

GET YOUR PLAYERS MATCH-READY

PROFESSIONAL WARM-UPS & COOLDOWNS



**EIGHT EXCLUSIVE
TRAINING & MATCH DAY
SESSIONS FROM THESE
LEADING COACHES**

MIKE GARRITY
LIVERPOOL

**ANDREW
SPARKES**
SWANSEA CITY

SCOTT AINSLEY
SUNDERLAND

TONY DALEY
**WOLVERHAMPTON
WANDERERS**

TOM WILLIAMS
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**MARCUS
SVENSSON**
ASPIRE ACADEMY

AL STEWART
HUDDERSFIELD TOWN

STEVE COOPER
**THE FOOTBALL
ASSOCIATION**

ELITE
SOCCER

PROFESSIONAL
WARM-UPS
& COOL DOWNS

**Eight exclusive training and match day
sessions from the game's leading coaches**

PDF version

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Thank you very much for picking up this, Elite Soccer's Professional Warm-Ups & Cool Downs

It's funny how so much emphasis is placed on some of the key parts of training and match day, yet getting players up to speed in the form of purposeful, measured, intelligent warm-ups is arguably as important, since how will they fulfil their potential if they're not in optimum shape? And similarly when having completed a period of exercise, winding the body down and putting in place recovery strategies is now seen as absolutely vital if these finely tuned athletes are going to be back to full efficiency quickly.

That's why we've put together this special issue where a vast array of ideas and principles are tackled. And as usual we've been thrilled by those who have come forward to take part, with four coaches currently plying their trade at Premier League clubs and another who is doing great things on the international stage.

In presenting a brilliant cross-section of training and match day warm-ups and cool downs, plus a number of intriguing bonus specialist sessions, this is a complete and comprehensive guide to helping your players maintain a level of performance that will give them the best chance of fulfilling their ambitions.

We hope you enjoy what's on offer, and wish you all success going forward.

Enjoy your football,

Howard Wilkinson

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SCOTT AINSLEY

SPORT SCIENTIST **SUNDERLAND**

TRAINING DAY WARM-UP

Scott has successfully applied his skills and knowledge as a Sport Scientist at Barclays Premier League side Sunderland for 17 years.

During the course of his career Scott has provided sports science support to every level of performance at the club. With a proven record in optimising player performance levels, major highlights include winning the Coca Cola Championship in 2006/07 season, as well as contributing to the club's reserve team's league and cup double success in 2008/09.



TONY DALEY

HEAD OF SPORTS SCIENCE
WOLVERHAMPTON WANDERERS

IMMEDIATE POST-TRAINING COOL DOWN

Birmingham-born, and with a successful decade as a player, Tony inspired Aston Villa to two runners-up finishes in the top division in the 1990s. The pacy winger also earned seven England caps, included in which were two appearances at the 1992 European Championships.

He left Villa for Wolves, and also featured for Watford, Walsall and Forest Green Rovers, then studied for a Bachelor of Arts degree in Sports Science at Coventry University, going on to graduate with a Masters degree in Applied Sports Science and Exercise from Wolverhampton University.

Tony secured the position of Fitness and Conditioning Coach at Sheffield United in 2003, moving on to Wolves in September 2007. He oversees the Sport Science provision for the entire club to ensure that strategies are uniform across all ages.



AL STEWART

HEAD OF SPORTS SCIENCE
Huddersfield Town

MATCH DAY WARM UP: A TIMELINE OF PREPARATIONS LEADING UP TO THE FIRST WHISTLE

A lecturer on periodisation and sports science, Al started at Manchester City's academy in 2005, leading the sports science department for seven years whilst guiding over 20 academy graduates through into the first-team (10 of whom have gone on to play at full international level).

He moved to Hull City Tigers in the summer of 2012 as Head of Strength and Conditioning before switching to Huddersfield Town in the summer of 2014 to take on the role as Head of Sports Science at the Sky Bet Championship club. Al has degree and Masters qualifications from MMU and University of Salford, in Coaching, Sport and Exercise Science, and Strength and Conditioning respectively.



TOM WILLIAMS

LEAD ACADEMY STRENGTH AND CONDITIONING COACH **LEICESTER CITY**

MATCH DAY COOL DOWN: A FOUNDATION PLAN FOR THE WEEK THAT FOLLOWS

Tom has worked in youth and professional football for eight years having begun his career as a youth coach at Derby County's Academy, whilst studying Sport and Exercise Science at Loughborough University.

After working as first-team Sport Scientist and Strength Coach at Mansfield Town he made the step-up to Sheffield United as first team Rehabilitation Coach. He spent three seasons at the club, implementing injury prevention strategies and specific individual rehabilitation plans around a team vying for promotion.

Tom subsequently moved to Leicester City to lead the Academy Strength and Conditioning programme from the Under-9s to Under-21s.



MIKE GARRITY

UNDER-18S COACH **LIVERPOOL**

ACTIVE WARM-UPS FOR DEFENSIVE AND OFFENSIVE PLAYERS

Mike Garrity joined Liverpool Academy in 2005, initially coaching players in the foundation phases on a part-time basis, before being employed full-time to look after the development of all age groups up to the Under-16s. In recent years Mike's remit has grown again to now take in the Under-18s as part of manager Brendan Rodgers's trusted backroom.

As a player, Mike spent five years at West Bromwich Albion, firstly as a youth team player before signing as a professional. During that time he suffered a lengthy injury lay-off after breaking his leg. Mike switched to playing part-time, but decided to build his future around coaching qualifications and is now applying his skills at the top of the domestic ladder.



ANDREW SPARKES

UNDER-21 GOALKEEPER COACH AND HEAD OF ACADEMY GOALKEEPING **SWANSEA CITY**

KEEPER WARM-UP AND COOL DOWN

Andrew joined Swansea City in 2012 as the Under-21s Goalkeeper Coach and Head of Academy Goalkeeping. Previously he was the Under-23s Goalkeeper Coach and Head of Academy Goalkeeping at MLS side New York Red Bulls, and also spent a year with leading Austrian side Red Bull Salzburg as their Under-16s and Under-18s Academy Goalkeeper Coach.

Now 29, Andrew has an extensive goalkeeper coaching background, with experience and a proven track record of developing keepers in the UK, Europe and the US. He also has international experience after working with the Sierra Leone national team for their FIFA 2014 World Cup qualifiers.

He is also a Coach Education tutor for the Football Association of Wales.



STEVE COOPER

ENGLAND UNDER-16S HEAD COACH
THE FOOTBALL ASSOCIATION

20-MINUTE TECHNICAL WARM-UP

Steve Cooper reports into England Under-21s Head Coach Gareth Southgate and the FA's Head of Technical Development Dan Ashworth, in his role as England Under-16s National Head Coach.

He joined the FA from Liverpool's academy in 2013, initially assuming the post of FA Youth Coach Educator (FAYCE). He was one of 18 FA Youth Coach Educators working in club academies across the country, helping support the Elite Player Performance Plan in developing the next generation of young players.

In 2007, he became one of the youngest coaches to achieve a UEFA Pro-license qualification, aged 27, and has continued an impressive progression, stepping up to become England Under-16s National Head Coach last October.



MARCUS SVENSSON

ASPIRE ACADEMY

ALTERNATIVE COOL DOWN TECHNIQUES

Marcus moved to the Aspire Academy in 2014 after a hugely successful period at Barclays Premier League side Arsenal. While with the London club, he assisted the club's fitness coaches in the daily preparation and conditioning of players.

Previously Marcus's experience had seen him work at Preston North End, Derby County, Rochdale and Notts County, notably in specialising in developing specific strength programmes for players.

He has a wealth of sports science qualifications and has now taken his expertise to the Aspire Academy – the multi-facility soccer development academy based in Qatar.

Training day warm-up

Overview

Over time, and with increased investment in the physical preparation of professional footballers for optimum performance, the content and structure of weekly training schedules has changed dramatically. Advances in warm-up routines and cool down/recovery sessions means they have become integral parts of the training strategy.

Across many clubs, day-to-day warm-up routines will vary greatly; however, what should remain constant is the ultimate aim of preparing players physiologically and psychologically for optimum performance, whilst reducing the risk of injury in the tasks that lay ahead.

The importance of the warm-up - specifically on training days - is often underestimated by many in football. But in my opinion the warm-up provides the ideal opportunity for the

sports scientist to incorporate various forms of physical training such as speed, power or change of direction sprints into the routine. Alternatively, warm-ups focusing on hip mobility and range of motion may employ strategies using high hurdles.

With appropriate programming the warm-up can serve not only to prepare players for the immediate session, but also provide the stimulus to create positive adaptations.

This is one of many strategies I have implemented over a number of years with a high degree of success in terms of improving individual/team performances and reducing injuries.

Detailed communication and planning alongside the coaching staff ensures all parties are aware of the aims and objectives of the training week. This framework allows the sports scientist to plan

and implement the most effective warm-up routine that will best prepare the players for the training session on any given day. For example, if the main content of the session is going to involve high intensity possession drills then the intensity of the warm-up should reflect this by stimulating the recruitment of the fast twitch muscle fibres.

Key thinking

Understanding the football season is a long haul and many warm-ups will be conducted, I have realised over the years that by keeping the content of the routine concise, varied and challenging, the individual application and enjoyment level of the players remains high. And what always remains stable and consistent is the match day warm-up - the structure and content are often rehearsed and finalised in pre-season between coaches and players so everybody concerned is comfortable with what will be delivered on

match days.

From a coaching perspective, the ability to think on your feet and be flexible is also very much the reality of practice. Occasionally players may show greater signs of fatigue than anticipated, which can have obvious implications for speed or power work. Other times it could simply be a case of your 'gut' feel leading certain elements of the warm-up as players are walking out onto the training pitch - you get the feeling this routine isn't going to engage the players on the day, so sometimes changing the complete emphasis of the warm-up can happen, but it pays to be flexible at all times.

Equipment required

In my experience an effective warm-up routine is not dependent on lots of equipment; it is about engaging the players you work with daily, and getting 'buy-in' to everything you're implementing or reinforcing.



SPEED AND POWER
(25mins)

These drills are designed to improve speed and power output, improving the ability to accelerate and decelerate the body, and change pace. As shown, all we require in terms of equipment is a good supply of cones. To prepare players for the main drills we can perform specific hip mobility and lower limb dynamic flexibility exercises.

DRILL ONE:

Acceleration drill

Players begin the drill and accelerate immediately, sprinting to the 10-yard line. We can either ask them to jog to the end of the drill area and back, or turn around immediately and move to the back of the line.

DRILL TWO:

Plyometric and acceleration drill

Now players make speed bounds for the first 20 yards. Speed bounds ask the player to use the arms to vault into the air, pushing off hard from the ground with each step and remaining airborne for as long as possible. It is recognised as the second part of the athletics triple jump technique. Players then accelerate for the second 10 yards, then jog to the end of the area and back.

DRILL THREE:

Acceleration and deceleration drill

Now players accelerate and decelerate in 10-yard banks and for the full 50 yards. So by the time they get to the end of the area they have accelerated three times and decelerated twice.

DRILL FOUR:

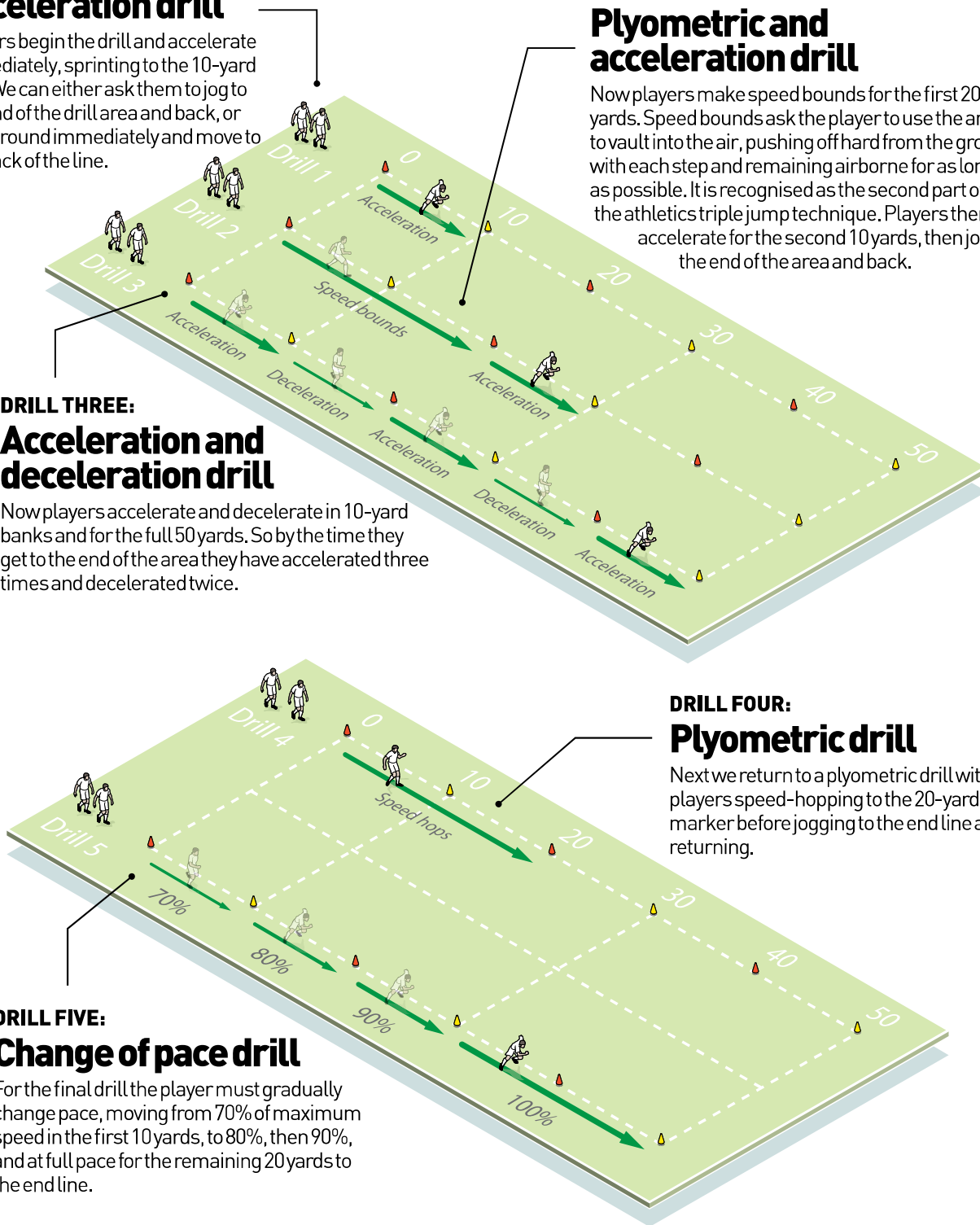
Plyometric drill

Next we return to a plyometric drill with players speed-hopping to the 20-yard marker before jogging to the end line and returning.

DRILL FIVE:

Change of pace drill

For the final drill the player must gradually change pace, moving from 70% of maximum speed in the first 10 yards, to 80%, then 90%, and at full pace for the remaining 20 yards to the end line.



plyometrics

/ˌplɪˈɒ(ʊ)mɛtrɪks/
 noun

a form of exercise that involves rapid and repeated stretching and contracting of the muscles, designed to increase strength.

KEY
 Ball movement →
 Player movement →
 Dribble →

BALL-BASED
(20mins)

Now working with a ball, this practice aims to improve accuracy, speed and weight of pass, as well as the efficiency of short/sharp movement to receive the ball, and body position. It also reinforces the timing of runs and movement, changes of pace, and intermittent running practices.

In terms of equipment, in each grid we need cones or mannequins, four poles and two footballs.

As shown, the drill starts each time with the player at the base of the area. Half the group works to the right side of the grid and the other half works to the left. All players hold the position on the disc they've run to and await the next ball.

We run this for four minutes (two minutes right, two minutes left), putting in place three further progressions, as shown, to achieve a total duration of 16 minutes' work.

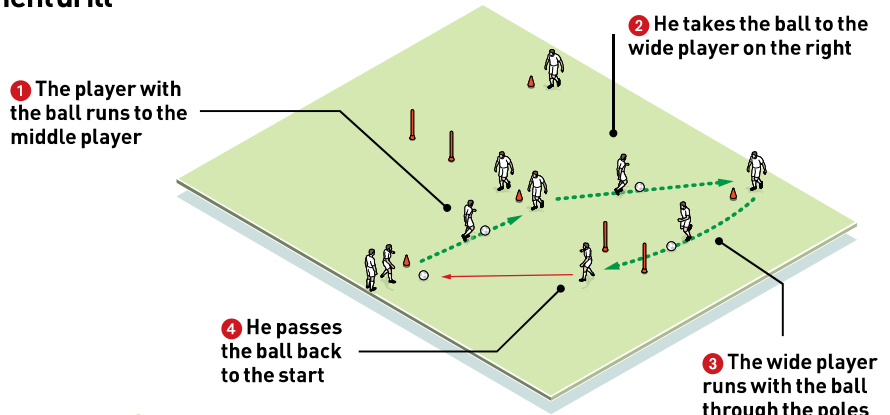
Modifying and progressing the drill

There are some simple ways in which we can change the parameters by which the drills are run.

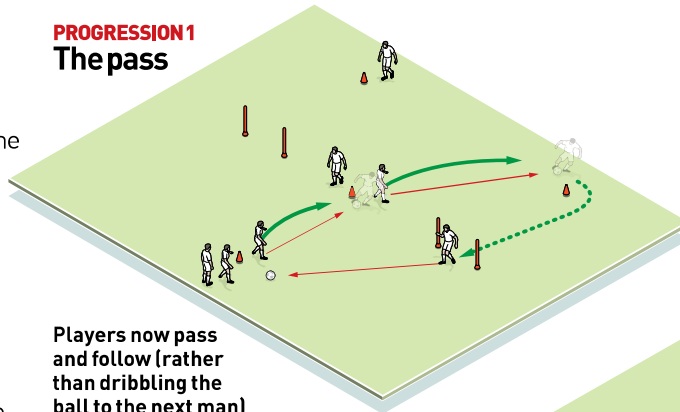
An obvious alteration is in the area size – this can be manipulated to emphasise desired outcomes, for example, in provoking repeated accelerations, or when increasing running and/or high-speed running distances.

We can also manipulate the work/rest time of the drill to create overloads that will stimulate adaptation. And depending on numbers of players, we can add an additional (third) ball into the drill to increase the intensity. It's worth bearing in mind the fact that certain phases of the season may influence the duration and area size of the drill. For instance, pre-season is more likely to be volume-related compared to during the season when intensity is the key factor.

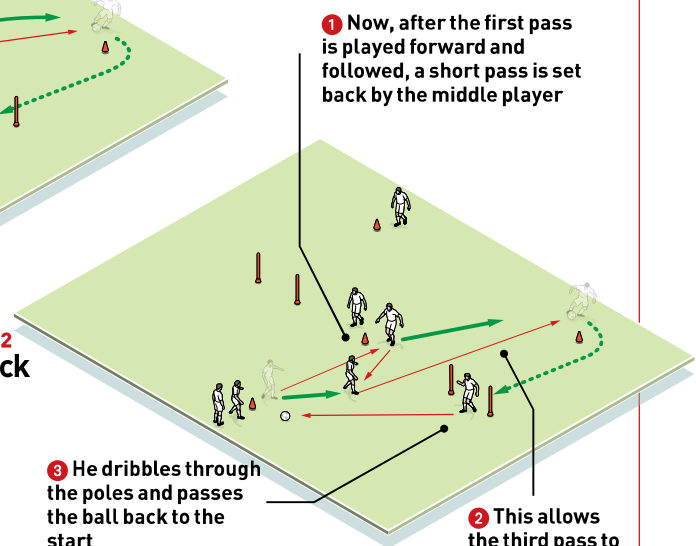
Movement drill



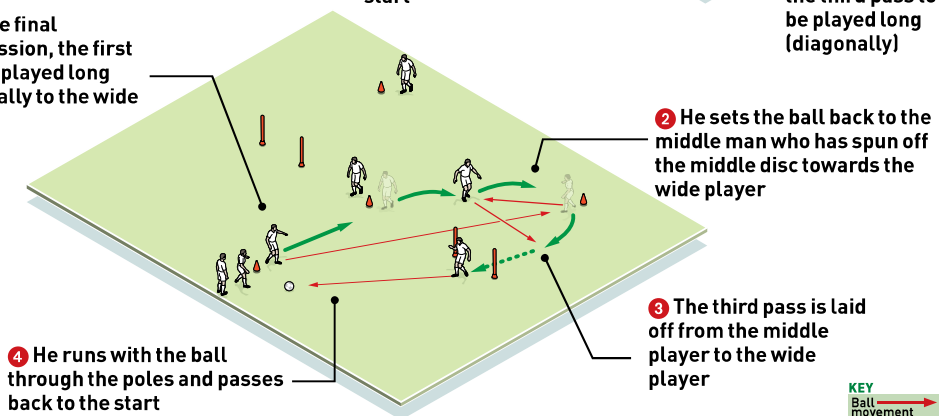
PROGRESSION 1
The pass



PROGRESSION 2
Setting back



PROGRESSION 3
The long diagonal



KEY
 Ball movement ———→
 Player movement ———→
 Dribble - - - - -→

A quick word on cool down and recovery strategies

At Sunderland we commonly categorise recovery strategies as either active or passive. Active methods include physical activities such as jogging, cycling and pool running. Passive methods are absent of physical activity and include nutrition, sleep,

rest and contrast bathing. We like to build an experience where an integration of both recovery methods is effective at targeting the major causes of post-match fatigue. And while the premise of this plan has been to outline warm-up elements, my thoughts on cool downs and recovery strategies are in ensuring coaches appreciate

just how pivotal they are also to discussions and debates within the game between medical and coaching staff. Common discussions include the content and nature of the recovery session and the implications this can have on structure of the training week, which then comes back to being extremely relevant for warm-ups!

Post-training cool down (24 hours)

Overview

Managing training during congested fixture schedules can be daunting. Therefore, post-training recovery strategies are required to reduce the risk of maladaptation to training (injury or overreaching) and to maximise optimal performance. Fatigue following competition or training has many factors that recovery strategies require targeting such as dehydration, glycogen depletion, muscle damage and, let's not forget, mental fatigue. So these can include nutritional intake, cold water immersion (CWI), sleeping, active recovery, stretching, compression garments, massage and even electrical stimulation (EMS). The most effective of these will always focus on hydration, diet and sleep, but presenting a good cross-section means offering options for various player intensities.

Ultimately, time spent cooling down will aid footballers'

performance by accelerating the recovery process. It is therefore important for coaches to recognise the significance of not only the warm-up but also the cool down, and this should help educate and actively support squad recovery process. It is crucial that your staff find the best way to convince your players to get buy-in.

Key thinking

Muscle damage is likely a major factor to consider when explaining post-training fatigue. During training players' drills usually mimic specific moments found during game play. If these drills are position-specific, although the session may be a small fraction of distance or time covered in the game, the player may have replicated (practised) specific key metrics as much or in some cases more than during actual game play. For example a striker participating in a finishing session may have 20 attempts at goal – many more

than during a match! So this may put considerable stress on the lower limbs (quads and hamstrings). The repetition of changes of direction, acceleration and deceleration throughout a training session may induce muscle damage. As a result, this damage is characterised by muscle soreness, increased passive muscle stiffness, muscle swelling and a reduction in muscle force production.

An additional factor to consider attempting to explain training maladaptation is mental fatigue. When training and competing, there may be insufficient time for players to recover psychologically, possibly leading to lack of motivation and mental burnout. Travelling may lead to the disruption of circadian rhythms (jetlag, for instance, or arriving somewhere during the night) thereby increasing the level of stress induced by restricted motion, unfamiliar sleeping patterns and poorer quality of sleep.

Equipment required

Recovery is multifaceted and encompasses a variety of strategies. The load and intensity of the training session determines the type of recovery protocol (passive, active or regenerative). For example high load intensity training will cause more muscle damage and deplete glycogen stores more than low intensity training. As a result a more active or regenerative recovery session may be required.

There are many strategies that can be implemented, so therefore equipment can be exhaustive. I would encourage coaches to make sensible and realistic decisions, factoring in typical workouts, resources and staffing. Of prime importance is that the protocol is optimal, and that strategies such as active/passive recovery, diet, hydration and sleep are adhered to.

High, moderate and low intensity recovery options

It is important that the post-training recovery covers key elements and that the priority strategies are covered dependent on type/intensity of training session. This table (below right) outlines typical strategies during the recovery process (CWI – cold water immersion; EMS – electrical muscle stimulation):

KEY COOL DOWN PHASES

PHASE ONE (IMMEDIATE)

Active/passive recovery

Low intensity exercise allows the heart rate to slow down and the body to start cooling. This can be achieved by doing low intensity ball drills, or by jogging for 5-15mins (dependent on training intensity). The featured cool down drills should be encouraged, dependent on weather and drill intensity. However, even after a light training session, a cooling down process is essential.

Session type	High intensity/ Load	Moderate intensity/Load	Low intensity/ Load
Active recovery	✓	✓	✓
Diet	✓	✓	✓
Hydration	✓	✓	✓
CWI	✓		
Sleep	✓	✓	✓
Massage	✓	✓	
Compression wear	✓	✓	✓
EMS	✓		

PHASE TWO (IMMEDIATE)

Hydration

Players' body mass is taken prior to training and immediately afterwards. The difference in mass is then used to measure the appropriate amount of fluid the players should replace, with a recommended guide of replacing one-and-a-half times the loss in body weight.

PHASE THREE (IMMEDIATE)

Static stretches

Each of the stretches shown are to be done with three repetitions, holding for between 20-30 seconds each.

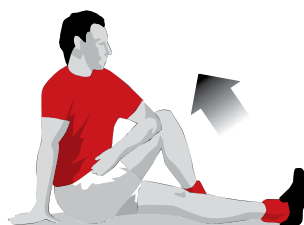
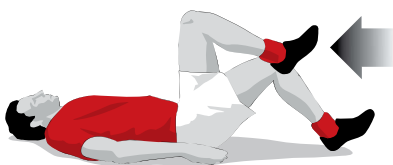
Static stretches are conducted indoors or out dependent on the weather. This is staff-led but not compulsory as protocols are fairly simple and easy to learn. Shaking limbs between each stretch promotes the return of blood to the heart if required, followed by passive recovery (foam rolling). During this time players are also encouraged to continue rehydrating.

Each stretch to be performed for 20-30 seconds, with three repetitions

Hamstrings



Groins

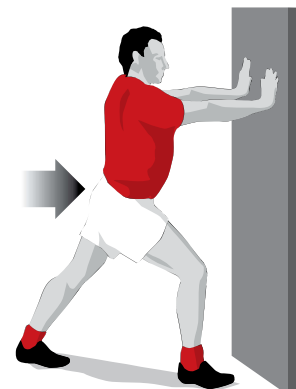
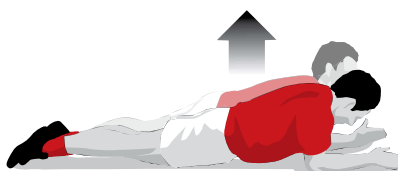


Iliotibial band stretches (ITBs)

Hip flexors



Core



Calves

Quadriceps



POST-TRAINING COOL DOWN

PHASE FOUR
(UP TO TWO HOURS POST-EXERCISE)

Restore and repair

It is important to promote muscle regeneration post-training and a recovery shake that contains at least 30g carbohydrate (CHO) and 15g protein (2:1) plus essential amino acids should be consumed within 30 minutes post-training.

In addition, eating meals containing essential amino acids with a high leucine and unrefined CHO content within two hours of training appears effective. Adding green vegetables will also help bolster the immune system, while cold water immersion (CWI – which appears to minimise fatigue and accelerate post-exercise recovery) and massage can help reduce muscle soreness.

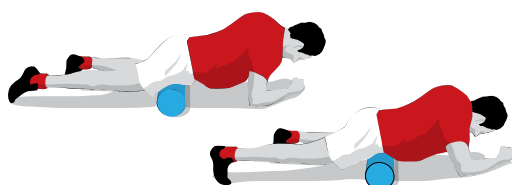
Enhanced short-term (hours to days) recovery may improve training performance and help reduce the chances of fatigue and its associated

issues, allowing greater training loads, or enhancing the effect of a given training load.

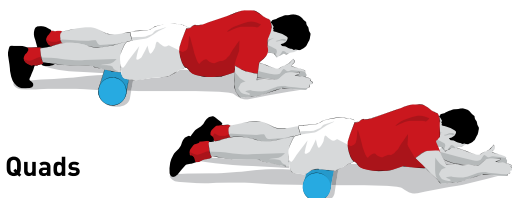
It should be noted though, CWI has an analgesic effect and is recommended only after a high intensity or high load training (10-15 degrees for 5-10mins).

Alcohol should be avoided as it delays the recovery process. Firstly, it acts as a diuretic, causing dehydration; and secondly it delays the ability of the muscles to recover.

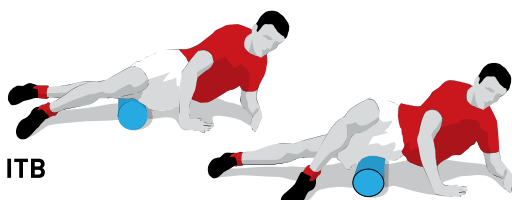
Further recovery moves using a foam roller to be performed for 30-60 seconds, with three repetitions



Hip flexors

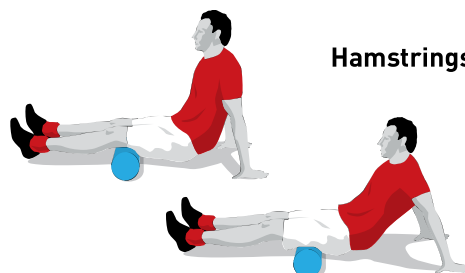


Quads

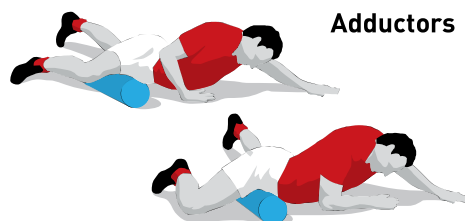


ITB

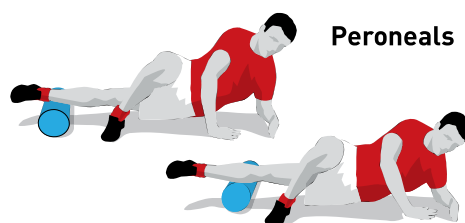
Calves



Hamstrings



Adductors



Peroneals

*For the science behind foam rollers see Marcus Svensson session on page 24

PHASE FIVE
(UP TO 24 HOURS POST-EXERCISE)

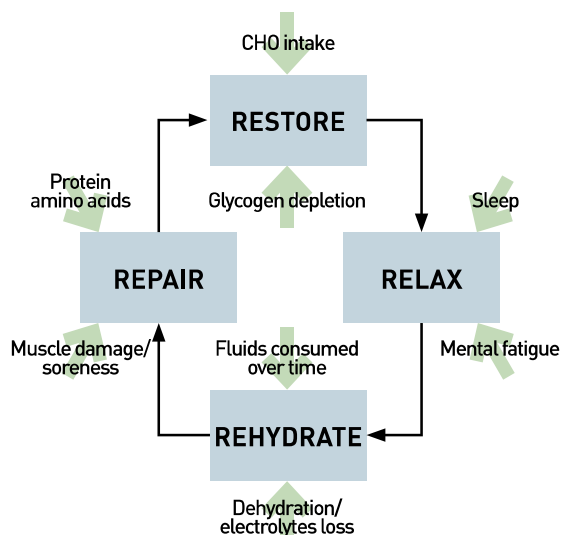
Relaxation

To accelerate the recovery process, sleep is essential. Lack of sleep has been associated with lower levels of endurance and maximal strength. We will always encourage players to try to create a relaxing bedtime environment (no caffeine, no computing or gaming before going to bed), with at least eight hours' sleep recommended.

Desired recovery

Daily training intensity and load will vary depending on fixtures, and this may affect recovery protocols and strategies. Education is key to optimal recovery and should be taken seriously, though in principle, the recovery strategy should:

- **REPAIR:** Promote muscle protein synthesis, and reduce muscle soreness
- **RESTORE:** Promote glycogen resynthesis
- **REHYDRATE:** Promote hydration
- **RELAX:** Facilitate mental recovery



Match day warm-up

A timeline of preparations leading up to the first whistle

Overview

This is a timed warm-up in the lead-up to the commencement of a game, from when we arrive at the stadium. The set-up is such that it gives players an opportunity to 'tune in' for the game and get themselves physically and mentally ready for the match. It is structured and timetabled so that everyone knows what's expected of them and at what time.

Before we go out to warm up on a match day, players are given the opportunity to perform any individual exercises they may have been prescribed (for example, loaded hamstring exercises, pelvic stretches, upper body loosening) or follow any protocols they may have subscribed to in their careers so far (static stretching, for instance). But past this, the plan encompasses the whole squad, with a variety of stretches, drills and movements that prepare everything necessary and reinforce the correct recruitment and movement patterns.

We plan to be back in the changing room 10 minutes before kick-off in order to maximise the potentiation effects (the increase in strength of nerve impulses along pathways) of the warm-up, so all of our timings lead up to

that point, where a final team talk will see the players build a psychological edge on to the physiological elements already practised.

Key thinking

There are a number of very different parts to the warm-up process, but we're looking for relatively similar things throughout – namely the quality of movement in order to guarantee correct physical preparation, and the correct level of effort and intensity to ensure that the warm-up progresses from low to high intensity and load.

The players should buy into the warm-up given the diversity of exercises, and that's what's required for them to perform at their best. For instance, some

players enjoy the band work, because they feel they have improved control; some feel their main focus is the speed and agility practices at the end of the warm-up because it leaves them ready to perform in the game.

Whatever exercises are performed, movement quality is essential. For those players with movement quality issues, the improvement of this is addressed throughout the training week. For example, during a hamstring stretch it is important to avoid a posterior tilt of the pelvis which will unload and reduce the stretch on the hamstrings. Similarly, a 'give in' to extension in the back and an anterior tilt of the pelvis can reduce the stretch through

the hip flexors and quads. In short, make sure process is followed.

Short verbal cues and key words can help to minimise these 'mistakes' during the pre-match warm-up, but of course a conditioning coach must be aware of exactly how each stretch and movement is designed to be performed in the first case to ensure it is done correctly.

Equipment required

For a warm-up routine on a pitch, we require just flat discs and balls. In the changing room, the equipment required includes foam rollers, mats and kettlebells. High-strength mini-bands can be used, both indoors and outdoors.



Our players are put through their paces in the pre-match warm-up away at Millwall in the Sky Bet Championship this season

Kick-off minus 40mins Practice area A

Players make their way out onto the pitch for some build-up exercises and activation/control work. At Huddersfield, we like this to include spinal mobility, knee to opposite shoulder drives, alternate lat stretches and thoracic (chest) rotations (perhaps six of each). We will then repeat the same exercises three times.

We move on to perform a number of light dynamics. These take the form of split squats, dynamic hamstrings, dynamic lateral lunges and dynamic glutes.

Next we practise moderate to high load dynamics and control work. This begins with a lunge matrix (forward/back/lateral/crossover) and progresses to three single leg stiff leg deadlifts on each leg (which is good for eccentric hamstring preparation).

Finally we put into place high load activation work. There is a mini-band lateral walk (two lots of five, left and right), mini-band stopovers (two lots of six, forwards and backwards, with the second set done at a higher pace), finishing with a hop and hold (two on the left, two on the right).

Kick-off minus 34mins Practice area B

Players jog over for mobility work combined with ball work in a coned off 25x15-yard area. The focus here is on increasing muscle temperature and range of movement while reinforcing game-related skills and establishing familiarity with the pitch (essentially how the balls roll on the surface).

We use five balls between 16 players to keep the major focus on the physical element. After performing the football skill for 5-6 seconds, players will 'find' a pass (through the player receiving the ball 'showing for

the ball') and then perform the physical component of that paired exercise:

- Left foot only dribble, right foot only dribble, both feet, high knees and heel tucks
 - Two-touch turns, sidesteps and karaokes (or 'cariocas')
 - One-touch turns, groins over the top and round the back
 - Movement on the front foot with the ball before driving out of the area with two big touches, Russian marches or 'B' skips
- Balls are then removed from the area and players finish this section with further mobility work:
- Kick across the heel to hip
 - Drive the knee across to the shoulder
 - Skips making forward and backwards circles with the arms

Kick-off minus 28mins Practice area C

Now we ask players to perform dynamic stretches, focusing on load, speed, stability and coordination:

- Drop squat, twist and knee hug
- Hamstring lift, push behind, swing through, put the foot down and stretch
- Back lunge, rotate into quad stretch and take over into a hamstring stretch
- Lateral lunge into crossover squat
- Dynamic calves into long lunge and rotation

Kick-off minus 25mins Practice area D

Next is neuromuscular activation and form:

- Heel tucks
- High knees
- Sidesteps (low for two steps, high for two steps and low for two steps again)
- Bounds for height followed by a curved run
- Bounds for length followed by two cuts (left and right)

Kick-off minus 22mins

Using a ball, the coaches run assorted possession drills and position-specific movement drills and skills, including heading, passing and finishing.

Kick-off minus 13mins Practice area E

Moving to practice area E, we now focus on speed and agility:

- Fast feet drills (front on, side on) and sprint (10 yards)

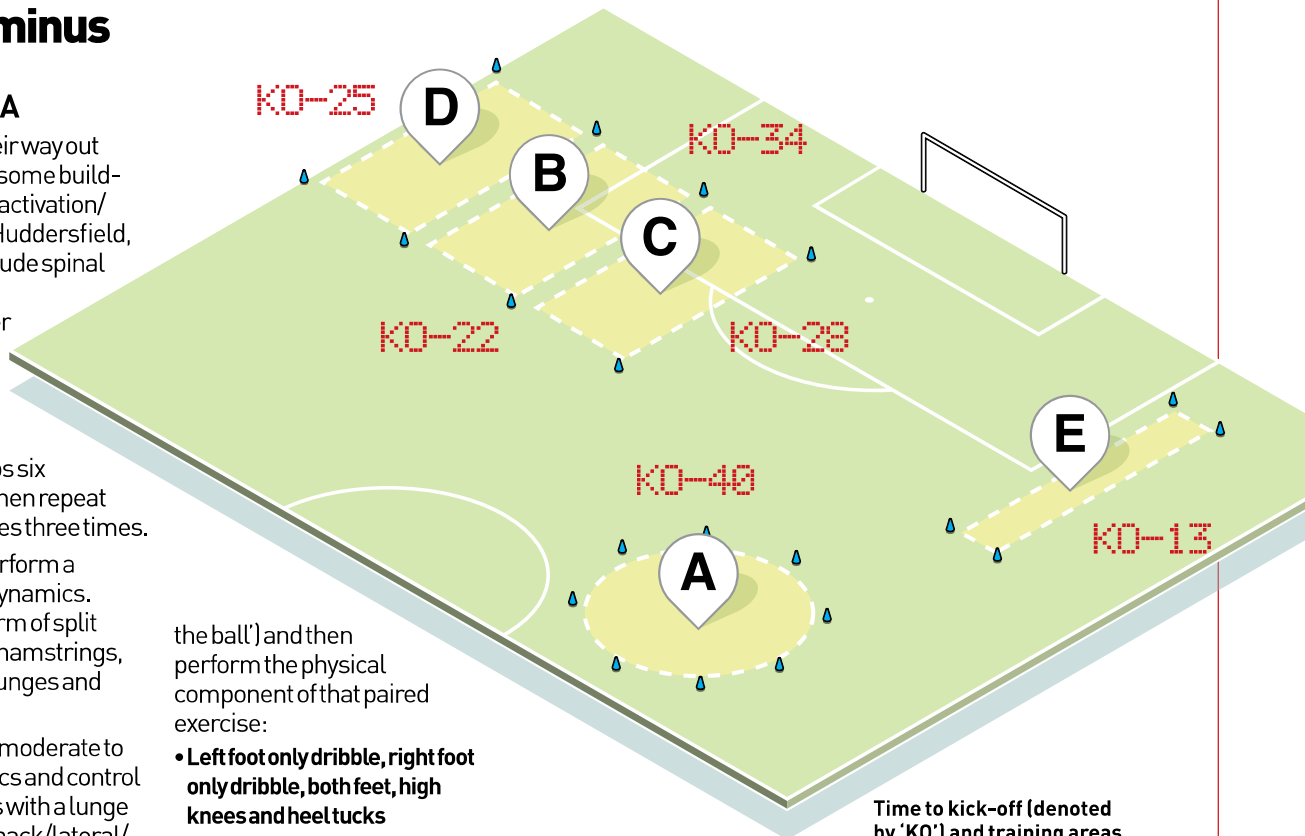
Time to kick-off (denoted by 'KO') and training areas are marked out

- Agility - step through the gaps between four cones which are one metre apart, then sprint
- Accelerate for four yards, change direction and run back four yards, then sprint
- Players push with shoulder-to-shoulder then break into a sprint

Obviously, the speed and agility section at the end of the warm-up relates most directly to the game that will follow, given that by this point the players will be at game pace and able to exert maximal force and speed. The one element here that is slightly different to some other warm-ups is the physical contact at the end where the players 'bump' each other shoulder-to-shoulder on both sides then break into a sprint.

Kick-off minus 10mins

Players return to the dressing room for the manager's team talk.





Match day cool downs

A foundation plan for the week that follows

Overview

Recovery strategies and cool downs are regularly met with a certain ambiguity in the game. They can often find themselves placed in something of a 'grey area' because many professionals find it difficult to accommodate and understand the true science and planning implementation required.

Yet utilising recovery strategies effectively can enhance a player's ability to participate in further training and increase physical readiness for fixtures. Many football clubs must currently deal with hectic fixture schedules, and managers frequently voice concerns over injury and fatigue. Therefore, employing high-level fatigue management strategies is paramount to the health and wellbeing of the players and, for me, that must begin as soon as the final whistle is blown in a game.

And because what goes on in the 48 hours after a game is similarly important, this session aims to outline a 'template' for all the key parts of recovery. In other words, the elements that are worked into the impact, control and regeneration phases are for you to decide – what I have provided is a template timeline that outlines a process that's relevant for any team. Indeed, because the session is designed as a broad foundation plan with detail to be added by coaches, I have taken a psychological and holistic approach to the whys and wherefores of how we use recovery strategies at Leicester City Academy which I hope you will find of real interest.

Key thinking

It is vital that players are educated in the benefits of recovery, creating a culture where these strategies become a weekly process and routine. To follow the intensity of a match we must have a complete plan for the week ahead, and that recovery period begins as soon as the players leave the field. And that's not just to the benefit of the body, because psychological (as well as physiological) adaptations occur as a result of fatigue, and these must be managed on an individual basis.

Equipment required

Initiating a cool down activity post-game requires various factors to be assessed when considering the magnitude of its delivery – the facility, space available and time, to name just three.

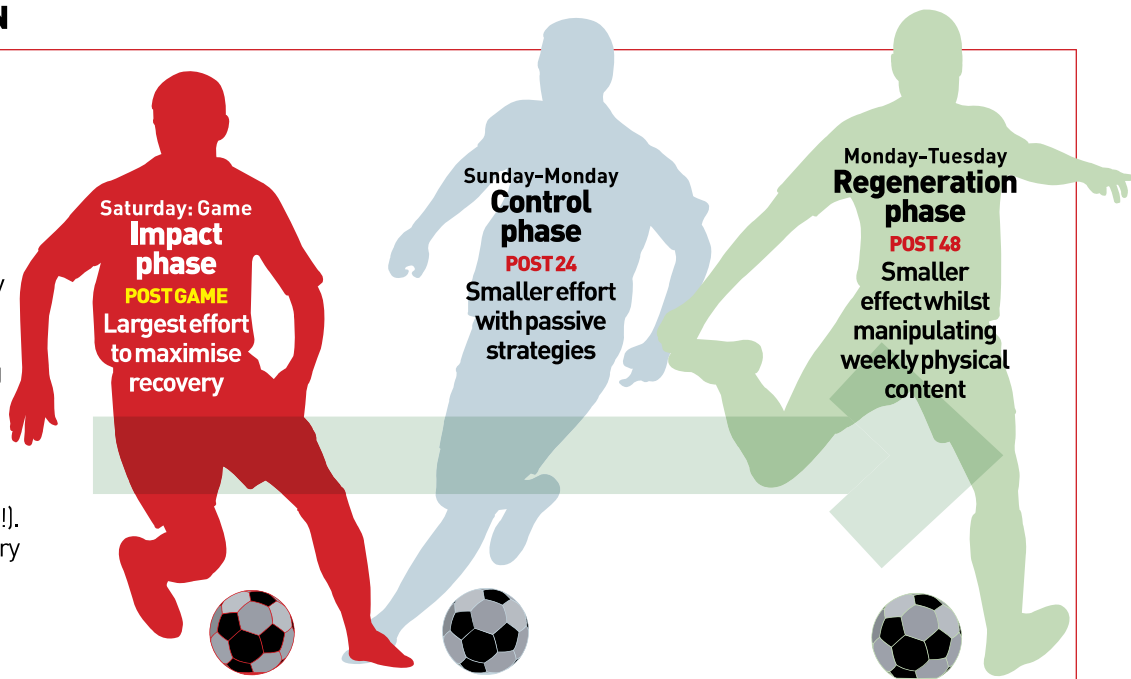
Yet to broadly classify recovery, two categories are used – active and passive recovery:

- Active recovery strategies are used when the players are performing an activity – including jogging, cycling, aqua-therapy, mobility and foam rolling exercises.
- Passive recovery strategies are demonstrated when the players do not need to physically perform the activity. So this might include cold water immersion or ice baths, massage, compression garments and nutrition intake.

So in terms of the equipment we actually use, cool downs can be used with a great deal of equipment and staff if both or either are available, or they can be delivered with a much lower strand of resources. Put another way, there are various ways to put a fire out! Therefore, from a coach's perspective, the combination should be to utilise the correct methods while allowing yourself to be dictated, to a good extent, by the environment!

Recovery in three phases

The use of nutritional/recovery shakes is a great way to refuel when the team receives a post match de-brief, before moving onto the key forms of active recovery that develop over the next 48 hours and set the tone for the week leading up to the next game (if we have that long!). To develop an operative recovery strategy, three progressive phases can be employed:



IMPACT PHASE (0-24hrs)

This initial phase post-game is when the body is in shock. During this phase it is important to protect the body and utilise primary strategies to impact recovery. This phase is where the largest quantity of recovery and cool down methods are provided. Contained within this phase are four pillars that represent fundamental foundations for a cool down procedure.

PILLAR 1 REFUEL
 Allow players to refuel using recovery shakes that contain high contents of carbohydrates and protein to replenish any lost nutrients and rebuild damaged muscles. Having basic nutritious foods available – such as fresh fruit to ensure a high intake of vitamins and minerals – is also imperative.
Time: Immediately post-match

PILLAR 2 MOBILITY AND RELEASE
 Utilising masseurs to aid in reviving and 'flushing out' waste products from the muscles will aid in recovery. The use of foam rollers – where players actively look to apply pressure to the muscles to squeeze and mobilise the tissue – assists in the removal of lactic acid.*
Time: 5-10mins

*For the science behind foam rollers see Marcus Svensson session on page 24

PILLAR 3 STRETCHING
 Players can be led through a routine of stretching – this can be conducted in the dressing room if space provides, or out on the field. This needs to encompass large movements that mobilise key joints and stretch key muscle groups. Providing a routine that players can relate to, understand and even learn, ensures consistency in the delivery of recovery.
Time: 4-8mins

PILLAR 4 CONTRAST BATHING
 Players alternate between a hot shower for two minutes before spending one minute in waist deep icy water. This cycle can be repeated for as many as five hot and four cold exposures.
Maximum time: 14mins

CONTROL PHASE (24-48hrs)

This phase utilises passive strategies where athletes control their own recovery. Within this phase we will recommend aqua jogging, swimming and the use of compression garments. Although a secondary stage, there are still a great number of important factors to consider, and a certain amount of empowerment is needed to ensure players use this time effectively.

REGENERATION PHASE (48hrs onwards)

The smallest quantity of active or passive recovery methods are used in this phase, but it remains a key part of the process. Using a multidisciplinary approach, it is vital that certain physical content is manipulated, for example pitch dimensions, playing numbers, and intensities; with large-sided games for physical load and small-sided games for intensity. We're also looking for smaller representations of those activities instructed in the Control Phase.

SHAKE IT OUT

Although opinion is varied, the majority of sports scientists agree that the most effective recovery shake should include around 0.8g/kg of carbohydrate and 0.4g/kg of protein, along with electrolytes such as potassium, chloride, and between 0.3-0.7g of sodium per litre of fluid (to help restore sweat losses and stimulate thirst).



Promoting individuality in cool down strategy

We know the key requirements of a cool down are to reduce muscle soreness and prepare players for forthcoming events. However, a blanket approach is difficult to implement as individual players may require different means that specifically work for them. For instance, when a player is substituted during a game his recovery needs to start from the moment he leaves the field, and that will begin with a recovery shake and some water. Having foam rollers available on the bench for players to release and stretch is effective, while some clubs use spin bikes on the touchline.

While there are only minor differences when it comes to substitutes – at the end of the game when the squad is re-fuelling, the substitutes may have moved on to contrast bathing – compared to those playing a full 90 minutes, individuality still counts and it is easy to neglect substituted players and not let them cool down.

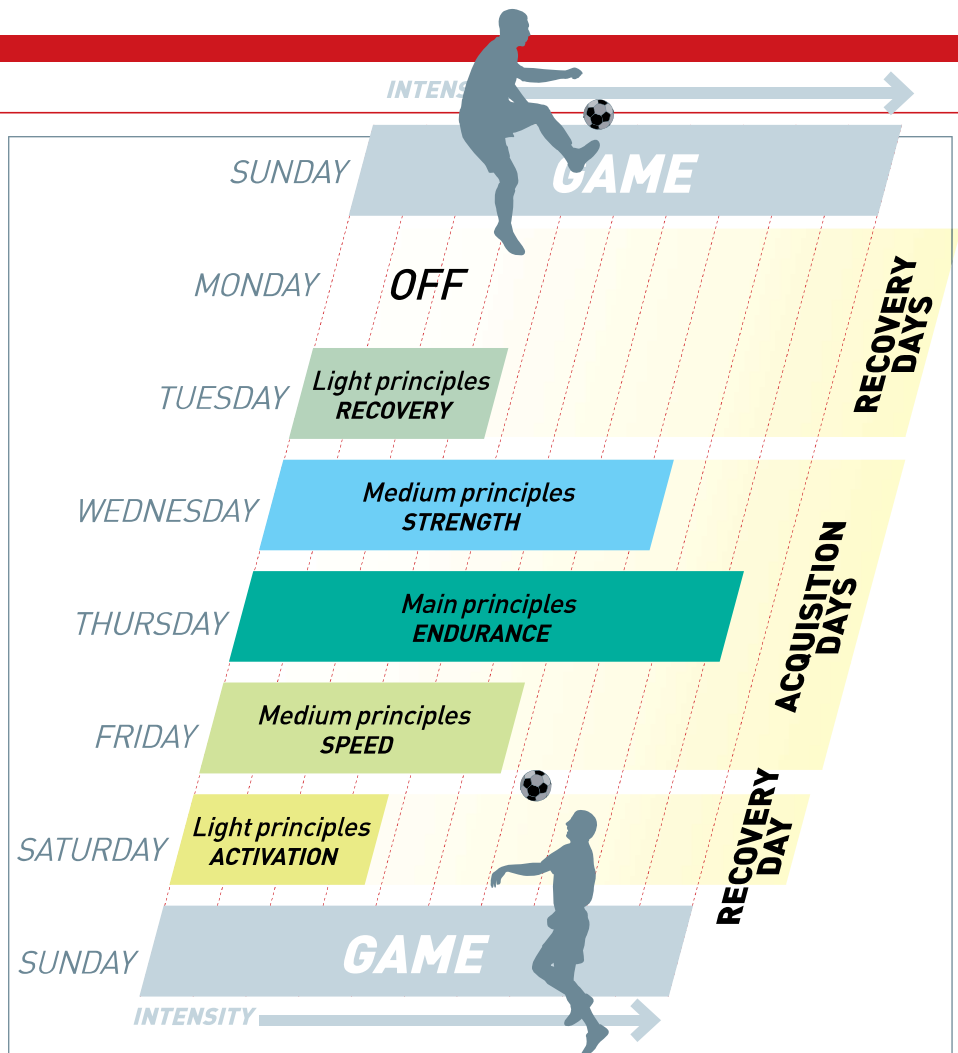
And as a broader theme, clubs must have a specific protocol that is simple, yet varied to cater for all players because having numerous options that encompass an individual approach can be more beneficial for the player.

It is important too that the cool down is not seen as a tedious task that involves jogging around and stretching on a cold wet field, as this will not aid recovery! Indeed, it may even enhance psychological stress on players.

A general rule is to keep cool down content simple but varied. Try not to see it as a monotonous task and don't discard the importance, as it is the first step to ensuring players are physically and psychologically prepared for what lies ahead.

Eliminating mistakes

The common mistakes made are usually those with a base in the environment - for example, confined dressing rooms, difficult



The art of periodisation

Periodisation is a planned distribution of training, on a cyclic basis. This includes annual, seasonal, and monthly planning.

A key form of micro-cycle management (weekly planning) is fatigue management. Enabling players to peak for each fixture is vitally important, however in doing so we must recognise the response of fatigue.

How to manage individuals

effectively leading to this period must be planned in a strategic multifactorial fashion as there are numerous variables to consider. Incorporating a strategy that allows periods of loading (work), unloading (recovery) and tapering is important for weekly management.

Tapering refers to the gradual reduction in volume in the lead-up to an event. A recent study in 2014 by Freitas and colleagues investigated the effects of tapering in

youth soccer. Findings indicated that allowing for a gradual decline in training volume leading to an event promoted higher physical responses and performance factors in comparison with a group that did not taper.

Planning these weekly/daily phases is vital in elite soccer to enhance performance, not only in a sports science fashion, but in a technical sense also. Above is an example of a micro-cycle plan catering for all key factors.

weather conditions and, perhaps unsurprisingly, the match result. These factors are the most prominent in affecting the delivery of a cool down.

As stated previously, the cool down is the first step in preparing players for the next session, so having the ability to assess all factors and still provide an effective recovery strategy is an important coaching tool that can't be underestimated. I would always tell coaches and sports scientists to take the factors into consideration and act accordingly to meet the needs of each individual.

Philosophy and progression

I have been involved in professional and youth sport for the past eight years, and with the ever-evolving sport science influence in football, it is important not to get stuck in the 'stone age'. The key message is to make content simple, yet effective.

It's important to build relationships with the players to know specifically what they need and what strategies are best suited to them, just as it is fundamental that a multidisciplinary approach is implemented throughout the staff, to ensure everyone is clear on how best to prepare players.

Warm-ups for defensive and offensive players

Overview

As coaches, we spend hours, days, weeks, months and sometimes years trying to find and nurture the finest elements that make players different from others; we're looking for a spark or a show of talent that can transform both them and our team into something great.

So while main training sessions will account for the needs and requirements of attackers, defenders, midfielders and keepers in specific, bespoke ways, why should the same not apply to the warm-up?

I wouldn't say devising different warm-ups for different player positions was essential, but it certainly applies a focused layer of attention onto a training plan. It will also strengthen the feeling that you are solely concentrated on their needs, which creates better 'buy in' and quicker, more accomplished results.

Equipment required

For equipment, all we need is discs, mannequins, balls and mini-goals. If technology allows, we will sometimes use video analysis in order to show examples of how we want the practice to look and feel, but this isn't an essential part.

Key thinking

Although the warm-ups shown have defensive and offensive elements to each, one of the key aspects that crosses over in both is that we want the players to press and be on the front foot when not in possession. If they can do this, they'll be putting themselves in precisely the right frame of mind for the main part of session.

It's worth remembering though the fact that warming up is not necessarily about players achieving all their aims and completely fulfilling what's put in front of them. Instead, it's about investing in the task as best they can, and getting them ready for the session.

Each of the exercises shown prepares the players in the following aspects:

- **Technical play**
- **Tactical play**
- **Physicality**
- **Mental awareness**

While I've presented defensive and offensive practices, it's assumed that midfielders can take benefit from the sessions in equal measure.

As a final point, it's important the practices used in here are short in duration as this keeps the players motivated and stimulated, and prevents lethargy or tiredness going into the main part of the session. To ensure this, each move is reset and rerun as soon as it comes to a natural conclusion.

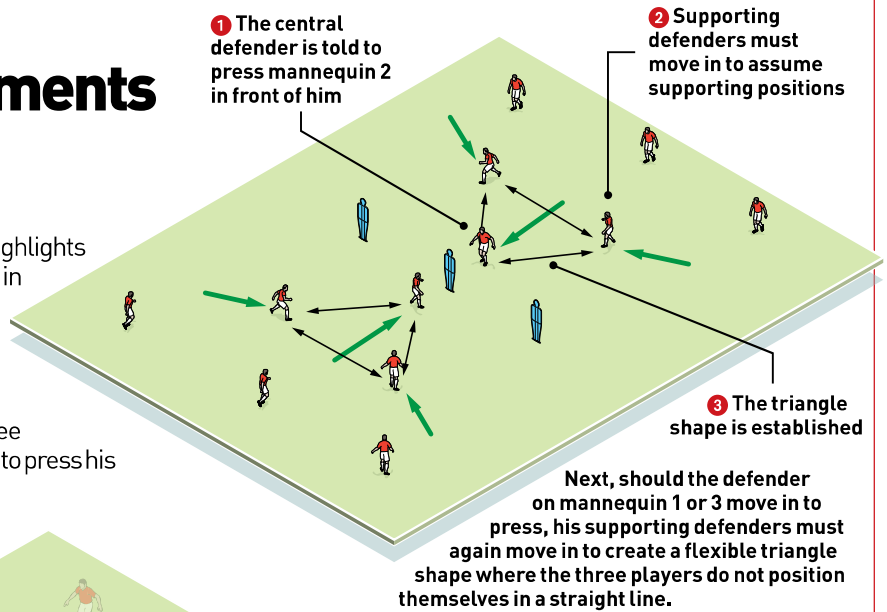
DEFENSIVE WARM-UP ELEMENTS

Fundamental movements for defending

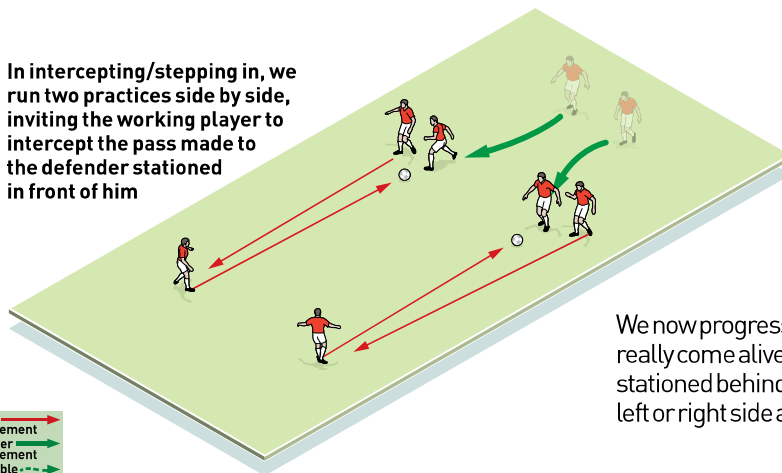
(3mins)

This practice is unopposed and a ball isn't used. It highlights how beneficial and important the use of triangles is in soccer. This is already a commonly accepted fact, and is a principle usually put forward when central midfielders rotate their positions. But the rewards are just as great for defenders as well.

So in this practice we will keep rotating banks of three defenders, with a different defender called forward to press his mannequin on each occasion.



In intercepting/stepping in, we run two practices side by side, inviting the working player to intercept the pass made to the defender stationed in front of him



KEY
 Ball movement →
 Player movement →
 Dribble - - - →

Intercepting/stepping in

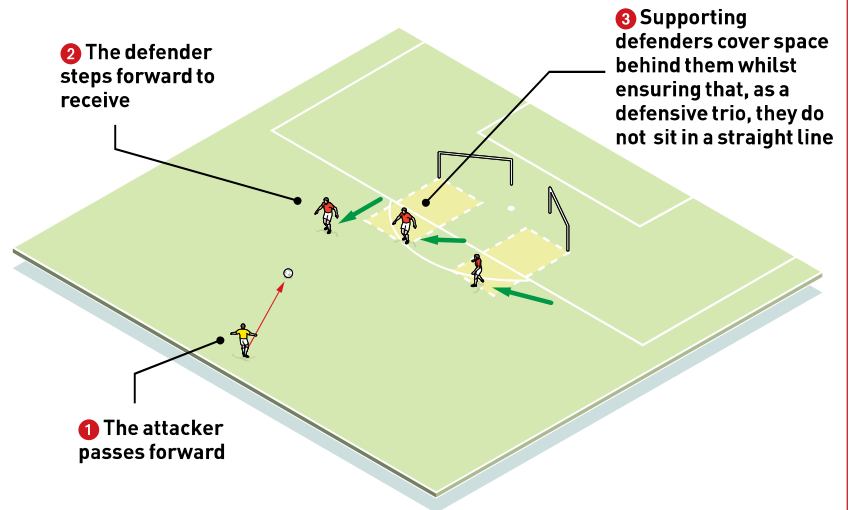
(4mins)

We now progress this by introducing a ball, and this is where the players really come alive. The task here is simple – the intercepting player stationed behind the receiving defender must come around either the left or right side and attempt to intercept the ball.

Defending box with back three

(4mins)

Now, setting up as shown, we step things up again, with this practice offering players a feeling of match realism. A pass comes in from the attacker to one of the defenders. The two other defenders must subsequently organise to support and protect.

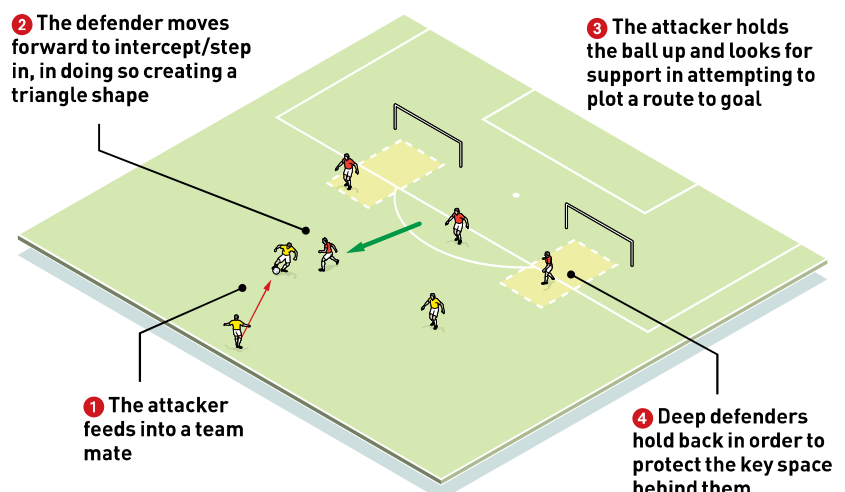


Defending width of box in back four

(4mins)

Now setting up as shown, we progress again with player numbers being increased. This is now a fully opposed practice which gives the offensive-minded players (as well as our defenders) technical work to do. This practice is also designed to be played at a higher tempo, thus getting players up to speed just before the main part of the training session.

The challenge is for attackers to hold the ball up and organise in finding a route to goal.



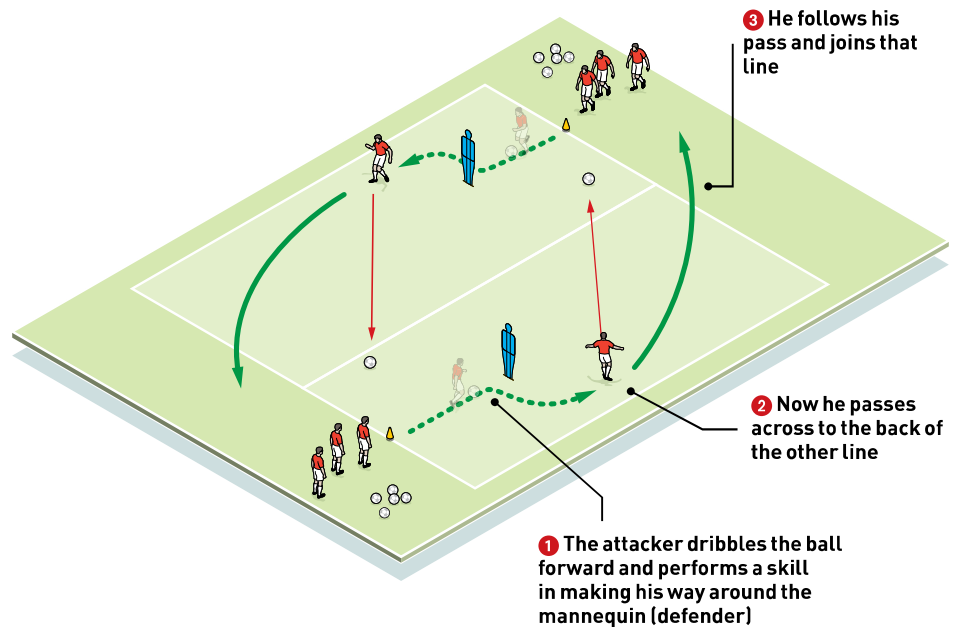
OFFENSIVE WARM-UP ELEMENTS

Unlike the defender practices, the two warm-ups I've chosen for attacking players are essentially used to practise key technical skills (rather than tactical or positional elements). Fluidity and confidence for attackers is vital if they are to make the most of the opportunities presented to them in a main training session, so simple passing and movement warm-ups are ideal for getting them in the right frame of mind for what is to follow.

Dribble and forward skill

(3mins)

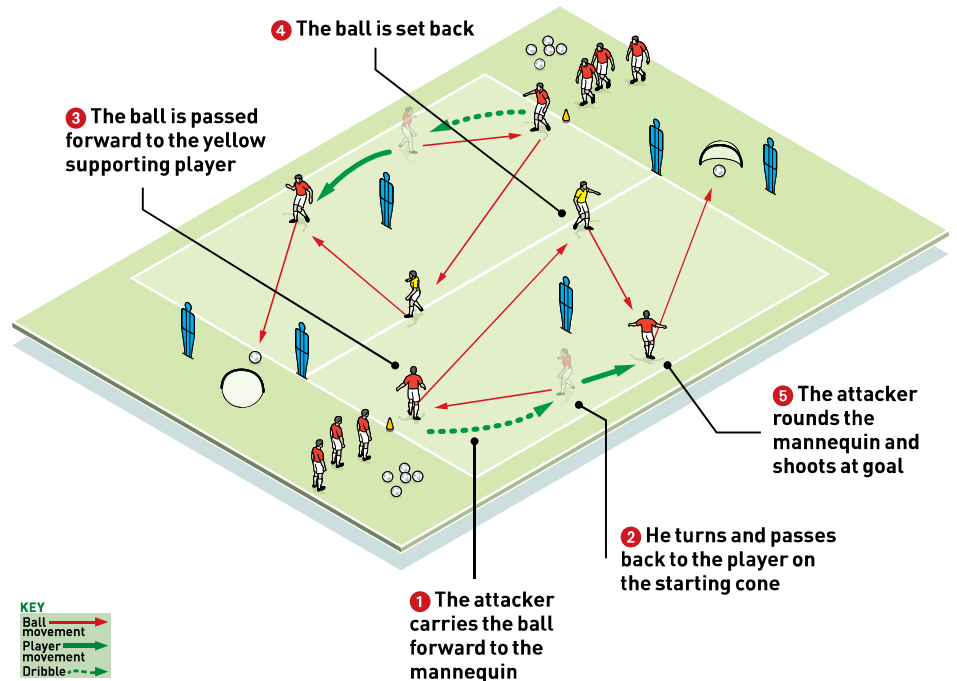
As shown, players must move forward, perform a move around the mannequin then pass on. A key 'want' here is for players to work with their heads up. We work on the right and left side for 2-3mins, encouraging players to take on mannequins on both sides, and always passing diagonally across to the other group so that the move flows.



Dribble, forward skill and shooting element

(3mins)

As a progression, the working attacker now turns as soon as he is past the mannequin and passes to the deepest yellow 'striker' positioned on the centre line. This player sets the ball back for a shot at goal. The move continues with the new working player emerging from the other side of the practice area.



Aims and goals

In terms of what to look out for in this warm-up, we want to see a willingness and desire to press the ball at good intensity. We're also looking for clever and ambitious physical movements of each player, with each enjoying working with the balls in achieving

pass completion, as well as thriving on dealing with challenges coming in from opponents.

There are a few mistakes we might see here – in the defensive practices, defenders may anticipate the attacking move too early and leave space in behind. And as a whole, we must make

sure a player is 100% comfortable and sure of what he is doing, especially when defending around the box. It's easy to rush players into scenarios and sometimes it can help to throw them in at the deep end, but when a player is too far away from mastering a skill we must recognise that, as must they.

Keeper warm-ups and cool downs

Overview

I have worked closely with the Head of Sports Science, Dan Rothwell, to create a specific warm-up and cool down structure for the keepers at Swansea City. The warm-ups we use at the club are based around three different areas - reaction speed, strength and a mixed warm-up that incorporates elements of strength, speed and reactions in one. As a result, we use these three different warm-ups at different times during a periodised training week, as follows:

Game day minus 5: Mixed warm-up

Game day minus 4: Mixed warm-up

Game day minus 3: Strength warm-up

Game day minus 2: Strength warm-up

Game day minus 1: Reaction speed

For cool downs, I have included a standard outline of stretches. These are all we would require the keepers to do.

Every warm-up will last 20 minutes in total:

5 minutes: Jog and dynamic stretches

5 minutes: 3v1 keepaway

10 minutes: Mixed strength, reaction speed and warm-ups

Key thinking

Understanding what type of warm-up to use at different times during the week is essential. For example, we'd never perform a strength warm-up the day before a game, as the keepers would carry fatigue through into the following day.

We also need to consider if the keepers have had a gym session before their training session on the pitch, whether they've played two games in a short period of time, and whether they are carrying any injuries or niggles. Beyond that, do they need extra work on a specific physical element?

Each warm-up can be adapted to suit the physical and technical needs of the main session that is to follow. For example, when preparing for a session that deals with crosses, we would similarly incorporate some high balls for the keepers to take, whilst also promoting relevant footwork.

Equipment required

As you will see, each warm-up differs in terms of equipment used, but in general we would require balls, different coloured cones, poles, flat markers, hurdles, ladders and hoops.

KEEPER WARM-UPS & COOL DOWNS

WARM-UPS: JOGGING AND DYNAMIC STRETCHES (5mins)

Keepers jog across the width of the penalty box at a sedate pace, stretching out limbs, squatting to the floor and jumping up as they go in this simple initial warm-up that gets limbs moving and the lungs working.

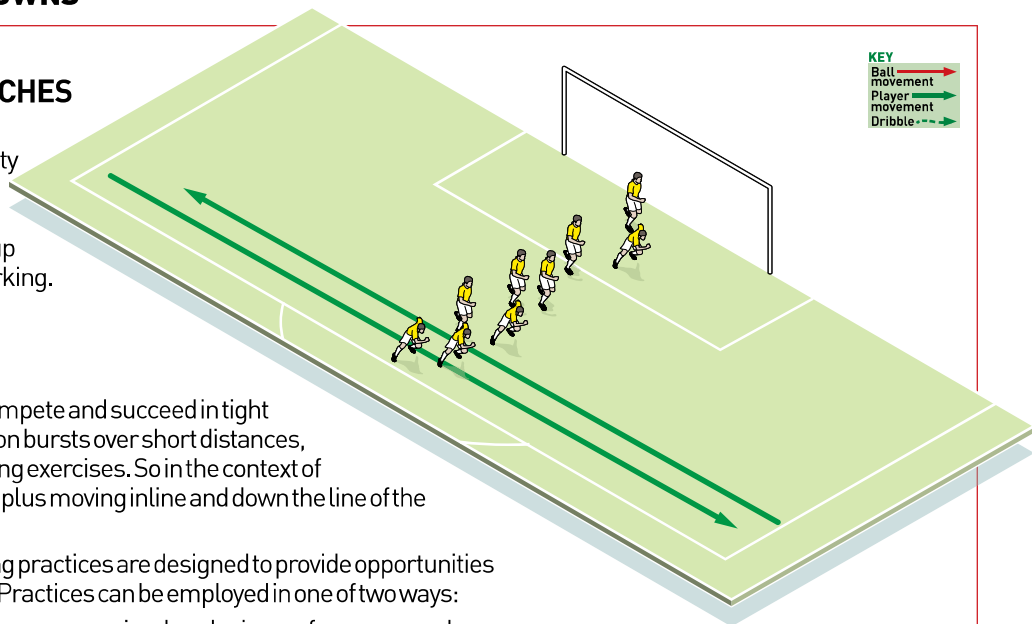
STRENGTH (10-20mins)

Football strength is a player's ability to compete and succeed in tight areas with rapid acceleration/deceleration bursts over short distances, changes of direction and explosive jumping exercises. So in the context of keepers, it's important for 1v1 situations, plus moving inline and down the line of the ball for shot-stopping.

Strength-based goalkeeping conditioning practices are designed to provide opportunities to maximally accelerate and decelerate. Practices can be employed in one of two ways:

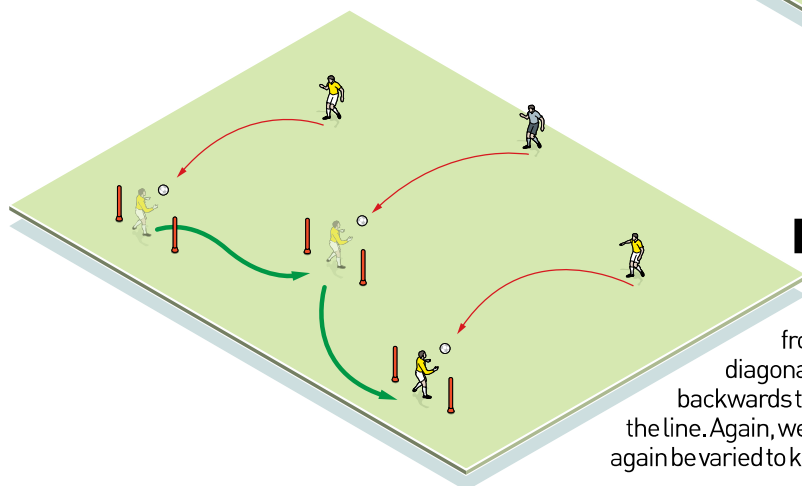
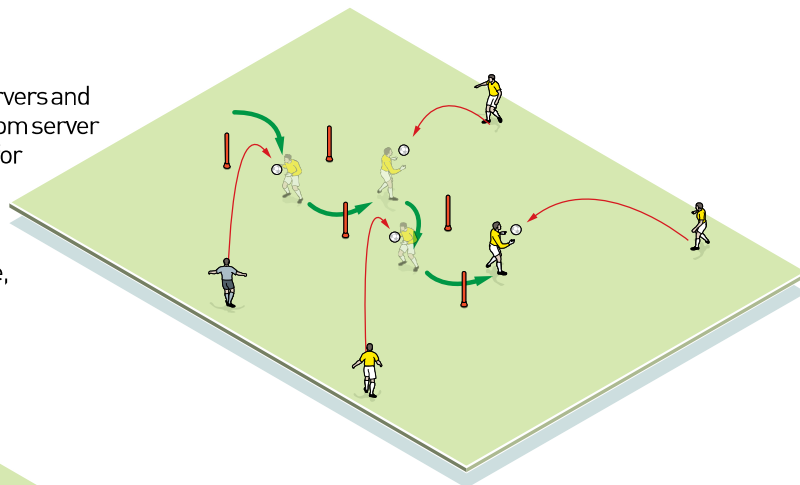
- with ample recovery between bouts to focus on maximal explosive performance and concentrate the adaptations to the peripheral leg musculature
- with limited recovery to develop the central cardiovascular system and develop the keeper's ability to perform and recover from multiple explosive bouts

If looking for a general rule of thumb, strength-based practices should be designed



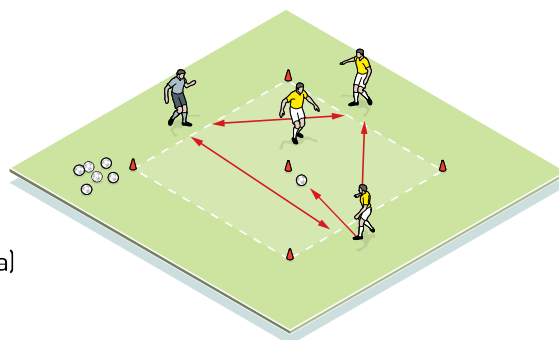
The catch chicane

Setting up as shown, we use one keeper, four servers and four balls. The keeper will set and take a volley from server 1 from a distance of around 8 yards, turn and set for server 2, then 3 and 4. At the end of the move the working keeper becomes a server and another server moves to become the working keeper. In stepping up the move we can change the serve, varying pace, velocity and type of delivery.



Left and right forward focus

Next we set up as shown, with five balls in total. The working keeper will set and take a volley from server 1 from a distance of 10-12 yards, burst diagonally to the right to set for server 2, diagonally backwards to set for server 3 before working his way back down the line. Again, we rotate after each set, and the type of serve should again be varied to keep the keepers on their toes.



3v1 keepaway

Finally we set up as shown, with two keepers and the coach on the outside of an 8x8-yard square keeping the ball away from the man in the middle. Those on the outside must pass the ball between each other and try to hit the cone in the middle. The keeper in the middle must try to get a touch on the ball. We rotate keepers when (a) the keeper in the middle gets a touch on the ball, (b) the ball hits the cone, or (c) a pass is misplaced on the outside.

REACTION SPEED

(10-20mins)

Reaction to a stimulus is central to goalkeeping performance and stimuli can be audio, visual or kinesthetic. The stimulus can occur with the keeper at a standing start or on the move, so the aim of the following drills is to ensure that the keeper accelerates maximally after the stimulus with the correct mechanics, and covers a specified functional distance as quickly as possible.

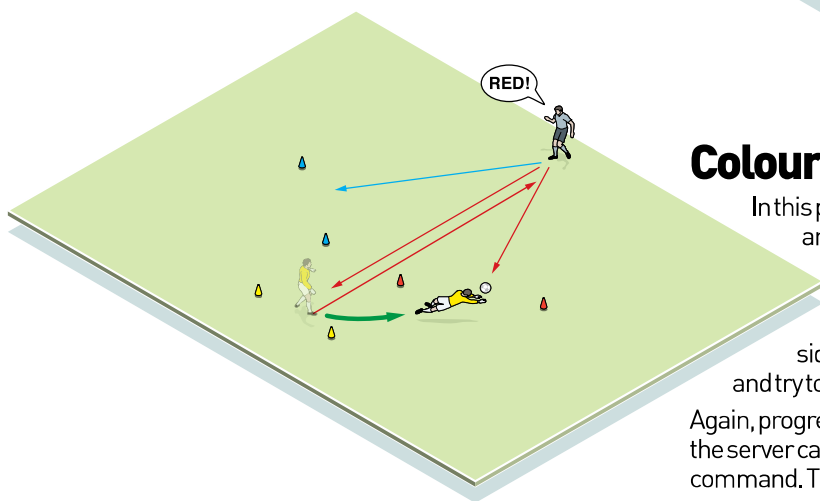
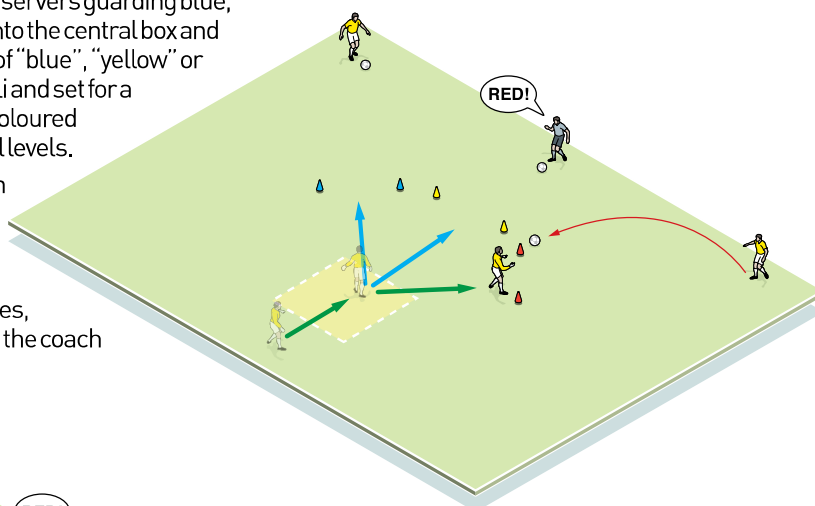
Ample rest should be provided between bouts to ensure that all efforts are maximal and the correct movement patterns are developed – in this case it's a work to rest ratio of 1:8. Acceleration is an important attribute to goalkeeping performance as a significantly greater intensity of acceleration can be found as playing level increases. Activities include bursting from a standing start, or bursting from the floor and accelerating after landing from a jump, with various audio, visual and kinesthetic stimuli.

Colour (catching) stimulus

We set up as shown with one keeper and three servers guarding blue, yellow and red gates. The keeper must burst into the central box and quickly set himself. On the coach's command of "blue", "yellow" or "red", the keeper must then react to the stimuli and set for a volley that comes to him from in between the coloured cones. Catch distances vary depending on skill levels.

Keepers rotate after every ball, and as we did in the last set of practices, we will vary the serve by pace, velocity and type of delivery.

In the next progression we'll change the stimuli. So from colours, this may be now names, numbers, or in the form of visual cues, such as the coach holding coloured cones.



Colour (diving) stimulus

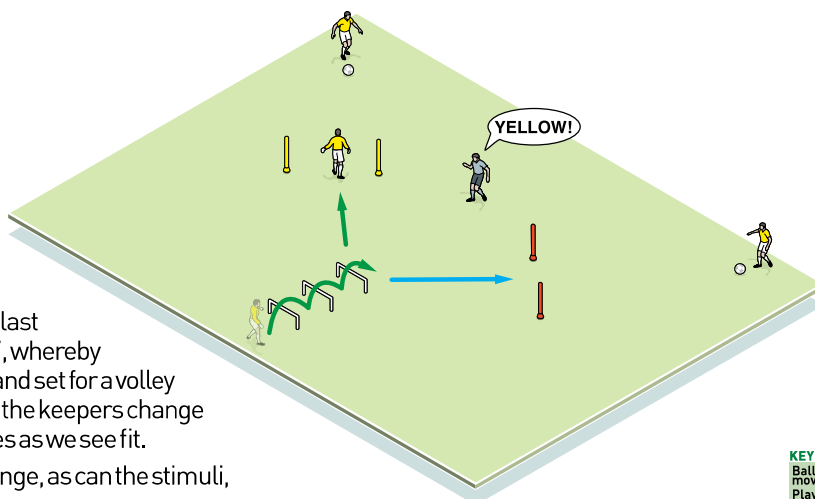
In this practice we set up as shown with one keeper and one server. They play one-touch passes back and forth, though at any moment he chooses, the server can call either "blue" or "red", then pass the ball towards the small goal on that side. The keeper must then react to the stimulus and try to attack the ball before the shot goes past him.

Again, progressions enable us to step up the difficulty. Now, the server can play the ball towards goal at any time without a command. The keeper then must react off the ball.

Hurdle and react

In the final practice we set up as shown. The keeper moves over hurdles (using various footwork patterns). Once over the last hurdle, the coach shouts "yellow" or "red", whereby the keeper must then react to the stimuli and set for a volley in between the coloured cones. As before, the keepers change after every ball, and we can adapt distances as we see fit.

For progressions, the serve can again change, as can the stimuli, as in previous practices.



KEY	
Ball movement	→
Player movement	→
movement	→
Dribble	→
Optional pass/run	→

KEEPER WARM-UPS & COOL DOWNS

MOVEMENT
(10-20mins)

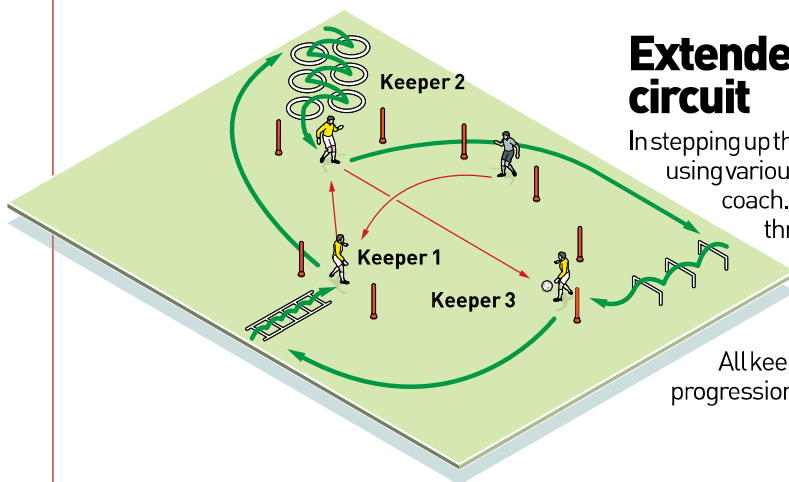
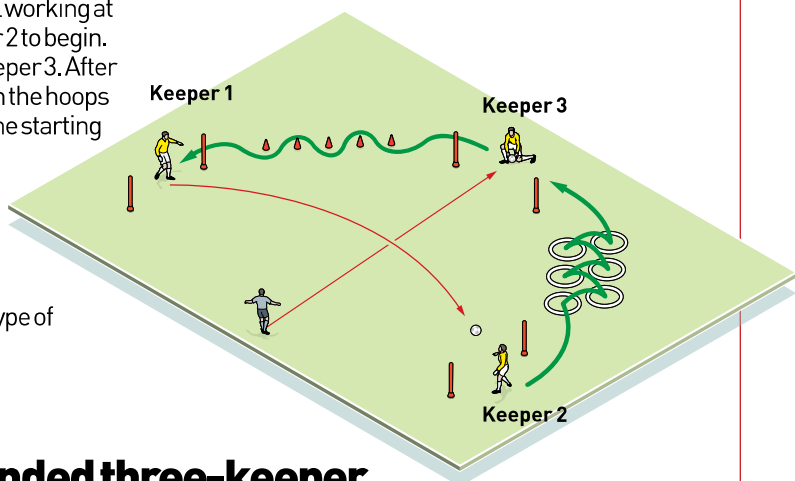
The final set of warm-ups practise movement and direction, with keepers reacting to the physical and instructional directives of others in several active, linked circuits.

Three-keeper circuit

We set up as shown with three keepers all working at the same time. Keeper 1 volleys to keeper 2 to begin. The goalkeeping coach then volleys to keeper 3. After catching the ball, keeper 2 moves through the hoops (right and left feet), while keeper 1 takes the starting position of keeper 2.

After catching the ball, keeper 3 moves through the cones (using any fast footwork pattern) and takes the starting position of keeper 1.

Again, the obvious progression is for the type of serve to change for each set.



Extended three-keeper circuit

In stepping up the warm-up, now keeper 1 moves through the ladder (again using various footwork patterns) and receives a volley from the goalkeeping coach. Once keeper 1 catches the ball, keeper 2 hops one-footed through the hoops and receives a volley from keeper 1.

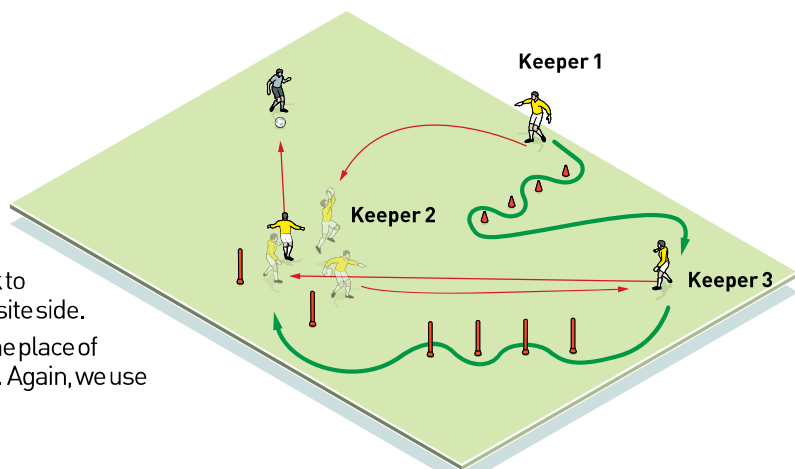
Once keeper 2 catches the ball, keeper 3 moves over the hurdles (using various footwork patterns) and receives a volley from keeper 2.

All keepers now rotate to a new starting position with the same progressions as practised previously.

Full movement circuit

In the final warm-up practice the three keepers are working at the same time. Keeper 1 chips the ball in to keeper 2. Keeper 1 then moves over the cones (using various footwork patterns), while keeper 2 rolls the ball out to keeper 3, who passes the ball back to keeper 2, who takes a touch and switches to the opposite side.

Keeper 3 then slaloms through the poles and takes the place of keeper 2, who jogs to the starting position of keeper 1. Again, we use progressions to enhance each challenge.



The keepers enjoy the structure of the warm-ups. After they have jogged and stretched, we may choose to bring in the 3v1 Keep Away straight away, but in all practices at Swansea City we try to include as much distribution as possible. This matches with the club's footballing philosophy, and all links to building up play from the back (the keeper). The practices shown require all our keepers to be technically proficient using both feet, and when making quick decisions under pressure.

The mixed warm-ups are also a great way for keepers to experience a variety of physical elements in a circuit-type warm-up as well as working specific keeper techniques.

I have been using this specific keeper warm-up structure since the start of the season and have seen results in all of the keepers - they feel physically and mentally prepared for the session ahead.

COOL DOWNS

We would look for the keepers to perform static stretches for 5-10mins. Static stretches are more appropriate to the cool down as they help muscles to relax, realign muscle fibres and re-establish their normal range of movement. Examples might include shoulder, chest, back, groin, hip, quadricep and hamstring stretches. All of these would be relevant for a keeper as they will help to improve flexibility, agility and range of motion.

These stretches should be held for between 10-30 seconds, though must be tailored to the individual, with that player determining the optimum level that best suits him. For example, we would only want a player to hold a given stretch until he feels a slight pulling in the muscle, but no pain. In holding the stretch the muscle will relax. When feeling less tension the player can increase the stretch again until he feels the same slight pull. He should hold this position

until he feels no further increase. Done correctly, the cool down will aid in the dissipation of waste products - including lactic acid (the burning sensation you get in your muscles) - reduce the potential for DOMS (Delayed Onset Muscle Soreness), reduce the chances of dizziness or fainting caused by the pooling of venous blood at the extremities, reduce the level of adrenaline in the blood, and allow the heart rate to return to its resting rate.

20-minute technical warm-up

Overview

Every coach encounters situations when there isn't the time to go through a full warm-up. On such occasions it helps to have a plan at hand that gets players quickly up to speed with an appreciation of both the ball and required movement for the upcoming sessions, hence why I have created these types of technical warm-up.

Of course, when there are no time constraints, the plan can be used as part of a wider warm-up process, and with the England Under-16s I've used this type of warm-up many times. Players enjoy it for its attack-minded elements and relatively straightforward game play as there is decision-making from the outset.

Key thinking

The rationale behind this technical practice is in having a collaborative working approach with the fitness coach in warming up the players, while 'scene setting' the theme of the session, which in this case is playing forward while breaking lines.

We therefore split time between the two:

- 5mins mobility with fitness coach
 - 4mins breaking line practice with coach
 - 2mins mobility with fitness coach
 - 4mins breaking line practice with coach
 - 2mins mobility with fitness coach
 - 3mins breaking line practice with coach
- = 20mins.

This warm-up is not only strongly motivational (because it has a clear competitive

element), but focuses on training too, as well as maximising time on the grass, which is sometimes at a premium in international football.

Equipment required

We require balls, cones and mannequins.

3v1s

We set up as many areas as the squad size dictates - in each it's 4v4 plus keepers (3v1 in each half), as shown. Simply, players must explore different ways of playing into middle zones through their own movement and that of the ball.

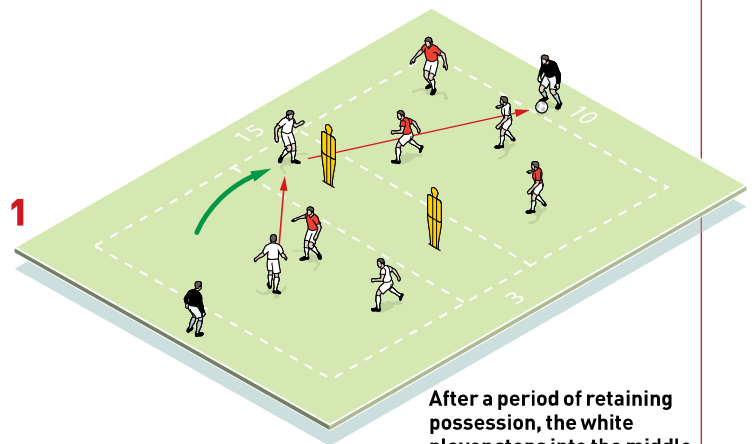
The one offensive player must hold up play, setting back to a supporting player in the middle zone (or dropping in himself), whereby a pass into the keeper is made. When this happens the practice continues - the three defenders are now given the ball and the game resets.

The player who moves into the middle zone can only remain there for two seconds, and will be rotated on every transfer. Should a move break down keepers restart.

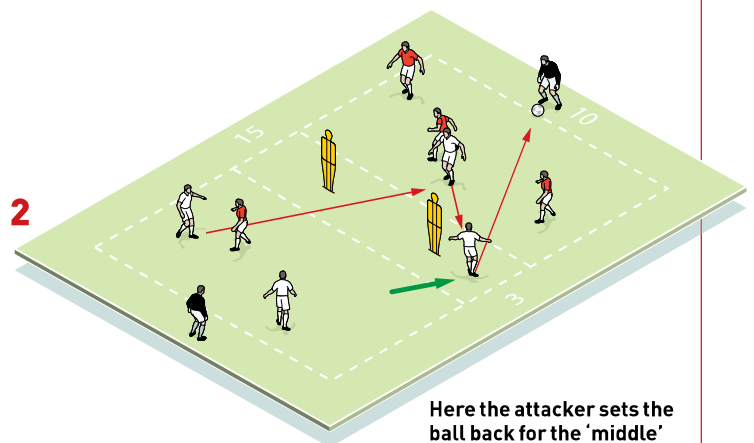
The technical objectives of the task include passing at speed, recognising a forward pass, changing rhythm, timing movement into the zone and creating a good body position for receiving, with creative, optimistic, forward passing.

Observations and progressions

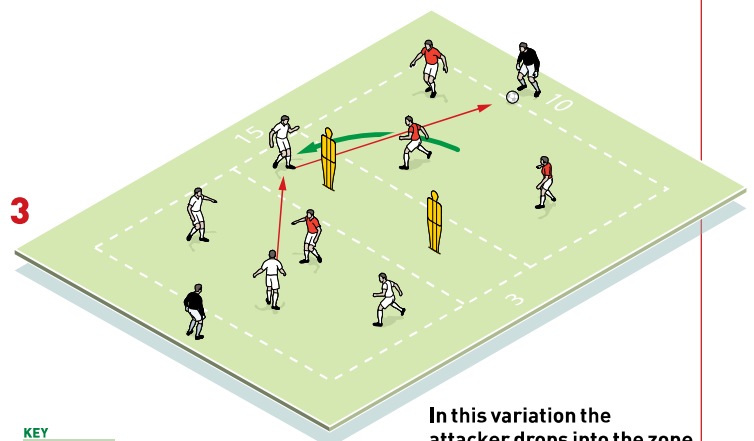
The first four minutes of the practice should be conducted with limited defending so players are not exerting themselves too early. You can increase the intensity as the



1 After a period of retaining possession, the white player steps into the middle zone, receives a pass and feeds direct into the opposite keeper



2 Here the attacker sets the ball back for the 'middle' player who finds a passing angle into the keeper



3 In this variation the attacker drops into the zone to receive on the half-turn and pass on to the keeper



warm-up develops.

The coach must let play flow - remember, even though tactical and technical observations are to be made, this is still a warm-up. It is important to encourage lots of transferring of the ball as this keeps everyone involved.

To progress, we can add a second defender who steps into the middle zone when the ball is there. We can also ensure frequent ball transfer by stating a maximum of three passes before it needs to be moved into the other half.

Advanced cool down techniques

Overview

As the modern game gets faster and more physically demanding, the importance of a proper recovery between training sessions and matches cannot be overstated. There is no better incentive to a player than being fresh and ready to perform the following day and not feeling the fatigue or 'heavy legs'. This, of course, benefits the team in terms of physical superiority over opponents and, in theory, a better points return.

In its simplest form the cool down can be performed at the end of a match on the pitch as stretch and mobility work, combined of course with appropriate nutritional intake (protein, carbohydrate, hydration).

Though depending on the resources of the team, recovery can be made more advanced (yet incredibly simple in form), and that's what I'm exploring in this outline by explaining the benefits of foam rollers and cold water immersion.



Cold water immersion (ice bath)

Players would be immersed up to waist level in cold water (below 10 degrees Celsius) for up to 10 minutes. One common option for the ice bath is an inflatable version where up to four players can be accommodated. New technologies include a regulated water cooling system that maintains the desired temperature. If such a cooling system is not available a normal ice bath can be used, but large quantities may be needed to maintain a low water temperature.

Why an ice bath works:

When completing exercise, muscles, tendons, bones and nerves are all in a recovery state, but surrounded by lactic acid, one of the waste products of exercise. The effects of too much lactic acid are tiredness, achiness and fatigue.

Taking an ice bath means blood vessels tighten and the blood supply moves away from the legs.

When jumping out of the ice bath, new blood arrives, flushing away the lactic acid and invigorating the muscles with oxygen.

Roller form (foam roller)

This is effective in the fact that it promotes self-myofascial release, relieving muscle pains. Players can work the full body with the roller form and focus on especially tender areas, for example the IT-band and calves. If we're tight on space I might split the team into two groups, with one performing mobility and stretches, and the other using rollers.

Why a foam roller works:

When we exercise, micro-tears and swelling muscle fibres create knots, adhesions and scar tissue, which impinge on nerves and vessels.

The foam roller 'irons out' these irregularities, keeping muscle mass smooth by breaking it down and releasing trigger points. It also increases blood flow within the muscle.

A foam roller can be used before, during or after a session, and in a player's own time.

It's a cost-effective and long-lasting piece of training kit.

Process:

The tender muscle area must be pushing down, therefore use arms and body position as leverage points in order to let gravity push a sore area onto the roller.

When locating a tender spot, roll over and back to 'work' out the knots, rocking back and forth and tackling an area no more than an inch in length at a time.

Concentrate on the tight areas for 30 seconds at a time in an overall workout of not more than 15 minutes, but repeat up to three times a day.

