

Musculoskeletal system

Humerus - The top of the arm

Radius - lower arm

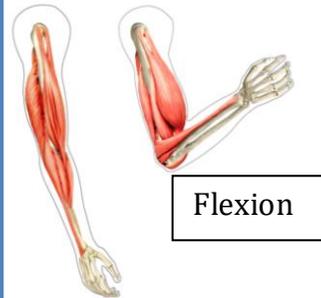
Ulna - Lower arm

Bones provide a framework for the muscles to attach to.

Antagonistic muscle pairs

Bicep - Contracts when the arm flexes (flexion). Relaxes when the arm extends.

Triceps Contracts when the arm extends (extension). Relaxes when the arm flexes.



Extension

Flexion

How can you link these to a Bicep curl/ push pass in hockey?

Anatomy and physiology Hockey Year 9 2-SBU

Respiratory system

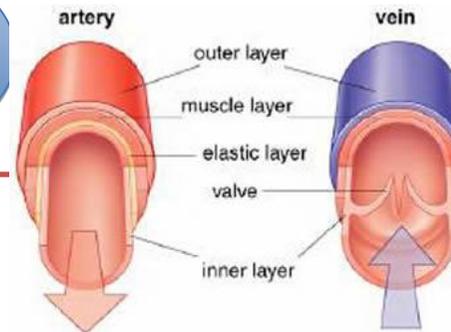
Lungs

Working Muscles

Mouth

Gaseous exchange

- Oxygen is breathed in through the mouth
- It then enters the lungs and the chest cavity becomes larger.
- Oxygen is then diffused into the blood and transported to working muscles that need it.
- Carbon dioxide is created by the working muscles and is a waste product
- Carbon dioxide is transported by the blood back to the lungs and is breathed out



Cardiovascular system

Heart

Blood vessels

- **Arteries** - Carry OXYGENATED blood away from the heart
- **Veins** - Carry DEOXYGENATED blood to the heart

Cardiac Output = Stroke volume x Heart rate

Cardiac Output - The volume of blood pumped out of the heart in 1 minute

Stroke Volume - The volume of blood pumped out of the heart per beat

Heart Rate - How many times the heart beats per minute.

When you play hockey your cardiac output increases due to the increased demand for oxygen by your working muscles.

COMMAND WORDS

Describe - Set out characteristics. Give a brief account

Explain - make an idea clear to someone by describing it in more detail or revealing relevant facts.

Compare - Identify similarities and or differences

Justify - Support a case with evidence (e.g. link it to sporting movements)

Identify - Name or otherwise characterise

Aerobic - Exercise whilst using oxygen (e.g. jogging for long periods of time)

Anaerobic - Exercise without using oxygen (short, fast movements. Lasts a few seconds)

Short term effects of exercise (what happens straight away)

Increased stroke volume

Increase in blood pressure

Increased breathing rate

Increase in heart rate

Long term effects of exercise

Decrease in resting heart rate

Increase maximum cardiac output

Increased lung capacity

How can you link anaerobic and aerobic exercise to sections of your sport?

Synovial Joints

Hinge joint- Elbow + Knee

Ball and socket- Shoulder and Hips

The hinge joint at the elbow allows flexion and extension when performing a chest pass

