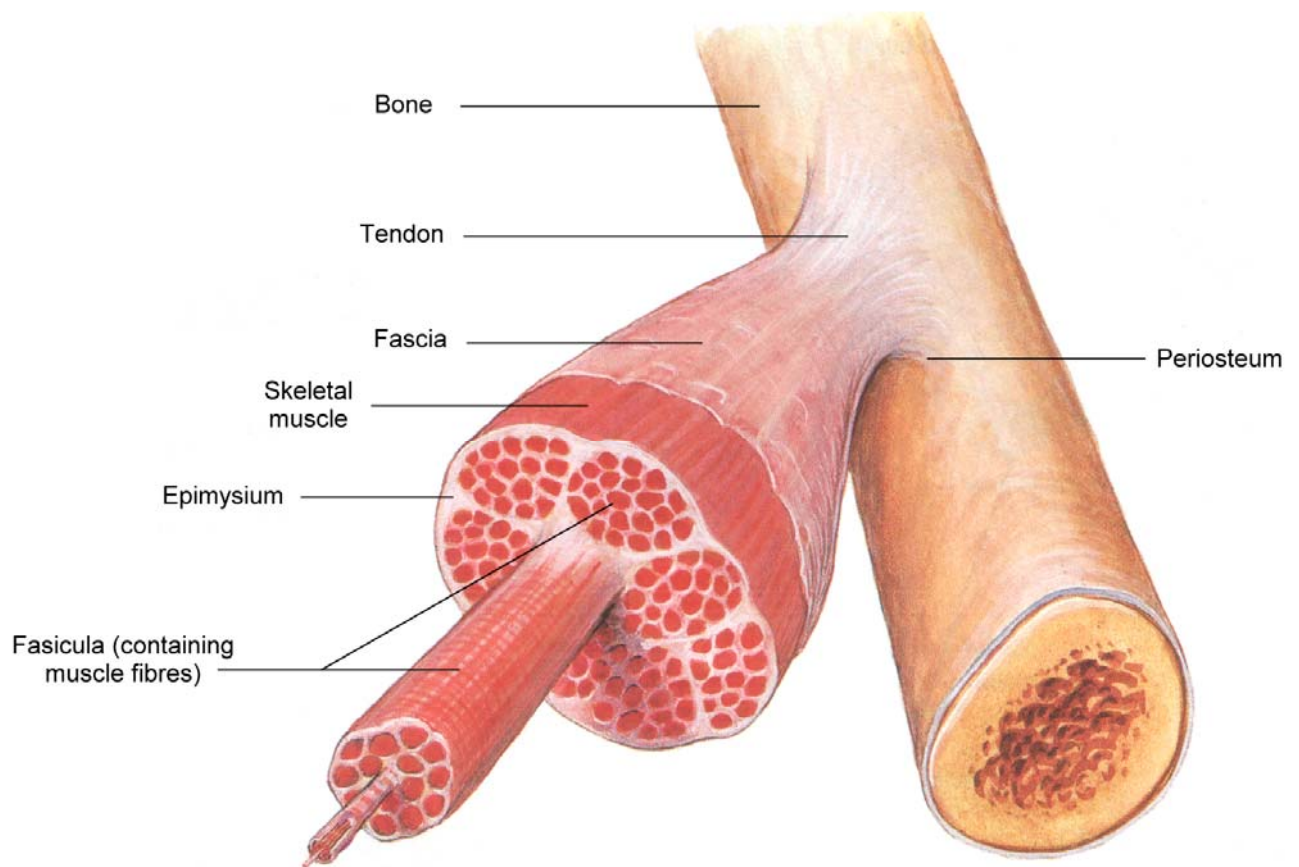


The waste products produced by muscle action are carbon dioxide and water. Waste products are conveyed by the blood and are excreted through the lungs, kidneys, skin and bowel. Care must be taken not to impede the blood or nerve supply to muscles, e.g. constricting bandages, tight clothing, etc.



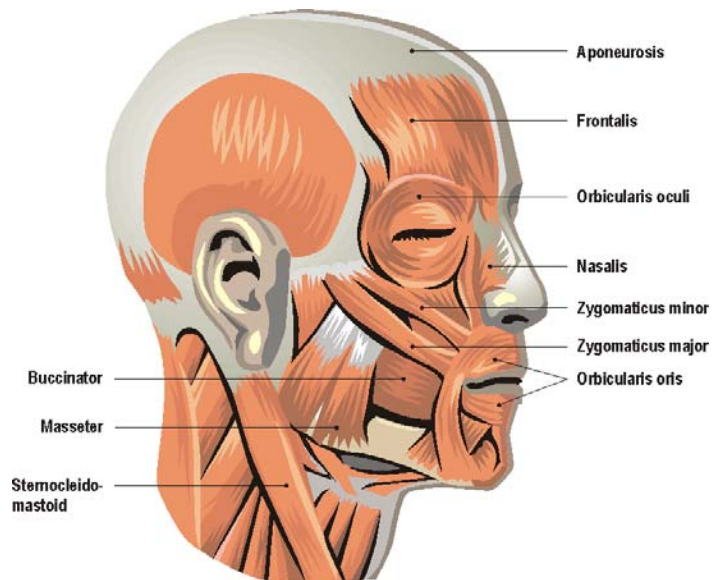
FACT FILE: When a person gets chilled or frightened and has what are known as ‘goose pimples’ – the little lumps on the skin are due to the tiny muscles of the skin pulling the hair erect.



THE MUSCLES OF THE HEAD

Form two groups:

1. **The muscles of expression.** These are attached to the skin rather than the bone and their contractions alter facial expression. Small muscles also move the eyeballs.
2. **The muscles of mastication.** These move the jaw up and down, side to side and backwards and forwards.



THE MUSCLES OF THE NECK

The neck contains two large muscles:

1. The **sternocleido mastoid** which runs from the sternum and clavicle at the front of the neck to the temporal bone behind the ear.

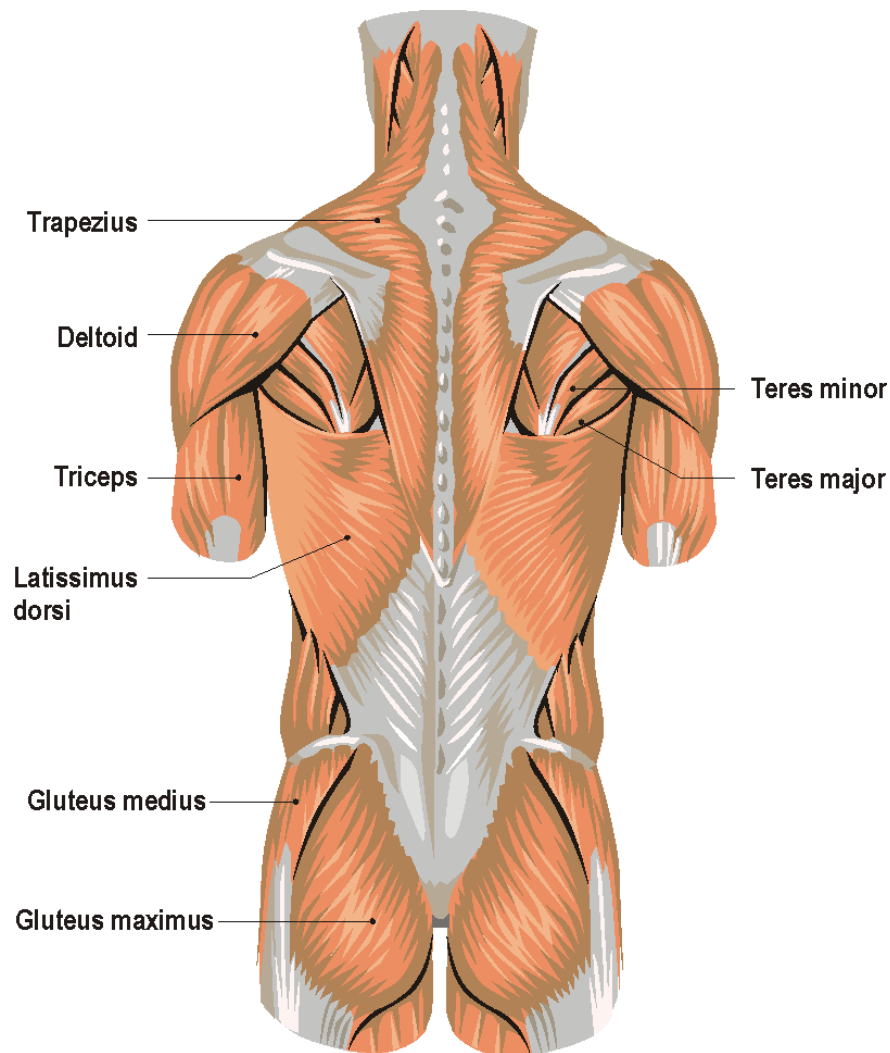
When the sternocleido mastoid, on either side of the head, contracts it draws the head towards the shoulder.

When both sides are contracted they flex the neck.

2. The **trapezius** lies over the back of the neck and chest. It is roughly triangular in shape, the base joining the spine down the back of the neck and chest, and the top and back of the shoulder where it is attached to the scapula and clavicle. It draws the scapula (shoulder blade) up and down and the shoulders back.

THE MUSCLES OF THE TRUNK can be separated into:

- muscles moving the shoulder
- muscles of respiration
- muscles of abdominal wall
- muscles moving the hip
- muscles moving the spine
- muscles of the pelvic floor



TUTOR TALK: Below you will find a list of the most important muscles of the body and the actions that they are responsible for.

MUSCLES OF THE HEAD AND NECK

NAME	ACTION
BUCCINATOR	Compresses the cheeks and retracts the angle of mouth.
FRONTALIS	Elevates the eyebrows and draws the scalp forward.
ORBICULARIS OCULI	Responsible for closing the eyelids.
ORBICULARIS ORIS	Puckers the mouth.
MASSETER	Closes the mouth and clenches the teeth.
PLATYSMA	Muscles of facial expression.
STERNOMASTOID	Flexes the head and turns it from side to side.

MUSCLES OF THE TRUNK OF THE BODY

TRAPEZIUS	Rotates, raises and draws the shoulder.
ERECTOR SPINAE	Extends the vertebral column.
LATISSIMUS DORSI	Adducts the shoulder and draws the arm backwards and down.
SERRATUS MAGNUS	Draws the scapula forwards.
GLUTEUS MAXIMUS	Extends the hip joint and extends the trunk on the buttocks when getting up from a sitting position.
PSOAS	Flexes the hip joint and trunk.
PECTORALIS MAJOR	Flexes the shoulder joint, depresses the shoulder girdle, adducts and rotates the humerus.
ABDOMINIS RECTUS	Supports the abdominal viscera and flexes the vertebral column.

MUSCLES OF THE ARMS

DELTOID	Abduction of the humerus to right angle.
BICEPS BRACHIALIS	Flexes and supinates the forearm.
TRICEPS BRACHIALIS	Extends the elbow joint.
BRACHIALIS ANTICUS	Flexes the elbow joint.
CORACO BRACHIALIS	Flexes and adducts humerus.
SUPINATOR LONGUS	Flexes the elbow joint.
PRONATOR TERRES	Pronates the forearm.
SUPINATOR TERRES	Supinates the forearm.
FLEXOR CARPI RADIALIS	Flexes the wrist joint.
EXTENSOR CARPI	Extends the wrist joint.
FLEXOR CARPI ULNARIS	Flexes the wrist joint.
EXTENSOR CARPI ULNARIS	Extends the wrist joint.
FLEXOR SUBLIMIS DIGITORUM	Flexes the fingers.
EXTENSOR SUBLIMIS DIGITORUM	Extends the fingers.

MUSCLES OF THE LEGS

RECTUS FEMORIS	Extends the knee joint.
VASTUS LATERALIS	Extends the knee joint.
VASTUS MEDIALIS	Extends the knee joint.
VASTUS INTERMEDIUS	Extends the knee joint.
SARTORIUS	Flexes the hip and the knee joints and rotates the femur.
ADDUCTOR MAGNUS, LONGUS	Adducts the thigh.
BICEPS FEMORIS	Flexes the knee joint.
SEMITENDINOSUS	Flexes the knee joint and extends the hip joint.
SEMIMEMBRANOSUS	Flexes the knee joint and extends the hip joint.
GASTROCNEMIUS	Flexes the ankle and the knee joint.
TIBIALIS ANTICUS	Flexes and inverts the foot.
FLEXOR DIGITORUM LONGUS	Flexes the toes.
EXTENSOR DIGITORUM LONGUS	Extends the toes.
ACHILLES TENDON	Assists in the movement of the foot.