

The anterior muscles

Level 2 Anatomy and physiology
for exercise and fitness instructors

Biceps



Origin - Scapula

Insertion – Radius

Joints crossed - elbow & shoulder

Joint action - flexes the elbow &
supinates the forearm

e.g. biceps curl

Deltoid



Origin - clavicle and scapula

Insertion - humerus

Joint crossed - shoulder

Joint action - abducts the arm,
assists in shoulder rotation &
flexion

e.g. Dumbbell lateral raise

Pectoralis Major



Origin - clavicle and sternum

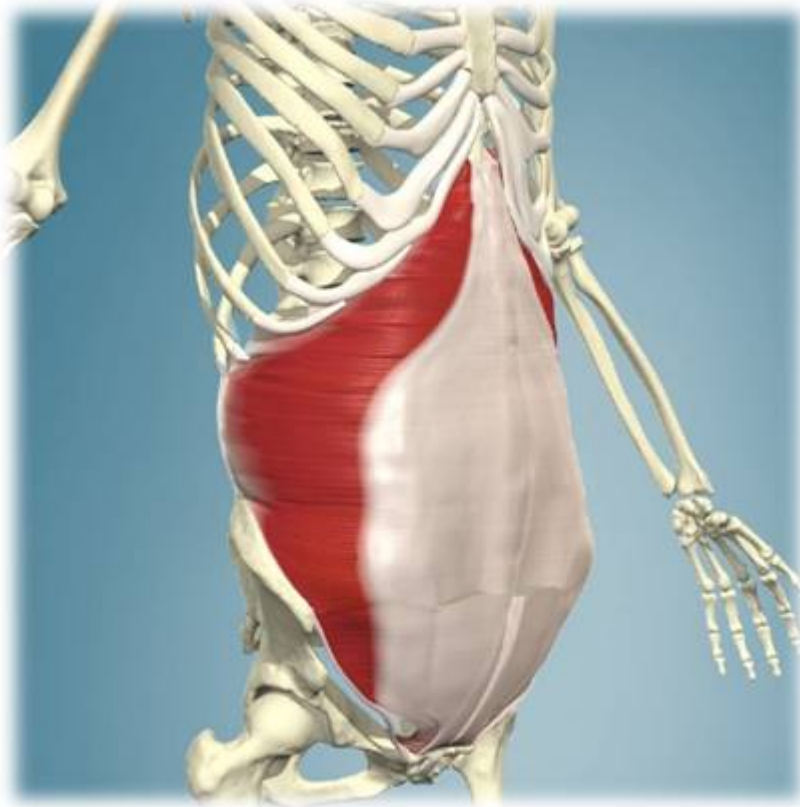
Insertion - humerus

Joint crossed - shoulder

Joint action - horizontal flexion,
adduction and inward rotation of
the arm

e.g. Press up, pec dec

Transverse Abdominis



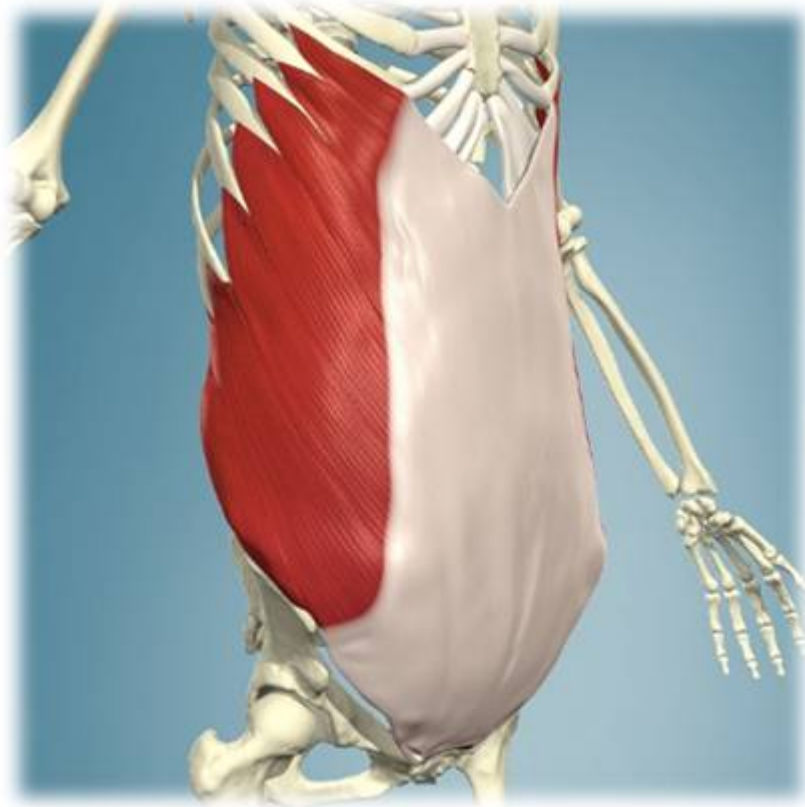
Origin - iliac crest, lumbar fascia and cartilage of interior six ribs

Insertion - xiphoid process, linea alba and pubis

Joint crossed – lumbar vertebrae

Joint action - compress the abdomen, pulls the abdomen in for posture and spine support
e.g. the plank

External Obliques



Origin - lower ribs

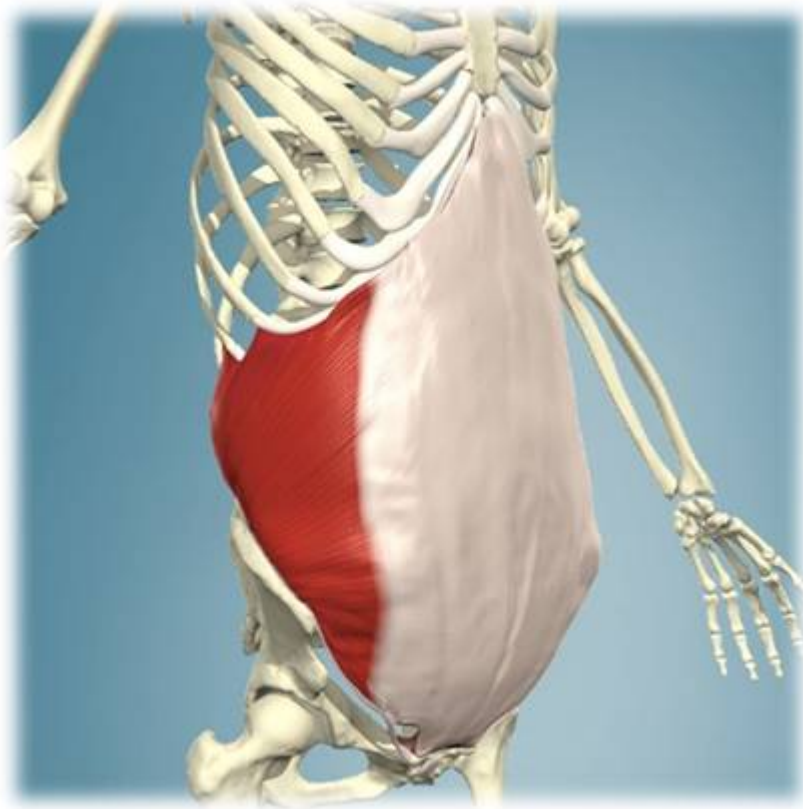
Insertion - ilium

Joints crossed – the vertebrae

Joint action - laterally flexes the thoracic spine

e.g. oblique curls

Internal Obliques



Origin - ilium

Insertion - lower ribs

Joint crossed - vertebrae

Joint action - laterally flexes the thoracic spine, rotates the thoracic spine

e.g. lying side bends

Iliopsoas (Hip Flexors)



Psoas Major



Iliacus

Origin - all lumbar vertebrae and ilium

Insertion - femur

Joint crossed - hip

Joint action - flexes the hip

e.g. kicks

Quadriceps



Rectus Femoris



Vastus Intermedius



Vastus Lateralis



Vastus Medialis

Origin - femur and Ilium

Insertion - tibia (via patella tendon)

Joints crossed - knee and hip (rectus femoris is the only quadricep to cross both hip and knee joints)

Joint action - all four muscles extend the knee, the rectus femoris also flexes the hip

e.g. leg extension

Adductors

Origin - pubis and ischium

Insertion - femur

Joint crossed - hip

Joint action - adducts and
outwardly rotates the hip

e.g. kicking across the body and
stabilising the pelvis



Tibialis Anterior



Origin - tibia

Insertion – first metatarsal

Joint crossed - ankle

Joint action - ankle dorsiflexion

e.g. heel digs