

## Humans legs

On SCOPE's Things that... have legs episode, Julia checked out the human leg.



### Did you know?

Most people think that the leg is the section of the body from the hips to the feet. But, according to human anatomy texts, the 'leg' is only between the knee and ankle! Although, the following information is about the entire lower limb!

- ❖ Your lower limb is made up of 4 bones; the femur, tibia, fibula as well as the patella, otherwise known as your knee cap.
- ❖ Three of these bones are some of the longest and strongest bones in your entire body.
- ❖ The bones of your lower limbs have rough patches where muscles attach. As the muscles contract they pull on the bones and cause your leg move.
- ❖ The longest muscle in your body is actually in your leg. It is a narrow muscle called the sartorius, which flexes the knee and runs from the hip to the knee.
- ❖ At the front of your thigh there is a group of muscles called the quadriceps. They are some of the strongest muscles in the body and are used to straighten your leg.
- ❖ At the back of the thigh, are your hamstrings which are used to bend the leg.
- ❖ At the back of the lower leg, the calf muscles raise the heel and connect to the heel via the Achilles tendon.

### Activity

Using a ruler, gently tap a friend's leg, just below their knee.  
What happens? Their lower limb should suddenly jerk up! But why?

### What's happening?

The reaction is called a patella reflex and it's all thanks to your patella tendon which runs down the quadriceps, over the knee cap and down the lower leg.

By touching the tendon, the quadriceps are slightly stretched. Nerves send this message to your spinal cord and a message is sent back to your quads to contract, bringing the lower leg forward. This reaction doesn't involve the brain, is involuntary and only takes about 50 milliseconds!

When you try this at home, make sure you don't use anything heavy and you don't hit too hard because it doesn't take much for the reaction to happen!

