

SAQ DEFINED



SPEED

In soccer, **Speed** is the ability to cover ground economically and efficiently during the first few yards (i.e. five steps) of a run. It also involves the ability to open stride length and frequency over a 40-50 yard length. Finally, Speed is seen as the maximum velocity a player can achieve and maintain.

How do we improve speed?

Running is an art unto itself, and proper running mechanics are not taught to young kids. This means just about everyone grows up with a certain degree of deficiency. To improve speed we must break down the components of running (e.g. stride length and frequency, leg cycle, hip and height position, arm movement, and ground contact time) and re-teach them correctly. Player must also be made aware of the Rest/Ratio requirements before and after every sprint so that they can recover properly between them.



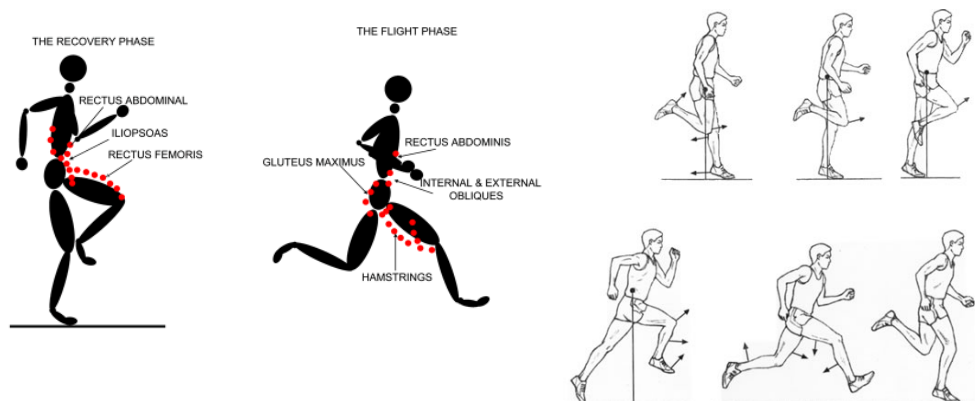
AGILITY

In soccer, **Agility** is the ability to change direction without loss of balance, strength, speed or body control. To be agile in terms of soccer means having lightning responses and reactions. There is also a direct link between improved agility and development of speed, strength, timing and rhythm. One of the greatest benefits of agility training is that it is long lasting. Once agility has become integrated into the muscle memory, it does not leave.

How do we improve agility?

Agility training is comprised of four elements: *Balance, Coordination, Programmed Ability* and *Random Agility*. Balance and Coordination are improved by mastering simple skills under varying degrees of stress. Movements are broken down into their component parts to allow the player to become aware of body positioning on an incremental level (e.g. a five-step run could be broken down to reflect the various motions that would include: high knee drive, lean forward, arm drive, and the butt kick). By taking apart the movements the player can better understand the biomechanics and gain muscle memory.

Programmed agility training occurs once player has already experienced a skill, and is aware of the pattern and sequence of demands. From there the player must now conduct the skill at a high speed. Random Agility is the final training element. Here the player is asked to perform tasks, at a high speed with unknown patterns and unknown demands. Skill level now becomes much closer to actual game like situations. It often incorporates visual and audible cues to force the player into reactive decisions.



QUICKNESS

While **Speed** is the ability to cover ground economically and quickly, **Quickness** in soccer refers to explosive acceleration. It is the ability to generate the greatest force transfer from the foot to the ground.

How do we improve quickness?

The science behind quickness involves reprogramming the neuromuscular system that impacts acceleration. This system is composed of the nerve root, the peripheral nerve, the neuromuscular junction and the muscle. It is the nervous system of the muscles themselves and its job is to help muscles to move.

Think of a towel snapping. To achieve that ‘crack’ the towel must lengthen (eccentric) and then shorten (concentric) instantaneously (contraction). This is the same movement required of a muscle, and it is known as the Stretch Shortening Cycle. In soccer the Stretch Shortening Cycle involves linear, lateral and vertical movements.

Training focuses on removing restrictive mental blocks and thresholds such as slow, uncoordinated initial acceleration. Range of movement is also addressed and improved. Drills focus on isolated fast contractions of an individual joint. These quick repetitive motions help take the body through the gears. This in turn increases muscle firing rates so that the player can literally explode over a 3-5 yard area.

