

Animal Experiment Reveals Why Astronauts Lose Their Sight

By [The Moscow Times](#)

October 04, 2013

The  **Moscow Times**

An experiment that saw dozens of animals blasted into orbit on a satellite has provided new insights as to why astronauts' eyesight deteriorates in space.

Vladimir Sychev, deputy director of the Institute of Medical and Biological Studies, said the experiment revealed the capacity of the cerebral arteries plummets in space, which accounts for reduced vision.

"We used to think that in zero-gravity, fluid traveled upward and that the quality of [blood] improved, but it turns out that it is the other way around," Sychev said. "The arteries of the brain come under duress and their capacity is reduced by 40 percent."

The institute also gained useful information about the impact of space travel on the spinal cord, inner ear and processes at the genetic level, Sychev said.

In April, Russia launched its first biological research satellite since 2007, the Bion-1M, on a 30-day mission to research the effect of being in orbit on the human body. The study aims to help pave the way for interplanetary flights, including missions to Mars.

Sychev said the mission was a success although few of the animals sent into space returned alive.

Passengers on the Bion-M1 included 45 mice, eight Mongolian gerbils, 15 geckos, slugs, snails and containers of microorganisms and plants. The flight proved fatal for all eight Mongolian gerbils and 29 out of the original 45 mice. The geckos, slugs and snails survived.

Original url:

<https://www.themoscowtimes.com/2013/10/04/animal-experiment-reveals-why-astronauts-lose-their-sight-a28313>