

## 1) TYPES OF MUSCLES

### Cardiac Muscles

*Only found in the heart, oxygen dependent, involuntary, aids blood flow through the heart.*

### Smooth Muscles

*Found in multiple locations including digestive tract, blood vessels, and lungs, contracts in all directions, can work without oxygen, involuntary, aids digestion, helps the distribution of blood.*

### Skeletal Muscles

*Found around the body, can work with or without oxygen, works voluntarily, aids with movement.*

## 2) STRUCTURE OF THE MUSCULAR SYSTEM



## 3) MUSCLE MOVEMENT & CONTRACTION

### Antagonist & Agonist

*One muscle shortens (Agonist) and a partner muscle lengthens (Antagonist) to create a movement.*

**Examples in the body**

*Bicep & Triceps*

*Quadriceps & Hamstring*

## 4) MUSCLE MOVEMENT & CONTRACTION

### Isotonic Contraction

*Muscle changes shape and creates movement.*

### Eccentric Contraction

*lengthening of the muscle.*

### Concentric Contraction

*shortening of the muscle*

### Isometric Contraction

*Muscle contracts but the length of the muscle does not change.*

*The contraction is constant, i.e. pushing against a load.*

## 5) MUSCLE FIBRE TYPES

SLOW TWITCH FIBRES	FAST TWITCH FIBRES
Resistant to fatigue	Fatigue easily
Contract more slowly	Contract fast
Produce less force	Produce great force
Red in colour	White in colour
Dense capillary network	Low capillary network
Smaller in size	Larger in size
Predominant in endurance sports	Predominant in anaerobic power sports

## 6) PLANES & AXIS

