The posterior muscles

Level 2 Anatomy and physiology
for exercise and fitness instructors

Triceps

Origin - scapula and humerus

Insertion - ulna

Joints crossed - elbow & shoulder

Joint action - extension of the elbow

e.g. triceps dips

Trapezius

Origin - C7, all thoracic vertebrae

Insertion - clavicle and scapula

Joint crossed - shoulder girdle

3 Joint actions:

- Upper fibres extend the neck
- Middle fibres retract the scapula
- Lower fibres depress the scapula

e.g. Shoulder shrugs

Latisimus Dorsi

Origin -lumbar and sacral vertebrae, thoracic vertebrae 7-12

Insertion - humerus

Joint crossed -shoulder

Joint action - adducts, extends and inwardly rotates the shoulder

e.g. Lat pulldown

Erector Spinae

Origin - sacrum , ilium to thorax

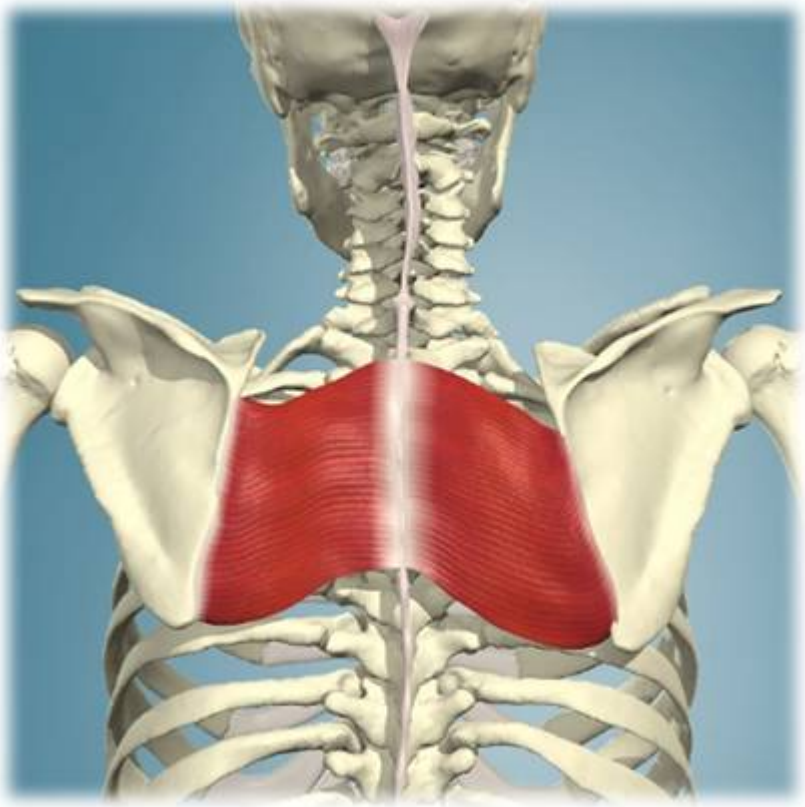
Insertion - ribs, vertebrae, to occipital bone (base of skull)

Joints crossed – vertebrae

Joint action - extends the spine rotates the thoracic spine

e.g. dorsal raise, side twists

Rhomboids



Origin - spinous processes of cervical and thoracic vertebrae (C7 & T1–T5)

Insertion - medial border of scapula

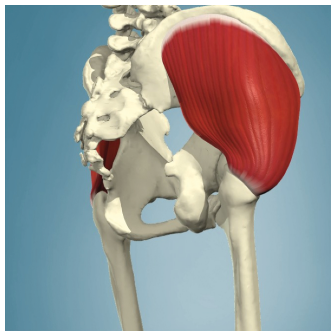
Joint crossed - shoulder girdle (moves scapula relative to rib cage)

Joint actions - retracts scapula downwardly rotates scapula (works as a synergist with pectoralis minor)

e.g. Pulling the shoulder blades together

Gluteals/Abductors

Gluteus Maximus



Gluteus Medius

Gluteus Minimus

Origin - ilium and sacrum (gluteus maximus only)

Insertion - femur

Joint crossed - hip

Joint action - extends and outwardly rotates the hip (gluteus maximus), abducts and inwardly rotates the hip (gluteus minimus and medius)

e.g. kick backs and squats

Hamstrings

Biceps Femoris

Semitendinosus

Semimembranosus

Origin - ischium

Insertion - tibia and fibula

Joints crossed - hip and knee

Joint action - knee flexion, hip extension

e.g. hamstring curls

Gastrocnemius

Origin - femur

Insertion - calcaneus

Joints crossed - ankle and knee

Joint action - ankle plantarflexion, assists in knee flexion

e.g. heel raises

Soleus

Origin - fibula and tibia

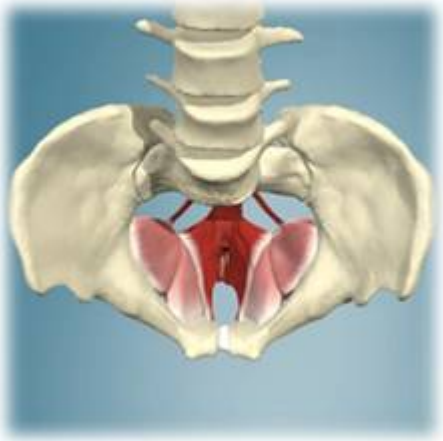
Insertion - calcaneus

Joint crossed - ankle

Joint action - ankle plantarflexion

e.g. heel raises

Pelvic floor muscles



Situated under the pelvis

A double layered muscle consisting of a deep and superficial layer of muscle tissue and connective tissue

Muscle fibres are fast and slow twitch

Provides stability for the pelvic girdle

Supports organs and growing foetus in pregnancy

Controls continence