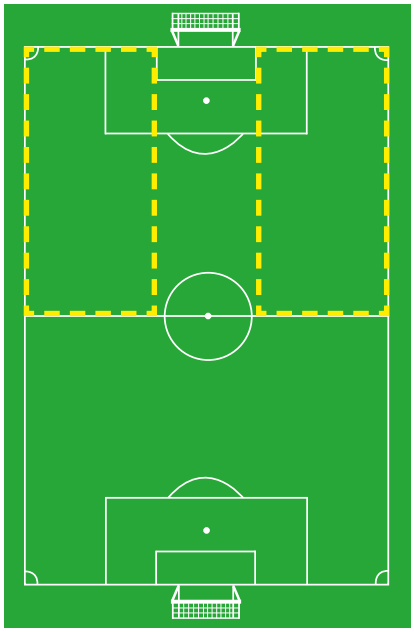
Quantifying the training load by measuring the rate of perceived exertion (RPE)

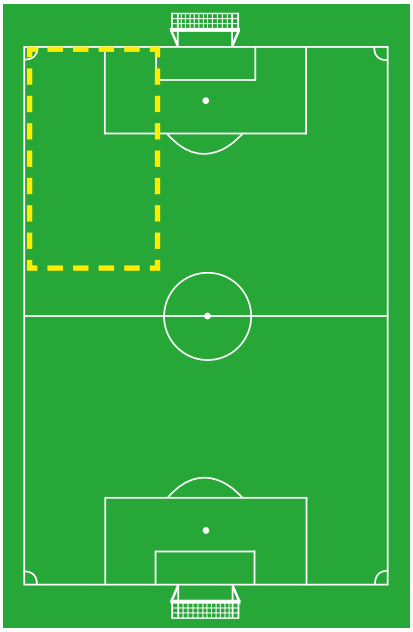
Elements for calculating the training load (tips from chapter 6)		
RPE and its relation to heart rate	HR = RPE x 10	Values
Training load formula – Theory by the coach – Felt by the players at the end of the session	RPE x time of exertion (in min) = arbitrary units (AU) Aim: to set the load of each of the training sessions	
Sum of the training loads per week (not including matches)	To set the objectives and the load of the micro-cycle. Warning: you must alternate the game situations and the intensity of the exertion because training loads of over 4,500 AU on a weekly basis (not including matches) result in a higher risk of injury.	Made up of between 3,200 AU and 4,000 AU
Week with one match	Value of one match	864 AU + micro-cycle load: 3,200 to 4,000 AU
	Total load for the week:	4,064 to 4,864 AU
Week with two matches. It would be better to rotate the squads in order to avoid players losing out on training during periods of important games	– Value of two matches	864 AU x 2 = 1,728
	– Total load for a week excluding matches:	2,336 to 3,136 AU
	– Total load for a week with 2 matches:	4,064 to 4,864 AU
	– Take actual playing time into account for an average span of 54'.	
	Training load proportionally lower for players who have had more match time. To obtain acceptable values, lowering the training load based on individual playing times during matches is recommended.	
Missed session	0 rating (zero) AU	Zero AU
Monotony index	Avoid monotony by using various loads throughout the week	
Number of matches for each player. Take each player's actual playing time into account to balance out the load.	Quantified based on average playing time	For example: 16 RPE x 54', i.e. 864 AU per match
		54' = 27' of actual play per half

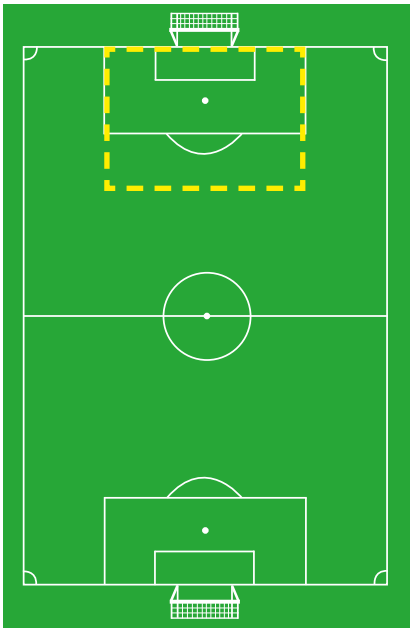
Small-sided games and playing zones

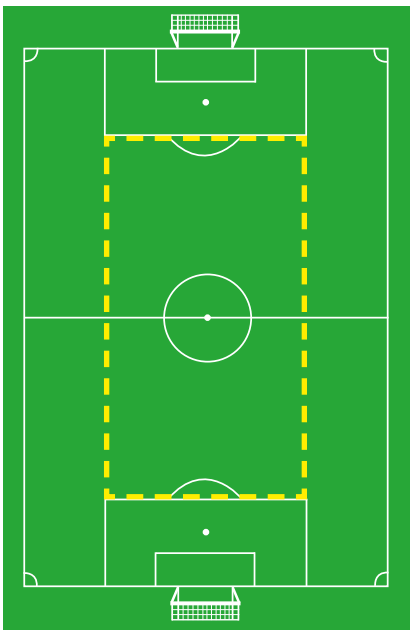
Small-sided games set up different match situations that are played out in different zones of the pitch based on match contexts. Implementing these situations relates to the desired objectives based on the content to be developed.



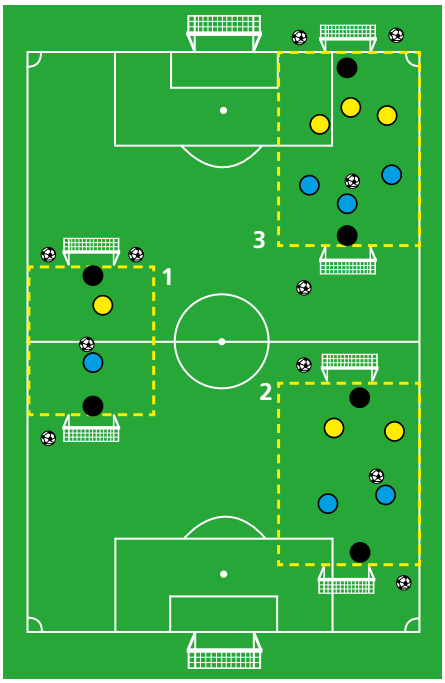








Selection of small-sided games (quantifying the load)



1. **Physical quality: max. speed based on MAP**
   1 versus 1 with goalkeepers
   Attack: taking out opponent and going towards the goal to score
   Defence: preventing the ball carrier from going towards the goal, regaining possession

2. **Physical quality: max. speed based on MAP**
   2 versus 2 with goalkeepers
   Attack: two-person play going towards the goal
   Defence: preventing the opponents from moving forward, regaining possession

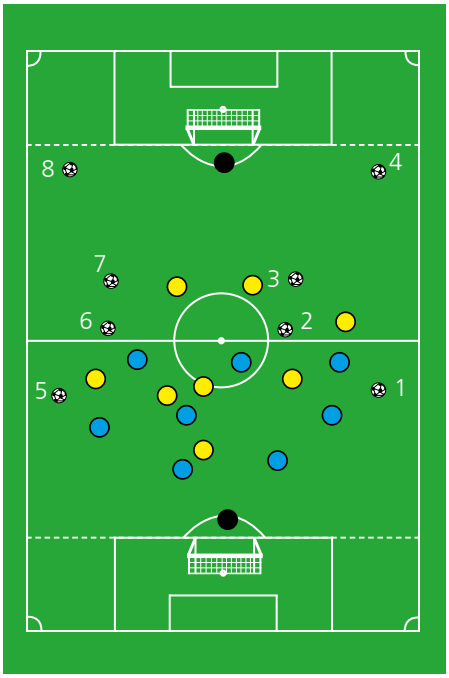
3. **Physical quality: max. speed based on MAP**
   3 versus 3 with goalkeepers
   Attack: support and back-up play for taking out opponents and moving forward
   Defence: closing down the gaps and preventing opponents from moving forward

	Pitch 1	**Pitch 2**	**Pitch 3**
Technical and tactical work	18 RPE x 4′ = 72 AU	17 RPE x 8′ = 136 AU	15 RPE x 9′ = 135 AU
Heart rate after a break of 3′	To be measured to ascertain if players can adapt to the desired intensity		
Organisation	20 x 15m pitch 2 drills 1 group of 1 versus 1	25 x 16m pitch 2 drills 1 group of 2 versus 2	30 x 25m pitch 2 drills 1 group of 3 versus 3
Procedure	1 versus 1 with mini-goals	2 versus 2 with mini-goals and goalkeepers	3 versus 3 with large goals and goalkeepers
Instructions	Based on the topic proposed		
Variant	Use support players	Use support players and specified number of touches	
Working time for each drill	4 x 1′	4 x 2′	3 x 3′
Recovery time for each drill	2′	2′	2′
Number of times each drill is repeated	4	4	3
Type of break for each set	Semi-active	Semi-active	Semi-active

Selection of small-sided games (quantifying the load)

Physical quality: speed based on MAP

8 versus 8 with goalkeepers
Attack: attacking quickly after a set piece (8 set pieces)
Defence: defending in position after each dead ball



Techniques and tactics: 16 min	Heart rate check		Heart rate after a break of 3′
RPE 16 x 16′ = 256 UA			
Organisation	Pitch size: three-quarters. 8 attacking drills and 8 defending drills per team. Group of 8 versus 8.		
Procedure	8 versus 8 with big goals. Attack 8 times and defend 8 times. Comparisons.		
Instructions	Tough attacking and defending as per the Laws of the Game.		
Working time	Length of break	Number of repetitions	Type of break
Between 30″ and 1′ depending on the intensity of the opposition	3′	8 attacking drills and 8 defending drills	Semi-active

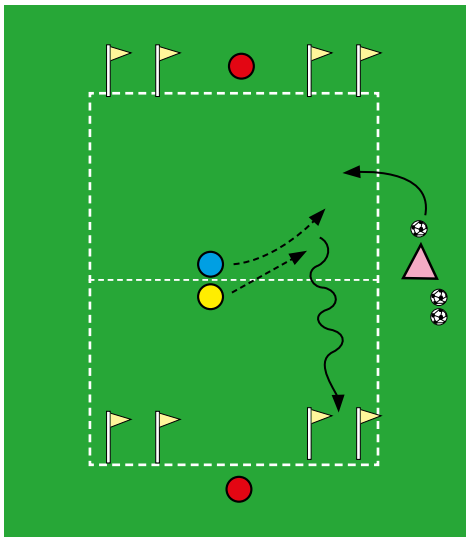
Dead-ball situation	**Position on the pitch**	
Throw-in	Ball no. 1	Ball no. 5
Indirect free kicks	Ball no. 2	Ball no. 6
Direct free kicks	Ball no. 3	Ball no. 7
Corners	Ball no. 4	Ball no. 8

1 versus 1

Physical quality: speed **1 versus 1 / Game 1**

1 versus 1 without goalkeepers + 2 attacking support players
Attack: dribbling the ball through a goal
Defence: defending 2 goals

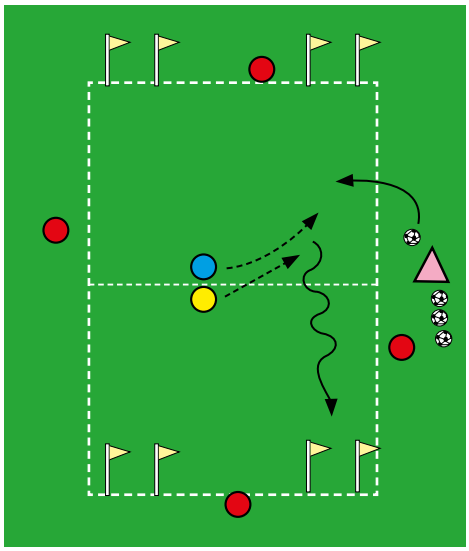
RPE: 16 x 12' → 192 AU	Heart rate check	Heart rate after a break of 3'	
Organisation: 25 x 16.5m – 1 versus 1 with attacking support players.			
Procedure: start: 2 players back to back. The coach throws the ball into the defending half of the player facing him. Dribble the ball through a goal.			
Instructions: once the drill is completed, the player returns to his half, the other player gets the ball and attacks.			
Variant: use the neutral players as support and back-up players.			
Working time	Length of break	Number of repetitions	Type of break
45"	1'30"	2 x 8	Passive



Physical quality: speed **1 versus 1 / Game 2**

1 versus 1 without goalkeeper + 2 attacking support players and 2 stationary neutral support midfielders
Attack: dribbling the ball through a goal
Defence: defending 2 goals

RPE: 16 x 12' → 192 AU	Heart rate check	Heart rate after a break of 3'	
Organisation: 25 x 16.5m – 1 versus 1 with attacking support players and neutral support players out wide.			
Procedure: start: 2 players back to back. The coach throws the ball into the defending half of the player facing him. Dribble the ball through a goal. Once the drill is completed, the player returns to his half and the other player gets the ball and attacks. Use the attacking support players and neutral support players to move forward and attempt to get through the goals.			
Instructions: once the drill is completed, the player returns to his half and the other player gets the ball and attacks.			
Variant: the goal counts double from a lay-off.			
Working time	Length of break	Number of repetitions	Type of break
45"	1'30"	2 x 8	Passive

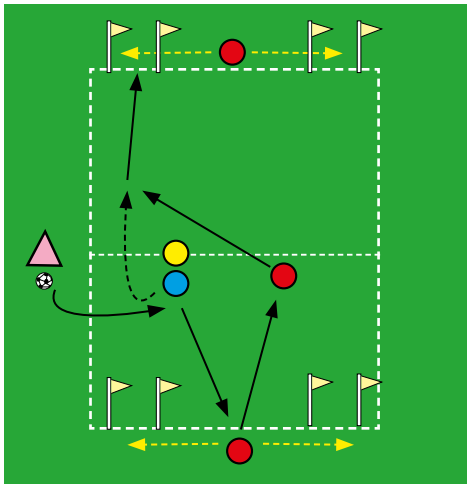


Physical quality: speed **1 versus 1 / Game 3**

1 versus 1 without goalkeeper + 1 floating player and 2 support players
Attack: passing through the goals
Defence: defending the two goals

RPE: 16 x 6' → 96 AU	Heart rate check	Heart rate after a break of 3'
Organisation: 25 x 16.5m. Use a floating player and support players to score points.		
Procedure: objective: use direct assistance. Start: 2 players back to back. The coach throws the ball into the defending half of the player facing him: Bring a floating player into the game with 2 touches of the ball. Time available for the player to get free from the player marking him.		
Instructions: once the drill is completed, the player returns to his half and the other player gets the ball and attacks.		
Variant: one floating player per player in the player's defending half who does not play in the attacking half.		

Working time	Length of break	Number of repetitions	Type of break
45"	1'30"	8	Passive between repetitions

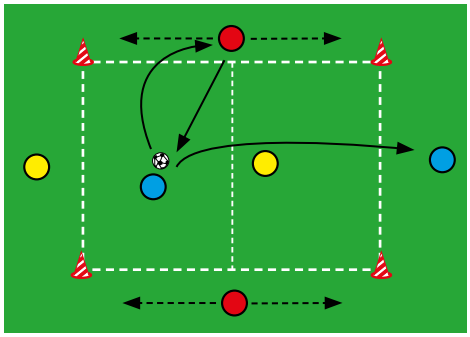


Physical quality: speed **1 versus 1 / Game 4**

1 versus 1 + support players
Attack: scoring points by heading past the goal line
Defence: defending own goal line

RPE: 15 x 6' → 90 AU	Heart rate check	Heart rate after a break of 3'
Organisation: 16.5 x 10m. Heading the ball using a wide support player to reach the central support player.		
Procedure: a point is scored if the ball crosses the goal line or bounces behind it.		
Instructions: neutral support players moving along the wings. Players cannot catch the ball with their hands until after the first bounce.		
Variant: chest-hand trap. Then direct hand-head play.		

Working time	Length of break	Number of repetitions	Type of break
45"	1'30"	8	Passive between repetitions

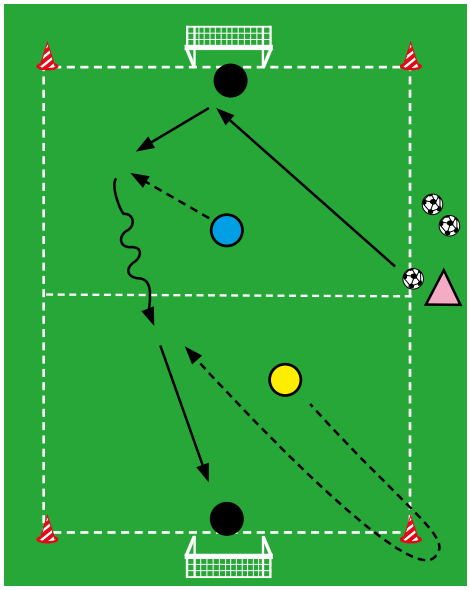


Physical quality: speed and MAP **1 versus 1 / Game 5**

1 versus 1 with goalkeepers
Attack: dribbling forward to score
Defence: defending own goal

RPE: 18 X 4' → 72 AU	Heart rate check	Heart rate after a break of 3'
Organisation: 20 x 18m. When a player receives a ball, his opponent quickly runs around a cone in the corner of the pitch and runs back to defend.		
Procedure: ball source at the goals of one of the goalkeepers. The coach passes to one of the goalkeepers → the game starts.		
Instructions: the player who scores gets a ball from the source. The player who concedes a goal must run around one of the cones on his goal line before returning to defend; the same applies if the ball is put out of play.		

Working time	Length of break	Number of repetitions	Type of break
1'	1'30"	4	Passive between repetitions

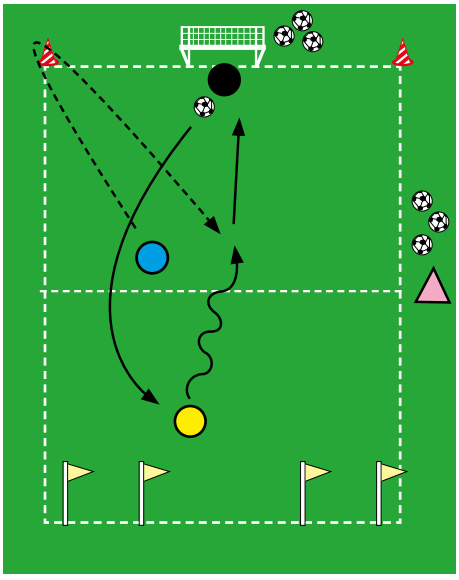


Physical quality: speed and MAP **1 versus 1 / Game 6**

1 versus 1 with goalkeepers
Attack: dribbling forward to score
Defence: defending own goal

RPE: 18 x 4' → 72 AU	Heart rate check	Heart rate after a break of 3'
Organisation: 20 x 18m. When a player receives the ball from a clearance by the opposing goalkeeper, the defender must run around a cone in the corner of the pitch.		
Procedure: yellow – score a goal. Blue – dribble through one of the two goals. Ball source at the goals. The goalkeeper throws a high ball to the yellow striker – the game starts.		
Instructions: if the yellow player scores, he returns to his defending half of the pitch and receives a new ball. The blue player runs around a cone on his goal line and goes into defence. If the blue player gets a point, he returns to his defending half. The yellow player returns to his half for another restart by the goalkeeper.		

Working time	Length of break	Number of repetitions	Type of break
1'	1'30"	4	Passive between repetitions

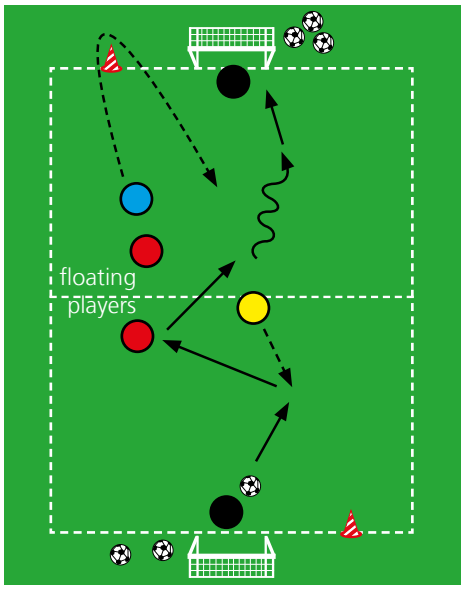


Physical quality: speed **1 versus 1 / Game 7**

1 versus 1 with goalkeepers and neutral floating players in 2 zones
Attack: using the floating players to score a goal
Defence: defending own goal

RPE: 18 x 4' → 72 AU	Heart rate check	Heart rate after a break of 3'
Organisation: 20 x 18m in 1 versus 1 with goalkeepers and neutral floating players in each zone.		
Procedure: score a goal using 2 floating players in two successive zones, in defence and attack. The ball source is at the goals. One floating player in defending zone can touch the ball 2-3 times, while the other floating player in the attacking zone has just 1 touch.		
Instructions: if the yellow player scores, he returns to his defending half of the pitch and receives a new ball. The blue player runs around a cone on his goal line and goes into defence. If the blue player scores, the yellow player runs around a cone on his goal line and goes into defence.		

Working time	Length of break	Number of repetitions	Type of break
1'	1'30"	4	Passive between repetitions

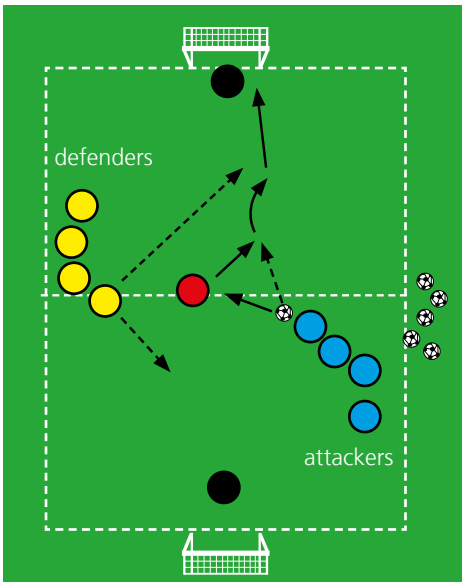


Physical quality: speed **1 versus 1 / Game 8**

1 versus 1 with goalkeepers
Attack: attacking quickly deep into opponent's half
Defence: defending quickly in the centre

RPE: 19 x 40" → 12.5 AU	Heart rate check	Heart rate after a break of 3'
Organisation: 15 x 40m		
Procedure: 2 goals on a reduced-size pitch, 2 teams facing each other, 1 with a ball and the other without + 1 stationary support player between the two teams. Pass to the support player who flicks the balls on to the right or left + duel for scoring. The player who touches the ball first chooses which goal he attacks.		
Instructions: use dynamic footwork. React by passing in front of the opponent or stepping aside depending on his position. Feint to shoot. Sprint to join the opposite line.		

Working time	Length of break	Number of repetitions	Type of break
5"	1'30"	8	Semi-active

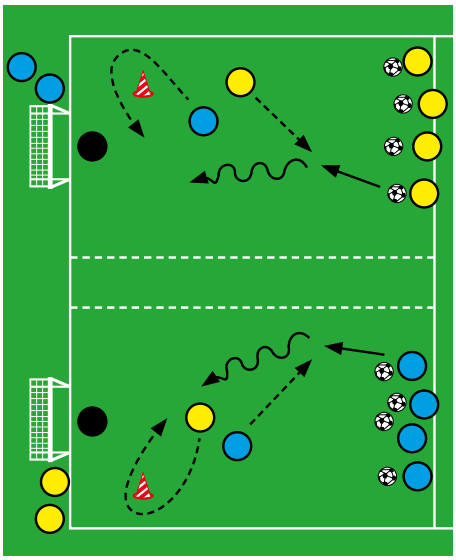


Physical quality: speed (work in rounds) **1 versus 1 / Game 9**

1 versus 1 with goalkeepers
Attack: playing with back to goal
Defence: defending own goal with the goalkeeper (handicap for defence)

RPE: 19 x 40″ → 12.5 AU	Heart rate check	Heart rate after a break of 3′
Organisation: 18 x 25m – 2 areas of 1 versus 1 with back-up player and goalkeeper.		
Procedure: 6 defenders/10 attackers, 2 goals side by side with two 1 versus 1 drills playing at the same time (2 ball sources). Duel with the attacker whose back is to goal and who has a minimum of 2 touches of the ball. Prevent him from turning and shooting. Win the ball back and feed it back to team-mates waiting to play. Switch roles.		
Instructions: defending on your feet without fouling.		

Working time	Length of break	Number of repetitions	Type of break
5″	1′30″	8	Passive between repetitions

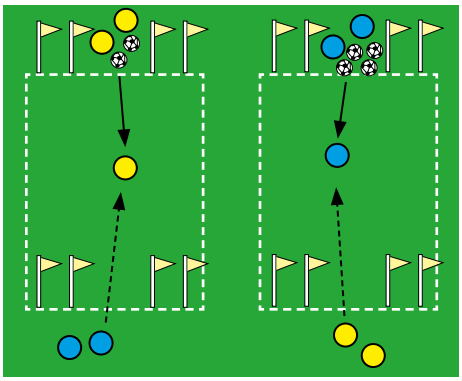


Physical quality: speed (playing the ball with the body) **1 versus 1 / Game 10**

1 versus 1 with back to goal – without goalkeeper on small pitch
Attack: attacking using the width on a short pitch
Defence: defending using the width

RPE: 18 x 2′ → 36 AU	Heart rate check	Heart rate after a break of 3′
Organisation: 25 x 40m – 1 versus 1. 2 mini-goals for defending and 2 mini-goals for attacking with back-up players.		
Procedure: on a 5 x 12m area: 2 teams of 3 take turns to defend. Prevent the attacker from turning and running through a goal. 2 areas. Switch roles.		
Instructions: quickly advance without making a mistake. Control your opponent.		

Working time	Length of break	Number of repetitions	Type of break
15″	1′30″	8	Semi-active

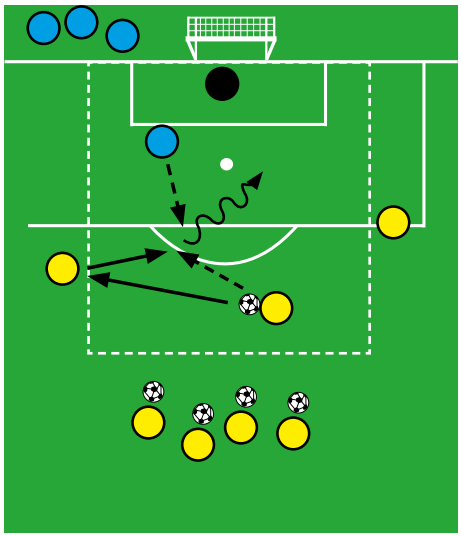


Physical quality: speed **1 versus 1 / Game 11**

1 versus 1 + goalkeeper and 2 support players
Attack: using the support players or dribbling to shoot at goal
Defence: preventing opponents from going towards goal

RPE: 18 x 2' → 36 AU	Heart rate check	Heart rate after a break of 3'
Organisation: 25 x 16.5m playing area – groups of 6 or 8 players.		
Procedure: use 1 of the 2 wide support players for a 1-2 that leads into a duel.		
Instructions: give a strong pass to the support player and start running forward. Carry the ball towards the defender while keeping your head up to see all the options. Draw the defender without being beaten by him.		

Working time	Length of break	Number of repetitions	Type of break
15"	1'30"	8	Semi-active

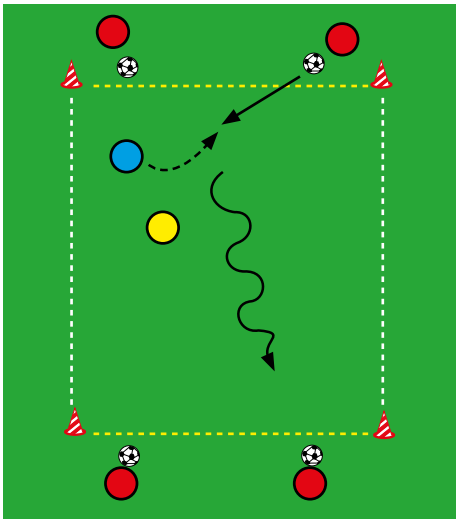


Physical quality: speed **1 versus 1 / Game 12**

1 versus 1 – without goalkeeper – stop-ball on one of the two lines
Attack: attacking duel
Defence: protecting the line

RPE: 18 x 6' → 108 AU	Heart rate check	Heart rate after a break of 3'
Organisation: 16.5 x 25m – 1 versus 1 with 4 ball sources. 2 neutral support players and 2 neutral back-up players.		
Procedure: moving into open space to win the ball back and attack the opposite line.		
Instructions: go back to the centre of the square after each "goal" scored; attacking-defending and defending-attacking transition work.		

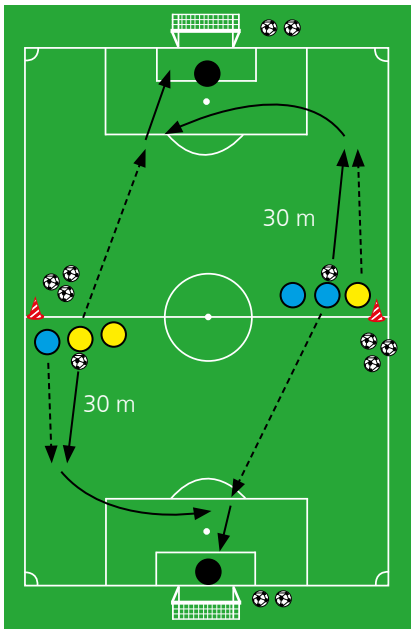
Working time	Length of break	Number of repetitions	Type of break
45"	1'30"	8	Passive between repetitions



Physical quality: speed (max. S), short sprint (work in rounds) **1 versus 1 / Game 13**

1 versus 1 with goalkeepers
Attack: scoring from a cross
Defence: none

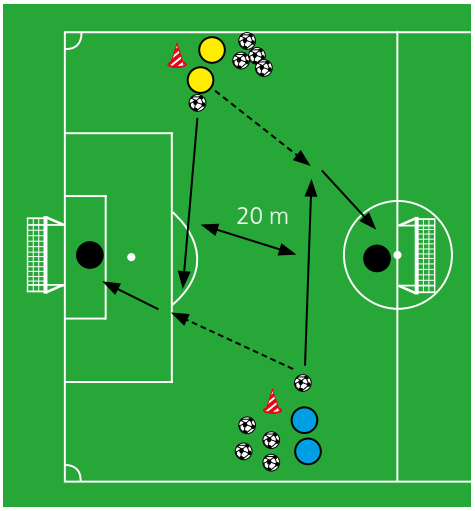
RPE: 19 x 40″ → 12.5 AU	Heart rate check	Heart rate after a break of 3′	
Organisation: half-pitch playing area – sprinting to connect with a cross and shoot.			
Procedure: 1 player passes a long ball for the other player to run onto (1) and runs to receive the ball at the opposite goal (2).			
Instructions: overlapping circuit with crosses and sprint for scoring.			
Working time	Length of break	Number of repetitions	Type of break
5″	1′30″	8	Semi-active



Physical quality: speed (max. S), short sprint (work in rounds) **1 versus 1 / Game 14**

1 versus 1 with goalkeepers
Attack: scoring from an anticipated pass
Defence: none

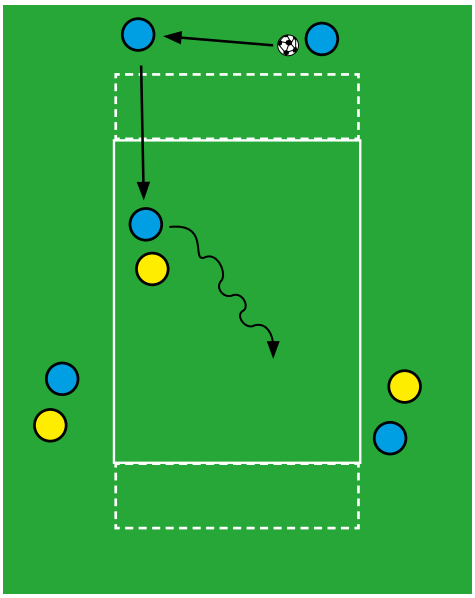
RPE: 19 x 40″ → 12.5 AU	Heart rate check	Heart rate after a break of 3′	
Organisation: 30 x 20m – exchange of passes and finish.			
Procedure: pull-back – sprint – shot at goal.			
Instructions: sprint as the ball is passed (anticipating-coinciding, timing).			
Working time	Length of break	Number of repetitions	Type of break
5″	1′30″	8	Semi-active



Physical quality: max. speed **1 versus 1 / Game 15**

1 versus 1 without goalkeeper (stop-ball) with wide support players and back-up players
Attack: dribbling into the zone by getting past the defender
Defence: stopping the player from coming forward, winning the ball back

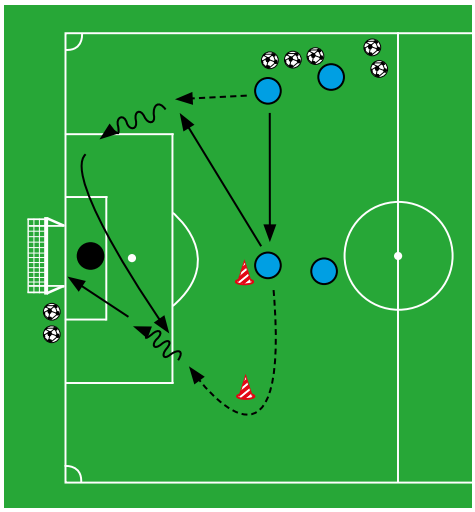
RPE: 18 x 6′ → 108 AU	Heart rate check	Heart rate after a break of 3′	
Organisation: 10 x 15m playing area: 3 pairs of attackers/defenders alternating.			
Procedure: 1 versus 1 after receiving the ball from a midfielder. Two-person play of 1 versus 1 with 2 back-up players and 2 wide support players playing against each other on the sides. If a player loses possession, a defender plays stop-ball. 2 areas.			
Instructions: run off the ball into space and decoy runs, then fall back slightly to draw the defender to the side. Change pace. Use the support players for passes or dummies. If blocked, use back-up player. The support player moves to stay level with the ball carrier.			
Working time	Length of break	Number of repetitions	Type of break
45″	3′	8	Semi-active



Physical quality: speed work in rounds **1 versus 1 / Game 16**

1 versus 1 with goalkeeper
Attack: scoring from a cross after sprinting round a cone
Defence: none

RPE: 19 x 1′ → 19 AU	Heart rate check	Heart rate after a break of 3′	
Organisation: half-pitch playing area – 1-2s in the channel and receiving the ball at the 16.5m line.			
Procedure: player gives a long ball into the channel after the 1-2 for the other player to run onto and runs to receive the ball at the 16.5m line for shooting after having sprinted around the defence markers.			
Instructions: overlapping circuit, cross and sprinting around cones before shooting.			
Variant: running off the ball into space/decoy runs for both the player who receives the pass and the cross.			
Working time	Length of break	Number of repetitions	Type of break
10″	1′	6	Semi-active

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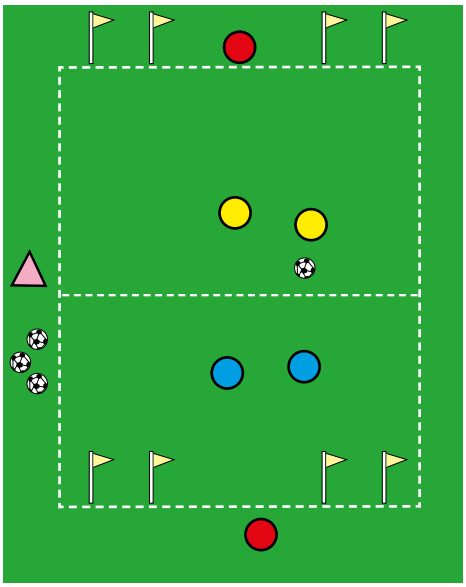
2 versus 2

Physical quality: speed and acceleration based on aerobic power (MAS) **2 versus 2 / Game 1**

2 versus 2 without goalkeepers with central support and back-up players
Attack: attacking 2 mini-goals with central support players
Defence: defending 2 mini-goals

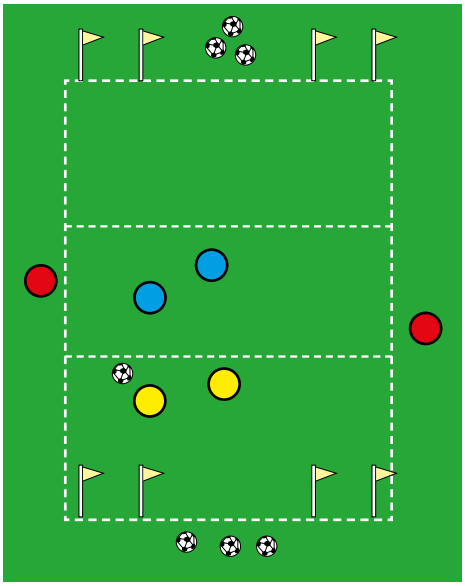
RPE: 17 x 7'30" → 127.5 AU	Heart rate check	Heart rate after a break of 3'	
Organisation: 25 x 15m – 2 versus 2 – two-person play and two-person play for a third player – look for length.			
Procedure: free play. Attack 2 mini-goals with 1 neutral central support player and 1 neutral central back-up player.			
Instructions: use the partner for direct assistance and the neutral players for indirect assistance.			
Working time	Length of break	Number of repetitions	Type of break
1'15"	2-3'	6	Active, with or without ball



Physical quality: speed and acceleration based on aerobic power (MAS) **2 versus 2 / Game 2**

2 versus 2 without goalkeepers with neutral wide support players
Attack: attacking 2 mini-goals with wide support players
Defence: defending 2 mini-goals

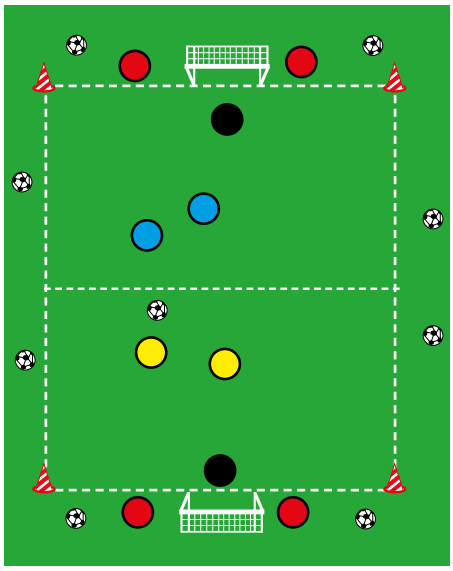
RPE: 17 x 7'30" → 127.5 AU	Heart rate check	Heart rate after a break of 3'	
Organisation: 25 x 15m – 2 versus 2 in 3 zones with 2 neutral wide support players.			
Procedure: free play. Attack 2 mini-goals with 1 neutral wide support player and 1 neutral wide back-up player.			
Instructions: use the partner as direct assistance and the neutral players as indirect assistance: use the width.			
Working time	Length of break	Number of repetitions	Type of break
1'15"	2-3'	6	Active, with or without ball



Physical quality: speed and acceleration – aerobic power (MAS) **2 versus 2 / Game 3**

2 versus 2 with goalkeepers + central support and back-up players
Attack: two-player attack on goal with central support and back-up players
Defence: defending own goal by closing down spaces and using lateral movements

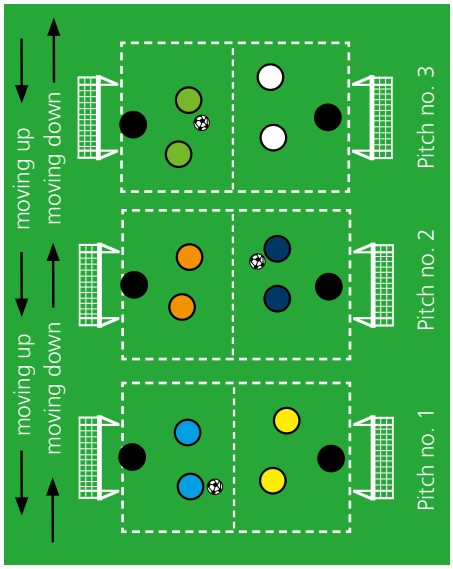
RPE: 15 x 7'30" → 112.5 AU	Heart rate check	Heart rate after a break of 3'	
Organisation: 30 x 25m – 2 versus 2 – two-person play and two-person play for a third player – look for length.			
Procedure: free play. Attack 2 goals with 2 neutral central support players and 2 neutral central back-up players.			
Instructions: use the partner for direct assistance and the neutral players for indirect assistance.			
Working time	Length of break	Number of repetitions	Type of break
1'15"	2-3'	6	Active, with or without ball



Physical quality: maximum aerobic power (MAP) **2 versus 2 / Game 4**

2 versus 2 with goalkeepers, moving up, moving down
Attack: attacking with 2 players to score
Defence: defending own goal with 2 players plus goalkeeper

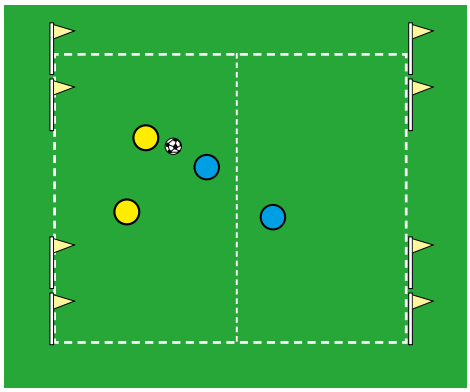
RPE: 17 x 16' → 272 AU	Heart rate check	Heart rate after a break of 3'	
Organisation: 40 x 16.5m – 6 groups of 3 players, 1 of whom is the goalkeeper.			
Procedure: 2 versus 2 over 2'. The winning team changes pitch by moving up to pitch no. 1. The losing team moves in the opposite direction to pitch no. 3. If the game finishes as a draw, the team that scored the first goal is the winner and moves up. If the game is a 0-0 draw, the team that attacked most is the winner.			
Instructions: use team-mates as support players and the goalkeeper as a back-up player. Provoke in attack and harass in defence.			
Variant: the goalkeepers can create a numerical advantage in the attacking phase without passing the halfway line.			
Working time	Length of break	Number of repetitions	Type of break
2'	2'30"	2 x 4	Semi-active, with or without ball



Physical quality: max. speed based on MAP **2 versus 2 / Game 5**

2 versus 2 without goalkeepers – staggered defence
Attack: attacking 2 mini-goals or dribbling through the goals
Defence: defending own goal by closing down spaces and using lateral movements

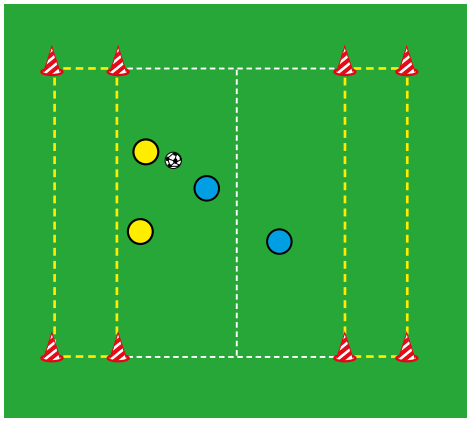
RPE: 16 x 7'30" → 120 AU	Heart rate check	Heart rate after a break of 3'	
Organisation: 25 x 15m – 2 versus 2 in staggered zonal defence with 2 mini-goals for defending and 2 mini-goals for attacking.			
Procedure: free play. One defender in each half. Objective: attack 2 mini-goals by eliminating the defenders one after another in the attacking and defending zones.			
Instructions: regardless of the outcome of the action, players return to their defending and attacking zone.			
Working time	Length of break	Number of repetitions	Type of break
1'15"	2-3'	6	Active, with or without ball



Physical quality: max. speed based on MAP **2 versus 2 / Game 6**

2 versus 2 without goalkeepers with staggered defence
Attack: reaching the goal area (stop-ball)
Defence: defending own goal area (stop-ball)

RPE: 16 x 7'30" → 120 AU	Heart rate check	Heart rate after a break of 3'	
Organisation: 25 x 15m – 2 versus 2 in staggered zonal defence with 2 stop-ball areas for defending and attacking.			
Procedure: free play. 1 defender in each half. Objective: dribble up to the goal area by taking out the defenders one by one in the attacking and defending areas.			
Instructions: at the end of the action, players return to their defending and attacking areas.			
Working time	Length of break	Number of repetitions	Type of break
1'15"	2-3'	6	Active, with or without ball

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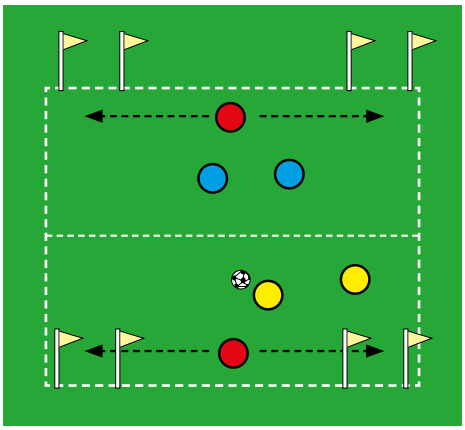
Physical quality: max. speed based on MAP **2 versus 2 / Game 7**

2 versus 2 without goalkeepers and with floating players
Attack: attacking 2 mini-goals
Defence: defending 2 mini-goals

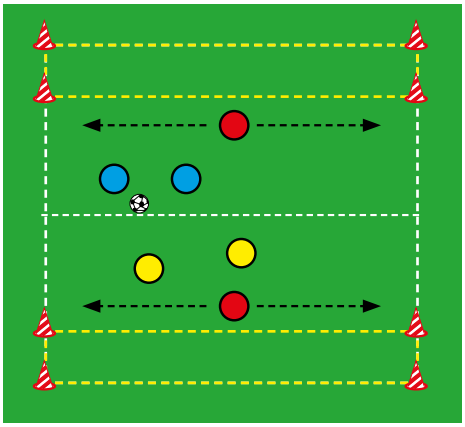
RPE: 16 x 7'30" → 120 AU	Heart rate check	Heart rate after a break of 3'	
Organisation: 25 x 15m – 2 versus 2 in staggered zonal defence with 2 mini-goals for defending and attacking.			
Procedure: free play. 1 floating player in each half. The team with the ball can use its floating player (limited to 2 touches of the ball) in its own defending half.			
Instructions: if the opposing team has the ball, the floating player defends the 2 mini-goals.			
Variant: at the end of the action, the players return to their defending zone. To score a point, reach the floating player with a pass into one of the 2 goals.			
Working time	Length of break	Number of repetitions	Type of break
1'15"	2-3'	6	Active, with or without ball



Physical quality: max. speed based on MAP **2 versus 2 / Game 8**

2 versus 2 without goalkeeper + 1 floating player in each attacking and defending zone
Attack: attacking opponents' goal line
Defence: defending own goal line

RPE: 16 x 7'30" → 120 AU	Heart rate check	Heart rate after a break of 3'	
Organisation: 25 x 15m – 2 versus 2 in zonal play with 2 stop-ball areas and with support players for defending and attacking.			
Procedure: free play. 1 floating player in each half. The team with the ball can use its floating player (limited to 2 touches of the ball) in its own defending half. If the opposing team has the ball, the floating player defends the stop-ball area.			
Instructions: at the end of the action, the players return to their defending zone.			
Working time	Length of break	Number of repetitions	Type of break
1'15"	2-3'	6	Active, with or without ball

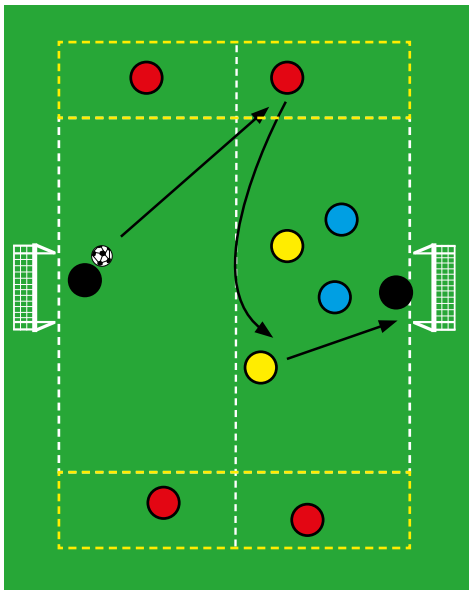


Physical quality: MAP **2 versus 2 / Game 9**

2 versus 2 + goalkeepers and 4 neutral crossers
Attack: scoring with a header from a cross
Defence: defending own goal by intercepting the crosses

RPE: 17 x 7'30" → 127.5 AU	Heart rate check	Heart rate after a break of 3'
Organisation: 30 x 25m – 2 versus 2 with zonal wide support players and goalkeepers.		
Procedure: goalkeeper releases to neutral player in support and back-up (2 touches of the ball). Running from end to end to score with a header from a cross or lay-off.		
Instructions: get organised in pairs (man-to-man or zonal marking).		
Variant: scoring from a volley – after a lay-off.		

Working time	Length of break	Number of repetitions	Type of break
1'15"	2-3'	6	Active, with or without ball

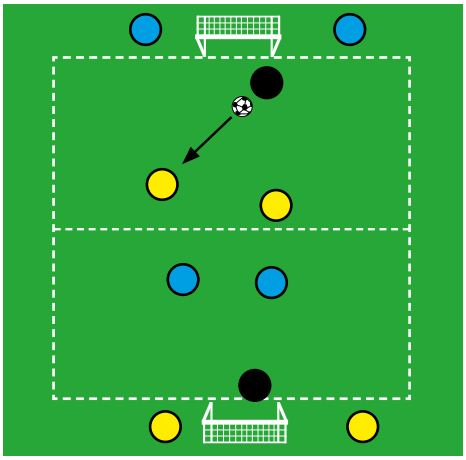


Physical quality: MAP **2 versus 2 / Game 10**

2 versus 2 + goalkeepers and 2 central attacking support players
Attack: attacking goal with goalkeeper as support and back-up
Defence: defending own goal with a numerical disadvantage

RPE: 16 x 7'30" → 120 AU	Heart rate check	Heart rate after a break of 3'
Organisation: 30 x 25m – 2 versus 2 with attacking support players.		
Procedure: goalkeeper plays the ball to his players. 4 neutral back-up players (2 touches of the ball). Attack and defend. Changing from end to end to score. The team that scores looks for the ball again from its goalkeeper.		
Instructions: if the ball goes out, the other team's goalkeeper restarts play. At the end of the action, the players return to their defending half.		

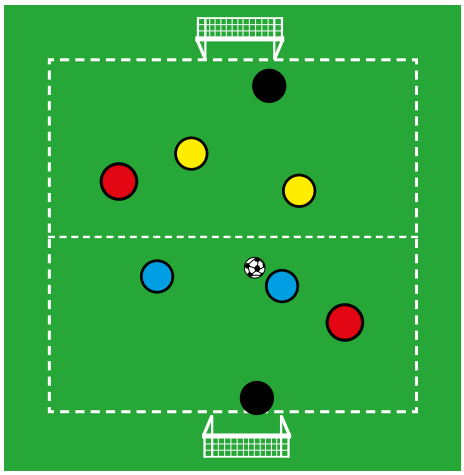
Working time	Length of break	Number of repetitions	Type of break
1'15"	2-3'	6	Active, with or without ball



Physical quality: MAP and mental strength **2 versus 2 / Game 11**

2 versus 2 + 1 floating player per team
Attack: attacking with numerical superiority
Defence: defending against the clock and with a numerical disadvantage

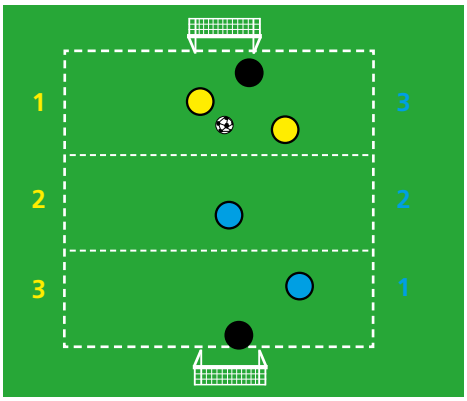
RPE: 17 x 7'30" → 127.5 AU	Heart rate check	Heart rate after a break of 3'	
Organisation: 30 x 25m – 2 versus 2 – neutral floating players.			
Procedure: floating players in red (3 touches of the ball). Free play. Man-to-man marking. Each team plays with a floating player covering the whole playing area, but who does not defend when possession is lost.			
Instructions: the floating player does not change areas and plays with the team in possession.			
Variant: the floating players do not change areas and play with the team in possession. An intentional pass from 1 floating player to the other changes the direction of play.			
Working time	Length of break	Number of repetitions	Type of break
1'15"	2-3'	6	Active, with or without ball



Physical quality: MAP and max. speed **2 versus 2 / Game 12**

2 versus 2 with goalkeepers, 2 of whom are defenders in 2 staggered zones
Attack: attacking in 2 staggered zones
Defence: defending in staggered zones with a numerical disadvantage

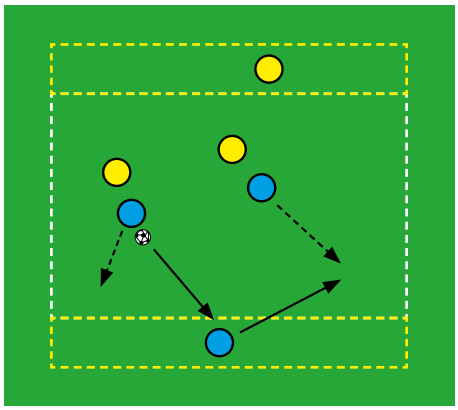
RPE: 15 x 7'30" → 112.5 AU	Heart rate check	Heart rate after a break of 3'	
Organisation: 30 x 25m. 2 versus 2 – pitch divided into 3 staggered defending zones.			
Procedure: free play. Push forward zone by zone. Goalkeeper restarts the game in zone 1. Get past the first defender in zone 2 and take out the second in zone 3, who can make for his own zone 2 if the ball is intercepted.			
Instructions: at the end of the action or if possession is lost, return as quickly as possible to zones 1 and 2.			
Working time	Length of break	Number of repetitions	Type of break
1'15"	2-3'	6	Active, with or without ball



Physical quality: MAP and changing pace **2 versus 2 / Game 13**

2 versus 2 without goalkeeper + support players
Attack: attacking opponents' goal line
Defence: defending own stop-ball zone

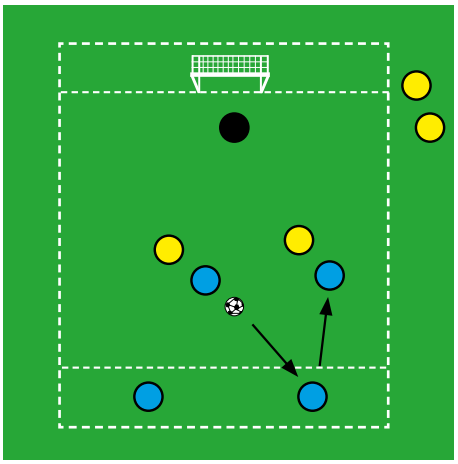
RPE: 16 x 15' → 240 AU	Heart rate check	Heart rate after a break of 3'	
Organisation: 25 x 15m – 2 versus 2 + 1 back-up player (2 touches max.).			
Procedure: stop-ball area to be defended. Possibility of releasing the ball to a back-up player when play is blocked (the back-up player cannot defend the stop-ball zone).			
Instructions: create an imbalance in 1 versus 1 or 2 versus 1 through a coordinated move and a change of pace. 1-2, overlapping run, diagonal run off the ball into space in front or behind. Find space to face play again.			
Working time	Length of break	Number of repetitions	Type of break
1'15"	3'	2 x 6	Active, with or without ball



Physical quality: MAP and changing pace **2 versus 2 / Game 14**

2 versus 2 with goalkeeper + support players
Attack: attacking opponent's goal
Defence: defending own stop-ball zone

RPE: 16 x 15' → 240 AU	Heart rate check	Heart rate after a break of 3'	
Organisation: 30 x 25m – 2 versus 2 + 2 back-up players (2 touches max.).			
Procedure: same as previous drill, but attacking a goal with goalkeeper and defending stop-ball zone.			
Instructions: create an imbalance in 1 versus 1 or 2 versus 1 through a coordinated move and a change of pace + shot. Find space to build up speed.			
Variant: after passing to the back-up player, take his place and the back-up player moves into play (moderate intensity).			
Working time	Length of break	Number of repetitions	Type of break
1'15"	3'	2 x 6 '	Active, with or without ball

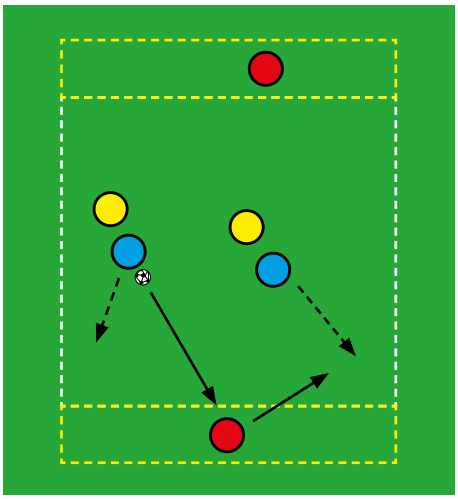


Physical quality: speed **2 versus 2 / Game 15**

2 versus 2 with back-up player
Attack: keeping possession with a numerical advantage, 2 players + back-up player
Defence: winning the ball back and using the back-up player to play out wide

RPE: 17 x 7'30" → 127.5 AU	Heart rate check	Heart rate after a break of 3'
Organisation: 25 x 20m including a 10 x 20m ball possession area. 2 versus 2 with back-up player.		
Procedure: keep possession in a 2 versus 2 with 2 neutral wide support players. Possibility of attacking goal after exchanging passes with the 2 support players (possession along the width, then playing deep into opponent's half).		
Instructions: uninterrupted play: use the support players, then attack quickly deep into opponent's half.		
Variant: possibility of using a third central neutral back-up player. Use the neutral support players in the playing area and attack after 5 consecutive passes.		

Working time	Length of break	Number of repetitions	Type of break
1'15"	2-3'	6	Active, with or without ball

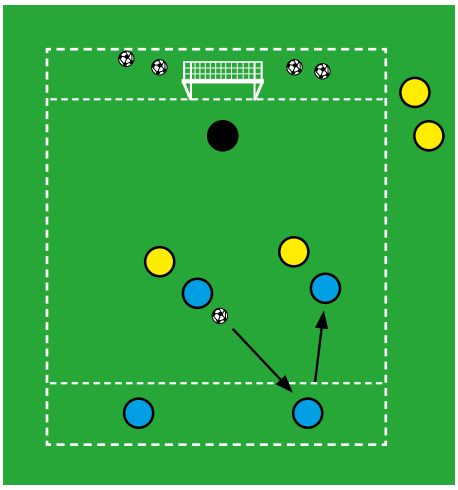


Physical quality: speed **2 versus 2 / Game 16**

2 versus 2 + goalkeeper or stop-ball zone
Attack: coordinating the attacking moves in pairs
Defence: closing down space, defending goal

RPE: 17 x 7'30" → 127.5 AU	Heart rate check	Heart rate after a break of 3'
Organisation: 30 x 25m – 2 versus 2 stop-ball zone with support player and defending zone with goalkeeper.		
Procedure: after each attempt, the teams receive a ball from their source (return to their defending zone). If intercepted, possibility of finishing off straight away.		
Instructions: optional use of partner's direct assistance. Always use dribbling as an alternative to each solution. Look for the ball directly going forwards, or indirectly. Pass into gaps. Runs off the ball into a space ahead. Runs behind opponents or into gaps. Use the space between the player and the line. Use screening. The solutions used need to be prepared beforehand.		

Working time	Length of break	Number of repetitions	Type of break
1'15"	2-3'	6	Active, with or without ball

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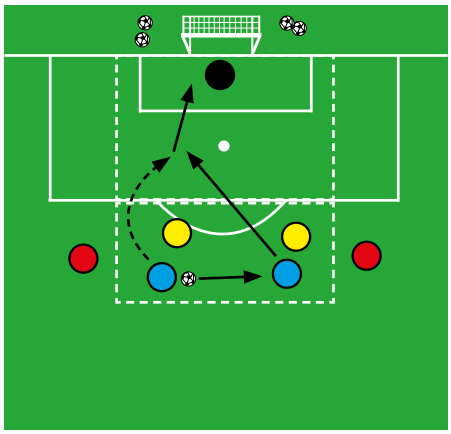
Physical quality: speed endurance **2 versus 2 / Game 17**

2 versus 2 with goalkeeper + support players
Attack: retaining possession with a numerical advantage, then finishing off
Defence: zonal defending and stopping opponent from reaching goal

RPE: 17 x 7'30" → 127.5 AU	Heart rate check	Heart rate after a break of 3'
Organisation: 25 x 20m including a 10 x 20m ball possession area. Defend as soon as ball possession is lost.		
Procedure: keep possession in 2 versus 2 with 2 neutral wide support players. Possibility of attacking goal after exchanging passes with the support players (possession along the width, then playing deep into opponent's half).		
Instructions: actively keep possession of the ball (use support players), then quickly attack deep into opponent's half.		
Variant: possibility of using a third central neutral back-up player. Use the neutral support players in the playing area and attack after 5 consecutive passes.		

Working time	Length of break	Number of repetitions	Type of break
1'15"	2-3'	6	Active, with or without ball

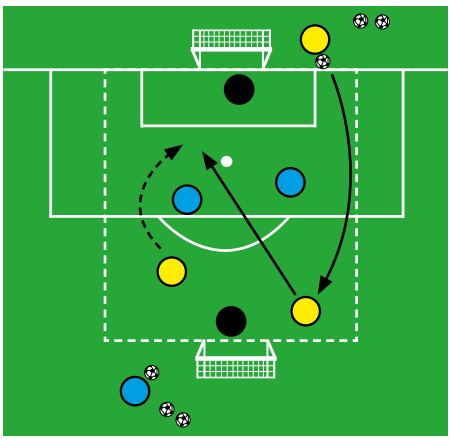


Physical quality: speed endurance **2 versus 2 / Game 18**

2 versus 2 + goalkeepers
Attack: coordinating the attacking moves in pairs
Defence: closing down space, defending goal

RPE: 17 x 7'30" → 127.5 AU	Heart rate check	Heart rate after a break of 3'
Organisation: 30 x 25m – 2 versus 2, pass from back-up player to lead into an attack.		
Procedure: after each attempt, the teams receive a ball from their source (return to their defending zone). If intercepted, possibility of finishing off straight away.		
Instructions: optional use of partner's direct assistance. Always use dribbling as an alternative to each solution. Look for the ball directly going forwards, or indirectly. Pass into gaps. Runs off the ball into a space ahead. Runs behind opponents or into gaps. Use the space between the player and the line. Use screening.		

Working time	Length of break	Number of repetitions	Type of break
1'15"	2-3'	6	Active, with or without ball

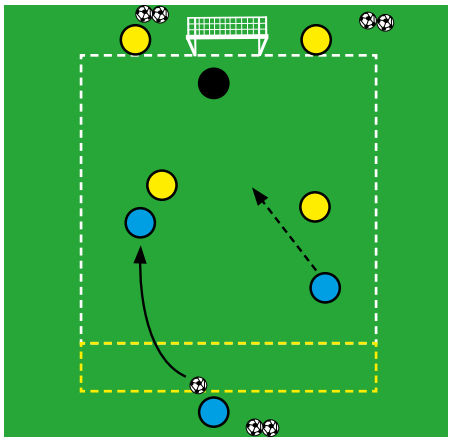


Physical quality: speed and acceleration based on MAP **2 versus 2 / Game 19**

2 versus 2 with goalkeeper + support players + stop-ball zone
Attack: 2-person play and in pairs for scoring
Defence: lateral movements and mutually covering each other to protect own goal

RPE: 16 x 7'30" → 120 AU	Heart rate check	Heart rate after a break of 3'
Organisation: 25 x 20m – 2 versus 2 with back-up player at source for the blue team and 2 back-up players for the yellow team.		
Procedure: ball put into play from a throw-in for the blue team. The yellow team defends the goal and attacks in a stop-ball situation using the 2 back-up players.		
Instructions: the player throwing the ball in looks first for the player furthest down the pitch. Do not be on the same line at the start. Anticipate possible flick-on while speeding up.		
Variant: after the throw-in, player must protect the ball and use the back-up player at the ball source.		

Working time	Length of break	Number of repetitions	Type of break
1'15"	2-3'	6	Active, with or without ball

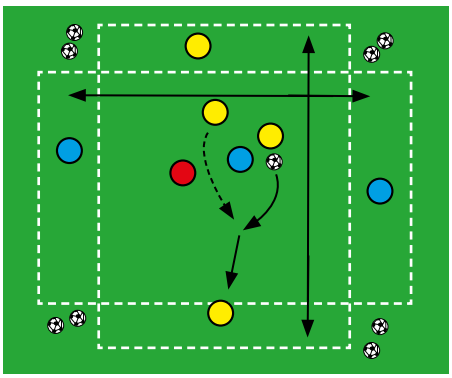


Physical quality: speed and acceleration based on MAP **2 versus 2 / Game 20**

2 versus 2 without goalkeepers + support and back-up players
Attack: keeping possession of ball between support and back-up players
Defence: regaining ball when possession is lost

RPE: 18 x 7'30" → 135 AU	Heart rate check	Heart rate after a break of 3'
Organisation: 2 intersecting rectangles with a 15 x 15m central zone for keeping possession of the ball in a 2 versus 2 with a support player and a back-up player (15 x 5m zones for support players and back-up players).		
Procedure: the yellow team keeps the ball using their support player and back-up player in one direction. The blue team must intercept, regain possession (possible with one of the two blue players being permitted to go into the support or back-up zone) and keep possession to then use their own support and back-up players in the other direction.		
Instructions: to keep the ball, use the spaces and the gaps in the direction of play. In defence, anticipate in order to harass the possible receiver.		
Variants: each time the ball goes out, throw in a new one. Only 1 touch for support and back-up players. 2 touches.		

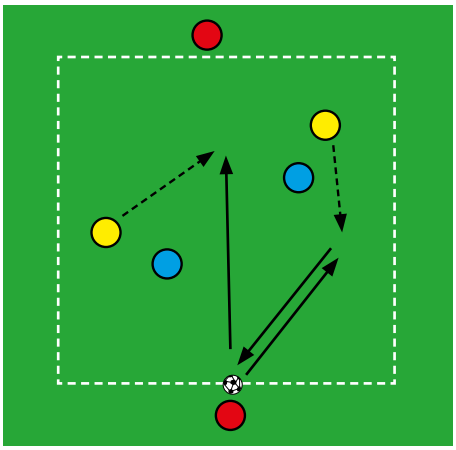
Working time	Length of break	Number of repetitions	Type of break
1'15"	2-3'	6	Active, with or without ball



Physical quality: speed based on MAP **2 versus 2 / Game 21**

2 versus 2 without goalkeepers + neutral support players
Attack: retaining the ball – neutral support and back-up players
Defence: closing down space, intercepting passes and regaining possession

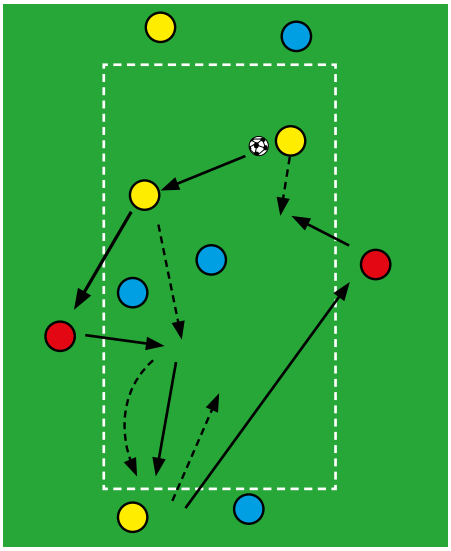
RPE: 18 x 7'30" → 135 AU	Heart rate check	Heart rate after a break of 3'	
Organisation: 25 x 20m playing area for retaining possession in a 2 versus 2 with neutral support and back-up players.			
Procedure: the yellow team keeps possession using the neutral support and back-up players. The blue team must regain the ball and retain possession using the neutral support and back-up players.			
Instructions: to keep the ball, use the spaces and the gaps. In defence, work in pairs to intercept the ball.			
Variants: everyone is limited to 2 touches of the ball. Then, just 1 touch for the support and back-up players and unlimited for the central players (possibility of having 1 support player on each side of the square).			
Working time	Length of break	Number of repetitions	Type of break
1'15"	2-3'	6	Active, with or without ball



Physical quality: speed based on MAP **2 versus 2 / Game 22**

2 versus 2 without goalkeeper + support players
Attack: short passing game and sequence
Defence: regaining ball when possession is lost

RPE: 15 x 10' → 150 AU	Heart rate check	Heart rate after a break of 3'	
Organisation: 20 x 15m in 2 versus 2 with 2 central support players and 1 central back-up player, and 2 neutral support players out wide.			
Procedure: retaining possession in pairs with 2 indirect helpers per team and 2 neutral indirect helpers (red). The support players are limited to 1 or 2 touches of the ball.			
Instructions: retain possession playing from one end to the other. Ball to be played on the ground only. Players to speed up when receiving passes. Take in information before receiving the ball. Position yourself well to make better use of the support players.			
Variant: long ball to a support player and take his place.			
Working time	Length of break	Number of repetitions	Type of break
2'	2'	5	Active

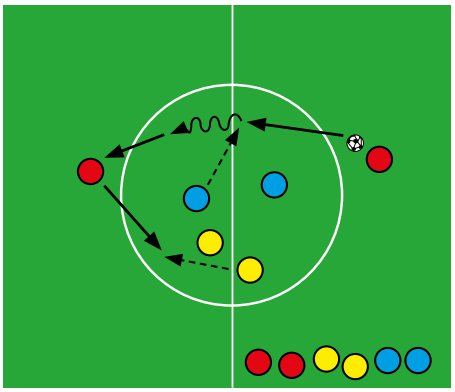


Physical quality: speed based on MAP **2 versus 2 / Game 23**

2 versus 2 without goalkeeper + support players
Attack: retaining possession of the ball using support players
Defence: intercepting, recovering the ball and passing sequence

RPE: 16 x 7'30" → 120 AU	Heart rate check	Heart rate after a break of 3'
Organisation: 2 versus 2 in the centre circle with 2 mobile neutral support players outside the circle.		
Procedure: ensure you have 12 players to allow for a break of twice the playing time (3').		
Instructions: man-to-man marking: lose marker + control on the turn + give to a support player outside the circle or to a partner inside it. Control on the turn and passing sequences.		
Variant: duel in each semi-circle and 1 mobile support player per semi-circle.		

Working time	Length of break	Number of repetitions	Type of break
1'30"	3'	5	Passive

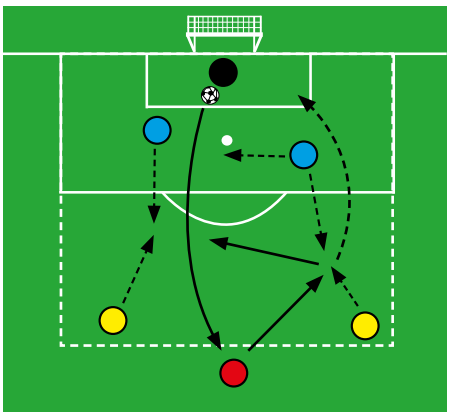


Physical quality: max. speed (anaerobic) **2 versus 2 / Game 24**

2 versus 2 with goalkeeper plus a floating player
Attack: taking out opponents and scoring
Defence: pressing up high – regaining possession and passing to the floating player

RPE: 18 x 3' → 54 AU	Heart rate check	Heart rate after a break of 3'
Organisation: 40 x 33m – 2 versus 2 with floating player – 2 attackers and 2 defenders (possibility of working in rounds by limiting the playing time).		
Procedure: goalkeeper passes to the floating player who passes the ball to the right or left to a yellow attacker. 2 versus 2 on goal. If the blue defenders intercept the ball, they try to pass back out to the floating player, with the two yellow attackers trying to stop the pass.		
Instructions: if the defenders intercept, they pass the ball to the goalkeeper who passes out to the floating player, which leads into 2 other attackers starting (working in rounds).		
Variant: the attackers press and try to stop the goalkeeper from passing the ball out to the floating player.		

Working time	Length of break	Number of repetitions	Type of break
30"	2-3'	6	Active, with or without ball

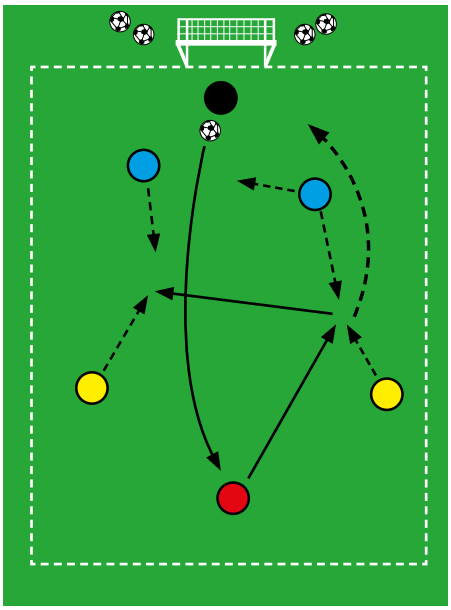


Physical quality: max. speed (anaerobic) **2 versus 2 / Game 25**

2 versus 2 with goalkeeper + floating player
Attack: taking out opponents and scoring
Defence: pressing up high – regaining possession and passing to the floating player

RPE: 18 x 3’ → 54 AU	Heart rate check	Heart rate after a break of 3’
Organisation: 25 x 15m – 2 versus 2 with a floating player – 2 attackers and 2 defenders (possibility of working in rounds by limiting the playing time).		
Procedure: the goalkeeper passes to the floating player who passes to the right or left to launch attack on goal. If the defenders intercept the ball, they try to pass back out to the floating player.		
Instructions: if the defenders intercept, they pass the ball back to the goalkeeper who kicks the ball out to the floating player.		
Variant: the attackers press and try to stop the goalkeeper from passing the ball out to the floating player.		

Working time	Length of break	Number of repetitions	Type of break
30”	2-3’	6	Active, with or without ball

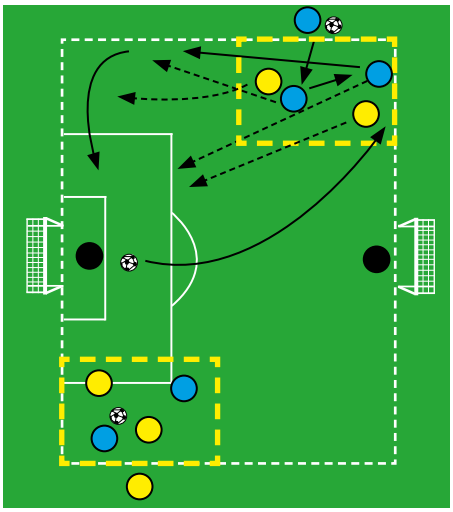


Physical quality: speed (alactic anaerobic capacity) **2 versus 2 / Game 26**

2 (+1) versus 2 with goalkeepers
Attack: attacking quickly from out wide and finishing
Defence: organised defending in pairs chasing the ball. Managing the pitch depth for the goalkeeper.

RPE: 17 x 4’ → 68 AU	Heart rate check	Heart rate after a break of 3’
Organisation: half-pitch with mobile goals and goalkeepers: 2 blue attackers plus the player laying the ball off against 2 yellow defenders. Work in rounds and rotate.		
Procedure: 2 versus 2 down the side after retaining possession of the ball (possibility of using the player laying the ball off).		
Instructions: fast attacking work: diagonal run off the ball from the centre into space behind the defender. Pass all the way down the line + finish in front of goal in a 2 versus 2. If intercepted by the defenders, the ball is passed to the goalkeeper who kicks it clear into the other square.		
Variant: working on the right and on the left.		

Working time	Length of break	Number of repetitions	Type of break
15”	1’	2 x 8	Active (walking or easy jogging)



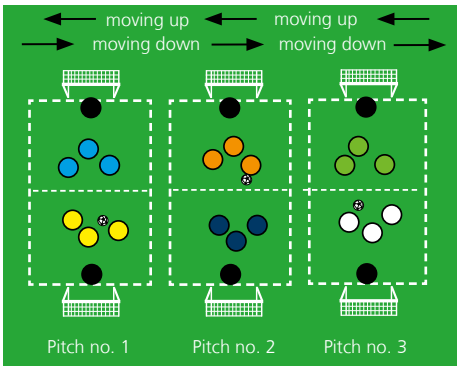
3 versus 3

Physical quality: MAP **3 versus 3 / Game 1**

3 versus 3 with goalkeepers, moving up, moving down
Attack: attacking with 3 players to score
Defence: defending own goal with 3 players plus goalkeeper

RPE: 15 x 12′ → 180 AU	Heart rate check	Heart rate after a break of 3′
Organisation: 40 x 16.5m – 6 groups of 3 players (+ goalkeeper).		
Procedure: 3 versus 3 over 2′. The winning team changes pitches and moves up to pitch no. 1. The losing team moves down to pitch no. 3. If the game finishes as a draw, the team that scored the first goal is the winner. If the game is a 0-0 draw, the team that attacked most is considered the winner.		
Instructions: the goalkeeper is to be used as a back-up player. Provoke in attack and harass in defence (resisting pressure).		

Working time	Length of break	Number of repetitions	Type of break
2′	2′	6	Active, with or without ball

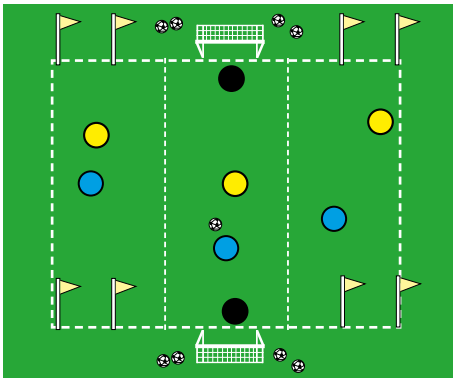


Physical quality: MAP and sprint repetitions **3 versus 3 / Game 2**

3 versus 3 with goalkeepers
Attack: attacking by preferably using the width
Defence: 3-person zonal defending

RPE: 17 x 12′ → 204 AU	Heart rate check	Heart rate after a break of 3′
Organisation: 40 x 30m pitch divided into 3 channels – 2 groups of 3 + goalkeepers.		
Procedure: free play. Goal is awarded if at least 2 of the 3 channels are occupied. Pass from the central channel, go to the channel opposite the one passed to. If the ball is passed from a side channel to the central channel, go to the channel on the other side.		
Instructions: use the width and length of the pitch. Move around and create space while playing. Favour dribbling.		

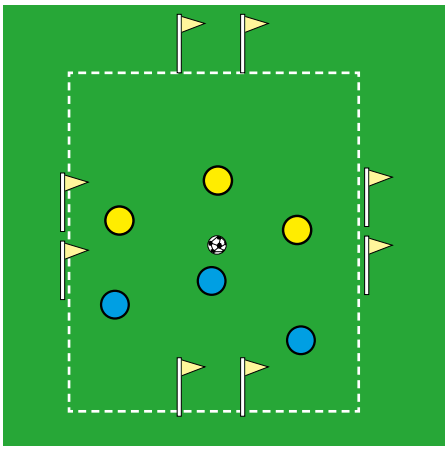
Working time	Length of break	Number of repetitions	Type of break
2′	2′	6	Passive



Physical quality: MAP and sprint repetitions **3 versus 3 / Game 3**

3 versus 3 – without goalkeepers, attacking and defending 3 goals
Attack: attacking a central goal and 2 goals on the sides
Defence: defending a central goal and 2 goals on the sides

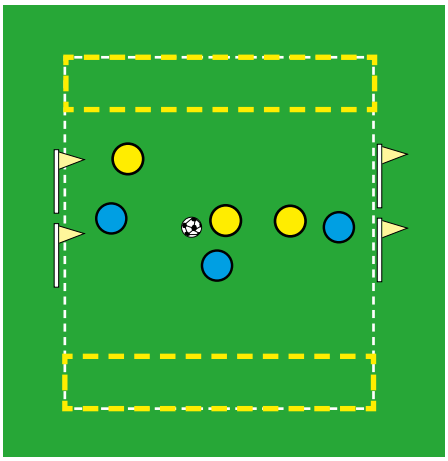
RPE: 16 x 12′ → 192 AU	Heart rate check	Heart rate after a break of 3′	
Organisation: 30 x 20m – 3 versus 3 with 2 small central goals and 2 mini-goals on the sides.			
Procedure: free play. Scoring with 1 touch of the ball.			
Instructions: use the playing possibilities along the width to better exploit the length. Defend by pressing.			
Variant: once past the 2 side goals, only the central goal can be attacked to score a point.			
Working time	Length of break	Number of repetitions	Type of break
2′	2-3′	6	Passive



Physical quality: MAP (medium intermittent) **3 versus 3 / Game 4**

3 versus 3 – without goalkeepers – stop-ball + 2 side goals
Attack: drawing in on one side to facilitate playing long balls
Defence: zonal defending and preventing long balls

RPE: 16 x 14′ → 224 AU	Heart rate check	Heart rate after a break of 3′	
Organisation: 30 x 20m – 3 versus 3 with 2 central stop-ball zones and 2 mini-goals on the sides.			
Procedure: free play: 2 points for a ball stopped in the stop-ball zones. 1 point for a goal scored with 1 touch of the ball into the side goals.			
Instructions: alternate attacking play between using the width and long balls. Retain possession as a group. In defence, press opponents to prevent them from pushing forward and using the length.			
Variant: goal awarded if all team members get past the goal on either side.			
Working time	Length of break	Number of repetitions	Type of break
2′	2-3′	7	Active or semi-active

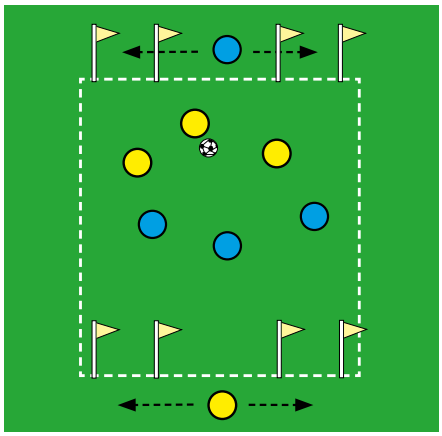


Physical quality: MAP (medium intermittent) **3 versus 3 / Game 5**

3 versus 3 – without goalkeepers + 2 mobile support players and 2 mini-goals
Attack: playing using the width and switching to score
Defence: defending 2 goals with a player moving all along the end

RPE: 16 x 14′ → 224 AU	Heart rate check	Heart rate after a break of 3′
Organisation: 30 x 20m – 3 versus 3 with 2 mini-goals at the pitch ends and an attacking support player for each team.		
Procedure: free play. 1 point for passing to the support player in the centre. 2 points for passing to the support player in the goals.		
Instructions: work as a team to reach the player moving along the end (look for and use the gaps).		
Variant: play tag to encourage pressing (if tagged while in possession of the ball, give the ball to the other team) and fluid movement (anticipation).		

Working time	Length of break	Number of repetitions	Type of break
2′	2-3′	7	Active or semi-active

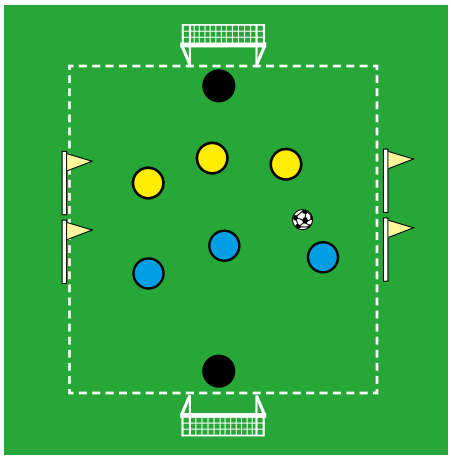


Physical quality: MAP (medium intermittent) **3 versus 3 / Game 6**

3 versus 3 – 2 goals at the ends with goalkeepers and 2 on the sides without goalkeepers
Attack: attacking the 3 goals
Defence: defending the 3 goals

RPE: 16 x 14′ → 224 AU	Heart rate check	Heart rate after a break of 3′
Organisation: 40 x 30m		
Procedure: free play; 2 points for a goal scored in the end goal; 1 point for a goal scored into the side goals with 1 touch of the ball.		
Instructions: use the playing possibilities along the width to better exploit the length. Defend by pressing.		
Variants: (1) Playing tag. (2) Once past the 2 side goals, only the central goal can be attacked to score a point.		

Working time	Length of break	Number of repetitions	Type of break
2′	2-3′	7	Active or semi-active

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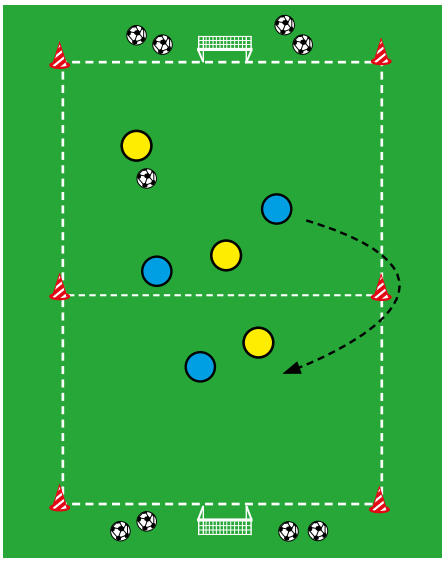
16

Physical quality: speed (anaerobic work) **3 versus 3 / Game 7**

3 versus 3 staggered – 3 versus (2+1) – without goalkeepers (mini-goals)
Attack: attacking 3 versus 2
Defence: defending 2 versus 3 with handicap on losing possession

RPE: 18 x 14' → 252 AU	Heart rate check	Heart rate after a break of 3'
Organisation: 40 x 30m – 3 versus 3 with a run around the cone (handicap) on losing possession.		
Procedure: free play; 2 defenders playing over the whole playing area and an attacker stationed in the attacking area. Alternating between 3 versus 2 and 2 versus 3. The team with the ball uses all 3 players to attack. At the end of the action, set it up again with 1 player in the attacking area and the 2 others in the defending area.		
Instructions: move as a group and support each other in attack and defence.		
Variant: on losing possession, 1 of the 3 players must run around one of the cones on the halfway line.		

Working time	Length of break	Number of repetitions	Type of break
2'	2-3'	7	Active or semi-active

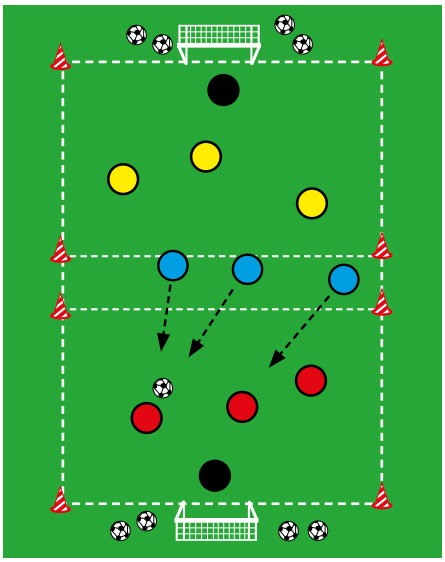


Physical quality: MAP (medium intermittent) **3 versus 3 / Game 8**

3 versus 3 with goalkeepers (3 teams of 3)
Attack: attacking in 3 versus 3 in the attacking half
Defence: defending in 3 versus 3 in the defending half

RPE: 16 x 14' → 224 AU	Heart rate check	Heart rate after a break of 3'
Organisation: 40 x 30m – 3 teams of 3 + 2 goalkeepers – 2 large goals.		
Procedure: free play; the blue team tries to score; if it loses the ball, the red team attacks the opposite goal defended by the yellow team. The blue team is out of the game. If a team scores a goal, it keeps the ball and may attack the other goal.		
Instructions: restart from the neutral central area of the pitch. Alternate keeping the ball and risk-taking for finishing off.		
Variant: if the attackers lose the ball in the attacking zone, they can try to regain possession by pressing and marking. Stop pressing to return to the midfield area for the defending team.		

Working time	Length of break	Number of repetitions	Type of break
2'	2-3'	7	Active or semi-active

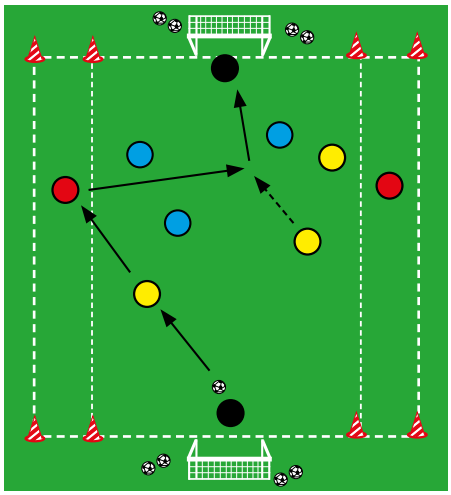


Physical quality: MAP (medium intermittent) **3 versus 3 / Game 9**

3 versus 3 with goalkeeper + support players (channels)
Attack: attacking by linking with the support and back-up players in the channels
Defence: closing down spaces and anticipating crosses

RPE: 17 x 14' → 238 AU	Heart rate check	Heart rate after a break of 3'
Organisation: 40x 30m – 3 versus 3 with 2 neutral wide support players.		
Procedure: support players limited to 1 touch of the ball. Goalkeepers to put ball into play. Use the wide support players to take out opponent and take a shot on goal.		
Instructions: move onto the return pass from the neutral support player. Finish off or look for a 1-2 or 1-2-3. Players to move onto the second last pass. Draw in the opponent before passing. Anticipate a return pass or a flick-on and accelerate after the pass.		
Variants: (1) Playing tag. (2) 2 touches of the ball for the neutral support players (with more time available for losing the marker).		

Working time	Length of break	Number of repetitions	Type of break
2'	2-3'	7	Active or semi-active

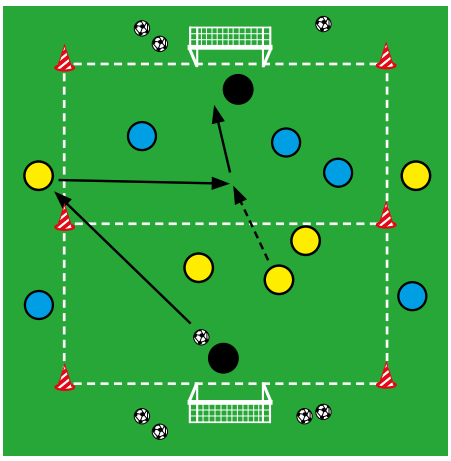


Physical quality: MAP (medium intermittent) **3 versus 3 / Game 10**

3 versus 3 with goalkeeper on a short and wide pitch + wide support players
Attack: attacking using the width on a short pitch
Defence: defending along the width and intercepting crosses

RPE: 18 x 9' → 162 AU	Heart rate check	Heart rate after a break of 3'
Organisation: 40 x 40m (pitch divided in 2). 3 versus 3 + 2 attacking support players out wide: 1 on each wing. 2 touches of the ball.		
Procedure: 3 versus 3 in front of each goal with 2 support players out wide on each wing: goalkeeper passes to a support player + cross and aerial play by attackers (heading or volleying). If intercepted, play is restarted directly by the defender passing to the support player in his team. Remember to change the crossers.		
Instructions: coordinate runs to intercept crosses. Defensive heading under pressure in front of goal.		
Variant: 4 neutral support players; passing between the 2 support players on the same side before playing a cross.		

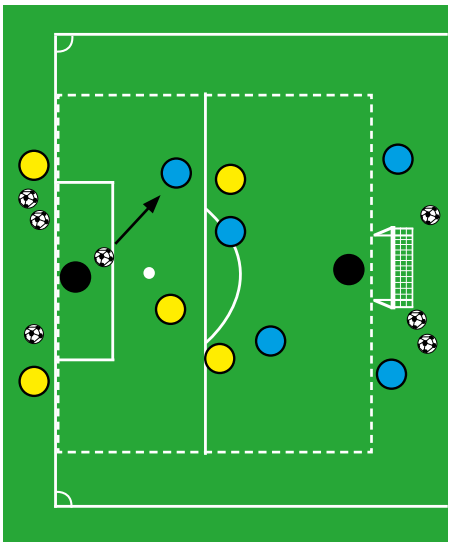
Working time	Length of break	Number of repetitions	Type of break
1'30"	2-3'	6	Active or semi-active



Physical quality: MAP (medium intermittent) **3 versus 3 / Game 11**

3 versus 3 with goalkeepers + support players
Attack: opening up access to goal. 2-person play and shot on goal
Defence: closing down the shot on goal

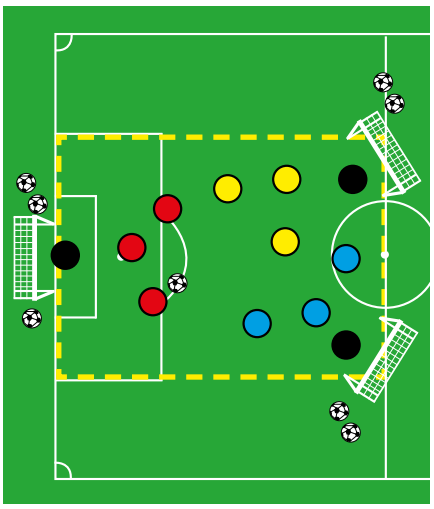
RPE: 17 x 14' → 238 AU	Heart rate check	Heart rate after a break of 3'	
Organisation: 40 x 30m. 2 goals brought closer together with goalkeepers (sources of balls). 3 versus 3 + 2 attacking support players.			
Procedure: receive pass from support player before taking a shot on goal, except if possession is regained in front of the opponents' goal. After each goal or ball put out of play by the opponents, goalkeeper to restart play.			
Instructions: increase the shots on goal after dribbling, return pass or a 1-2. React quickly to set up a new attack.			
Variant: 4 neutral support players, 2 as back-up players and the 2 others as support players.			
Working time	Length of break	Number of repetitions	Type of break
2'	2-3'	7	Active or semi-active



Physical quality: MAP (medium intermittent) **3 versus 3 / Game 12**

3 versus 3 versus 3 with goalkeepers
Attack: attacking 2 goals using the best opportunities
Defence: defending own goal against two teams

RPE: 17 x 14' → 238 AU	Heart rate check	Heart rate after a break of 3'	
Organisation: 52 x 40m – 3 teams of 3 players in 3 different colours + 3 goalkeepers – 3 large goals and only one ball in play.			
Procedure: each team plays against the two other teams. Players try to score against the 2 other teams. Free play.			
Instructions: make the right decisions when setting up again after a breakdown in formation (attack-defence or defence-attack transition). Alternate the goals to be defended.			
Variants: (1) 1 floating player playing with all 3 teams. (2) 2 teams against 1 single team (the team that lost the ball).			
Working time	Length of break	Number of repetitions	Type of break
2'	2-3'	7	Active or semi-active



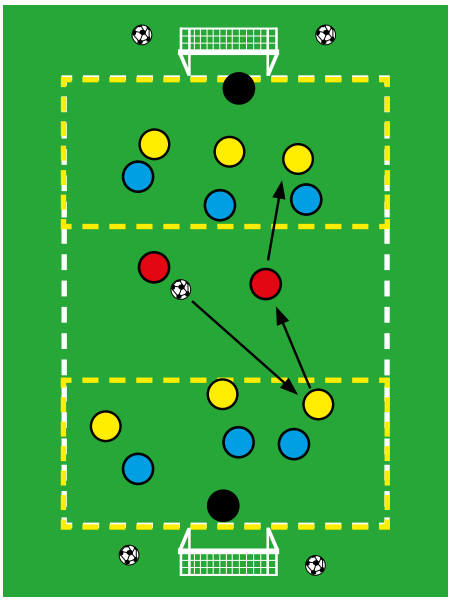

16

Physical quality: acceleration speed based on MAP **3 versus 3 / Game 13**

3 versus 3 with goalkeepers + neutral support players in midfield
Attack: playing 1-2-3s and looking for depth to finish
Defence: protecting own goal and intercepting passes

RPE: 12 x 14' → 168 AU	Heart rate check	Heart rate after a break of 3'
Organisation: half-pitch, 16.5m wide with goalkeepers: 3 versus 3 in front of each goal + 2 neutral midfielders who guide and support the attackers in each team.		
Procedure: after regaining possession, restart play by passing to midfielders or attackers. Change the 2 neutral players every 2' (1 per team).		
Instructions: protect the ball; play physically (tussling); create uncertainty.		
Variant: the neutral midfielder can follow and create a numerical advantage.		

Working time	Length of break	Number of repetitions	Type of break
2'	2-3'	7	Active or semi-active

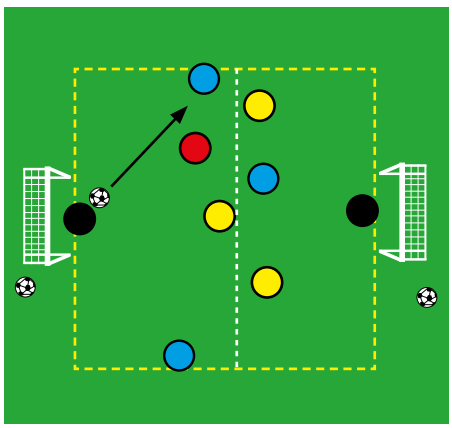


Physical quality: acceleration speed based on MAP **3 versus 3 / Game 14**

3 versus 3 with goalkeepers and neutral support players in midfield
Attack: playing 1-2-3s and looking for depth to finish
Defence: protecting own goal and intercepting passes

RPE: 17 x 14' → 238 AU	Heart rate check	Heart rate after a break of 3'
Organisation: 30 x 30m with 2 goals closer together and 1 midfielder: 3 versus 3 + 1 neutral player.		
Procedure: play 4 versus 3 in attack. Change the neutral player every 2'.		
Instructions: move forward as you receive the ball, play quick, snappy passes and look for depth.		

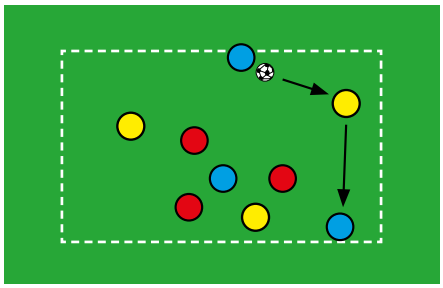
Working time	Length of break	Number of repetitions	Type of break
2'	2-3'	7	Active or semi-active



Physical quality: MAP **3 versus 3 / Game 15**

3 versus 3 + 3 without goalkeeper
Attack: controlling and retaining possession
Defence: regaining possession by limiting the ball carrier's options

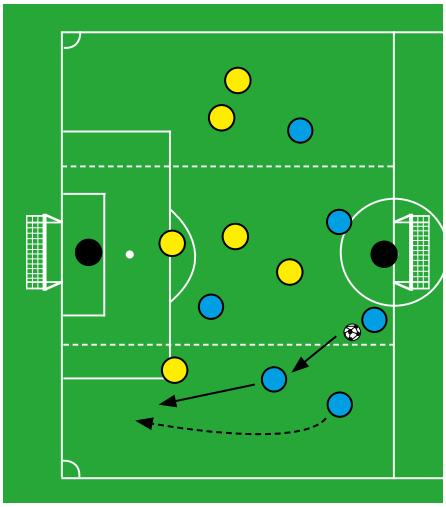
RPE: 16 x 12' → 192 AU	Heart rate check	Heart rate after a break of 3'	
Organisation: 10 x 20m: 6 versus 3.			
Procedure: retain possession without passing back to the same player. The team that loses possession is to take up defence.			
Instructions: be active while the ball is in movement. Look before receiving the ball. Keep moving. Be available and accessible.			
Variant: 1 team to play as floating players for 2' and then change.			
Working time	Length of break	Number of repetitions	Type of break
2'	2-3'	6	Active or semi-active



Physical quality: speed and acceleration based on MAP **3 versus 3 / Game 16**

3 versus 3 in the centre with goalkeepers + 2 versus 1 or 1 versus 2 in the channels
Attack: deep play and turning play
Defence: protecting the centre and covering the wings

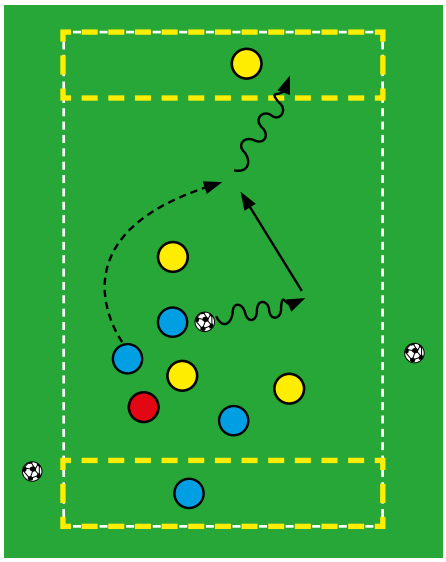
RPE: 16 x 14' → 224 AU	Heart rate check	Heart rate after a break of 3'	
Organisation: half-pitch with goals and goalkeepers: 3 versus 3 in the central area and 2 versus 1 or 1 versus 2 out wide.			
Procedure: play 3 versus 3 in the centre as support and back-up players with overlapping. Use the numerical advantage in the channels to facilitate crosses.			
Instructions: score from a cross. Change pace, vary the passing and feign passing. Give and move in behind the defence.			
Variant: a defender may come to rebalance the sides on the goal-side.			
Working time	Length of break	Number of repetitions	Type of break
2'	2-3'	7	Active or semi-active



Physical quality: MAP **3 versus 3 / Game 17**

3 versus 3 without goalkeeper with 1 floating player and 2 support players at each end
Attack: support and back-up play and overlapping, stop-ball scoring
Defence: stopping the ball from circulating and anticipating passes

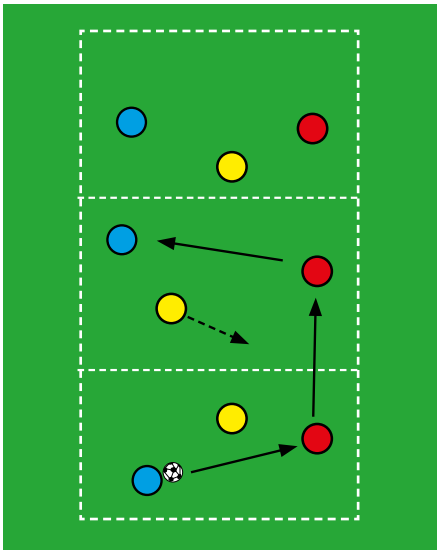
RPE: 15 x 8' → 120 AU	Heart rate check	Heart rate after a break of 3'	
Organisation: 15 x 20m: 3 versus 3 plus a floating player with 1 back-up player per team.			
Procedure: stop-ball scoring. Change the floating player every 2'.			
Instructions: overlapping runs or feign overlapping. Draw in the defender and change pace when moving behind opponent for the ball.			
Variants: (1) central support players and floating player limited to 1 touch of the ball. (2) 2 touches of the ball for the players in both teams.			
Working time	Length of break	Number of repetitions	Type of break
1'	2'30"	8	Active



Physical quality: aerobic capacity **3 versus 3 / Game 18**

3 + 3 without goalkeepers, 3 players intercepting passes
Attack: playing into gaps
Defence: intercepting and anticipating opponents' passes

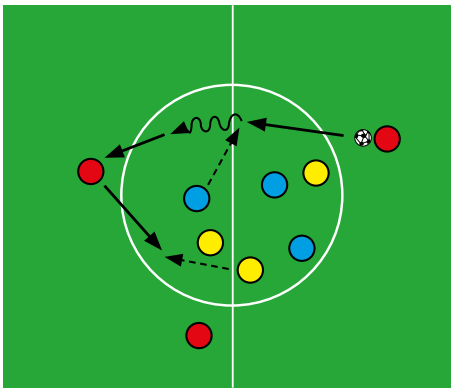
RPE: 13 x 18' → 234 AU	Heart rate check	Heart rate after a break of 3'	
Organisation: playing area split into 3 zones, 7m wide x 15m long – 9 players (3 teams). Objective: make as many passes into gaps as possible in a row. The team that loses the ball changes to defence.			
Procedure: two teams facing each other exchange passes against a team in the middle that must intercept.			
Instructions: move around in own zone as the ball is being passed. Fall back to create space in the middle. Avoid being hidden behind an opponent. Dynamic footwork, snappy play and control the pass.			
Variant: switching zones after passing.			
Working time	Length of break	Number of repetitions	Type of break
6'	3'	3	Passive



Physical quality: speed (intermittent) **3 versus 3 / Game 19**

3 versus 3 + 3 without goalkeeper
Attack: controlling and retaining possession
Defence: regaining possession by limiting the ball carrier's options

RPE: 18 x 6' → 108 AU	Heart rate check	Heart rate after break of 3'	
Organisation: opposition in centre circle: 3 versus 3 with 3 neutral support players outside.			
Procedure: individual marking. 2 groups.			
Instructions: use directed controls and flicks. Lose marker. Use external support players and team-mates in the playing area.			
Variant: limit the game to 2 touches of the ball.			
Working time	Length of break	Number of repetitions	Type of break
1'	3'	6	Slightly active

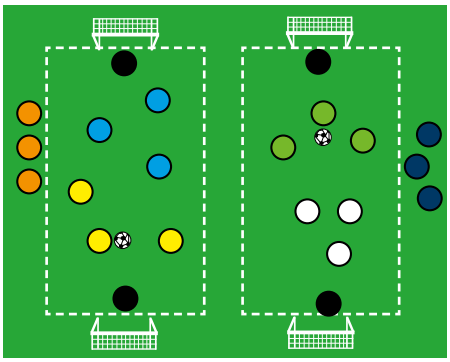


Physical quality: maximum speed (intermittent) based on MAP **3 versus 3 / Game 20**

3 versus 3 with goalkeepers (with scoring and time pressure)
Attack: attacking with determination
Defence: protecting the centre and covering the wings

RPE: 19 x 12' → 228 AU	Heart rate check	Heart rate after break of 3'
Organisation: pitch: 40 x 30m, 3 versus 3 in free play for a maximum of 2'.		
Procedure: the team that scores eliminates the other team, and a third team takes the losing team's place. The team that won is then eliminated if it concedes a goal or if it draws the next game at the end of the allotted time (2'). If the first match ends in a draw, the team that scored first wins the game and stays on the pitch. If a match ends in a 0-0 draw, the team that was the most attacking stays on the pitch.		
Instructions: press all over the pitch and do not leave yourself open to attack. Prioritise protecting the centre if unbalanced. Take risks. Look for efficiency.		
Variant: play with 2 touches of the ball, then with 1 touch of the ball, except for the goalkeeper.		

Working time	Length of break	Number of repetitions	Type of break
2'	2'	6	Active



4 versus 4

The principles of 4 versus 4

4 versus 4 allows players to discover all of the principles of attacking and defensive play.

In attack, the objective is to:
- score a goal;
- play while on the move;
- retain possession;
- lose one's marker;
- create and use space.

In defence, the objective is to:
- stop attacks;
- quickly close down the player in possession;
- take up a position between the ball and the goal;
- close down space;
- regain possession;
- restrict the time and space for the player in possession.

Structure of 4 versus 4

"4 versus 4 is the smallest version of a full match."

Studies comparing 4 versus 4 football with 11 versus 11 football show:

- The players touch the ball five times more often in 4 versus 4. They play three times as many game situations in 1 versus 1.
- On average, a goal is scored every two minutes in game situations in 4 versus 4

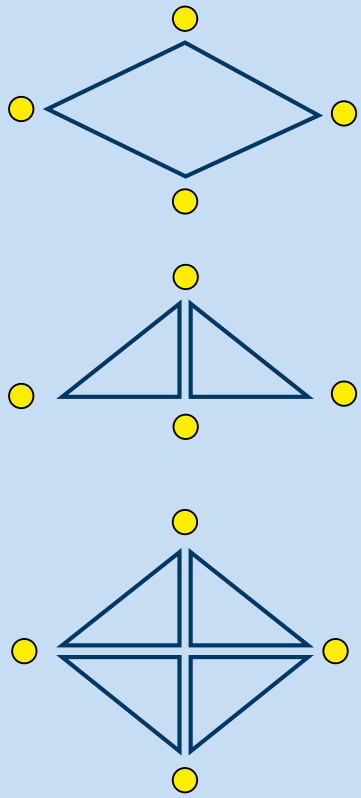
The ball is out of play:
- no more than 8% of the time in 4 versus 4;
- more than 34% of the time in 11 versus 11

Other advantages of 4 versus 4

- The game is easy to understand.
- Freedom of expression = enjoyment of playing.
- More individual initiative is used.
- Basic tactical awareness is developed.
- Game intelligence is developed.
- More forward play.
- More play in the goal area.
- Many more shots on goal.

Active and constant participation enhances the development of specific physical qualities (integrated physical preparation), in particular for the development or training of aerobic power or capacity.

By using the shape of a diamond, in other words four triangles, all game conditions are used: attacking play, transitions, defensive play and all types of transition.



This type of game allows players to learn about the notion of a team, about attacking together and about defending together, but especially about moving together to occupy the pitch better. Finally, it continually develops the idea of playing forward.

Learning basic team tasks here helps players to transfer the skills they have learnt into a real match situation. In fact, transferring the individual and team skills learnt during training sessions into a real match situation is even more efficient if there are common points between the two situations.

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It is therefore preferable if training sessions use game situations similar to those that will be encountered during competitive matches.

Training using small-sided games

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Game situations that are practised in isolation during training sessions may not be recognised by players during matches.

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Training using small-sided games

The most important criteria is not technical perfection, but choosing the right moment, in the right direction and at the right speed.
Anticipation/vision and communication among players are therefore essential objectives. This basic form, which has many variants, gives players the opportunity to train in the best possible manner, using the joy of playing because the players feel like they are in a real match, which motivates and encourages them to make an effort and creates a good learning atmosphere.

Change the type of game by varying it, starting from the basic structure

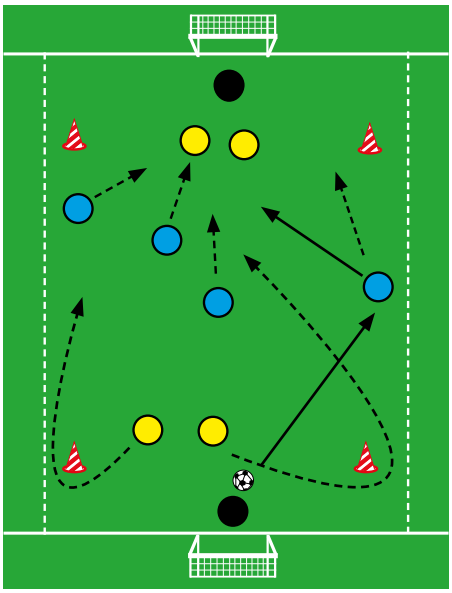
It is possible to change the type of game by varying it after starting from the basic structure, which gives players different ways to learn and discover. Consequently, the coach has to set new objectives.

Physical quality: speed and acceleration based on aerobic capacity **4 versus 4 / Game 1**

4 versus 4 with goalkeepers and defensive imbalance
Attack: attacking fast with numerical superiority
Defence: moving laterally and cutting off trajectories

RPE: 18 x 10' → 180 AU	Heart rate check	Heart rate after break of 3'
Organisation: 33 x 50m. 4 versus 4. Attack and defend.		
Procedure: if the ball is lost, 1 yellow player has to complete a sprint (there and back) before returning to the defence. During this time, the blue team counter-attacks with 4 players against 3 yellow defenders.		
Instructions: in attack, inject pace into sequences and trajectories. Play between the goal and the defenders. Break free after winning the ball. Inject speed and accuracy into passes. Link up quickly. In defence, practise retreating ("jockey move") while waiting for the sprinting players to return. Read the trajectories, close down space and gaps.		
Variant: the team's handicap moves progressively from 1 to 2 and then to 3 players to regulate the speed of counter-attacks.		

Working time	Length of break	Number of repetitions	Type of break
2'	2'	5	Active

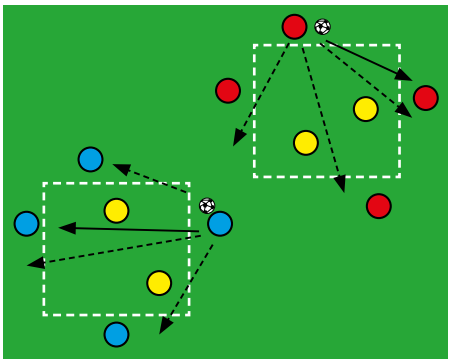


Physical quality: anaerobic lactic capacity **4 versus 4 / Game 2**

Without goalkeepers. 2 groups of 4 versus 2
Attack: retaining possession, completing a pass and changing sides
Defence: intercepting passes while inside the square

RPE: 14 x 15' → 210 AU	Heart rate check	Heart rate after break of 3'
Organisation: 2 groups of 4 versus 2.		
Procedure: the four players around the square have 2 touches of the ball. If a pass is intercepted, the player who played the pass moves into the middle. If a pass is misdirected: ditto. After completing a pass, players have to switch sides.		
Instructions: play on the move and with flicks. Accuracy of passes. Rapidity of execution.		
Variant: look to play passes through gaps between the 2 players in the middle.		

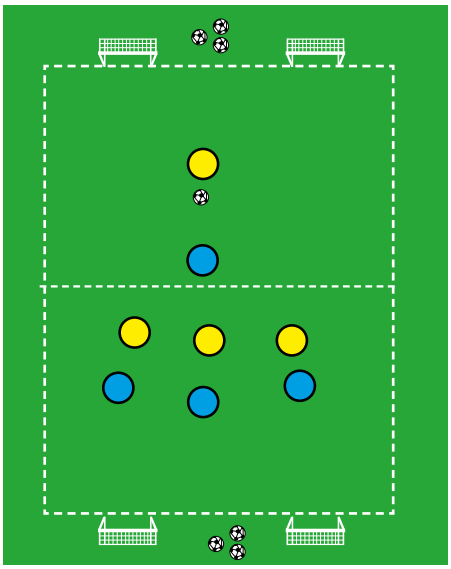
Working time	Length of break	Number of repetitions	Type of break
2'30"	2'	6	Semi-active



Physical quality: anaerobic lactic capacity **4 versus 4 / Game 3**

4 versus 4 without goalkeepers and with 2 mini-goals – play using the width of the pitch
Attack: attacking using the width of the pitch
Defence: defending using lateral movements to protect the 2 mini-goals

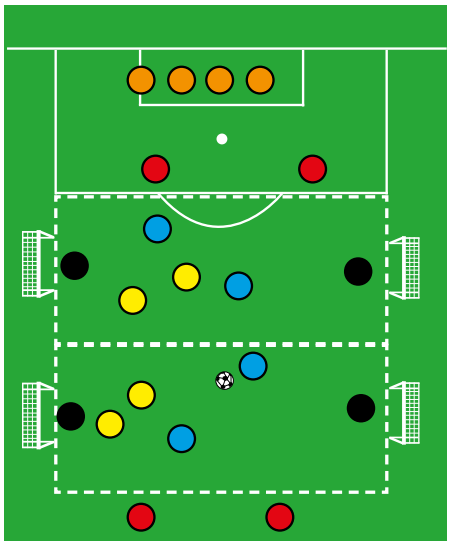
RPE: 15 x 15 → 225 AU	Heart rate check	Heart rate after break of 3'	
Organisation: 40 x 16.5m – 4 groups of 4 players – 2 groups playing each other, 2 groups on an active break.			
Procedure: play using the width of the pitch and 3 touches of the ball. A goal is only awarded if all of the players in the attacking team cross the halfway line. Respect the offside rule. Create goalscoring opportunities by switching sides. Great ball speed. Direct play. Choose the right moment to switch play. In defence, prevent opposition from using deep balls, stay compact, press. Good organisation (occupation of pitch). Active and constant defending.			
Instructions: use the support/back-up players and switches of play to create gaps in the opposition defence.			
Variant: 2 touches in the defensive half and free play in the attacking half.			
Working time	Length of break	Number of repetitions	Type of break
2'30"	2'	6	Semi-active



Physical quality: anaerobic lactic capacity **4 versus 4 / Game 4**

4 versus 4 with goalkeepers and 2 large goals
Attack: attacking 2 large goals using 2 channels
Defence: defending the width with 2 large goals and goalkeepers

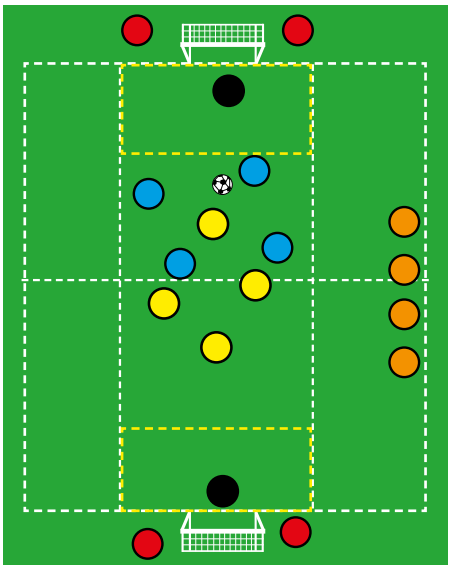
RPE: 15 x 12' → 180 AU	Heart rate check	Heart rate after break of 3'	
Organisation: 40 x 16.5m divided into 2. 2 groups of 4 versus 4 – 1 group as neutral support, 1 group on a break.			
Procedure: attack and defend 2 goals using 2 channels.			
Instructions: occupy all the width. Create space by stretching the lines and use the gaps created. Look quickly for depth. Use support/back-up players and switches of play. Create imbalances.			
Variant: a goal counts double if there was a switch after using a support/ back-up player.			
Working time	Length of break	Number of repetitions	Type of break
2'	2'	6	Semi-active



Physical quality: lactic anaerobic capacity (speed) **4 versus 4 / Game 5**

4 versus 4 with goalkeepers and 2 large goals – narrow pitch
Attack: attacking down the narrow centre of the pitch
Defence: defending in the centre

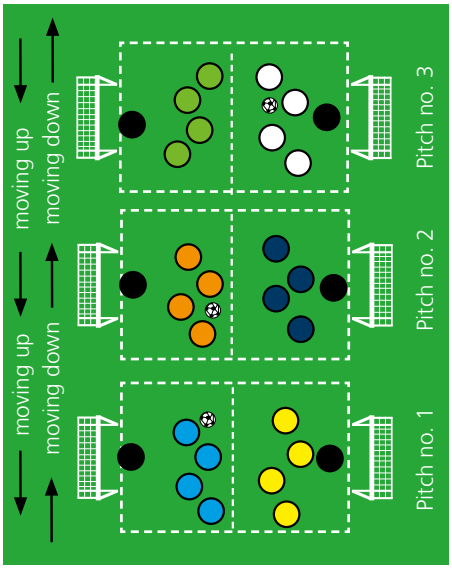
RPE: 15 x 15′ → 225 AU	Heart rate check	Heart rate after break of 3′	
Organisation: 50 x 40m – 4 versus 4 and 1 group of 4 players as neutral support and 1 group on a break.			
Procedure: leave the pressing area, and as soon as possession has been regained, pass to the strikers and accompany them to the finish.			
Instructions: in attack, look to play long balls quickly. Look to play 1-2s or 1-2-3s. Play balls out to the flanks. In defence, defend while pushing up. Press the ball carrier. Read and close passing lines for long balls.			
Variant: add neutral back-up and support players outside the pitch (by the side of the goals).			
Working time	Length of break	Number of repetitions	Type of break
3′	2′	5	Semi-active



Physical quality: MAP **4 versus 4 / Game 6**

4 versus 4 with goalkeepers, moving up, moving down (small tournament)
Attack: attacking with determination
Defence: defending effectively

RPE: 15 x 12′ → 180 AU	Heart rate check	Heart rate after break of 3′	
Organisation: 40 x 40m – 6 groups of 4 players, plus 1 goalkeeper.			
Procedure: 4 versus 4 over 2′. The winning team changes pitches by moving up to pitch no. 1. The losing team moves down to pitch no. 3. If the game finishes as a draw, the team that scored the first goal is the winner. If the game is a 0-0 draw, the team that was the most attacking is considered the winner.			
Instructions: provoke in attack and harass in defence.			
Variant: the goalkeepers can create a numerical advantage in the attacking phase but without passing the halfway line.			
Working time	Length of break	Number of repetitions	Type of break
2′	2′	6	Semi-active

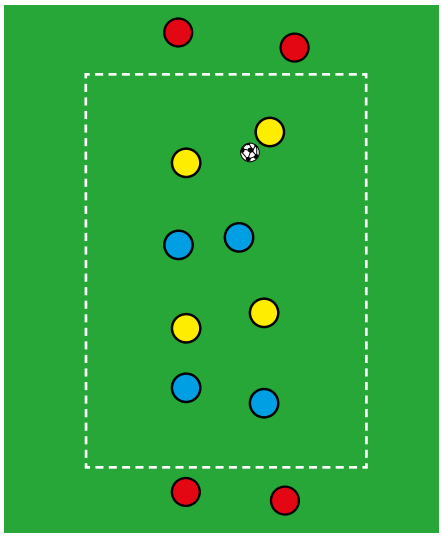


Physical quality: lactic anaerobic capacity **4 versus 4 / Game 7**

4 versus 4 without goalkeepers + 4 neutral support/back-up players
Attack: retaining possession using support and back-up players
Defence: covering and playing inside

RPE: 15 x 15′ → 225 AU	Heart rate check	Heart rate after break of 3′
Organisation: 40 x 30m – 3 groups of 4 players as neutral support and back-up players – 2 groups of 4 players playing each other.		
Procedure: retain possession by using the neutral support and back-up players.		
Instructions: in attack, the team in possession tries to pass the ball to the support players (1 point). If they succeed, they keep the ball and attack in the other direction. While in possession, they can play backwards towards the back-up players. In defence, follow and anticipate the movement of the attacker. Requirement: development of attention to frequent changes of direction and possession.		
Variant: play with 2 touches of the ball – play with just 1 touch of the ball.		

Working time	Length of break	Number of repetitions	Type of break
3′	2′	5	Semi-active

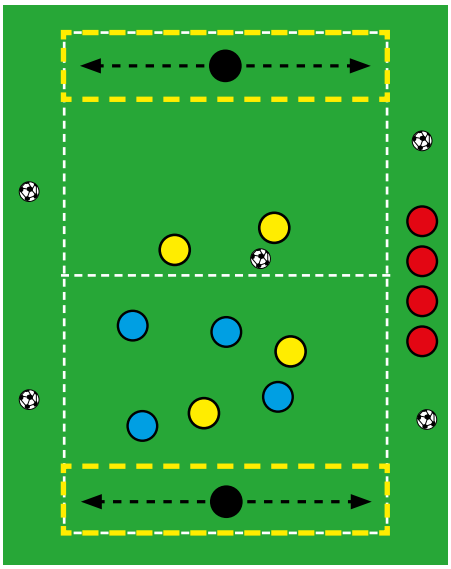


Physical quality: aerobic capacity (90-95% of MAP) **4 versus 4 / Game 8**

4 versus 4 with goalkeepers, behind goal lines
Attack: attacking to cross the goal line
Defence: defending own goal line

RPE : 15 x 15' → 225 AU	Heart rate check	Heart rate after break of 3'
Organisation: 40 x 30m + 3 teams of 4 players – 1 team on a break and 2 teams playing each other.		
Procedure: free play. Try to play an accurate pass to a goalkeeper behind the goal line.		
Instructions: in attack, while in possession of the ball, spread the play and make passes into the gaps. Score behind the line after a pass to the goalkeeper. Direct play. Choose the right moment to play long. In defence, close the gaps and defend laterally to prevent opponents from playing the ball long. Defend own zone. Think about covering. Permanent, active defending.		
Variant: a goal is only awarded if all of the team passes the halfway line. A goal is only awarded after a 1-2 or a 1-2-3. A goal is only awarded if a pass is played from the attacking half. Then, a goal is only awarded if a pass was played from the defending half (pressing of opponents).		

Working time	Length of break	Number of repetitions	Type of break
3'	2'	5	Active

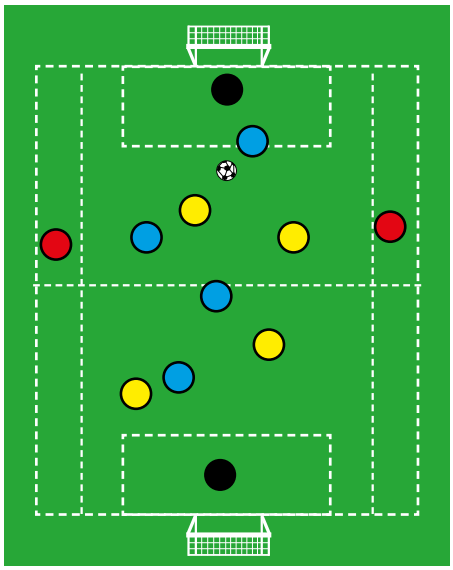


Physical quality: speed based on aerobic capacity (90-95% MAP) **4 versus 4 / Game 9**

4 versus 4 with goalkeepers
Attack: scoring with a header from a cross
Defence: defending aerial balls

RPE: 16 x 10' → 160 AU	Heart rate check	Heart rate after break of 3'
Organisation: 20 x 40m – 4 versus 4. Meeting crosses, headers.		
Procedure: heading crosses. Increase the number of crosses. Keep a 5m area on the wings free to prepare crosses.		
Instructions: in attack, score with a header. Free play for the players on the flanks. Play long balls and balls out to the flanks. Frequency, quality and diversity of crosses. Choose the right moment to play long and to play the ball out wide. Place the players in their specific positions (wingers). Read the trajectory of crosses. Quality of the goalkeeper's ball release. In defence, aerial play. Defend own zone well. Active defending.		
Variant: a goal is only awarded if all of the team passes the halfway line.		

Working time	Length of break	Number of repetitions	Type of break
2'	2'	5	Active

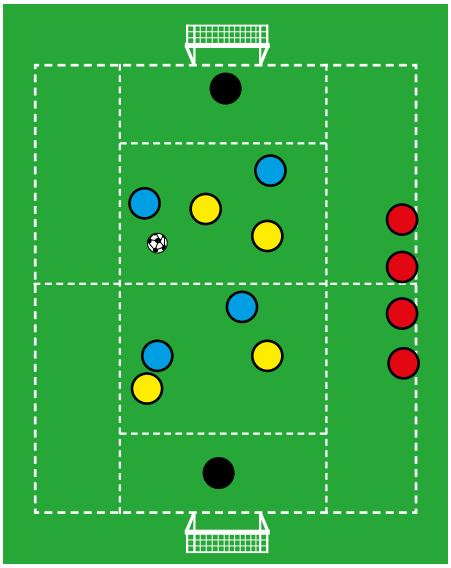


Physical quality: speed and acceleration (medium intermittent) based on MAP **4 versus 4 / Game 10**

4 versus 4 with goalkeepers and 2 large goals – narrow pitch
Attack: attacking down the narrow centre of the pitch
Defence: defending in the centre

RPE: 15 x 16' → 240 AU	Heart rate check	Heart rate after break of 3'
Organisation: pitch of 40 x 50m – 4 versus 4 with goalkeepers. 1 team on a break and 2 teams playing each other.		
Procedure: teams playing each other, with goalkeepers. Two-touch play in own half; free play in attacking half. High pressing on opposition.		
Instructions: in attack, look to play long balls quickly. Play forward quickly. Short and fast combination play. Look to play 1-2s or 1-2-3s. Play balls out to the flanks. In defence, defend while pushing up. Pressure on the ball carrier. Read and close passing lines for long balls.		
Variant: 2-touch play all over the pitch. 1 touch only with free play in one-on-ones with goalkeeper.		

Working time	Length of break	Number of repetitions	Type of break
2'	2'30"	8	Active

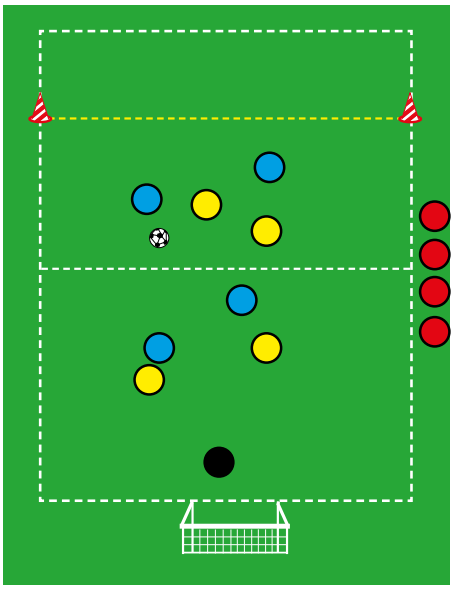


Physical quality: speed and acceleration (medium intermittent) based on MAP **4 versus 4 / Game 11**

4 versus 4 with 1 goalkeeper and 1 large goal on a short and wide pitch
Attack: attacking using the width on a short pitch
Defence: defending using the width

RPE: 15 x 16′ → 240 AU	Heart rate check	Heart rate after break of 3′
Organisation: 25 x 40m. 1 team on a break and 2 teams playing each other.		
Procedure: 1 team defends the width of the pitch and shoots at the large goal (gradual build-up attack) The team with the goalkeeper scores a goal by running with the ball over the line (counter-attack). The 2 teams swap positions and roles every 2′.		
Instructions: team without goalkeeper – attack: gradual build-up attack. Retain possession. Use the width. Try to play in the gaps. Look to play 1-2s or 1-2-3s. Play long balls and balls out to the flanks. Defence: counter the counter-attacks. Defend while pushing up. Press the ball. Read and close passing lines for long balls. Team with goalkeeper – defence: stay balanced. Defend zones. Move behind the ball. Close down routes to own goal. Position to intercept and counter-attack. Press the ball carrier. Read and close passing lines for long balls. Attack: fast attacks and counter-attacks. Play forward quickly. Direct play and without controlling. Try to play in the gaps. Look to play 1-2s or 1-2-3s. Play long and out to the flanks.		
Variant: limit the number of touches of the ball.		

Working time	Length of break	Number of repetitions	Type of break
2′	2′30″	8	Active

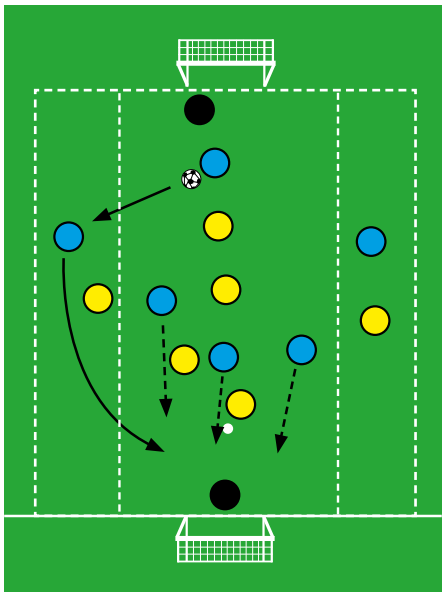


Physical quality: speed based on MAP (medium intermittent) **4 versus 4 / Game 12**

4 versus 4 with goalkeepers on a short and wide pitch + wide support players
Attack: attacking using the width on a short pitch
Defence: defending using the width

RPE: 15 x 15' → 225 AU	Heart rate check	Heart rate after break of 3'
Organisation: 50 x 50m – 4 versus 4 – wide support players in 1 versus 1.		
Procedure: opposition with free play in central area. Use the wide support players to get past the defence and approach the goal or cross to score.		
Instructions: be in a position to use at least 3 solutions: get down the channels, play long or switch the play to create difficulties for the opposition defence.		
Variant: a player who uses a support player swaps places with the support player, who moves into the central area to take part in the game play.		

Working time	Length of break	Number of repetitions	Type of break
3'	2'	5	Active

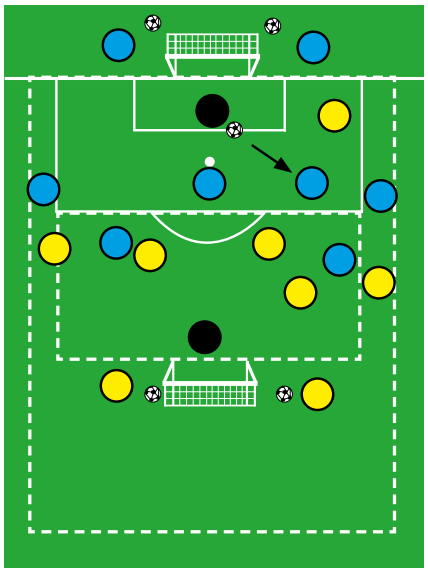


Physical quality: speed and acceleration based on MAP **4 versus 4 / Game 13**

4 versus 4 with goalkeepers on a short and wide pitch + central and wide support players
Attack: attacking using the width on a short pitch
Defence: defending using the width

RPE: 18 x 12′ → 216 AU	Heart rate check	Heart rate after break of 3′
Organisation: 25 x 40m – 4 teams in 2 colours. The 2 teams in the same colour take it in turns to attack the same goal. 2 teams playing each other with 2 touches of the ball and 2 others as central and wide support players.		
Procedure: 2 goals brought close together with goalkeepers (sources of balls). 4 versus 4 + 2 central support players and 2 wide support players. Swap roles every 2 minutes.		
Instructions: when attacking, create gaps to shoot at goal if well placed; be mobile and visible. When defending, close down space and anticipate opponents' movements.		
Variant: goals only count if they are scored after a pass from the support players.		

Working time	Length of break	Number of repetitions	Type of break
3′	3′	4	Semi-active

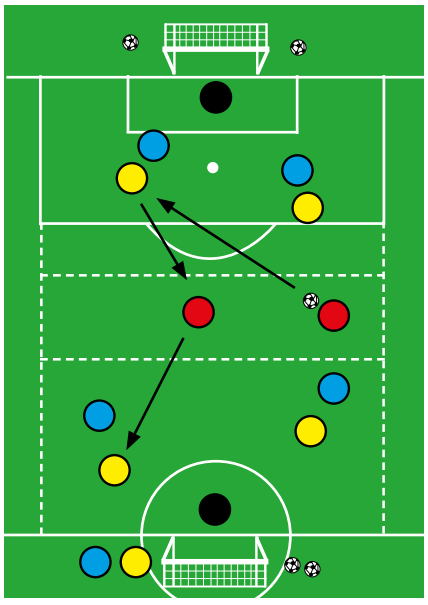


Physical quality: speed based on MAP (medium intermittent) **4 versus 4 / Game 14**

4 versus 4 with goalkeepers + 2 floating players in middle zone
Attack: attacking using the width on a short pitch
Defence: defending while unbalanced

RPE: 16 x 15′ → 240 AU	Heart rate check	Heart rate after break of 3′
Organisation: 50 x 40m pitch, divided into 3 zones – 4 versus 4 with goals and goalkeepers, plus 2 central floating players laying the ball off.		
Procedure: 2 versus 2 in front of each goal + 2 neutral players in the middle who guide and support the attackers of each team. After regaining possession, play a pass to the central players or attackers.		
Instructions: obligation to use the central floating players. In attack, use the central players (in red) as support players to get the ball to the attackers and as back-up players to retain possession and create a numerical advantage. In defence, press high in 2 versus 2 to prevent passes to the floating players. Change positions every 3 minutes.		
Variant: the central floating players can create a numerical advantage by leaving their zone.		

Working time	Length of break	Number of repetitions	Type of break
3′	2′	5	Active

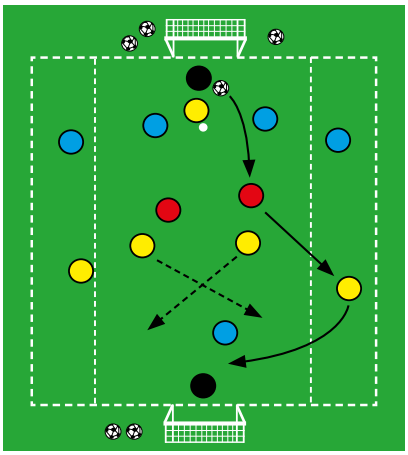


Physical quality: speed and acceleration, headers (anaerobic lactic power) **4 versus 4 / Game 15**

4 versus 4 with goalkeepers, wide support players and 2 floating players in play
Attack: attacking using the width on a short pitch – floaters flicking on with the head and meeting the cross
Defence: defending using the width – intercepting crosses

RPE: 18 x 10′ → 180 AU	Heart rate check	Heart rate after break of 3′
Organisation: pitch: 25 x 40m – 2 groups of 4 players, 2 floating players in playing zone and 2 wide support players per team.		
Procedure: 2 versus 1 in front of each goal + 2 crossers and 2 floating players in middle zone. Direct pass to a floating player, who flicks the ball on with his head to a crosser, who controls the ball and crosses for a goal to be scored with a header or volley. Change positions every 2′.		
Instructions: lose marker to flick balls on to players down channels. In attack, use good runs and decoys to get into a position for an effort on goal (header or volley) from the cross from the channel. In defence, take up a position in relation to own goal and goalkeeper to intercept a cross or to distract the opponent's attackers.		
Variant: control on the turn and pass into the channel. Flick into the channel and create numerical advantage with floating players.		

Working time	Length of break	Number of repetitions	Type of break
2′	3′	5	Active

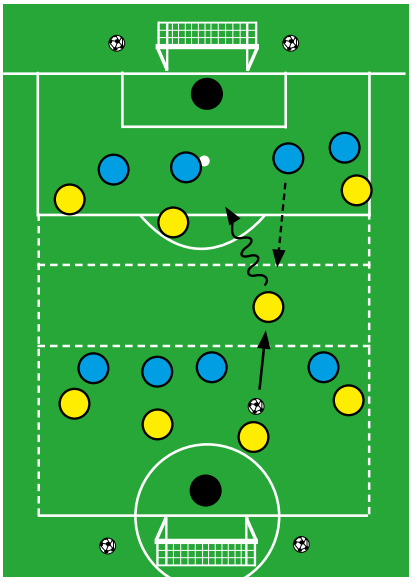


Physical quality: speed based on MAP **4 versus 4 / Game 16**

4 versus 4 with goalkeepers on a short and wide pitch – free central zone
Attack: attacking using the width
Defence: defending using the width

RPE: 16 x 16′ → 256 AU	Heart rate check	Heart rate after break of 3′
Organisation: 50 x 40m – zone 4m wide – 4 versus 4 in both halves of the pitch.		
Procedure: pass to an attacker, who breaks into the free zone, controls the ball and links up. Dribble or play with a team-mate before finishing.		
Instructions: pick up speed while approaching goal and try to score. 1 attacker in the free zone at a time, for no longer than 5". Change pace after a pass and controlling the ball. Use runs into space and decoy runs. Use the support players. If blocked, play back towards the back-up players. Support player moves to be visible.		
Variant: 1 defender follows 2 attackers who break into the free zone.		

Working time	Length of break	Number of repetitions	Type of break
2′	2′30"	8	Active

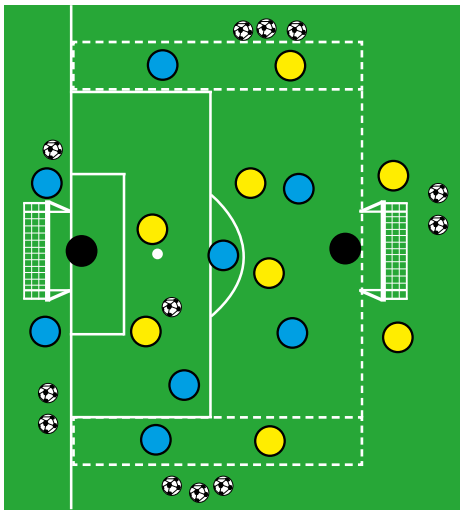


Physical quality: speed based on MAP **4 versus 4 / Game 17**

4 versus 4 + 2 goalkeepers + wide and central support players
Attack: attacking the opponents' goal by using external support players
Defence: closing down space and defending own goal

RPE: 16 x 16' → 256 AU	Heart rate check	Heart rate after break of 3'
Organisation: 33 x 40m – 4 versus 4 + goalkeepers + support players in each channel and at the side of each goal. Spare balls around the pitch and in the goals.		
Procedure: players wearing the same colour play with each other as well as with the support players wearing the same colour. The support players are on a break.		
Instructions: in attack, increase the alternatives: short play/long play; indirect play/direct play. Increase the options for the ball carrier; play the ball in behind for the player making a run. Play in the gaps – play on the move to create time for rapid ball circulation. In defence, mobile defensive block – close down goal area.		
Variant: the goalkeepers may advance to the halfway line to create a numerical advantage as a back-up player.		

Working time	Length of break	Number of repetitions	Type of break
2'	2'30"	8	Active

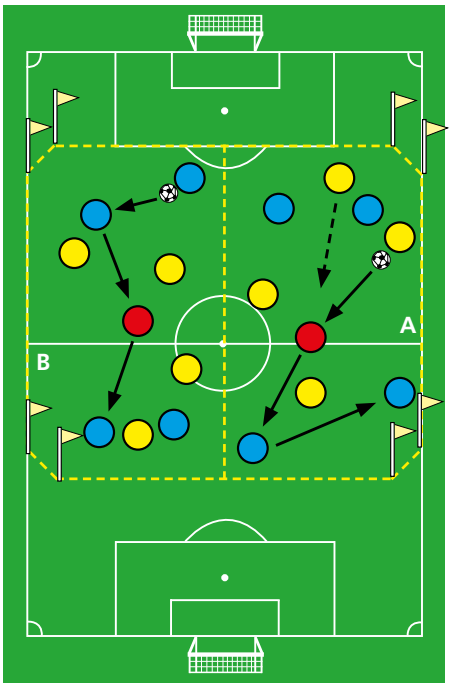


Physical quality: speed (lactic anaerobic capacity) **4 versus 4 / Game 18**

4 versus 4 without goalkeepers + neutral floating players
Attack: retaining possession and finishing
Defence: regaining possession

RPE: 15 x 15' → 225 AU	Heart rate check	Heart rate after break of 3'
Organisation: pitch divided into 2 zones (A + B) with 4 mini-goals in the corners.		
Procedure: 4 versus 4 in each zone with 1 or 2 touches. The neutral floating player has 1 touch. 1 point awarded after 6th pass (not including passes from the floating player).		
Instructions: control the ball with the feet – either intercept the first pass or delay to wait for defensive assistance – move while the ball is en route.		
Variant: each team defends 2 goals and attacks the other 2.		

Working time	Length of break	Number of repetitions	Type of break
3'	3'	5	Active

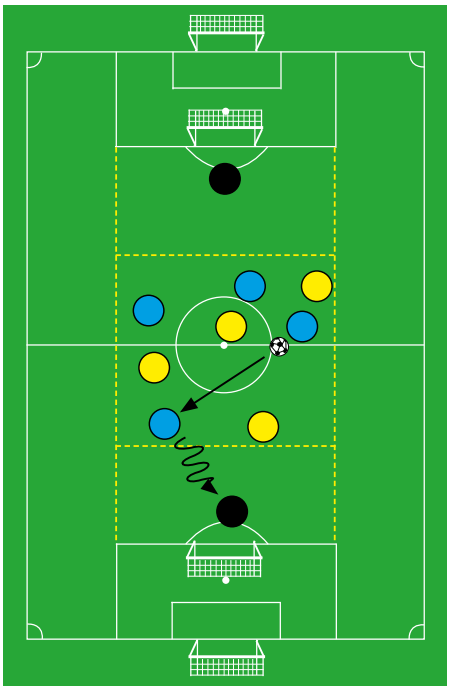


Physical quality: speed and acceleration based on MAP **4 versus 4 / Game 19**

4 versus 4 and duels with goalkeepers
Attack: duels with goalkeepers
Defence: defending the central zone

16 x 16' → 256 UA	Heart rate check	Heart rate after break of 3'
Organisation: 70 x 40m, neutral zone, 2 teams of 4 players with 2 goalkeepers. Pitch divided into 3 zones. 2 large goals.		
Procedure: free play in neutral zone. Try to cross the defensive line with the ball at feet to score past the goalkeeper in a one-on-one. 1 point awarded for crossing the line; 2 points for scoring a goal. 1 point awarded to the goalkeeper for saving a shot.		
Instructions: in attack, string passes together and play long balls in behind defenders to bring players into a position to shoot. In defence, develop a sense for the timing of the game (anticipation) – stay at a good distance to complicate the game for the opponents (defensive block). Defend as a unit. Density and compact block.		
Variant: a defender follows the attacker into the scoring zone once he is facing the goalkeeper.		

Working time	Length of break	Number of repetitions	Type of break
2'	2'30"	8	Active

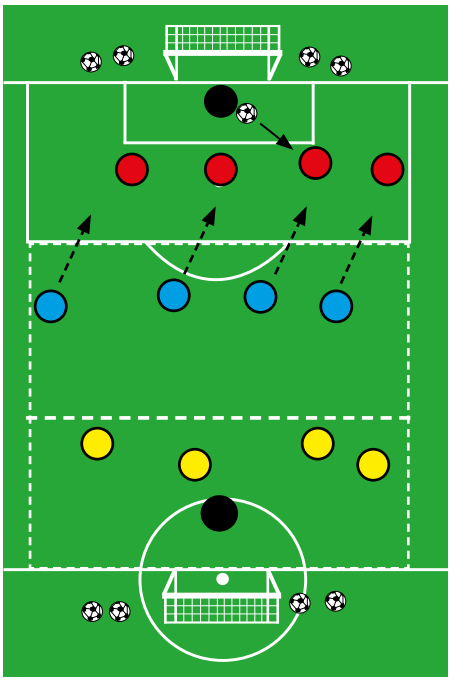


Physical quality: speed and acceleration (lactic anaerobic capacity) **4 versus 4 / Game 20**

4 versus 4 with goalkeepers (3 teams of 4)
Attack: attacking in 4 versus 4 in the attacking half
Defence: defending in 4 versus 4 in the defending half

RPE: 18 x 4'30" → 81 AU	Heart rate check	Heart rate after break of 3'
Organisation: 50 x 40m – 3 teams of 4 + 2 goalkeepers in 3 zones. Middle: free zone.		
Procedure: free play; the blue team tries to score a goal. If it loses the ball, the red team attacks the other goal defended by the yellow team. The blue team leaves the game. If a team scores a goal, it keeps the ball and may attack the other goal. The defensive zones are the pressing zones to prevent opponents moving towards the neutral zone.		
Instructions: aggressive play in duels – transition from attacking situation into defensive situation. Switch between watching zone and marking opponents.		
Variant: if the attackers lose the ball in the attacking zone, they can try and regain possession by pressing and then shooting at goal.		

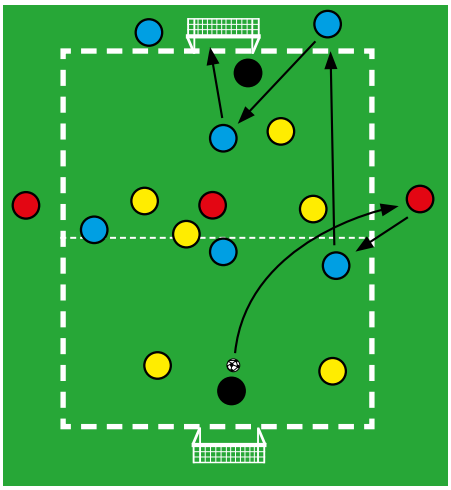
Working time	Length of break	Number of repetitions	Type of break
45"	2'	6	Active



Physical quality: speed endurance **4 versus 4 / Game 21**

4 versus 4 with goalkeepers + 2 neutral wide support players, 2 central support players and a floating player
Attack: trying to score quickly
Defence: attacking the ball carrier while protecting the goal

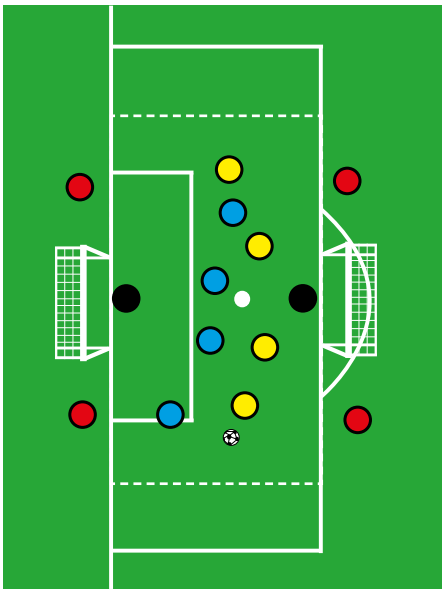
RPE: 18 x 16' → 288 AU	Heart rate check	Heart rate after break of 3'	
Organisation: 25 x 20m. Mobile goals and goalkeepers: 4 versus 4 + neutral wide and central support players with 1 touch.			
Procedure: goalkeeper plays the ball to the wide support players. 2 touches of the ball. A goal scored after 1 touch of the ball counts double.			
Instructions: be mobile and available. Take the speed of trajectory into account; controls on the turn. In defence and attack, create uncertainty.			
Variant: 1 touch of the ball in own defensive half; free play in attacking half.			
Working time	Length of break	Number of repetitions	Type of break
2'	2'30"	8	Active



Physical quality: strength and speed (heading) **4 versus 4 / Game 22**

4 versus 4 with goalkeepers – heading
Attack: playing with the head to score a goal
Defence: intercepting in the air

RPE: 18 x 16' → 288 AU	Heart rate check	Heart rate after break of 3'	
Organisation: 30 x 16.5m – 4 versus 4 with central support players.			
Procedure: all actions are completed with the head, including the first pass, apart from when the ball touches the ground. Restarts are also with the head. Goals scored from passes by the support players count double.			
Instructions: the goalkeeper plays the ball towards the attacking players, who flick the ball on with the head towards the support players or the other players. No use of the hands (except the goalkeepers).			
Variant: goalkeeper plays directly to central support players.			
Working time	Length of break	Number of repetitions	Type of break
2'	2'30"	8	Active

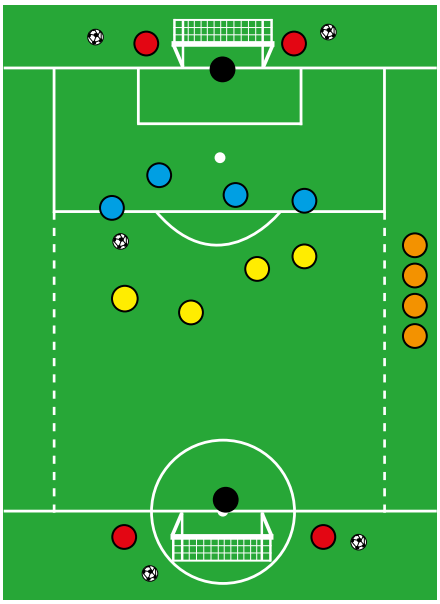


Physical quality: speed endurance (high pressing) **4 versus 4 / Game 23**

4 versus 4 with goalkeepers + neutral support and back-up players
Attack: fast forward play
Defence: regaining possession

RPE: 19 x 24' → 456 AU	Heart rate check	Heart rate after break of 3'
Organisation: 50 x 40m – 3 teams in 3 colours. 2 teams playing each other, 1 team on an active break. If a team concedes a goal, it leaves the pitch immediately and is replaced by the team taking a break. The winning team will leave if it concedes a goal or draws a game. Etc.		
Procedure: 2 goals brought close together with goalkeepers (sources of balls). 4 versus 4 + 4 attacking support players. Maximum of 2 passes + shot. Swap roles every 2'.		
Instructions: in attack, link-up play – transition between defence and attack / between attack and defence – retain time advantage (lose marker) – use space – create numerical advantage in attack on the move. In defence, hold up, stop the opponent from progressing – manage players who "move zones" – manage players between lines – manage depth – aerial duels: flicks, 2nd ball.		

Working time	Length of break	Number of repetitions	Type of break
3'	3'	8	Active



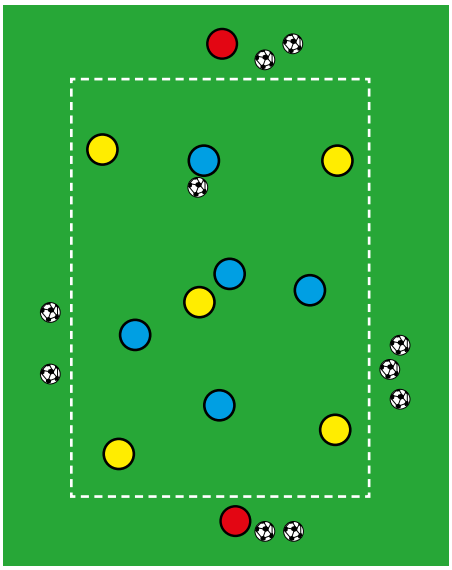
5 versus 5

Physical quality: speed based on lactic anaerobic capacity **5 versus 5 / Game 1**

5 versus 5 without goalkeepers + central support players
Attack: retaining possession
Defence: pressing zone, intercepting

RPE: 18 x 16' → 288 AU	Heart rate check	Heart rate after break of 3'
Organisation: 25 x 22m – retain possession in 5 versus 5 + 2 central support players – 5 players in 1 zone: 2 defenders, 1 midfielder, 2 attackers.		
Procedure: create a numerical advantage in midfield with 1 attacker dropping after losing the ball – quickly move into space after regaining possession – close down space quickly (pressing zone) after losing possession.		
Instructions: to prevent harassing of opponents, do not play quickly systematically. Be able to retain possession individually (shielding, dribbling to escape opponent) under pressure.		
Variant: add 2 more central support players to give direction to the game – scoring points: 10 passes without back-and-forward 1-2s = 1 point.		

Working time	Length of break	Number of repetitions	Type of break
2'	2'30"	8	Active

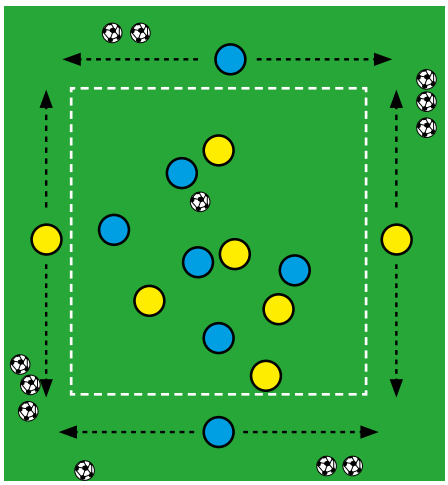


Physical quality: speed based on lactic anaerobic capacity **5 versus 5 / Game 2**

5 versus 5 without goalkeepers + central and wide support players
Attack: retaining possession
Defence: transition between interception and retaining possession

RPE: 17 x 16' → 272 AU	Heart rate check	Heart rate after break of 3'
Organisation: 25 x 22m, 2 teams of 5 players + 2 support players attempt to retain possession and complete 10 passes to score 1 point. The support players come into play each time they touch the ball. Another player of that team then takes a place in the support zone. 1 team uses the width of the pitch, the other the length of the pitch. Swap ends regularly.		
Procedure: improve team play in short game and on the ground under pressure. The player will be able to adapt his choices depending on the stress created by the game conditions.		
Instructions: move into space and use controls on the turn to escape difficult situations, eliminate an opponent with the first touch or protect the ball.		
Variant: change the teams' sides from time to time.		

Working time	Length of break	Number of repetitions	Type of break
2'	2'30"	8	Active

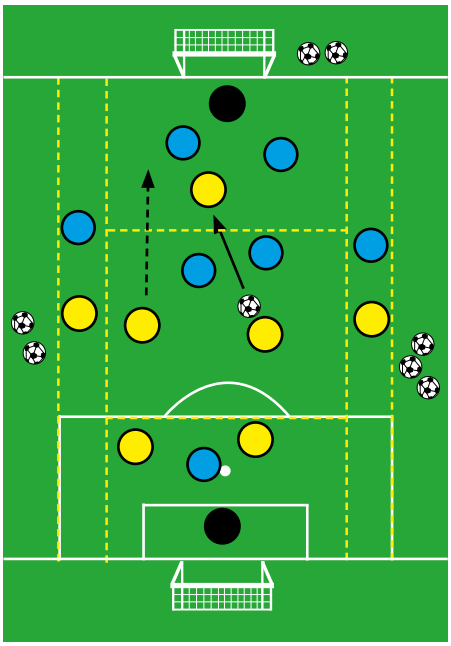


Physical quality: repeated short sprints based on aerobic capacity **5 versus 5 / Game 3**

5 versus 5 with goalkeepers in 3 zones, 2 floating players
Attack: retaining possession
Defence: regaining possession

RPE: 16 x 15' → 240 AU	Heart rate check	Heart rate after break of 3'
Organisation: 40 x 50m. Pitch divided into 3 zones with 2 channels.		
Procedure: a player may help an attacking team-mate during an attacking phase by switching zones. The support players play with their team along the length of the pitch with a pre-determined number of touches.		
Instructions: players in the channels actively participate in the game. Play long balls from 1 zone to another. Use the channels to get round the defence.		
Variant: possibility to swap positions with players in the channels after a pass.		

Working time	Length of break	Number of repetitions	Type of break
3'	2'	5	Active

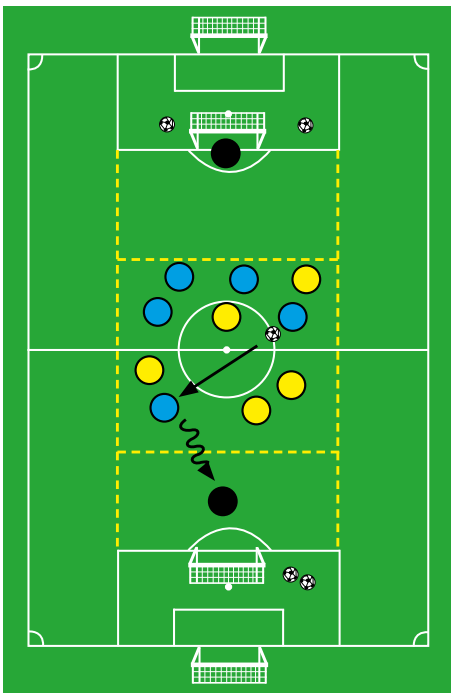


Physical quality: repeated short sprints based on aerobic capacity **5 versus 5 / Game 4**

5 versus 5 in central pressing zone and duels with goalkeepers
Attack: leaving pressing zone followed by duel with goalkeeper to score
Defence: defending in pressing zone

RPE: 18 x 15' → 270 AU	Heart rate check	Heart rate after break of 3'
Organisation: 70 x 40m. 2 teams of 5 players with 2 goalkeepers. Pitch divided into 3 zones. 2 large goals. Free play in zone with goalkeeper.		
Procedure: free play in central zone. Try to cross the defensive line with the ball at feet to score past the goalkeeper in a one-on-one. 1 point awarded for crossing the line; 2 points for scoring a goal. 1 point awarded to the goalkeeper for saving a shot.		
Instructions: enter the goalkeeper's zone with ball at feet. Call for the ball after a run in behind the defence.		
Variant: a defender can follow the attacker into the finishing zone once he is facing the goalkeeper.		

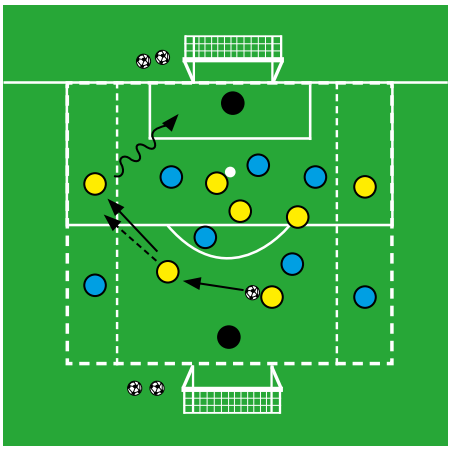
Working time	Length of break	Number of repetitions	Type of break
3'	2'	5	Active



Physical quality: repeated short sprints based on aerobic capacity **5 versus 5 / Game 5**

5 versus 5 with goalkeepers in 3 zones, 2 attacking support players
Attack: turning and overlapping
Defence: regaining possession

RPE: 18 x 15' → 270 AU	Heart rate check	Heart rate after break of 3'	
Organisation: 33 x 40m. 2 teams of 5 players + 2 goalkeepers + 2 support players in the attacking zone.			
Procedure: free play. After a support player receives the ball, he may take 2 touches.			
Instructions: attack the goal by crossing or running around. Runs into space and dummy runs, overlapping.			
Variant: the support player may enter the game, and the player who passed to him takes his place.			
Working time	Length of break	Number of repetitions	Type of break
3'	2'	5	Active

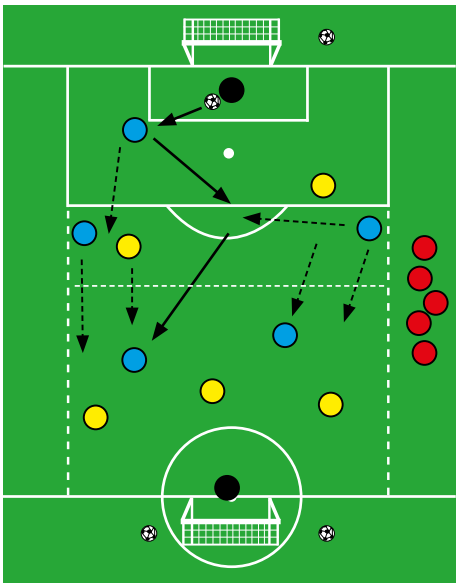


Physical quality: speed and acceleration based on MAP **5 versus 5 / Game 6**

5 versus 5 with goalkeepers
Attack: attacking as a unit in the attacking zone
Defence: pressing zone and retreating into defence

RPE: 16 x 15' → 240 AU	Heart rate check	Heart rate after break of 3'
Organisation: 40 x 50m. 3 teams of 5 play each other alternately.		
Procedure: 1 touch of the ball in the defensive zones and 2 touches of the ball in the attacking zone. A goal is only awarded if all of the team crosses the halfway line.		
Instructions: in attack, create space and be available for the ball carrier. Play deep as a unit to avoid counter-attacks. In defence, be active in the pressing zone upon losing possession and while retreating.		
Variant: play with 2 touches of the ball in the defensive zone and freely in the attacking zone.		

Working time	Length of break	Number of repetitions	Type of break
3'	3'	5	Active

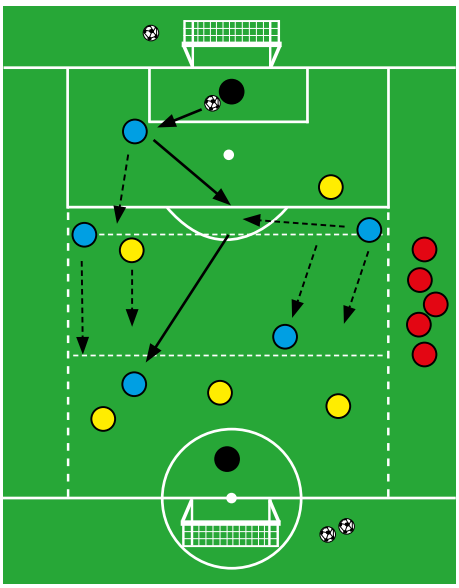


Physical quality: speed and acceleration based on lactic capacity **5 versus 5 / Game 7**

5 versus 5 with goalkeepers
Attack: attacking as a unit in 2 attacking and midfield zones
Defence: pressing zone and retreating into defence

RPE: 15 x 15' → 225 AU	Heart rate check	Heart rate after break of 3'
Organisation: 40 x 50m – 3 teams of 5 play each other alternately with 3 zones.		
Procedure: 5 versus 5 – a goal is only awarded if the team is divided over 2 adjoining zones. 2 working times, 1 break time.		
Instructions: in attack, create space and be available for passes. Play as a unit in 2 adjoining zones. In defence, reorganise upon losing possession. Be active in the pressing zone, as high as possible without losing shape and balance.		
Variant: the defending team is also divided over 2 zones.		

Working time	Length of break	Number of repetitions	Type of break
3'	2'	5	Active

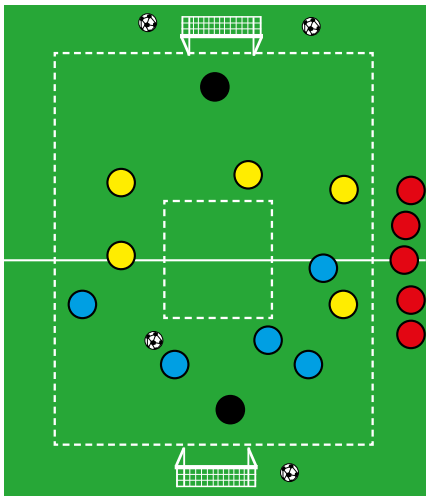


Physical quality: speed and acceleration based on MAP **5 versus 5 / Game 8**

5 versus 5 with goalkeepers
Attack: attacking by alternating between short and long play
Defence: preventing exchanges in "no-go" zone and intercepting long passes

RPE: 16 x 15' → 240 AU	Heart rate check	Heart rate after break of 3'
Organisation: 40 x 50m. 3 teams of 5 organised in 5 versus 5 (teams organised in 3/2) and 1 team on a break. 1 "no-go" zone of 10 x 10m.		
Procedure: skip a line to play deep or to switch the play. Opposition with free play. A goal counts double if there is an alternation between short and long play.		
Instructions: attack by using switches of play or turns. Alternate between short play and long play. Create space and lose marker to be visible.		
Variant: the "no-go" zone becomes (1) a flick-on zone, then (2) a free zone for support or back-up players.		

Working time	Length of break	Number of repetitions	Type of break
3'	3'	5	Active

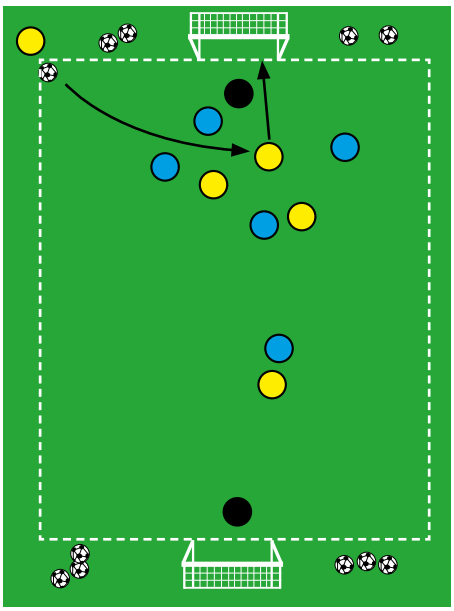


Physical quality: speed and jumps based on lactic capacity **5 versus 5 / Game 9**

5 versus 5 with goalkeepers – corner kicks
Attack: attacking corner kicks
Defence: intercepting corners by defence or goalkeeper

RPE: 16 x 15' → 240 AU	Heart rate check	Heart rate after break of 3'
Organisation: 40 x 50m with balls placed in all 4 corners.		
Procedure: 6 attacking corners and 6 defensive corners for each team. The 2 teams oppose 6 consecutive corners. Try to get a defender to launch a counter-attack on the opposing goal. Then change roles.		
Instructions: in attack, avoid being too far forward at the start, then push up quickly as soon as the shooter prepares to shoot to force the attackers back. Anticipate in the direction of the goal. In defence, 1 player is free near the near post, individual marking for the others. Players impose themselves physically.		
Variant: the play is only over when the ball has left the pitch.		

Working time	Length of break	Number of repetitions	Type of break
3'	3'	5	Active



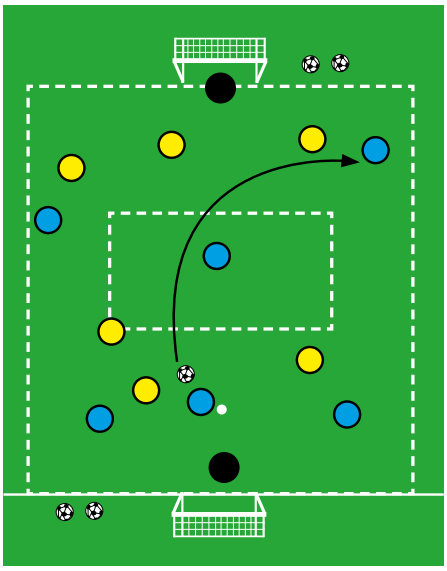
6 versus 6

Physical quality: speed and acceleration based on lactic capacity **6 versus 6 / Game 1**

6 versus 6 with goalkeepers on a short and wide pitch
Attack: attacking using the width on a short pitch
Defence: defending using the width and length of the pitch

RPE: 16 x 15' → 240 AU	Heart rate check	Heart rate after break of 3'
Organisation: 45 x 40m on half a pitch with a 10 x 40m "no-go" zone.		
Procedure: skip a line to play deep. Free play.		
Instructions: attack by using switches of play or turns. Alternate between short play and long play. Create space and lose marker to be visible.		
Variant: the "no-go" zone becomes (1) a flick-on zone, then (2) it becomes a free zone for support or back-up players.		

Working time	Length of break	Number of repetitions	Type of break
3'	3'	5	Active

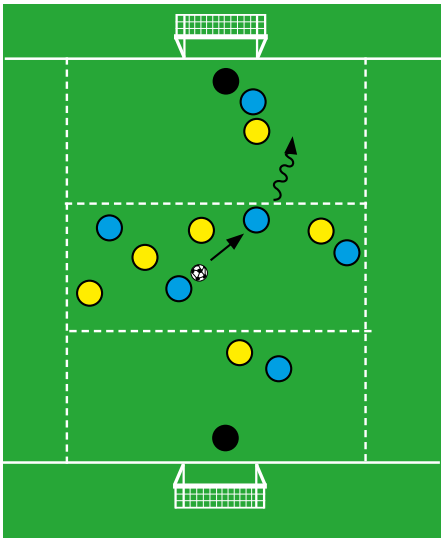


Physical quality: speed and acceleration based on lactic capacity **6 versus 6 / Game 2**

6 versus 6 (4 versus 4 + 2 versus 2) with goalkeepers
Attack: attacking from the middle zone
Defence: defending in the middle zone and protecting in the defending zones

RPE: 18 x 12' → 216 AU	Heart rate check	Heart rate after break of 3'
Organisation: 45 x 40m divided into 3 zones. Middle zone with 4 versus 4 and 2 finishing zones with 2 versus 2 in front of goal.		
Procedure: create a numerical advantage after linking with 1 or 2 attackers: 3 versus 2 + finish.		
Instructions: in attack, retain possession. Play the ball in to an attacker behind the defence, using gaps. Create a numerical advantage to finish the move. In defence, press to prevent an attacker running into the defending zone to create a numerical advantage. Only 1 defender may retreat into the finishing zone.		
Variant: an attacker drops back to create a numerical advantage in the middle zone. Maximum of 2 touches in the middle zone.		

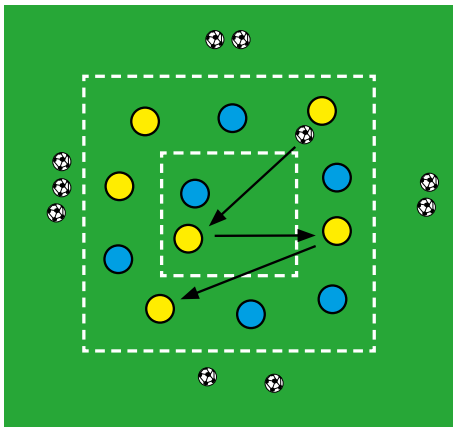
Working time	Length of break	Number of repetitions	Type of break
2'	2'30"	6	Active



Physical quality: acceleration based on lactic capacity **6 versus 6 / Game 3**

6 versus 6 without goalkeepers (free zone)
Attack: using support players and a 3rd player
Defence: intercepting and linking play

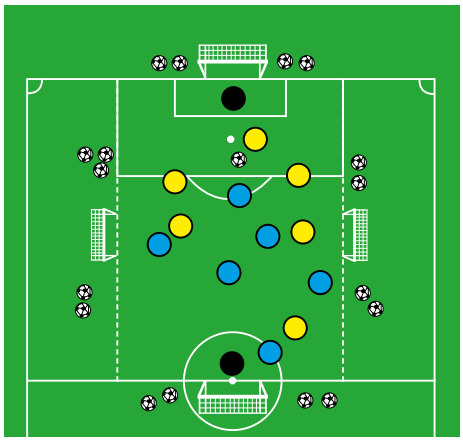
RPE: 14 x 12' → 168 AU	Heart rate check	Heart rate after break of 3'	
Organisation: 40 x 40m with a neutral middle zone of 10 x 10m. 4 ball sources. Each team has 1 free player in the neutral zone.			
Procedure: free play in 6 versus 6.			
Instructions: to score 1 point, a team has to start in the neutral zone and create a link between the passer, the player laying the ball off and the 3rd player.			
Working time	Length of break	Number of repetitions	Type of break
2'	2'30"	6	Active



Physical quality: acceleration based on lactic capacity **6 versus 6 / Game 4**

6 versus 6 with goalkeepers in normal goals
Attack: attacking by switching play
Defence: transition between regaining possession and counter-attack

RPE: 16 x 12' → 192 AU	Heart rate check	Heart rate after break of 3'	
Organisation: 40 x 50m. 4 goals (2 normal goals and 2 small goals). 4 ball sources.			
Procedure: change and re-occupy positions in attacking and defensive play – change the game.			
Instructions: each team attacks and defends 2 goals.			
Variant: 1 team scores in the normal goals, the other team scores in the small goals.			
Working time	Length of break	Number of repetitions	Type of break
2'	2'30"	6	Active

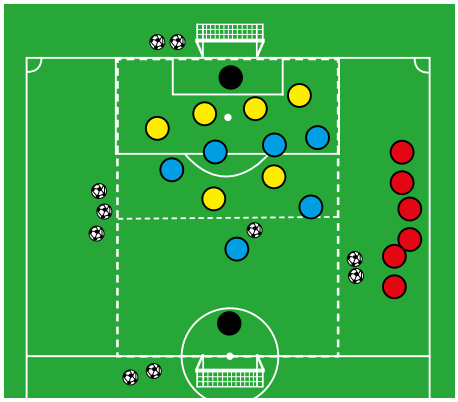


Physical quality: speed based on MAP **6 versus 6 / Game 5**

6 versus 6 with goalkeepers
Attack: shooting or passing with or without control (finish)
Defence: intercepting passes and preventing shots

RPE: 17 x 15' → 255 AU	Heart rate check	Heart rate after break of 3'
Organisation: 40 x 50m. 6 versus 6. 3 teams. Score with a limited number of touches.		
Procedure: game limited to 2 touches of the ball. Control and pass. Or control and shoot. Ball sources near the goals.		
Instructions: shoot with or without controlling. Shoot at goal as soon as possible, regardless of position.		
Variant: 2 touches of the ball in the defensive zone; 3 touches of the ball in the attacking zone		

Working time	Length of break	Number of repetitions	Type of break
3'	2'30"	5	Active

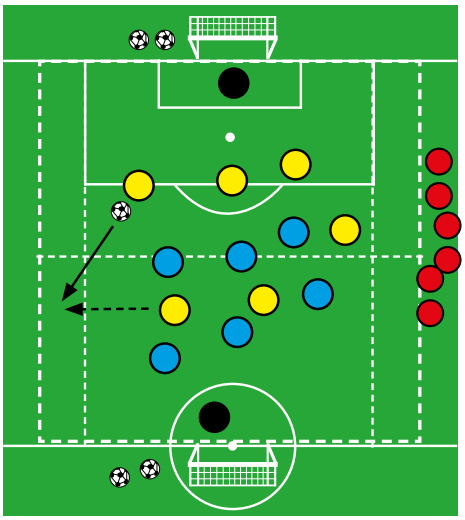


Physical quality: speed based on MAP **6 versus 6 / Game 6**

6 versus 6 with goalkeepers
Attack: attacking using the width and length of the pitch with crosses
Defence: defending using the width and intercepting crosses

RPE: 16 x 15' → 240 AU	Heart rate check	Heart rate after break of 3'
Organisation: 40 x 50m. 6 versus 6. 3 teams – 2 wide channels.		
Procedure: the 2 teams both have 2 wide channels that are protected and allow a player to cross without being challenged. Players may not enter these channels with the ball at their feet, or simply wait there for the ball. They must enter these channels to demand the ball (run) and to receive it while running.		
Instructions: in attack, use the channels to eliminate opponents. In defence, protect the centre and try to intercept passes towards the channels. Intercept crosses to protect the goal.		
Variant: if a team scores a goal, it wins a corner.		

Working time	Length of break	Number of repetitions	Type of break
3'	2'30"	5	Active

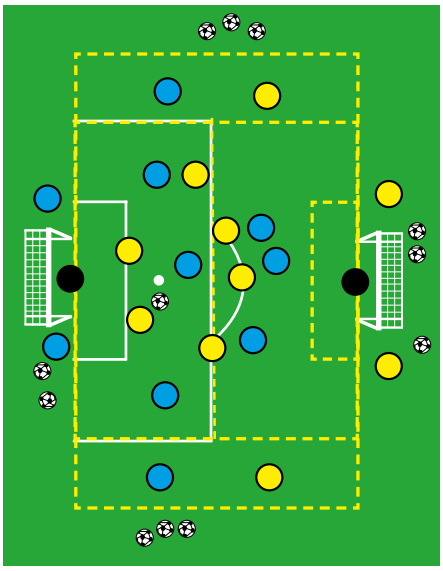


Physical quality: speed and acceleration based on lactic capacity **6 versus 6 / Game 7**

6 versus 6 + goalkeepers + wide and central support players
Attack: retaining possession + finishing
Defence: regaining possession

RPE: 17 x 15' → 255 AU	Heart rate check	Heart rate after break of 3'
Organisation: 40 x 33m. 3 teams of 6 players + goalkeepers + support players. Spare balls around the pitch and in the goals.		
Procedure: the players in the same team play with each other as well as with the support players wearing the same colour. Try to score by using the support players.		
Instructions: in attack, create space and find finishing opportunities by using the team's support players. In defence, close down space and anticipate opponents' movements to regain possession.		
Variant: goals count double if scored from a cross.		

Working time	Length of break	Number of repetitions	Type of break
3'	2'30"	5	Active

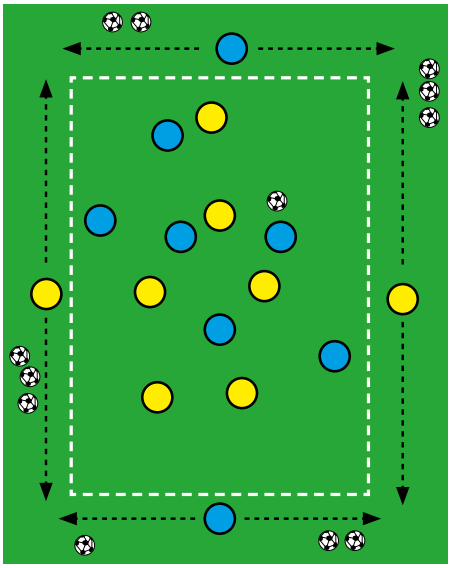


Physical quality: speed based on MAP **6 versus 6 / Game 8**

6 versus 6 with support players
Attack: attacking using the width and length of the pitch using crosses
Defence: defending using the width and length and intercepting crosses

RPE: 18 x 15' → 270 AU	Heart rate check	Heart rate after break of 3'
Organisation: 40 x 33m. 2 teams of 6 players + 2 support players try to retain possession and complete 10 passes and score 1 point. The support players come into play each time they touch the ball. Another player in that team then takes a place in the support zone. 1 team uses the width of the pitch, the other the length of the pitch. Swap wings regularly.		
Procedure: improve team play in short game and on the ground under pressure. Adapt choices depending on the stress created by the game conditions.		
Instructions: create and use space, eliminate an opponent with the first touch or protect the ball.		
Variant: play with 2 floating players to give the team in possession of the ball a numerical advantage.		

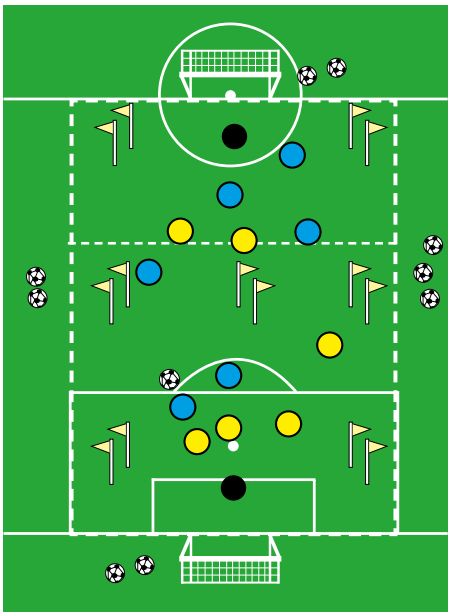
Working time	Length of break	Number of repetitions	Type of break
3'	2'30"	5	Active



Physical quality: speed and precision based on lactic capacity **6 versus 6 / Game 9**

6 versus 6 + goalkeepers + gates
Attack: ball possession and finishes
Defence: regaining the ball; transition and finish

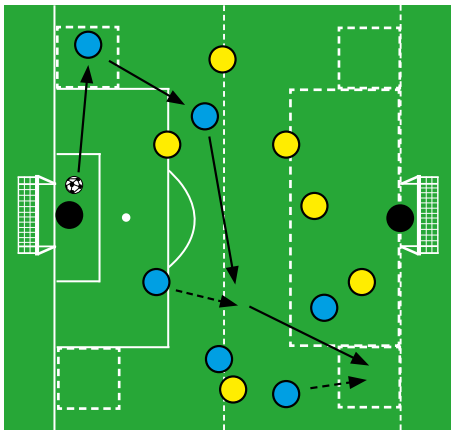
RPE: 17 x 15' → 255 AU	Heart rate check	Heart rate after break of 3'	
Organisation: 50 x 40m – 7 gates randomly placed around the pitch.			
Procedure: alternate between short and long play by using the gates all over the pitch.			
Instructions: 1 point is scored if a player passes the ball through a gate to a team-mate (no return passes allowed). Goal scored = 2 points.			
Variant: limit the number of touches of the ball.			
Working time	Length of break	Number of repetitions	Type of break
3'	2'30"	5	Active



Physical quality: speed endurance based on lactic capacity **6 versus 6 / Game 10**

6 versus 6 with goalkeepers
Attack: attacking by switching sides to score
Defence: defending using lateral movements

RPE: 18 x 15' → 270 AU	Heart rate check	Heart rate after break of 3'	
Organisation: 40 x 50m. 6 versus 6. 4 zones in all 4 corners of the pitch.			
Procedure: pass through 1 zone on the right and 1 zone on the left before scoring. A team that intercepts in the attacking zone only passes through 1 zone. Free in the zone.			
Instructions: retain the ball to find an opening. Play in twos at the right time. Precision and timing of passes. Anticipate passes towards the free zone.			
Variant: maximum of 2 touches of the ball in the 4 free zones.			
Working time	Length of break	Number of repetitions	Type of break
3'	2'30"	5	Active

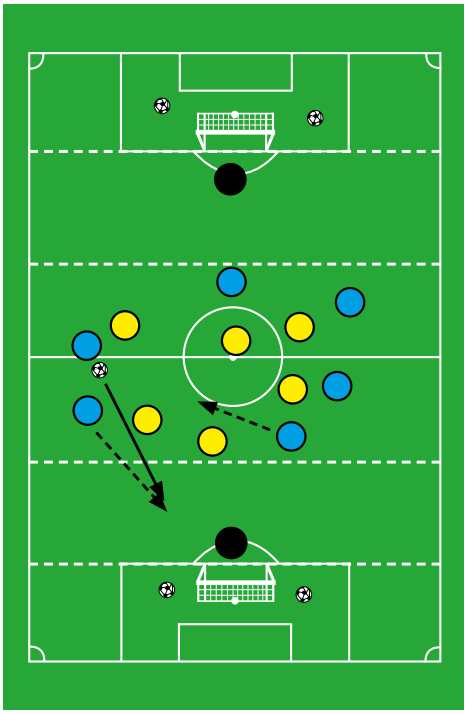


Physical quality: speed endurance based on lactic capacity **6 versus 6 / Game 11**

6 versus 6 + goalkeepers – duel with goalkeeper
Attack: attacking with deep passes after runs into space + duel with goalkeeper
Defence: preventing and intercepting deep passes

RPE: 18 x 12′ → 216 AU	Heart rate check	Heart rate after break of 3′
Organisation: 70 x 50m with middle zone of 30m.		
Procedure: after a minimum of 3 passes, play the ball into space after runs into space or dummy runs by the attackers, who finish in a duel with the goalkeeper.		
Instructions: make runs in behind the defence – dart into space and make runs and dummy runs into gaps – finish in duels.		
Variant: only 1 defender retreats with 1 extra attacker (1 defender and 1 goalkeeper versus 2 attackers).		

Working time	Length of break	Number of repetitions	Type of break
2′	2-4′	6	Active

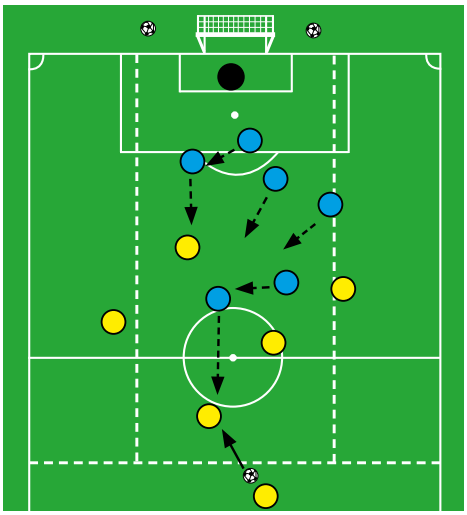


Physical quality: speed endurance based on MAP **6 versus 6 / Game 12**

6 versus 6 with a goalkeeper and a stop-ball line
Attack: looking for depth or turns depending on defensive movement
Defence: organising cover for partner

RPE: 18 x 18′ → 324 AU	Heart rate check	Heart rate after break of 3′
Organisation: 70 x 50m. 6 defenders versus 6 attackers with 1 free player with free play behind the line.		
Procedure: 6 defenders, occupying the whole pitch, against 4 attackers (1 in stop-ball zone and 2 in the channels).		
Instructions: in attack, regain possession and counter-attack into the stop-ball zone. In defence, close down the ball carrier. Cover partner in the centre. Cover partner in the channel. Mark the potential recipient and cover partner. Manage the depth if the attackers play using the free player. Cover your partner in duels and protect your goal.		
Variant: attackers free in the channels, but with a maximum of 2 touches of the ball.		

Working time	Length of break	Number of repetitions	Type of break
3′	3′	6	Active

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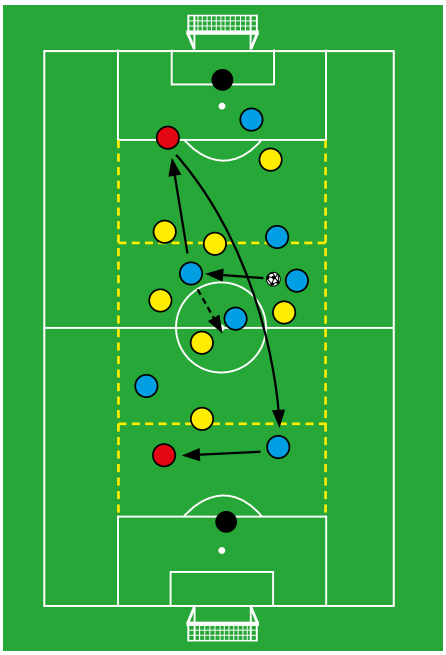
7 versus 7

Physical quality: series of sprints and jumps based on MAP **7 versus 7 / Game 1**

7 versus 7 with goalkeepers and free floating players in defensive and attacking zones
Attack: attacking with long passes and by flicking the ball on
Defence: cutting off trajectories and intercepting long passes

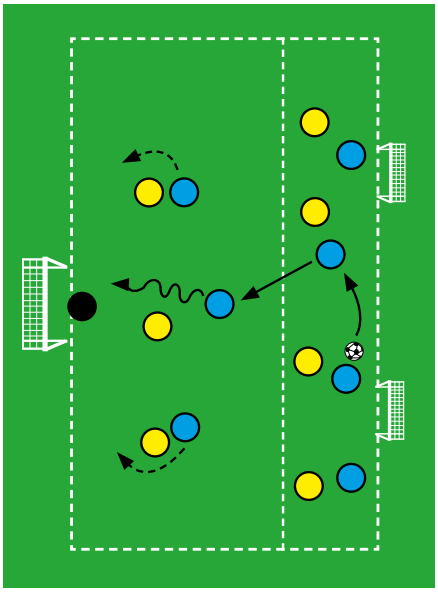
RPE: 16 x 15' → 240 AU	Heart rate check	Heart rate after break of 3'	
Organisation: 70 x 40m. 7 versus 7 including 1 versus 1 with 1 neutral attacker in front of each goal. 6 versus 6 in middle zone.			
Procedure: 1 player of a team can switch zones after the ball has been flicked on with the head. Play a long ball to a pivot after at least 2 passes.			
Instructions: play to a retreating player – make runs into space to be visible to the ball carrier. Flick the ball into space.			
Variant: use the channels (2 touches of the ball if possible) to switch the play.			
Working time	Length of break	Number of repetitions	Type of break
3'	2'30"	5	Active



Physical quality: speed and acceleration based on aerobic capacity **7 versus 7 / Game 2**

7 versus 7 with 1 goalkeeper and mini-goals on a short and wide pitch
Attack: attacking using the width
Defence: defending using the width

RPE: 14 x 15' → 210 AU	Heart rate check	Heart rate after break of 3'	
Organisation: 30 x 40m. 7 versus 7 including 4 versus 4 in a 10 x 40m zone with mini-goals. 3 attackers wait with 3 defenders in the other part of the pitch: break time + rapid attack on a goal with a goalkeeper.			
Procedure: coordinated positioning and movement from a low block. Switch the players waiting. Change positions every 3 minutes.			
Instructions: read attacking play. The centre-forward plays as a support player and the attackers move into space.			
Variant: a player from the 4 versus 4 group moves into the 3 versus 3 zone to create a numerical advantage.			
Working time	Length of break	Number of repetitions	Type of break
3'	2'30"	5	Active

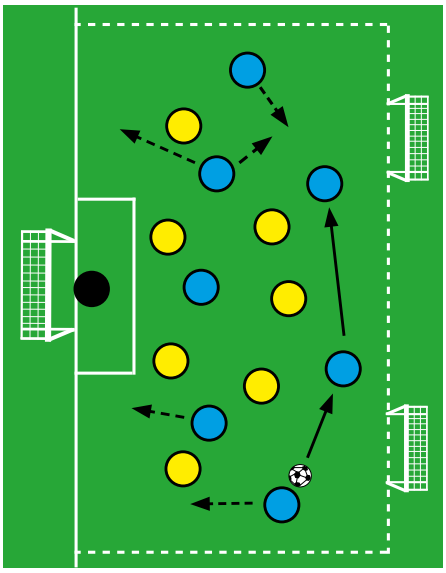


Physical quality: series of sprints (short intermittent) based on MAP **7 versus 7 / Game 3**

7 versus 7 with 1 goalkeeper and 2 mini-goals on a short and wide pitch
Attack: turning, advancing and finishing
Defence: defending laterally and harassing

RPE: 18 x 15' → 270 AU	Heart rate check	Heart rate after break of 3'
Organisation: 50 x 40m. 2 attackers, 3 midfielders and 2 wide players against 7 players in a high block.		
Procedure: draw in on 1 side and pass on the other with the active participation of the winger. Switch the play or play deep to finish.		
Instructions: in attack, the wide wingers are not on the same level as the centre-forward. The midfielders are positioned on the same level. The wingers push forward on the opposite side. Create space depending on the movements and runs of the ball carrier. In defence, defend laterally, with jockey movements and pressure, to regain possession.		
Variant: break up the defence into 2 zones of 3 and 4 players. Players may not retreat from a zone. The attackers can advance to create a numerical advantage while paying attention to imbalances and counter-attacks.		

Working time	Length of break	Number of repetitions	Type of break
3'	2'30"	5	Active

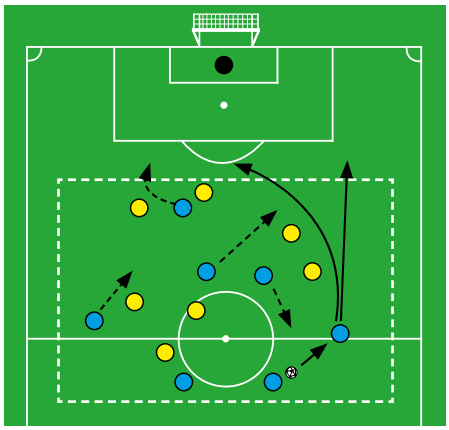


Physical quality: speed and sprints based on aerobic capacity

7 versus 7 / Game 4

7 versus 7 with 1 goalkeeper on a short and wide pitch
Attack: looking for depth in the centre or down the wings
Defence: closing the gaps and space to regain possession

RPE: 15 x 15' → 225 AU	Heart rate check	Heart rate after break of 3'	
Organisation: 60 x 50m. 7 attackers against 7 defenders in a high block.			
Procedure: the defenders try to regain possession. If they give the ball to their goalkeeper, they score 1 point. The goalkeeper passes the ball to the attackers, who move forward and try to score by using deep passes.			
Instructions: in attack, try to play the ball long. Use the second pass (behind). Play to the playmaker, who can flick the ball on, control and advance. Look for the centre-forward or winger to play deep. Unbalance the defence. In defence, move into the ball's trajectory. Move across together, close the gaps. Prevent balls being played in behind the defence.			
Variant: only 1 defender retreats back behind the zone to defend, then 2.			
Working time	Length of break	Number of repetitions	Type of break
3'	2'30"	5	Active

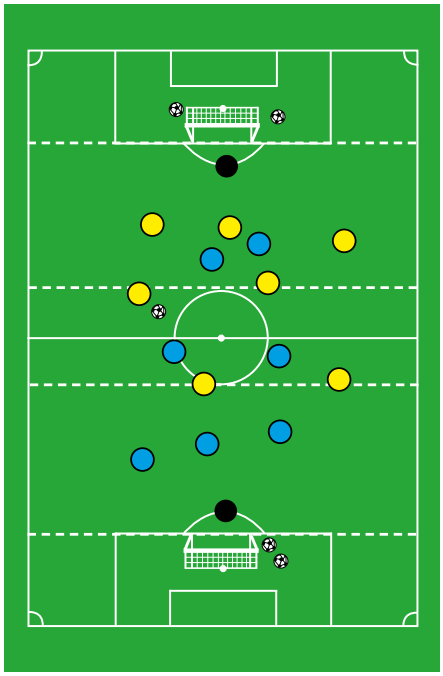


Physical quality: speed endurance based on aerobic capacity

7 versus 7 / Game 5

7 versus 7 with goalkeepers and 3 zones
Attack: fast transition from defensive zone to attacking zone
Defence: preventing opponents from progressing

RPE: 15 x 15' → 225 AU	Heart rate check	Heart rate after break of 3'	
Organisation: 67 x 50m. 7 versus 7 in 3 zones. 4 versus 4 in middle zone and 3 versus 2 in finishing zones.			
Procedure: each team plays with 1 goalkeeper, 3 defenders, 2 midfielders and 2 attackers.			
Instructions: players may not leave their zone unless a defender passes to a midfielder or a midfielder passes to an attacker. The passer can then move into this zone and create a numerical advantage (4 versus 3).			
Variant: progressively increase numerical advantage to 2 or 3 attackers.			
Working time	Length of break	Number of repetitions	Type of break
3'	2'30"	5	Active

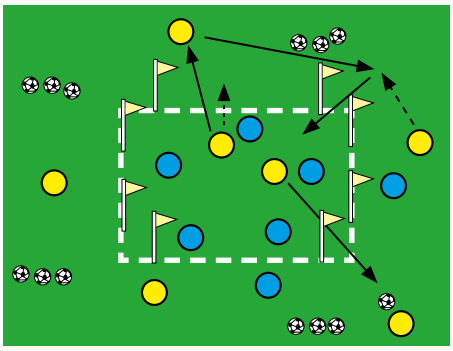


Physical quality: specific sprints based on aerobic power (short intermittent) **7 versus 7 / Game 6**

7 versus 7 without goalkeepers, with mini-goals
Attack: retaining possession and playing in small spaces
Defence: intercepting and protecting mini-goals

RPE: 15 x 15' → 225 AU	Heart rate check	Heart rate after break of 3'
Organisation: 2 teams of 7 players. The team in possession of the ball attempts to score in the goals in the corners.		
Procedure: for a goal to be scored, the ball must be played back and forth, but not between the same 2 players. As soon as 3 new passes have been completed, it is possible to score in the same goal or in another goal. Change players every 3'.		
Instructions: retain possession and play in small spaces. Adapt choices to the zones and instructions, and provide solutions adapted to zones.		
Variant: add a third team to play 2 teams against 1, or add floating players to create a numerical advantage.		

Working time	Length of break	Number of repetitions	Type of break
3'	2'30"	5	Active

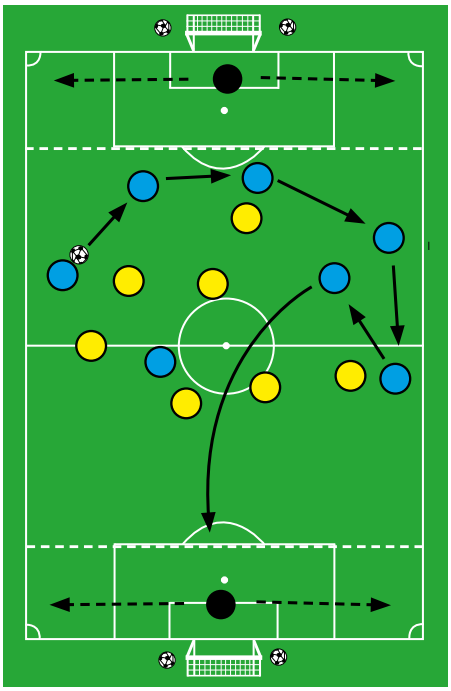


Physical quality: speed and acceleration based on MAP **7 versus 7 / Game 7**

7 versus 7 with goalkeepers on a short and wide pitch
Attack: positive possession and ball retention
Defence: preventing exchanges by closing down spaces and gaps

RPE: 16 x 15' → 240 AU	Heart rate check	Heart rate after break of 3'
Organisation: 67 x 50m. 2 neutral goalkeepers play behind the lines.		
Procedure: retain possession and occupy the pitch. Maximum of 3 touches. A goal is scored after 5 passes followed by an aerial pass into the hands of a goalkeeper.		
Instructions: be available for the ball carrier. Create space to receive the ball. Use gaps to eliminate opponents and gain ground.		
Variants: (1) 2-touch play. (2) with 2 goals. After 5 passes, a goal may be scored in the 2 goals.		

Working time	Length of break	Number of repetitions	Type of break
3'	2'30"	5	Active

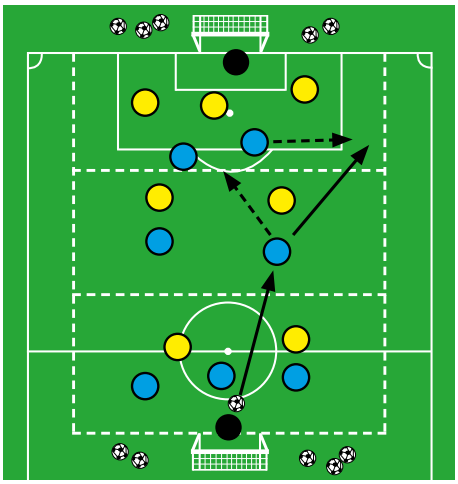


Physical quality: speed endurance based on aerobic capacity **7 versus 7 / Game 8**

7 versus 7 with goalkeepers on a short and wide pitch in 3 zones
Attack: playing long and flicking into finishing zone
Defence: intercepting long passes and protecting the goal

RPE: 17 x 15' → 255 AU	Heart rate check	Heart rate after break of 3'
Organisation: 60 x 45m. 2 teams of 7 players + 2 goalkeepers – pitch divided into 3 zones – 2 versus 2 in middle zone and 3 versus 2 in finishing zones.		
Procedure: the game starts with the goalkeeper, who plays the ball to the middle of the pitch. 2 versus 2 play. The blue team tries to play with a red attacker, who loses his marker. If he succeeds, a midfielder can advance into the attacking zone (3 versus 3).		
Instructions: flick the goalkeeper's pass into the finishing zone, or play the ball back to a support player, who can play a deep ball.		
Variant: (1) 2 midfielders can advance into the attacking zone. (2) 1 or 2 defenders can advance into the middle zone.		

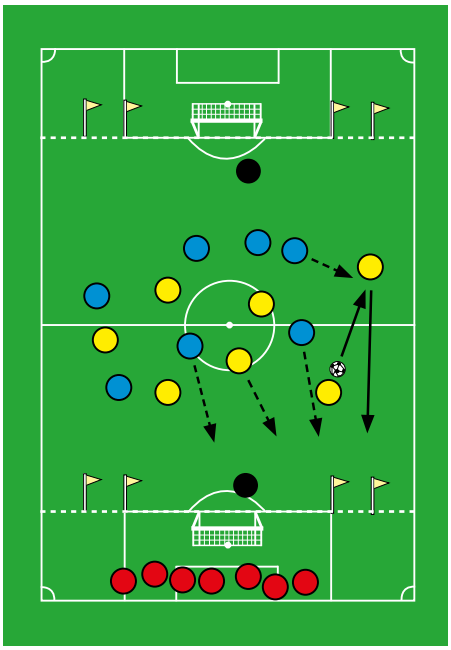
Working time	Length of break	Number of repetitions	Type of break
3'	2'30"	5	Active



Physical quality: speed based on anaerobic capacity **7 versus 7 / Game 9**

7 versus 7 with goalkeepers on a short and wide pitch
Attack: deep play by support players
Defence: preventing exchanges by closing gaps and space

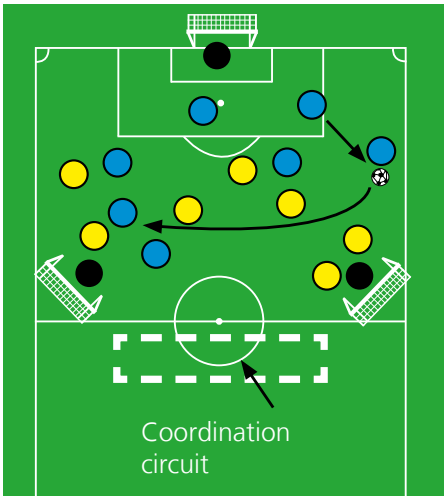
RPE: 17 x 24′ → 408 AU	Heart rate check	Heart rate after break of 3′	
Organisation: 70 x 50m. 3 teams of 7 with goalkeepers play each other alternately. Attack 2 gates and 1 large goal with a goalkeeper.			
Procedure: the team that concedes a goal leaves the pitch. The winning team is the team that wins the most games.			
Instructions: retreat into defence after losing the ball – intercept, regain possession and launch a counter-attack. Use the support and back-up players to play deep.			
Variant: the winning team stays on the pitch but can no longer draw.			
Working time	Length of break	Number of repetitions	Type of break
3′	2-4′	2 x 4	Active



Physical quality: speed endurance based on MAP/MAS **7 versus 7 / Game 10**

7 versus 7 with goalkeepers, 3 goals
Attack: scoring with a volley and/or a header after switching play
Defence: intercepting long passes and preventing crosses

RPE: 15 x 24′ → 360 AU	Heart rate check	Heart rate after break of 3′	
Organisation: 50 x 40m – 7 versus 7 and 3 goals – switch play.			
Procedure: switch play when blocked.			
Instructions: movement all over the pitch.			
Variant: players who lose the ball complete a coordination circuit individually.			
Working time	Length of break	Number of repetitions	Type of break
3′	2-4′	2 x 4	Active

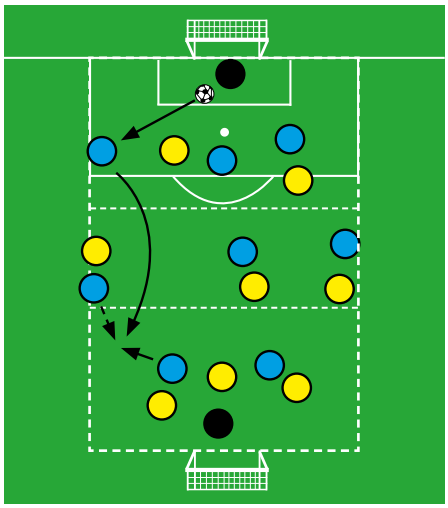


8 versus 8

Physical quality: sprints based on aerobic capacity **8 versus 8 / Game 1**

8 versus 8 with goalkeepers
Attack: playing long and accompanying the attack
Defence: intercepting long passes and protecting the goal

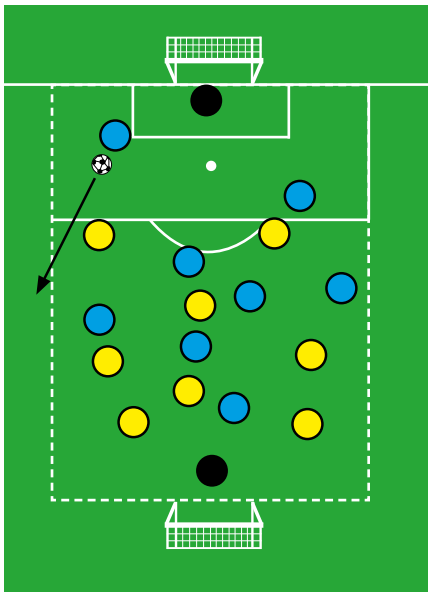
RPE: 15 x 18' → 270 AU	Heart rate check	Heart rate after break of 3'	
Organisation: 50 x 40m. Middle zone of 20m width, 3 versus 3: finishing zones 3 versus 2.			
Procedure: middle "no-go" zone: skip the middle.			
Instructions: the attackers compete for aerial balls and the midfielders play the second balls.			
Variant: free play.			
Working time	Length of break	Number of repetitions	Type of break
3'	3'	6	Semi-active



Physical quality: speed and series of sprints based on lactic capacity **8 versus 8 / Game 2**

8 versus 8 with goalkeepers and wide support players
Attack: attacking by using the width
Defence: defending by closing down space

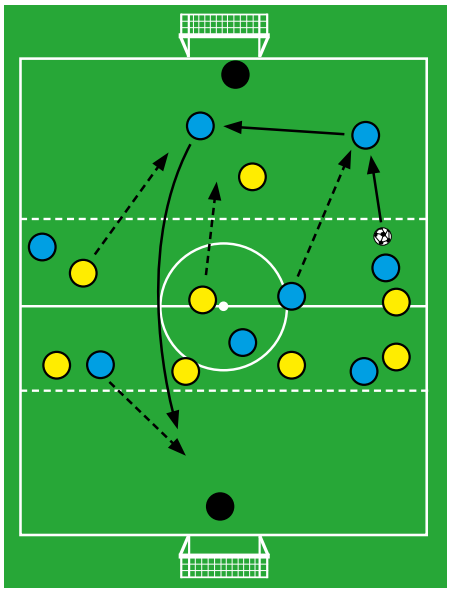
RPE: 15 x 18' → 270 AU	Heart rate check	Heart rate after break of 3'	
Organisation: 50 x 40 m with channels: 8 versus 8.			
Procedure: the team in possession occupies the 2 channels. Free play in the channels and 1-2 touches in the middle.			
Instructions: in attack, open the play up; in defence, close the play down.			
Variant: defensive imbalance as if a team loses the ball, a player leaves the pitch and is replaced by an additional player waiting for the other team. The players take it in turns to leave and enter the pitch.			
Working time	Length of break	Number of repetitions	Type of break
3'	3'	6	Active



Physical quality: speed and intermittent sprints based on MAP **8 versus 8 / Game 3**

8 versus 8 with goalkeepers
Attack: attacking using long balls over the middle zone
Defence: intercepting long passes and regaining possession

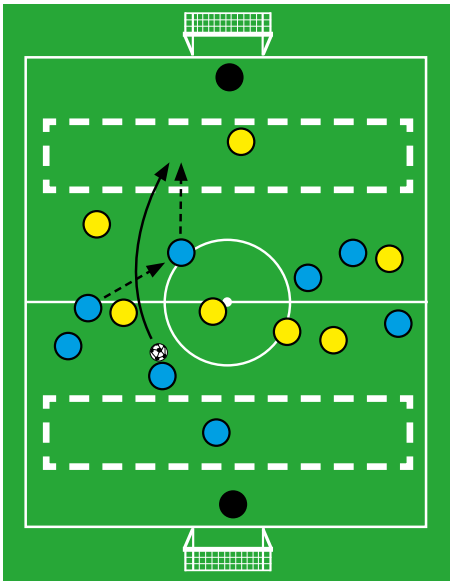
RPE: 13 x 24′ → 312 AU	Heart rate check	Heart rate after break of 3′	
Organisation: 67 x 50m. Pitch divided into 3 zones. 1 middle zone (8 versus 8) and 2 finishing zones.			
Procedure: retain possession for at least 4 passes, then play a long ball over the middle zone to a player on the run. Try to score.			
Instructions: play to 2 attackers when they break free. Watch out for offside.			
Variant: (1) only 1 player can defend outside of the middle zone. (2) progressively increase the number of defenders.			
Working time	Length of break	Number of repetitions	Type of break
3′	3′	8	Semi-active



Physical quality: speed and acceleration based on lactic capacity **8 versus 8 / Game 4**

8 versus 8 (7 versus 7 + 1 versus 1)
Attack: retaining possession then accelerating to score
Defence: regaining possession and defending 1 versus 1

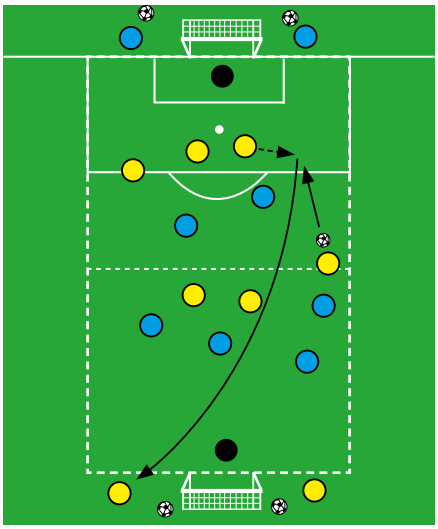
RPE: 15 x 24′ → 360 AU	Heart rate check	Heart rate after break of 3′	
Organisation: 67 x 50m with middle zone of 30m, 8 versus 8 (7 versus 7 + 1 versus 1 in front of the goal).			
Procedure: retain possession. Look to play towards a deep support player.			
Instructions: link up and finish.			
Variant: in the finishing zones, move progressively from 1 versus 1 to 3 versus 3.			
Working time	Length of break	Number of repetitions	Type of break
3′	2-4′	2 x 4	Active



Physical quality: series of movements based on lactic capacity **8 versus 8 / Game 5**

8 versus 8 with 2 attacking support players per team
Attack: support/back-up players and switches of play
Defence: supporting, covering and defending laterally

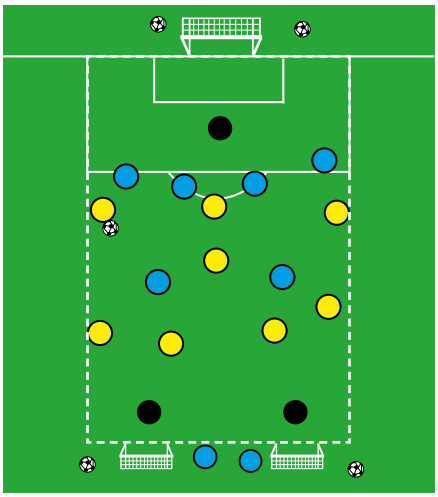
RPE: 16 x 24' → 384 AU	Heart rate check	Heart rate after break of 3'	
Organisation: 40 x 50m: 8 versus 8 (6 versus 6 + 2 attacking support players per team).			
Procedure: 1 touch for the support players. Change the support players every 3 minutes.			
Instructions: in attack, retain possession. Use support/back-up players and switches of play. Goals scored from a pass from a support player count double or triple. In defence, close down space and anticipate the opponents' movements.			
Variant: play at least 4 passes before playing towards the deep support players.			
Working time	Length of break	Number of repetitions	Type of break
3'	2-4'	2 x 4	Active



Physical quality: speed based on aerobic capacity **8 versus 8 / Game 6**

8 versus 8 (6 versus 6 with 2 attacking support players) with 3 goalkeepers
Attack: support/back-up players and switches of play
Defence: closing down space and regaining possession of the ball

RPE: 16 x 24' → 384 AU	Heart rate check	Heart rate after break of 3'	
Organisation: 40 x 50m. Attack/defence 8 versus 8 (6 + 2 support players waiting).			
Procedure: the blue team shoots at the 2 wide goals with the help of the support players; the yellow team shoots at the large goal. Change sides and roles for the 2 teams every 3'.			
Instructions: in attack, the attackers break free to act as intermediate support players and to push the game forward. 1 touch for the support players. Create space and use gaps to gain ground and eliminate opponents. In defence, intercept deep passes by anticipating and closing gaps.			
Working time	Length of break	Number of repetitions	Type of break
3'	2-4'	2 x 4	Active

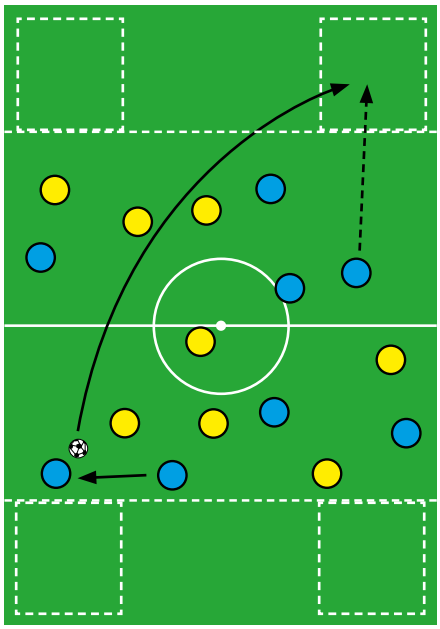


Physical quality: series of movements based on lactic capacity **8 versus 8 / Game 7**

8 versus 8 without goalkeepers
Attack: alternating between short and long passes
Defence: preventing progression and intercepting long passes

RPE: 16 x 24′ → 384 AU	Heart rate check	Heart rate after break of 3′
Organisation: 50 x 50m. 4 goal zones of 10 x 10m to attack and defend.		
Procedure: stop the ball in one of the goal zones after controlling an aerial ball.		
Instructions: react to switches of play. Improve the quality of support play and the accuracy of passes.Look around before controlling the ball. Controls on the turn.		
Variant: receive and control the ball in one of the zones from long and high balls.		

Working time	Length of break	Number of repetitions	Type of break
3′	3′	5	Active

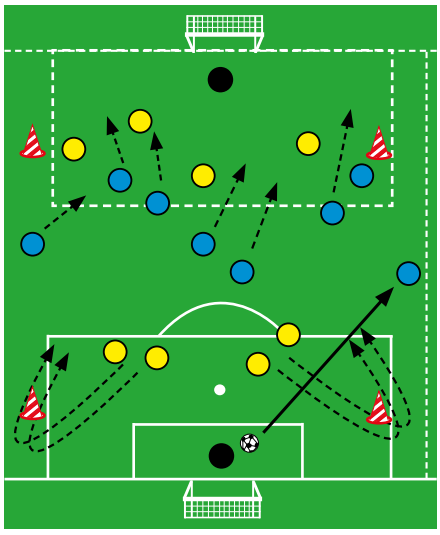


Physical quality: speed and acceleration based on aerobic capacity **8 versus 8 / Game 8**

8 versus 8 with goalkeepers and defensive imbalance
Attack: attacking rapidly with a numerical advantage
Defence: defending laterally and cutting off trajectories

RPE: 16 x 24′ → 384 AU	Heart rate check	Heart rate after break of 3′
Organisation: 50 x 50m. 8 versus 8. Attack with a numerical advantage, defend with a numerical disadvantage.		
Procedure: if possession is lost, 2 yellow players complete a sprint (there and back) before returning to the defence. During this time, the blue team counter-attacks with 8 players against 6 yellow defenders.		
Instructions: in attack, inject pace into sequences and trajectories. Play between the goal and the defenders. Break free after receiving the ball. In defence, practise retreating ("jockey move") while waiting for the sprinting players to return. Read the trajectories, close down space and gaps.		
Variant: the team's handicap moves progressively from 2 to 4 and then to 6 players to regulate the speed of counter-attacks.		

Working time	Length of break	Number of repetitions	Type of break
3′	3′	5	Active

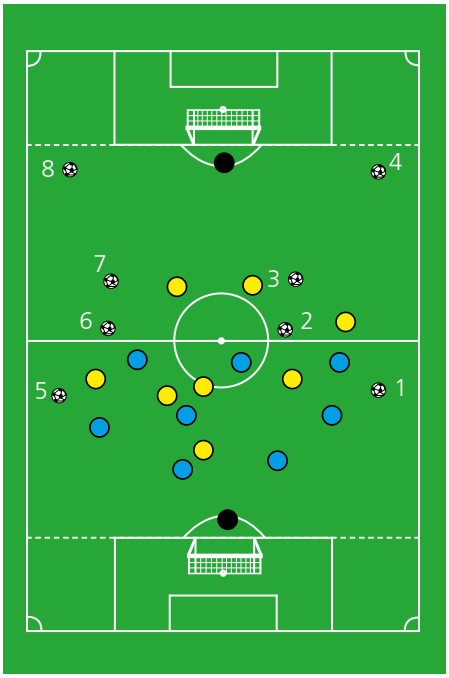


Physical quality: speed and acceleration based on aerobic capacity **8 versus 8 / Game 9**

8 versus 8 with goalkeepers
Attack: attacking and finishing from 8 set pieces
Defence: individual marking and interception of passes

RPE: 18 x 16' → 288 AU	Heart rate check	Heart rate after break of 3'
Organisation: 70 x 50m, 8 versus 8.		
Procedure: each team takes 8 set pieces to start the game with 2 throw-ins, 2 corner kicks, 2 indirect free kicks, 1 direct free kick, 1 penalty kick. If the other team regains possession, it launches a counter-attack. Change the roles after 8 set pieces.		
Instructions: in attack, move forward and create space. Take up positions in gaps. Move in behind the defence. Make yourself visible to passers. In defence, ensure coverage ball-side. The opposite wing player watches the diagonal play. If a defender is eliminated, the central defender takes over and the other defender retreats into a covering position. The central defence takes up positions behind the ball to ensure coverage. The nearer the ball, the tighter the marking. Be responsible for your opponent. Win your duel.		

Working time	Length of break	Number of repetitions	Type of break
1'	2-3'	2 x 8	Active



10. “FIFA 11+”

"FIFA 11+"
A complete warm-up programme to prevent football injuries

Background

The "FIFA 11+" injury prevention programme was developed by an international group of experts based on their practical experience with various injury prevention programmes for amateur players aged 14 or older.

In a scientific study, it was shown that youth football teams using the "FIFA 11+" as a standard warm-up had a significantly lower risk of injury than teams that warmed up as usual. Teams that performed the "FIFA 11+" regularly at least twice a week had 37% fewer training injuries and 29% fewer match injuries. Severe injuries were reduced by almost 50%. This study was published in the renowned British Medical Journal in 2008.

The programme should be performed, as a standard warm-up, at the start of each training session at least twice a week and it takes around 20 minutes to complete. Prior to matches, only the running exercises (parts 1 and 3) should be performed.

Structure of the "FIFA 11+"

The "FIFA 11+" has three parts with a total of 15 exercises, which should be performed in the specified sequence at the start of each training session.

Part 1: six running exercises at a slow speed combined with active stretching and controlled partner contacts;

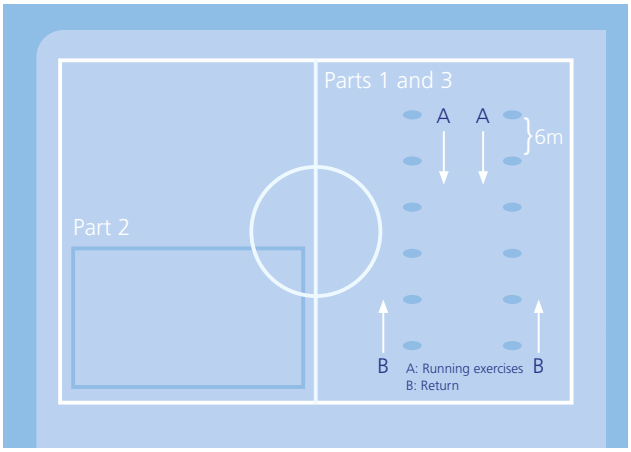
Part 2: six sets of exercises, focusing on core and leg strength, balance, and plyometrics/agility, each with three levels of increasing difficulty;

Part 3: three running exercises at moderate/high speed combined with planting/cutting movements.

A key point in the programme is to use the proper technique during all of the exercises. Pay full attention to correct posture and good body control, including straight leg alignment, knee-over-toe position and soft landings.

Field set-up

The course is made up of six to ten pairs of parallel cones, approximately 5-6m apart. Two players start at the same time from the first pair of cones, jog along the inside of the cones and do the various exercises on the way. After the last cone they run back along the outside. On the way back, speed can be increased progressively as players warm up.



Part 1: Running exercises – 8 minutes

1 Running – straight ahead

Jog straight to the last cone. Make sure you keep your upper body straight. Your hip, knee and foot are aligned. Do not let your knee buckle inwards. Run slightly more quickly on the way back. 2 sets.

2 Running – hip out

Jog to the first cone, stop and lift your knee forwards. Rotate your knee to the side and put your foot down. At the next cone repeat the exercise on the other leg. Repeat until you reach the other side of the pitch. 2 sets.

3 Running – hip in

Jog to the first cone, stop and lift your knee to the side. Rotate your knee forwards and put your foot down. At the next cone repeat the exercise on the other leg. Repeat until you reach the other side of the pitch. 2 sets.

4 Running – circling partner

Jog to the first cone. Shuffle sideways towards your partner, shuffle an entire circle around one another (without changing the direction you are facing) and then shuffle back to the first cone. Repeat until you reach the other side of the pitch. 2 sets.

5 Running – jumping with shoulder contact

Jog to the first cone. Shuffle sideways towards your partner. In the middle jump sideways towards each other and make shoulder-to-shoulder contact. Land on both feet with your hips and knees bent. Shuffle back to the first cone. Repeat until you reach the other side of the pitch. 2 sets.

6 Running – quick forwards and backwards sprints

Run quickly to the second cone then quickly run backwards to the first cone, keeping your hips and knees slightly bent. Repeat, running two cones forwards and one cone back until you reach the other side of the pitch. 2 sets.

Part 2: Strength, plyometrics and balance – 10 minutes

7.1 The bench – static

Starting position: Lie on your front, support the upper body with your forearms. Keep your elbows directly under your shoulders.
Exercise: Lift the upper body, pelvis and legs up until your body forms a straight line from head to foot. Pull in stomach and gluteal muscles and hold the position for 20-30 sec. 3 sets.
Important: Do not sway or arch your back. Do not move your buttocks upwards.

7.2 The bench – alternate legs

Starting position: Lie on your front, support the upper body with your forearms. Keep your elbows directly under your shoulders.
Exercise: Lift the upper body, pelvis and legs up until your body forms a straight line from head to foot. Pull in stomach and gluteal muscles. Lift each leg in turn, holding for a count of 2 sec. Continue for 40-60 sec. 3 sets
Important: Do not sway or arch your back. Do not move your buttocks upwards. Keep pelvis stable and do not let it tilt to the side.

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7.3 The bench – one leg lift and hold

Starting position: Lie on your front, supporting your upper body with your forearms. Keep your elbows directly under your shoulders.
Exercise: Lift the upper body, pelvis and legs up until your body forms a straight line. Pull in stomach and gluteal muscles. Lift one leg about 10-15cm off the ground and hold the position for 20-30 sec. Repeat with other leg. 3 sets.
Important: Do not sway or arch your back. Do not move your buttocks upwards. Ensure the pelvis is stable and do not let it tilt to the side.

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8.1 Sideways bench – static

Starting position: Lie on your side with the knee of your lower leg bent to 90 degrees, support yourself on forearm and lower leg. Keep the elbow of your supporting arm directly under the shoulder.
Exercise: Lift pelvis and upper leg until they form a straight line with your shoulder and hold the position for 20-30 sec. Repeat on other side. 3 sets.
Important: Keep pelvis stable and do not let it tilt downwards. Do not tilt shoulders, pelvis or leg forwards or backwards.

8.2 Sideways bench – raise and lower hip

Starting position: Lie on your side with both legs straight, support yourself on your forearm. Keep the elbow of your supporting arm directly under the shoulder.

Exercise: Raise pelvis and legs until your body forms a straight line from the upper shoulder to the upper foot. Lower hips to the ground and raise them back up again. Continue for 20-30 sec. Repeat on other side. 3 sets.

Important: Do not tilt shoulders or pelvis forwards or backwards. Do not rest your head on your shoulder.

8.3 Sideways bench – with leg lift

Starting position: Lie on your side with both legs straight, support yourself on your forearm and lower leg. Keep the elbow of your supporting arm directly under the shoulder.

Exercise: Raise pelvis and legs until your body forms a straight line from the upper shoulder to the upper foot. Lift upper leg up and slowly lower it down again. Continue for 20-30 sec. Repeat on other side. 3 sets.

Important: Keep pelvis stable and do not let it tilt downwards. Do not tilt shoulders or pelvis forwards or backwards.

9.1 Hamstrings – beginner

Starting position: Kneel with knees apart at hip's width; partner pins your ankles firmly to the ground with both hands.

Exercise: Slowly lean forward while keeping your body straight from the head to the knees. When you can no longer hold the position, gently take your weight with your hands, falling into a press-up position. 3-5 repetitions.

Important: Do exercise slowly at first, but once you feel more comfortable speed it up.

9.2 Hamstrings – intermediate

Starting position and exercise: As described in 9.1. 7-10 repetitions.

9.3 Hamstrings – advanced

Starting position and exercise: As described in 9.1. Minimum of 12-15 repetitions.

10.1 Single-leg stance – hold the ball

Starting position: Stand on one leg, knee and hip slightly bent and hold the ball in both hands.

Exercise: Hold balance and keep body weight on the ball of your foot. Hold for 30 sec. and repeat on the other leg. The exercise can be made more difficult by lifting the heel from the ground slightly or passing the ball around your waist and/or under your other knee. 2 sets on each leg.

Important: Do not let your knee buckle inwards. Keep pelvis horizontal and do not let it tilt to the side.

10.2 Single-leg stance – throwing ball with partner

Starting position: Stand on one leg, face a partner at a distance of 2-3 m.
Exercise: Maintain your balance while you throw the ball to one another. Hold in your stomach and keep your weight on the ball of your foot. Continue for 30 sec. and repeat on the other leg. The exercise can be made more difficult by lifting the heel from the ground slightly. 2 sets on each leg.
Important: Do not let your knee buckle inwards. Keep pelvis horizontal and do not let it tilt to the side.

10.3 Single-leg stance – test your partner

Starting position: Stand on one leg, at arm's length from your partner.
Exercise: Maintain your balance while you and your partner take it in turns to try to push the other off balance in different directions. Continue for 30 sec. and repeat on the other leg. 2 sets on each leg.
Important: Do not let your knee buckle inwards. Keep pelvis horizontal and do not let it tilt to the side.

11.1 Squats – with toe raise

Starting position: Stand with your feet apart under your hips, hands on your hips.
Exercise: Slowly bend hips, knees and ankles until your knees are flexed to 90 degrees. Lean your upper body forwards. Then straighten the upper body, hips and knees and stand up on your toes. Then slowly lower yourself again and straighten up slightly more quickly. Repeat for 30 sec. 2 sets.
Important: Do not let your knee buckle inwards. Lean upper body forward with a straight back.

11.2 Squats – walking lunges

Starting position: Stand with feet apart under your hips, hands on your hips.
Exercise: Lunge forward slowly at an even pace. Bend hips and knees slowly until your leading knee is flexed to 90 degrees. The bent knee should not extend outside the line of the toes. 10 lunges on each leg. 2 sets.
Important: Do not let your knee buckle inwards. Keep upper body straight and pelvis horizontal.

11.3 Squats – one-leg squats

Starting position: Stand on one leg, loosely hold on to your partner.
Exercise: Slowly bend your knee, if possible until it is flexed to 90 degrees, and straighten up again. Bend slowly then straighten slightly more quickly. Repeat on the other leg. 10 squats on each leg. 2 sets.
Important: Do not let your knee buckle inwards. Keep upper body facing forward and pelvis horizontal.

12.1 Jumping – vertical jumps

Starting position: Stand with your feet apart under your hips, hands on your hips.
Exercise: Slowly bend hips, knees and ankles until your knees are flexed to 90 degrees. Lean upper body forwards. Hold this position for 1 sec. then jump as high as you can, and straighten your whole body. Land softly on the balls of your feet. Repeat for 30 sec. 2 sets.
Important: Jump off both feet. Land gently on the balls of both feet with your knees bent.

12.2 Jumping – lateral jumps

Starting position: Stand on one leg. Bend hips, knee and ankle slightly and lean upper body forwards.
Exercise: Jump off your supporting leg, landing approximately 1m sideways onto the other leg. Land gently on the ball of your foot and bend your hips, knee and ankle. Hold this position for about a second and then jump onto the other leg. Repeat for 30 sec. 2 sets.
Important: Do not let your knee buckle inwards. Keep upper body stable and facing forward and pelvis horizontal.

12.3 Jumping – box jumps

Starting position: Stand with feet apart under your hips, imagine you are standing in the middle of a cross.
Exercise: Jump with both legs forwards and backwards, from side to side, and diagonally over the cross. Keep upper body slightly leaned forwards. Jump as quickly and explosively as possible. Repeat for 30 sec. 2 sets.
Important: Land softly on the balls of both feet. Bend hips, knees and ankles on landing. Do not let your knee buckle inwards.

Part 3: running exercises – 2 minutes

13 Running – across the pitch

Run approx 40m across the pitch at 75-80% of maximum pace and then jog the rest of the way. Keep your upper body straight. Your hip, knee and foot are aligned. Do not let your knees buckle inwards. Jog back gently. 2 sets.

14 Running – bounding

Take a few warm-up steps then take 6-8 high bounding steps with a high knee lift and then jog the rest of the way across the pitch. Lift the knee of the leading leg as high as possible and swing the opposite arm across the body. Keep your upper body straight. Land on the ball of the foot with your knee bent and spring. Do not let your knee buckle inwards. Jog back gently to recover. 2 sets.

15 Running – plant & cut

Jog 4-5 steps straight ahead. Then plant the right leg and cut to change direction to the left and accelerate again. Sprint 5-7 steps (80-90% of maximum pace) before you decelerate and plant the left foot and cut to change direction to the right. Do not let your knee buckle inwards. Repeat the exercise until you reach the other side of the pitch, then jog back. 2 sets.

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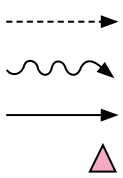
Key



Path of the player without the ball

Path of the player with the ball

Path of the ball (from a pass or shot)

Coach

List of abbreviations (in order of appearance):

HR:	heart rate
$\dot{V}O_2$ max:	maximum oxygen consumption (Abbreviation VO_2max used for typographical reasons)
MAS:	maximum aerobic speed
AP:	aerobic power
ALP:	anaerobic lactic power
AAP:	anaerobic alactic power
ATP:	adenosine triphosphate
ECC:	eccentric contraction
CONC:	concentric contraction
ISO:	isometric contraction
MR:	maximum repetition = load that can only be performed once (MR 4 means a load that can only be performed four times)
max. S:	maximum speed
FS:	football skills
TEF:	time of exertion in football
RPE:	rating of perceived exertion
TRIMP:	training impulse (training load)
DOMS:	delayed onset muscle soreness
AU:	arbitrary units
MAP:	maximum aerobic power; the power at which the consumption of oxygen peaks and corresponds to lactic threshold 2 up to VO_2 max.

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