

# PREVENTION OF INJURY

To play football puts high demands on your body. To be able to perform well it is important to take good care of your body and it will help to have the basic knowledge of what is required physically to develop and to avoid to get injured as much as possible.

## Warm-up

In a body at rest, the blood flow to the muscles is comparatively low, and the majority of the small blood vessels (capillaries) supplying them are closed. When activity begins, the blood flow in the exercising muscles increases as the capillaries open. A muscle can only achieve maximum performance when all of its blood vessels are functional. Physical work increases the energy output and temperature of the muscle, this in turn leads to improved co-ordination with less likelihood of injury.

A warm-up can be described as a process to increase awareness, improve co-ordination, elasticity and contractibility of muscles, and increase the efficiency of the respiratory and cardiovascular systems. Warming up leads to a specific increase of body and muscle temperature which is required to be able to perform movements in a higher tempo. To decrease the risk of injury, the warm-up should be initiated with some exercises that activate large muscle groups, for example jogging with or without a ball (6-10 min). The warm-up should then be continued with exercises for the main muscle groups used during football, this can be specific football movements within a drill working technical skills (12-20 min).

A dynamic stretching should be undertaken after 8-10 min of aerobic exercise. Dynamic stretching involves moving parts of the body and gradually increasing reach, speed of movement, or both. The stretching should be performed as slow controlled movements through the full range of motion. Ensure the stretch is not forced beyond a comfortable range.

## Cool-down

Following the end of a physical activity it takes time for the body to return to its resting state. Large volumes of blood and waste products remain in the muscles that lead to a build-up of pressure within the muscle, which results in excess fluid accumulating in the tissues and muscles.

If you simply stop following a training session or match you are more likely to incur some form of muscle stiffness/soreness (lactate). By cooling down appropriately, the recovery process is accelerated, which diminishes subsequent discomfort and promotes the process of adaptation.

Light recovery activities for a minimum of 5 minutes will help to remove the lactate more quickly and you are already starting to prepare for the next training session or match by speeding up the recovery process.

Type of activity can be jogging with or without a ball or light ballwork.

## Stretching

Stretching is defined as an exercise where the muscle is fully extended and held in that position for at least 15 seconds (static stretching). It is important for you as a football player to be flexible, as poor range of movement can hinder performance and cause the muscle to rupture in situations during a match where the muscle is forced into an extreme position.

It has been demonstrated that the length of certain muscles in the legs are considerably shortened following a football match, and it can take more than two days before the normal length is restored. Playing matches and training frequently without performing regular stretching can result in a permanent shortening of the muscles. Thus ending a match or training session by stretching the main muscle groups used in football will help to restore the length of the muscles.

There are several ways to perform stretching exercises but there are always certain rules to observe:

- The muscle must be warm
- Always use slow movements and do not bounce
- Never stretch with a bent back and straight legs
- Be careful when stretching with a partner

The most important muscles/muscle groups to stretch as a football player are: Calf muscles, Quadriceps muscles, Hamstring muscles, Leg Adductor muscles, Deep Abdominal muscles, Back extensor muscles and Buttock muscles. Add on for goalkeepers are: Arms, Shoulders and Chest muscles.

### **Developing strength – Resistance training**

The reason for this being part in the training to become an elite football player is to increase muscle strength in order to:

- 1) Increase muscle power output during explosive activities in a football match such as tackling, jumping and accelerating
- 2) Prevent injuries
- 3) Regain strength more quickly after an injury

Generally football players need to be relatively strong in most of the large muscle groups of the body, as muscle strength is an important component of many match activities such as tackling and sprinting. Also the goalkeeper has a special need for a high level of muscle strength due to the explosive nature of the movements that a goalkeeper has to perform during a game.

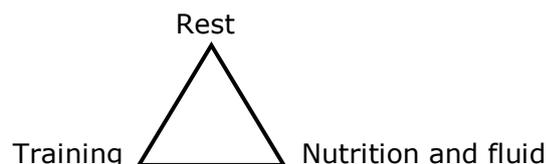
One important function of the muscles is to protect and stabilize joints of the skeletal system. Therefore strength training is also of importance in preventing injuries as well as the re-occurrence of injuries. A prolonged period of inactivity, e.g due to an injury, will considerably weaken the muscles. It has been demonstrated that five weeks after immobilization of a leg, the strength of the quadriceps muscle can be reduced by 50%. Thus, before returning to football training after an injury, a period of strength training is required. Strength training should also be performed after having returned to football training and should be continued until pre-injury strength is regained. The length of time required to regain strength is dependent on the length of inactivity period but generally several months are needed.

When you first start with strength and resistance training you should start with Basic strength training, where the first step is to work with your own body weight as the only resistance.

The above steps should be taken by people above 16yrs of age.

### **Recovery**

Besides the different areas within training to develop and strengthen physical and co-ordinational skills to prevent injuries to occur it is also vital for you with rest and recovery off the pitch (you need 1 rest day per week) and a well-balanced diet and sufficient fluid intake. These three corner stones form a "development triangle". All three are needed to develop as a football player and will help you to prevent from getting injured.





## **Equipment**

Another aspect to consider preventing injuries is to take good care of your body by using appropriate equipment. Shin guards should always be worn during training and match. Also make sure that the football boots are of good quality and that when getting a new pair of football boots take measures to avoid getting blisters by gradually wearing them in or prior to using them for the first couple of sessions putting tape directly on the skin where it is most likely to receive blisters, only mentioning two tips to avoid unnecessary blisters that may prevent you from a couple of training sessions or maybe even a match. As a football player it is also necessary with a proper pair of running shoes, trainers that are made specifically for running when doing specific running off the pitch.