
HEART
to
HEART

1
00:00:00,180 --> 00:00:02,720
We're doing  something no one else has done before.

2
00:00:05,180 --> 00:00:07,900
This is really a
first foray, for NASA,

3
00:00:08,236 --> 00:00:12,486
of getting into the genetics,
the genome part of science.

4
00:00:12,636 --> 00:00:16,986
The whole twins experience is
really exciting for us, overall.

5
00:00:17,246 --> 00:00:19,446
When the one year
mission came about,

6
00:00:19,906 --> 00:00:22,786
and Scott Kelly was assigned,
there was a recognition

7
00:00:22,786 --> 00:00:24,736
that Scott had a twin.

8
00:00:25,886 --> 00:00:30,086
So, why not take the opportunity
to study one person in space

9
00:00:30,166 --> 00:00:31,486
and one person on the ground?

10
00:00:35,236 --> 00:00:40,026
In our experiment, Cardio Ox,
we're looking specifically

11
00:00:40,416 --> 00:00:43,236
at things that might

modify or have an effect

12
00:00:43,496 --> 00:00:44,766
on cardiovascular disease.

13
00:00:45,216 --> 00:00:47,996
The more we learn about
cardiovascular disease risk,

14
00:00:48,396 --> 00:00:50,266
the more it benefits
the everyday person.

15
00:00:50,656 --> 00:00:55,306
The focus of our laboratory is
to understand the implications

16
00:00:55,516 --> 00:00:58,756
of spaceflight weightlessness
on the cardiovascular system,

17
00:00:59,226 --> 00:01:03,506
as well as changes in the crew
members diet, activity levels,

18
00:01:04,166 --> 00:01:05,906
stress levels and
sleep patterns.

19
00:01:06,626 --> 00:01:11,096
These sorts of physiologic
changes are ones we expect

20
00:01:11,096 --> 00:01:14,916
for people who are on 6-month
transit mission to Mars.

21
00:01:15,106 --> 00:01:17,726
We want to understand what
are the potential health

22
00:01:17,726 --> 00:01:19,816
consequences and
more importantly,

23
00:01:20,096 --> 00:01:23,126
what can we do to prevent them.

24
00:01:23,176 --> 00:01:25,306
The tough thing about
doing spaceflight research,

25
00:01:25,886 --> 00:01:29,336
for example, our biological
samples, in our case, the blood

26
00:01:29,336 --> 00:01:32,496
and urine samples from which
we derive a lot of our science,

27
00:01:32,956 --> 00:01:35,956
they stay on station for a
long period of time and we have

28
00:01:35,956 --> 00:01:38,246
to wait for the next opportunity
for them to come down.

29
00:01:39,016 --> 00:01:42,706
We have long gaps in
getting spaceflight data,

30
00:01:42,746 --> 00:01:46,206
but in the meantime, you have
other research studies you're

31
00:01:46,206 --> 00:01:46,886
working on.

32

00:01:47,266 --> 00:01:51,426
We always stay busy, we always
keep asking new questions.