

Muscles

Muscle Fibers are Bundled together in to **fascicles**.

Fascicle Arrangement Types:

Parallel - like a rod between two tendons

Fusiform - bundle with a swelled belly between two tendons

Circular - forms sphincters

Triangular - fascicles radiate out from one tendon

Unipennate - fascicles feathers out from one tendon

Bipennate - fascicles feather obliquely on two sides of one tendon

Multipennate - fascicles feather obliquely on two sides of branching tendons

Muscles only contract to perform an *Action*

Relatively stationary attachment = *Origin*

Relatively more mobile attachment = *Insertion*

Contractions that bring the insertion and origin closer together are isotonic, those that do not are isometric

Muscles have nerve *innervations* to direct their actions.

Muscle actions take place with relation to other muscles

Prime mover / Agonist - causes action

Antagonist - yields to action

Synergists - working together and usually located near Agonist

Fixators - stabilize the agonist at its origin