



Stephen Warnock on preparation and recovery

Jenny Thorp talks to Aston Villa and England defender Stephen Warnock about his preparation and recovery as an elite sports performer

Football is a game involving sudden sprints, short bursts of energy and quick changes in direction. Changes in pace during a match can cause depletion in leg muscle glycogen stores. When muscle glycogen is low, aerobic endurance and speed may decline as the match progresses. Carbohydrates are important to replenish these glycogen stores. A normal healthy diet is said to contain 55–60% of carbohydrates but a footballer's diet should contain up to as much as 70% of carbohydrates.

Diet

JT What food do you eat before, during and after Premier League matches, and when do you eat it?

SW The day before a game I fill up on carbohydrates so a typical lunch or dinner for me would be spaghetti bolognaise and brown pasta and I make sure I drink plenty of fluids, mainly water throughout the day to stay hydrated.

On match day I eat poached egg on toast for breakfast and spaghetti bolognaise for lunch. About an hour before

the warm-up I drink Lucozade drinks to help the energy levels and have sachets of Powerade or Gatorade salts in my drink to replace the salt in my system.

During the match I drink water to stay hydrated and refuel my energy level during the game.

After a game I tend to eat plenty of chicken or other protein and again drink plenty of fluids to stay hydrated, particularly CNP recovery shakes.

JT Why is water not enough for hydration?



Carbohydrates like pasta help replenish glycogen stores

SW When you are in the middle of a competitive football match and desperately need a drink, it's natural to head for the nearest bottle of water. But although it will quench your thirst, it is not always the best way to rehydrate your body during or after exercise as water does not have adequate minerals and carbohydrates. Water shuts down the thirst receptors prematurely, before you have replaced the fluid your body has lost through sweat.

During a match or training session working muscles produce heat, causing a rise in body temperature. This causes the body to increase the amount of sweat and blood flowing to the skin. As a result, heat is removed as sweat evaporates from the skin. While sweating is important, if you don't replace the fluids you lose through sweat, it can lead to **dehydration** and fatigue. Sports drinks contain sodium and carbohydrates that help your body retain and use the fluid more effectively, helping to recover muscle fuel stores. Sports drinks help to replenish both fuel and mineral needs to help you sustain

Key term

Dehydration Water is lost through sweating during exercise and if it is not replaced dehydration occurs. Dehydration can have an effect on blood flow to the working muscles and result in a loss of electrolytes such as calcium, which help with muscular contractions. Blood viscosity increases and blood pressure reduces. There is a reduction in sweating to prevent further water loss, which in turn increases core body temperature. This results in the performer being unable to meet the demands of the activity.

physical and mental performances at your best.

Cool-down

If an athlete simply stops after exercising, the levels of adrenaline are high and can cause a feeling of restlessness. The waste products in muscles are thought to cause tiredness and stiffness, and it is not good for anyone to have a rapid decrease in body temperature, heart rate and blood pressure.

It is for this reason that a cool-down is thought to be beneficial after training or a competitive match, allowing a gradual decrease in temperature, heart rate and blood pressure. By gently working the major muscle groups, waste products are actively removed.

During the cool-down the body releases hormones that counter the effects of adrenaline and allow rest and sleep after exercise. A cool-down can also stop blood pooling in the veins by maintaining the skeletal muscle pump as well as help remove lactic acid. Because of the increase in tissue temperature the cool-down period is an ideal time to stretch and improve or maintain flexibility.

Players may not feel like doing a cool-down after a strenuous game, but they



Water quenches thirst, but it doesn't contain enough minerals or carbohydrates to rehydrate the body during or after exercise

understand that it is beneficial to a footballer's recovery process.

JT What is a typical cool-down that Aston Villa would go through at the end of a match?

SW In the past we would go for a gentle jog and some stretches at the end of a game but now we take ice baths, eat protein and drink fluids. Some of us have a massage and then we continue our recovery in a training session. If we have a mid-week game we train 24 hours after the match, but if there is no mid-week game then we train 48 hours after the match.

Ice baths are one of my most dreaded methods of recovery but they are of the best ways to recover from the aches and pains of a match. I have an ice bath after every game to keep my muscles fresh and prevent any injuries, as I believe it's one of the best ways to recover after a match or even after a heavy training session. It's not something I particularly enjoy, but it does help me to recover a lot quicker and I'm used to it now so it doesn't really bother me. I now have an ice bath every day as part of my daily routine to ensure I perform at my best.

JT How do ice baths help the recovery process?

SW When you get into an ice bath for 5-10 minutes the icy cold water causes your blood vessels to tighten, draining the blood out of your legs and causing them to feel cold and numb. When emerging from the ice bath your legs fill up with fresh, oxygenated blood that invigorates the muscles with oxygen, enhancing cell function. The blood leaving your legs takes away the lactic acid that builds up during the match.

Compression skins

Research suggests that skins can help reduce **DOMS** and improve your muscle recovery time through direct compression and improved muscle oxygenation.

When using skins for post recovery it is recommended that they are worn

Key term

DOMS Delayed onset of muscle soreness.

for at least 3 hours. They can be worn while sleeping, when they can speed up the body's normal recovery process. Compression skins help to return power to your muscles faster, reduce swelling, aid the repair of muscle fibres and reduce post-match fatigue.

Compression socks are like a second skin assisting the venous system, reducing blood and fluid pooling and improving oxygenation and circulation velocity. Due to the effect of gravity, your lower leg is the area that can benefit most from the effects of wearing compression socks. They are designed to be worn daily and replace normal socks, helping to counteract the strains of a competitive football match or training session.

JT How do you use compression skins and socks as part of your recovery process?

SW I don't wear skins during the game as I find them too warm. I prefer to wear compression socks as it's easier to fit into my daily routine. I wear them almost all of the time as I believe it gives me fresh

legs the next day and re-energises me for the next match or training session.

Massage

Another process that Stephen spoke highly of was massage therapy, which is designed to reduce injuries and inflammation and to relax the footballer either before or after a game. A post-match massage stimulates circulation, especially in the region of the working muscles, flushing out waste materials such as lactic acid.

Stephen explained that massages can help with muscle soreness, loosening the muscles and improving a footballer's flexibility. A light massage after a game can help to deal with any tension in the muscles occurring from the impact of tackling during the match and to reduce lactic acid.

JT When do you use massage therapy?

SW Before a game I have a massage on my quadriceps, lower leg muscles and hamstrings and before training I have a massage on just my lower leg muscles

and hamstrings. I find this helps to loosen up my legs before I go out onto the pitch or training ground.

JT Do your team-mates have similar routines?

SW Everyone in the team is different. Some of the lads prefer to wear skins but it is a personal preference. What suits me may not suit other players on the team. It really is an individual thing as everyone's body responds differently.

Some players wear skins during the game and others don't as they get too hot and sweat more. Some players like to have an ice bath every day while other players just don't find it works for them. Other players will have a massage before the game, while some prefer a massage after the game.

We all have our own ways of recovering, you just have to try different things and find out what suits your body best.

Jenny Thorp teaches PE at John Deane Sixth Form College and is an A-level PE examiner.



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