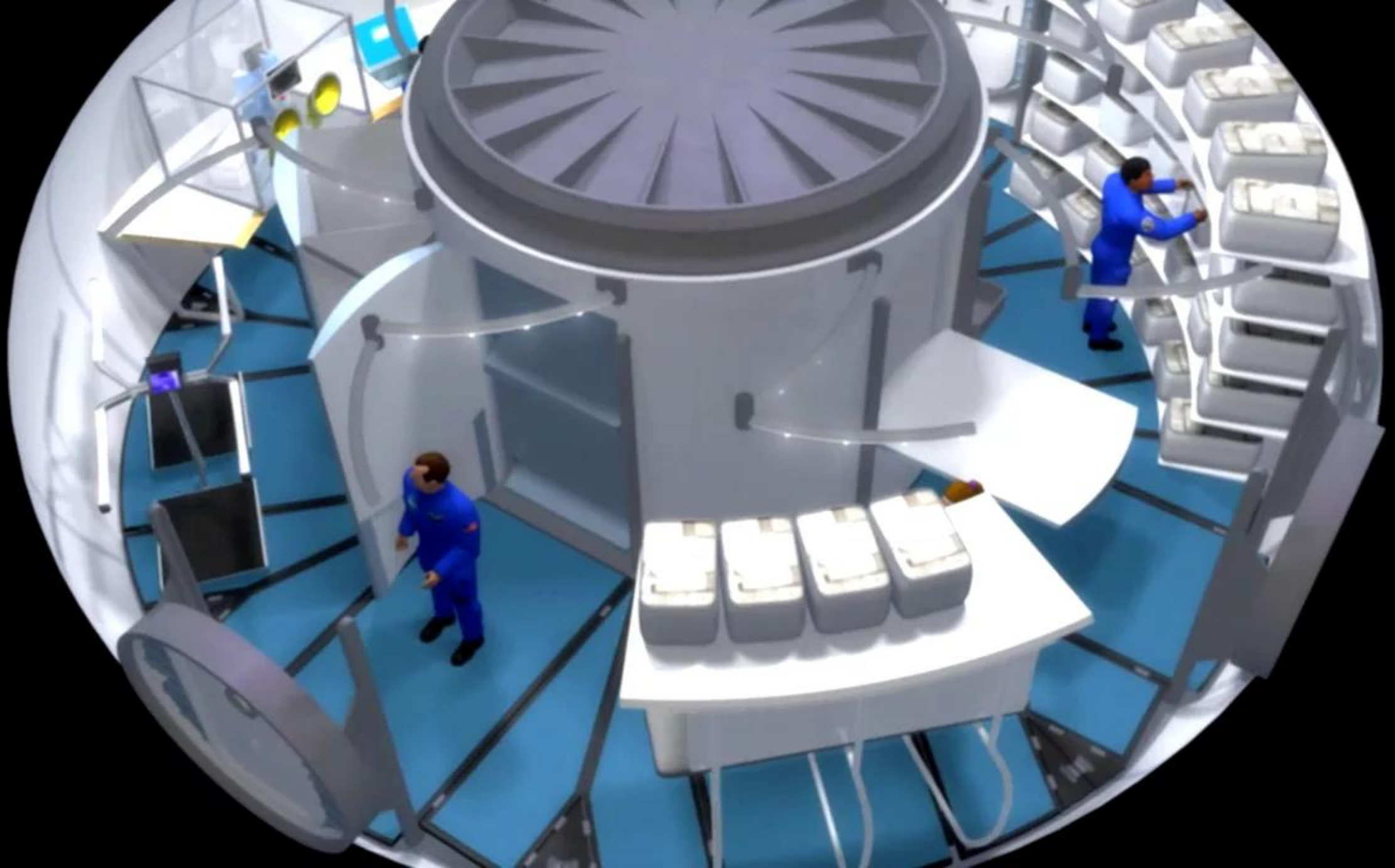

1
00:00:00,440 --> 00:00:05,920
My name is Gail Perusek and I manage Advanced
Exercise Concepts Development at NASA Glenn

2
00:00:05,920 --> 00:00:06,690
Research Center

3
00:00:06,690 --> 00:00:16,650
(Music)

4
00:00:16,650 --> 00:00:21,830
Crew members on the International Space Station
work out to stay health, keep their muscles

5
00:00:21,830 --> 00:00:27,280
and bones strong during the mission. And on
the Space Station we've got a whole gym

6
00:00:27,280 --> 00:00:31,940
of exercise equipment. There's the Advanced
Resistive Exercise Device which is like lifting

7
00:00:31,940 --> 00:00:34,820
free weights, there's a treadmill and there's
a cycle ergometer.

8
00:00:34,820 --> 00:00:45,010
The Journey to Mars will require that we preserve
this exercise capability or enhance it and

9
00:00:45,010 --> 00:00:51,579
do it in a much more resource efficient manner.
So the exercise countermeasures devices that

10
00:00:51,579 --> 00:00:58,210
we're developing are much more compact.
They'll take fewer vehicle resources like

11
00:00:58,210 --> 00:01:05,720

power. They'll have a smaller footprint
in the Mars transit vehicle or habitat and

12
00:01:05,720 --> 00:01:11,540
allow the crew members to arrive to Mars healthy
and fit and able to perform their mission.

13
00:01:11,540 --> 00:01:18,400
We're using analogues like the vertical
treadmill, behind me and also parabolic flight

14
00:01:18,400 --> 00:01:26,000
to test the equipment in true zero gravity
for 20 seconds to prove out and demonstrate