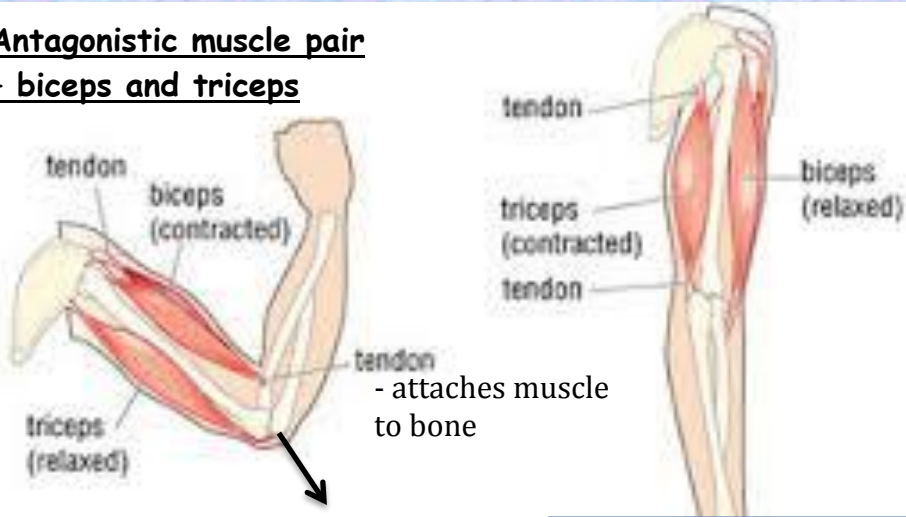


Antagonistic muscle pair
- biceps and triceps



Elbow joint – where the humerus, radius and ulna meet

How are you?

H R U

- Humerus
- Radius
- Ulna

= ELBOW joint

Joint - a place where two or more bones meet

The ELBOW joint (hinge) allows flexion and extension

Flexion - bending the arm at the elbow.
 Biceps contract

Extension - straightening the arm at the elbow.
 Triceps contract



The cardiovascular system
Heart / blood / blood vessels

ARTERIES: carry **OXYGENATED** blood around the body

VEINS: carry **DEOXYGENATED** blood back to the heart

During exercise the following increase:

- ✓ **Stroke volume:** more blood is pumped by the heart **per beat**
- ✓ **Heart rate:** number of **beats per minute** increases to pump more blood (oxygenated around the body/deoxygenated to the lungs)



The respiratory system

Gaseous exchange: delivery of **oxygen** from the lungs to the bloodstream, and the removal of **carbon dioxide** from the bloodstream to the lungs

Breathing rate increases when we exercise to breathe in more oxygen and breathe out carbon dioxide at a faster rate

Mechanics of breathing:

Breathing in - air (oxygen) through the nose and trachea, air fills up the lungs

Breathing out - air (carbon dioxide) is forced from the lungs, up the trachea and out of the nose

Anaerobic and aerobic exercise

Aerobic (with oxygen) - running down the pitch to score a try

Anaerobic (without oxygen) - a quick tackle

Short term effects of exercise:

Tiredness/fatigue Light headedness Nausea

Long term effects of exercise:

Improvements in cardiovascular endurance / muscular endurance / speed / agility / muscle strength