## Healthy Bodies

## Learning Objective:

To investigate how muscles move the skeleton and how muscle activity requires increased blood flow.





Can you stand up and balance on one leg?

How do you do that? How do you make your body move?

It is our muscles that make us move. We have hundreds of different muscles in our bodies. Muscles are made of lots of small stretchy fibres grouped together. Muscles come in three groups:



Smooth muscles: these are the muscles that move without you controlling them, such as those in your digestive system.

<u>Cardiac muscles:</u> these are the muscles that control the heart and help to pump your blood around your body.

Skeletal muscles: these muscles are attached to bones and are the muscles that you can move when you want to. You can use your skeletal muscles to kick a ball, walk, hold a pen, and for lots of other things.

BACK

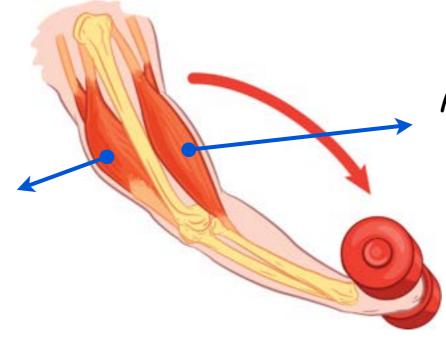
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Skeletal muscles are attached to bones so that our bones can move. Muscles work in pairs on either side of the bone. As the muscles relax and contract, they pull our bones to make them move. Relaxing the muscles releases the bones again. Muscles cannot push bones.

This muscle is called the extensor. As the flexor contracts, this muscle relaxes to allow the bone to move.

This muscle is called the flexor. It contracts to make it smaller. As it is attached to the forearm, it pulls the forearm upwards as it contracts.

This muscle contracts again as the flexor relaxes.



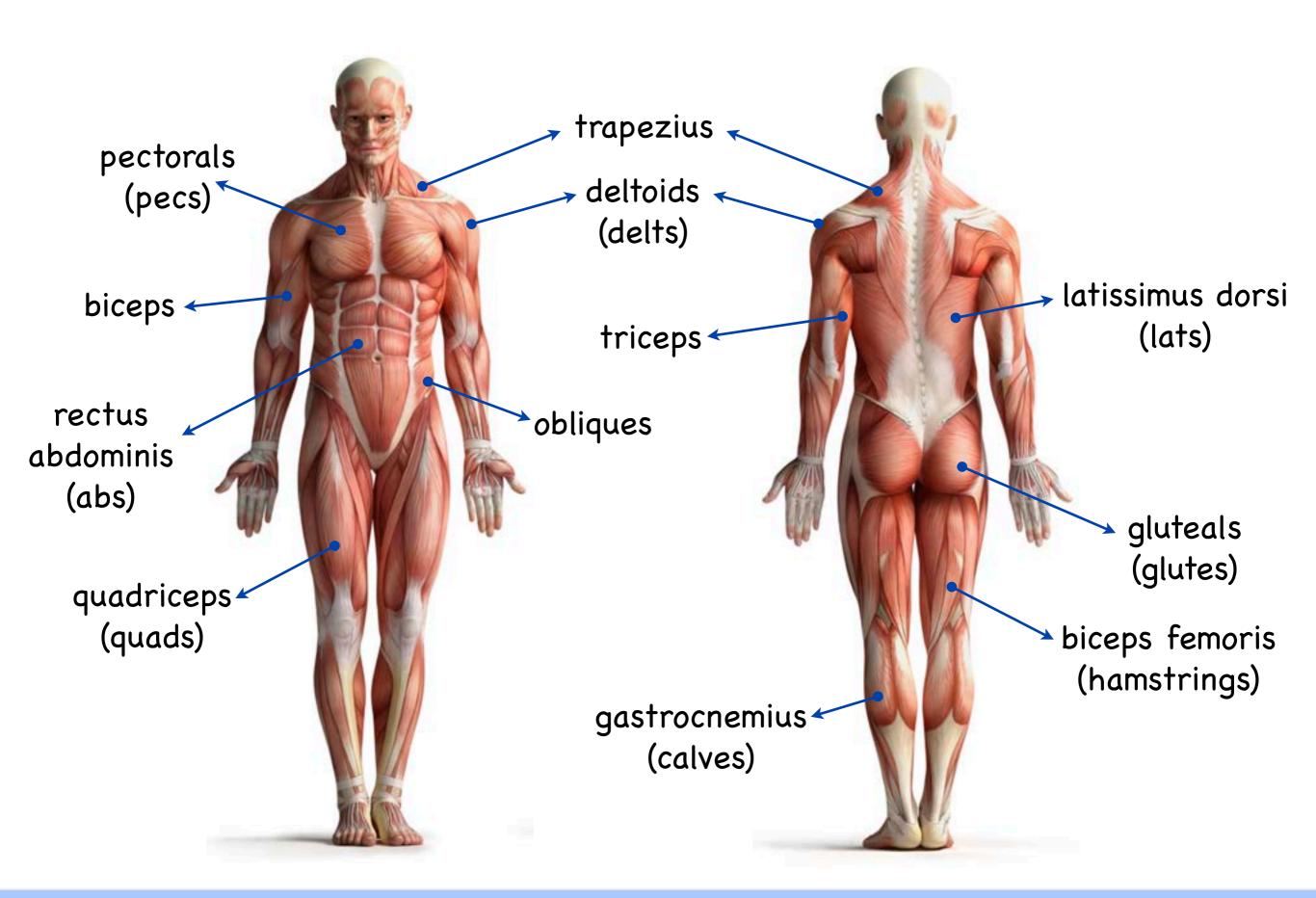
As this muscle relaxes, it gets longer. This allows the arm to move back down again.







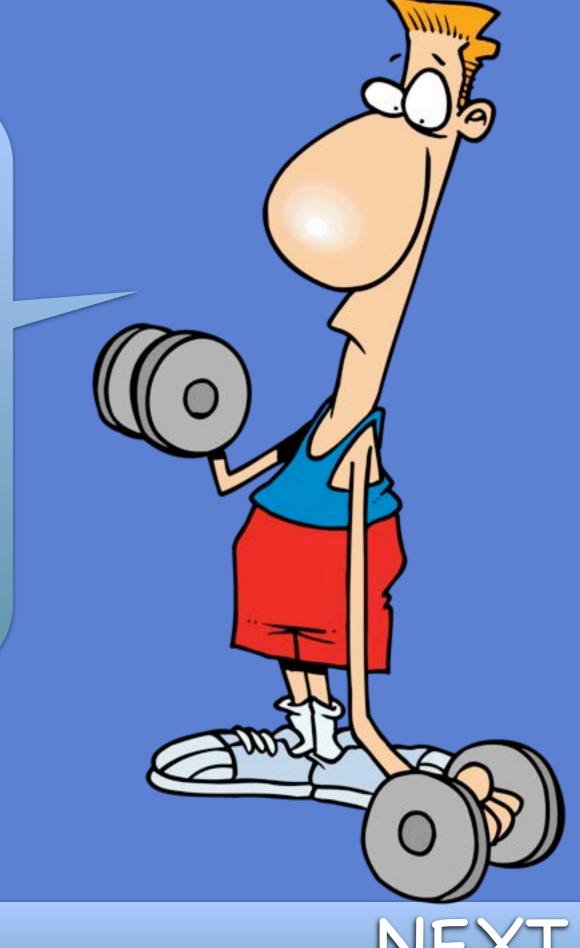
Did you know that your body has more than 600 muscles? Can you name any of the major muscle groups? Let's have a look...







Let's try some exercises to see what happens to our muscles. As you exercise your muscles, think about how they feel and why this might be.



When we exercise, our muscles have to work harder which makes them feel tired. Our hearts have to beat faster too so that more blood can get to the muscles that are working. This is because the muscles need more oxygen than normal. As you get more used to exercising, you get fitter which means you will get less tired and will be able to keep exercising for longer.



Have a look at the pictures on the next slides. Which muscles do you think are working the hardest? Which parts of the body would have most blood flowing to them?

NEXT







