

Astronauts collect blood for immune study

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International Space Station crew members are collecting blood, saliva and urine samples to study their immune function in microgravity.

The National Aeronautics and Space Administration said while previous research conducted after landing showed dramatic changes in crew members' immune systems, the on-going first-of-its-kind study is the only one to comprehensively monitor the human immune system before, during and after spaceflight.

Dr. Clarence Sams at the Johnson Space Center in Houston is the principal investigator for the study that will determine the clinical risks due to the adverse effects of spaceflight on immunity and confirm an immune-monitoring strategy.

"Brief stress for astronauts, such as launch and landing, can alter immunity," said Dr. Brian Crucian, a co-investigator for the experiment. "Landing is a significant stress on the human body and it somewhat skews the post-flight data we get from crew members.

"Since we don't know if the immune system changes during flight will resolve or worsen over a long-duration mission, this is a perfect opportunity to determine the status of immunity as it balances out during flight," Crucian said.

Researchers said the study will help determine whether countermeasures are needed to prevent immune dysfunction during exploration-class spaceflight.

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