

# He physical fitness and skill related fitness requirements in tennis



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Tennis is a fun fast paced challenging sport, which demands a high level of skill and ability to play.

Tennis requires muscular endurance, flexibility, speed and aerobic endurance these are the physical fitness of tennis. The skill related side of tennis requires Balance, power, agility, Coordination and reaction time.

These are the fundamental components of tennis but what do they mean?

Physical fitness Muscular endurance is the ability to produce repetitive movements of a muscle or muscle group and not to get tired while doing so Paul beashel, 2006. Throughout a match in tennis you will hit hundreds of balls and they need to be as hard at the end of a match as well as the beginning. Tennis requires muscular endurance so that your body can quickly recover from prolonged points and be ready to perform again and again, with minimal rest in between.

The aim is to hit the final shots of the match as effectively as the first ones. Muscular endurance can be enhanced through training. Flexibility is the ability to perform a joint action through a range of movement Paul beashel, 2006. Tennis sometimes requires you to place your body parts in extreme ranges of motion e.

g. reaching for the ball and serving. Flexibility is important to tennis because of the quick starts and stops in tennis, reaching for overheads and serves, and lunging and stretching for wide shots, all test your body's flexibility. If you had poor flexibility it would lead to injury.

Speed is the ability to move body parts quickly over a set distance Paul beashel, 2006. In tennis the faster you can get to a ball, the more time you

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have to prepare for and execute your shot. Although speed has a largely genetic component, muscles and the nervous system can be trained to make a player faster. Many athletes are fast in a straight line, but tennis players must have the agility to be able to change directions at speed. If you had poor speed you would have less time preparing for the next shot. Aerobic endurance is the ability to continue exercising for a long period of time.

To do this the body needs to transport and use the oxygen that is breathed in during exercise Paul beashel, 2006. Aerobic endurance is an important to tennis because during a tennis match you have 25 seconds of rest between points and 90 seconds at changeovers. It will be difficult to recover throughout a match if your aerobic fitness is poor you will be fatigue by the end of a match. Basically The more endurance you have the longer you can keep going, the more ground you cover across the court during the course of a match, the less likely you are to lose concentration, and the less mistakes you will make. Body composition body composition is used to describe the percentages of fat, bone and muscle in human bodies.

In order to perform at your optimum a player must have good body composition. Body composition can be altered through appropriate training and nutrition. Tennis players must also have appropriate levels of body fat. Too much body fat will slow you down and make you sluggish.

Males should aim for between 8-15% body fat while females should aim for between 15-22% body fat. Skill related fitness Balance is the ability to maintain the centre of gravity through a range of movement Paul beashel,

2006. Good balance in tennis equals to a powerful game. If you are able to maintain a straight posture, no shot would throw you off balance.

Balance is one of the most important parts of playing tennis. Balance aids in proper shot execution, it keeps players from tripping, falling, and possibly getting injured. Power is the ability to produce a large amount of force in a short period of time Paul beashel, 2006. Modern tennis players require explosive movements and greater power allows you to respond more quickly as well as produce far greater forces when hitting the ball. Power is more important for tennis than strength.

Power is what generates speed to the ball. The faster you can overcome the resistance of your arm and racket during the serve, the more power you will be able to generate. Increase in strength and speed will have a positive affect on power. Agility is the ability to change the body's position in a short length of time Paul beashel, 2006.

A tennis player has to change direction to be able to hit the ball this will give them time for there next shot. This is very important for the tennis player. Increases in strength and power will have a positive affect on the agility of a player. Changing direction quickly requires great amounts of strength and power, and muscular endurance can help to change direction again and again without excessive fatigue.

Coordination is the ability to synchronize movement of the arms and legs while the body is in motion Paul beashel, 2006. A good example of coordination in tennis is when the tennis player is running to hit the ball

while aiming where to place the ball in the opposing half. When a tennis ball  
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flies toward you, your eyes sends information about it to the brain, which calculates its distance, speed. Then the brain sends command signals to the muscles in your arm, telling it where to move the racquet in order to meet the ball. Reaction time is the time taken to react to a stimulus Paul beashel, 2006. In tennis an average serve is 109mph and you will have little time to react so good reaction time would help.

Excellent reaction time helps a player return a serve, a smash, play effectively at the net or simply return the ball into the opponent's court. Poor reaction time will lose you points. The physical fitness and skill related fitness requirements in footballFootball is a physically demanding sport to play it demands a high level of skill and ability to play. Football requires muscular endurance, flexibility, speed and aerobic endurance these are the physical fitness of football. The skill related side of football requires Balance, power, agility, Coordination and reaction time. These are the fundamental components of football but what do they mean? Physical fitnessMuscular endurance is the ability of the muscle to work for long periods of time without tiring.

In football a good example of this is repeated running and kicking in a game. Football requires muscular endurance so that your body can repair from running up and down the pitch. Muscular endurance can be enhanced by exercise and training. Flexibility is the ability to perform a joint action through a range of movement. Flexibility is critical in football because of the joint stress associated with dynamic multi-joint movements, this can lead to injury. By being flexible you are less likely to cause injury.

Speed is the ability to perform a movement or cover a distance in a short period of time. Speed is an essential element of successful footballer they will be able to accelerate, change direction quickly and deceive the opposition. By having good speed you will be able to make runs and opportunities on the pitch. Aerobic endurance is the ability to maintain aerobic muscle output over long periods of time. In football there have been some studies shown that in the second half footballers tend to cover less distance and work at lower intensities this is down to poor aerobic endurance.

If you have good aerobic endurance you would cover more distance and work at a higher intensity. Body composition is looking at the amount of body fat mass around the body it is important to sport but also health and well being. Football you will need to move freely around the pitch without excess weight but in football it is a contact sport so footballers will need to be strong on the ball so they will be mesomorph. It is a well-known fact backed up by scientific evidence that carrying a few extra pounds can affect your performance.

It can lead to fatigue, increased injury risk and a decreased adherence to training.