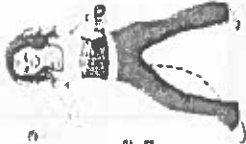


What are the components of physical fitness?

Components of physical fitness relate to a person's health and are directly linked to the body systems.

- Skeletal system (Bones and joints)
- Muscular system (Muscles)
- Cardiovascular system (Heart)
- Respiratory system (Lungs)

These are important in ensuring an athlete is able to meet the physical demands of a sport in order to reach optimal performance and perform efficiently.



Speed

Definition: The ability to travel over a distance in the shortest possible time.

$$\text{Speed (m/s)} = \text{Distance (m)} \div \text{Time (s)}$$

There are three types of speed:

1. Acceleration: The ability to rapidly increase your speed, e.g. 30 m sprint
2. Pure speed: Speed over a moderate distance, e.g. 60 m sprint
3. Speed endurance: The ability to maintain speed, e.g. repetitive sprints with short recovery time in between.

Examples of sports that require speed:

- 100 m sprint
- Hurdles
- Football, e.g. a winger



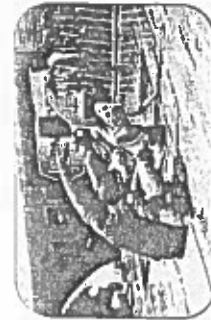
Flexibility

Definition: The ability to be able to fluently move a joint through its full range of movements.

Flexibility is a component of fitness that is required for many sports and improving it can help to reduce the chances of injury.

Examples of sports that require flexibility:

- Gymnastics
- Ballet
- Athletics, e.g. high jump



Components of Physical Fitness

There are six components of physical fitness



Aerobic endurance

Definition: The ability of the cardiovascular and respiratory systems to function effectively, improving the efficiency of gas and nutrient transport in the blood to allow sustained physical activity.

Aerobic endurance is a component of fitness that is required in endurance events. It also helps to improve the ability to perform all types of aerobic sports.

Examples of sports that require aerobic endurance:

- Swimming
- Marathon running
- Triathlon



Muscular strength

Definition: The amount of force a muscle or muscle group can generate when contracting against a resistance.

Muscular strength is a component of fitness that is useful for many sports but especially those that require muscle to contract against heavy resistance.

Examples of sports that require muscular strength:

- Olympic weightlifting
- American football
- Olympic rings



Body composition

Definition: The relative ratio of fat to non-fat mass in the body.

Almost all sports benefit from having a low fat/non-fat ratio in the body. Increased fat can cause the other components of physical fitness, such as speed and aerobic endurance, to decrease and can also result in health complications including obesity and diabetes.

Non-fat mass includes:

- Muscle
- Bone
- Organs



Muscular endurance

Definition: The ability for the muscular system to work efficiently, exerting force over a period of time by continual contractions.

Muscular endurance is a component of fitness that is required in many sports, especially those that rely heavily on a few specific muscle groups.

Examples of sports that require muscular endurance:

- Marathon running
- Rugby
- Long-distance cycling

