

# After nearly a year in space, Scott Kelly craves human contact

26 February 2016

After nearly a year in space, US astronaut Scott Kelly craves the simple pleasures of human contact, a shower, and a splash in a swimming pool.

Kelly and his Russian counterpart Mikhail Kornienko are scheduled to plunge back to Earth aboard a Soyuz spacecraft next week—speeding through the atmosphere at a pace of 17,500 miles (28,000 kilometers) per hour—before landing in Kazakhstan early on March 2.

Speaking to reporters this week via video link for a final time as he floated, microphone in hand, inside the International Space Station, the veteran astronaut admitted to mixed feelings about returning home.

"Leaving this amazing facility is going to be tough because I will probably never see it again," said Kelly, 52, who has flown to [space](#) four times in his career.

"But I certainly look forward to going back to Earth," he added from the sprawling spacecraft which circles about 250 miles (400 kilometers) above the Earth.

"There is a lot of great stuff down there that I miss." "Of all the concerns, that is my biggest," he added.

A New Jersey native and former Navy pilot, Kelly is also the father of two and the twin brother of astronaut Mark Kelly. Doctors are not sure if spending so long in space could eventually lead to cancer.

He did not say specifically who he misses most, but said he looks forward to reuniting with his loved ones. "It would always be hard to know," said Barry Rosenstein, professor of radiation oncology at the Icahn School of Medicine at Mount Sinai in New York.

"I think the hardest part is being isolated in a physical sense from people on the ground that are important to you," he said, listing his priorities as "human contact, the people you love on Earth, your family, your friends." Rosenstein described the amount of radiation Kelly has received as "relatively low," enough to raise his lifetime cancer risk in "the ballpark of a few percent."

When he gets back, he plans to head to Johnson Space Center in Houston for a battery of medical tests.

"And then I am going to go home and jump in my pool."

## Physical damage

Kelly said he expects to find he has lost bone density after a year in microgravity, and has noticed some changes in his vision similar to what he experienced the last time he was in space, a journey that lasted 159 days.

He and his twin brother are taking part in a battery of tests so that NASA can study the effects of long-term spaceflight on the body and mind, including CAT scans, MRIs, measurements of bone density, and changes to muscles and blood vessels, including the heart.

Scientists are also looking to compare any genetic changes from radiation in the two men.

Kelly described radiation's long-term effects as "the biggest unknown."

"Of all the concerns, that is my biggest," he added.

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"It would always be hard to know," said Barry Rosenstein, professor of radiation oncology at the Icahn School of Medicine at Mount Sinai in New York.

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But even if he does develop cancer years from

now, it would be difficult to pin down the root cause, © 2016 AFP since there are no molecular tests to identify a cancer that is caused by radiation versus cancer that is caused by any other reason, Rosenstein told AFP.

NASA has said the Kelly-Kornienko mission will help the US space agency prepare for a longer journey to deep space, including Mars, during which the radiation load would be far higher.

### **A changed perspective**

Despite yearning for a shower, after bathing with towelettes and using a toilet equipped with a suction tube for almost a year, Kelly managed to have some fun in space.

He grew a garden of zinnias, snacked on the first space lettuce, snapped vivid pictures of the Earth and floated around in a gorilla suit to raise schoolkids' interest in space.

He will return to Earth holding the record of the longest time spent in space by an American. In all, he will have lived 520 days of his life in space.

Russian Valeri Polyakov holds the all-time record for longest single space mission with nearly 438 days at the Mir Space Station in 1994 and 1995.

And Russian Gennady Padalka—who flew to space with Kelly and Kornienko last year—has spent a total of 878 days in space.

Kelly said things like records, souvenirs and mementos from space are not that important to him.

But what has changed is his perspective on the Earth.

"You definitely have a heightened sense of empathy and also you notice the effect of our presence on the planet," he said, mentioning the heavy pollution visible near the Himalayas.

"It makes you somewhat—if you weren't already—an environmentalist."

APA citation: After nearly a year in space, Scott Kelly craves human contact (2016, February 26)  
retrieved 26 September 2021 from <https://phys.org/news/2016-02-year-space-scott-kelly-craves.html>

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