



## It's a Space Fact

Physical exercise is part of the daily routine of astronauts on the International Space Station (ISS). Muscle and bone carry less load in weightlessness and get weaker; about 2 hours of daily exercise slows down muscle loss and loads the bones in the skeleton. The ISS has an exercise cycle which provides bone strength exercise for the legs. When the large leg muscles work they need more blood. Working muscles stimulate the heart to pump more blood, and you breathe faster to get more oxygen in. Cycle training on the ISS also maintains endurance and cardio-vascular fitness of the astronaut. The ISS has an exercise cycle which is used for endurance training. The exercise cycle used by European astronauts on the space station is called the Cycle Ergometer with Vibration Isolation and Stabilization, or CEVIS. Cosmonauts, the Russian astronauts, also have a cycle called VELO.

### Coordination:

Using your muscles together to move your body the way you want it to.

### Muscle strength:

Ability to use your muscles to move or lift things, and yourself.

### Endurance:

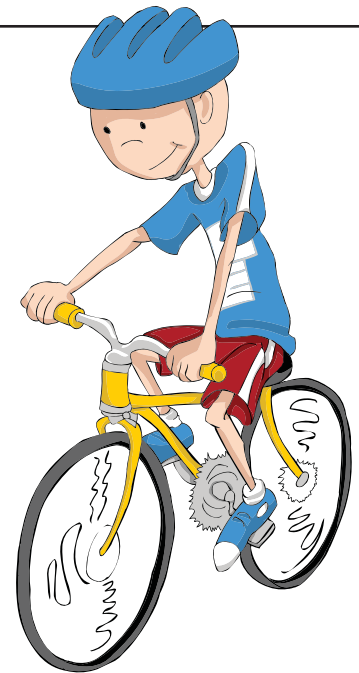
Ability to withstand physical fatigue during extended physical activity, like cycling or running fast over a long distance.

### Cardiovascular System:

Part of the body where blood flows, i.e. heart and blood vessels. It is the body system for transport and use of oxygen to provide the 'fuel' to muscles and organs.

## Fitness Acceleration

- Ride your cycle to school for two days.
- Involve you family , pick two different days to ride your cycle to school with two members of your family (in two different occasions)
- Ride your bicycle to school four days out of the week.



## Think Safety!

Scientists and Astronaut Strength, Conditioning & Rehabilitation (ASCR) Specialists working with the astronauts must make sure they have a safe environment in which to practice, so that the astronauts can't get injured. Therefore, make sure:

- To wear appropriate attire for cycling such as a helmet and knee and elbow pads.
- To follow all cycle safety rules and follow all traffic rules: [http://kidshealth.org/parent/firstaid\\_safe/outdoor/bike\\_safety.html](http://kidshealth.org/parent/firstaid_safe/outdoor/bike_safety.html)
- To listen to the advice of the adult who is cycling with you

## Mission Explorations

- On the weekend, take a cycle ride to explore your neighbourhood.
- Ride your cycle to school or to visit your friends more often than you usually do.
- Find a location close to home and plan a cycle day trip with your family.

**Status Check: Have you updated your Mission Journal?**