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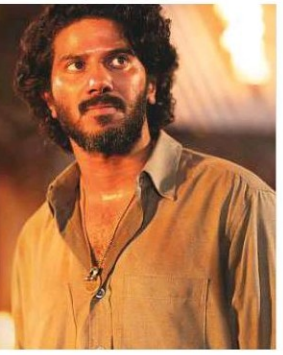


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Al Neyadi gets heart pumping for research

Heart-rate reading of astronauts key for study into cardiovascular risks

DUBAI

Gulf News Report

The Mohammad Bin Rashid Space Centre (MBRSC) has shared a glimpse into astronaut Sultan Al Neyadi's contribution to the cardiobreath experiment on the International Space Station (ISS). The experiment looks at how microgravity affects the heart and lungs and was done in collaboration with the Canadian Space Agency (CSA), Simon Fraser University, and The University of North Dakota.

During the experiment, astronauts on the ISS use a special shirt equipped with sensors to monitor their heart rate, blood pressure, blood oxygen levels, and ECG. The goal is to understand how space conditions impact astronauts' cardiovascular and respiratory systems, so they can stay healthy during their space journey.

Two stages

The experiment was conducted in two phases. First, Al Neyadi tried it using a custom device while on a stationary bike. He biked at a certain level for 25 minutes. Researchers tracked his heart rate, blood pressure, breathing, and activity levels both while cycling and when he stood still to measure his balance.

In the second step, Al Neyadi wore the same custom shirt while doing the same measurements. This time, he did them while using an exercise bike and while floating around in the ISS.

How the study helps

Scientists back on Earth will compare the results from both steps to find ways to reduce heart and lung risks during space travel. This research could also help older patients with on Earth who face similar issues.

Adnan Al Rais, Mission Manager, UAE Astronaut Programme, said: "The Car-



Sultan Al Neyadi



WATCH: Sultan Al Neyadi 'breaking a sweat' for cardiobreath study

diobreath study is critical to our understanding of long-term space travel and how different activities impact the crew aboard the ISS.

"This partnership with CSA and the North Dakota and Simon Fraser universities has fortified our knowledge of the dynamics of cardiovascular and respiratory functions in space and how the body adapts to microgravity. We are looking forward to studying this further as it contributes to the future of safer space travel."

Why it matters

The Cardiobreath study will support astronauts in investigating cardiovascular and respiratory systems and how they impact blood pressure. The study will also showcase the deconditioning that weightlessness can cause while shedding light on the comparison of data between male and female astronauts.

The UAE Astronaut Programme is one of the projects managed by MBRSC under the UAE's National Space Programme and funded by the ICT Fund of the Telecommunications and Digital Government Regulatory Authority (TDRA), which aims to support research and development in the ICT sector in the UAE and promote the country's integration on the global stage.