



In the Zone at home

Get In the Zone at home (or anywhere else!) with these simple activities about the body. See how you compare against your family or friends.

Brilliant balancing

How long can you balance for when standing on one leg? Practise balancing for as long as you can and find out if you improve with practice. Make up your own balancing activity, e.g. standing on your toes or having your arms in the air, and investigate which lets you balance for the longest.

Did you know?

There are receptors on the nerve endings in muscles, tendons, joints and the inner ear called proprioceptors, which tell you where you are in relation to the space around you. Many injured athletes use proprioceptor training in order to regain their sense of balance.

Quick off the block

Stick the reaction tester (overleaf) to a piece of card (or use a ruler if you have one) to test your reactions. Get a friend to hold the tester so zero is at the bottom and then let go – and see how far it falls before you can catch it. Are you faster with your right or left hand? Do you get better with practice?

Did you know?

The fastest-reacting muscles in your body are those involved in your eyes blinking. They allow you to blink up to five times a second.



25 cm

Keep trying!

20 cm

Speedy

15 cm

Very speedy

10 cm

Super speedy

0 cm

Reaction tester

Body fact or fiction?

Is your arm span the same as your height? Is the length of your foot the same as the circumference of your fist? Is the height of your ear the same as the height of your nose? Measure them to find out if these are body facts or body fictions. Can you think of more body facts?

Heart beaters

Take your pulse rate at rest (counting how many pulses you have in 15 seconds and multiplying by four may be easier than taking your pulse for 60 seconds). Do star jumps for one minute and take your pulse rate afterwards. What has happened? Take your pulse rate every minute for five minutes after the star jumps – is it back to your resting rate yet?

On your marks...get set...breathe

How many breaths do you think you take in a minute? Counting a breath as one inhalation and one exhalation, count how many breaths you take in 30 seconds and multiply by two to calculate your resting breathing rate. Then carry out one minute of exercise such as jogging and repeat to find out how your breathing rate changes with exercise. How long does it take to return to resting rate?

Mighty muscles

Hold your arms out to the sides, parallel to the ground, while holding weights (bottles filled with sand work well but you can use cans of beans or whatever you have handy). How long can you hold your arms in this position? Can you manage longer if your family are cheering you on? How do you compare to your friends?

Did you know? The tallest man in history was an incredible 2.72 m.

Did you know? When we exercise, our hearts need to pump more blood to our cells to provide enough oxygen for respiration and to remove waste products. Sportspeople try to improve their heart muscles through exercise to gain a low resting heart rate and a quick recovery rate.

Did you know? The breath-holding world record is held by a Swiss free-diver who held his breath underwater for 19 minutes and 21 seconds!

Did you know? The largest muscle in your body is the gluteus maximus, one of three muscles that form your buttocks. It's used in lots of activities including climbing stairs, running and cycling.

Our In the Zone initiative is a combination of physiology-related experiment kits that will be delivered to every UK school and further education college, plus a fun, interactive touring exhibition for families across the UK. Follow us on Twitter @**inthezone2012** and find more fun, free and fascinating In the Zone games and resources at **www.getinthezone.org.uk**