SLIDING FILAMENT THEORY:

Where does the nerve impulse arrive at? -A neuromuscular junction What are released from the sarcoplasmic reticulum? -Calcium ions What is the sarcoplasmic reticulum? -It is a specialised type of endoplasmic reticulum. (ER is a system of membrane bound sacs around the myofibrils.) What happens to the calcium ions? -They diffuse through the sarcoplasm. What is the sarcoplasm? -It is the name given to cytoplasm in a muscle cell. How does the troponin molecule move? -The Ca2+ attaches to it. What happens as a result?

-The tropomyosin on the actin filament shifts its position.

What does this expose?

lesale.co.uk -It exposes the myosin binding sites on the activited What do the myosin heads bird with and what does this form? -They bind with the mycsin binding sites in the actin frement. -They form cross or dges. What happens when the myosin heads bind to the actin? -ADP and Pi on the myosin head are released. What happens when the myosin changes shape? -The myosin head nods forward. What does this movement result in? -The relative movement of the filaments; the attached actin moves over the myosin. What happens to the myosin head after an ATP molecule binds to it? -It detaches What does the ATPase on the myosin head do? -It hydrolyses the ATP What is formed as a result? -ADP and Pi