Image: Testing astronauts' lung health

April 21 2017

Credit: ESA/NASA

The stellar views from the International Space Station are not the only things to take an astronaut's breath away: devices like this are measuring astronauts' breath to determine the health of their lungs. ESA astronaut Tim Peake took part in the Airway Monitoring experiment during his Principia mission in 2016.

Developed by researchers at the Karolinska Institutet in Sweden, the experiment draws on a study of airway inflammation that ran on the Station from 2005 to 2008.

The analyser measures the amount of nitric oxide in exhaled air – a signalling molecule produced in the lungs to help regulate blood vessels. Too much nitric oxide suggests inflammation. Causes can be environmental, like dust or pollutants, or biological, such as asthma – at least on Earth, but what happens in space?

Researchers compare measurements from astronauts taken before their flights to those taken in space to understand the effects of weightlessness on airway health. Astronauts in space are essentially fish out of water. Understanding how to track, diagnose and treat lung inflammations is important for their safety.

The experiment began with ESA astronaut Samantha Cristofretti's 2015 mission and measurements have been gathered by six astronauts. Four more astronauts will conduct the experiment next year.

Provided by European Space Agency

Citation: Image: Testing astronauts' lung health (2017, April 21) retrieved 9 April 2024 from https://phys.org/news/2017-04-image-astronauts-lung-health.html