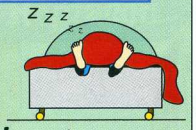
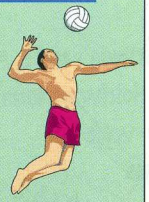
Every movement of your body depends on muscles.
These are three different types of muscle.

1. INVOLUNTARY (Smooth)



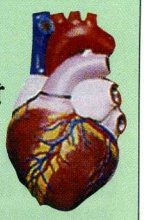
- Found mainly surrounding hollow organs e.g. blood vessels, gut.
- Performs its function without any conscious control, but usually quite slowly.

2. VOLUNTARY (Skeletal)



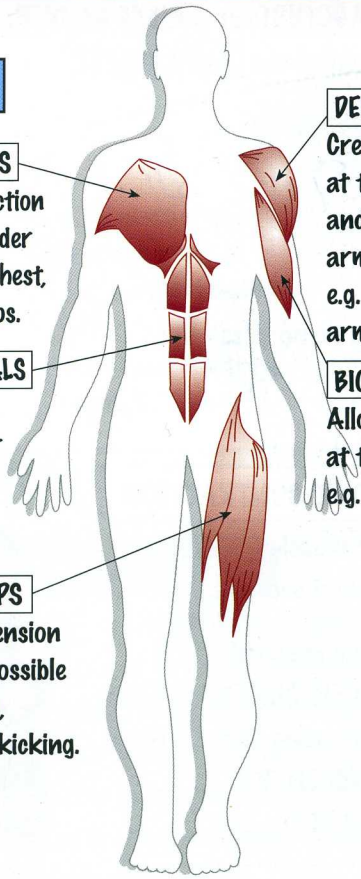
- Found mainly attached to the skeleton.
- Capable of rapid contraction which causes skeletal movement.
- Under conscious control e.g. all conscious movement.

3. CARDIAC



- Found only in the walls of the heart.
- Undergoes constant automatic rhythmical contractions.
- No conscious control.

Voluntary Muscles - How They Perform In Detail



FRONT

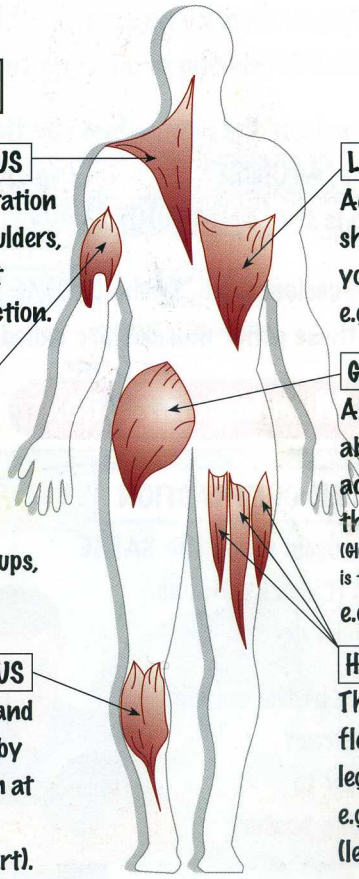
PECTORALS
Create adduction at the shoulder across the chest, e.g. press-ups.

ABDOMINALS
Allow you to flex your trunk, e.g. sit-ups.

QUADRICEPS
Makes extension of the leg possible at the knee, e.g. squats, kicking.

DELTOIDS
Create abduction at the shoulder and raise your arm sideways, e.g. swimming arm action.

BICEPS
Allows flexion at the elbow, e.g. chin-ups.



BACK

TRAPEZIUS
Allows rotation of the shoulders, e.g. cricket bowling action.

TRICEPS
Creates extension at the elbow. e.g. press-ups, throwing.

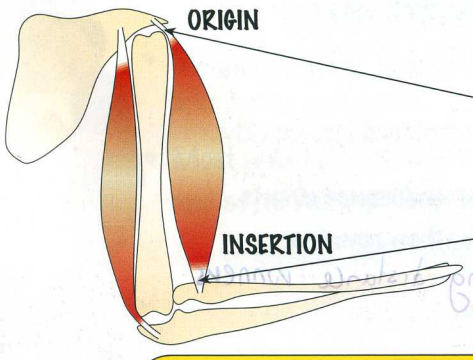
GASTROCNEMIUS
Allows you to stand on your tiptoes, by creating extension at the ankle, e.g. sprinting (start).

LATISSIMUS
Adduction at the shoulder behind your back, e.g. rope climb.

GLUTEALS
Allow extension, abduction and adduction at the hip.
(Gluteus Maximus is the biggest Gluteal).
e.g. squats, jumping.

HAMSTRINGS
These allow flexion of the leg at the knee, e.g. sprinting (leg action recovery).

Muscle Attachment



Voluntary muscles are attached to your skeleton by **TENDONS**, usually across a synovial joint. These are fibrous and INELASTIC.

A The point where the muscle tendon attaches to the fixed or stationary bone is called the **ORIGIN.**

B The point where the muscle tendon attaches to the moving bone is called the **INSERTION.**

As muscles contract they shorten. This makes the joint move.

WHEN A MUSCLE CONTRACTS THE INSERTION MOVES TOWARDS THE ORIGIN.