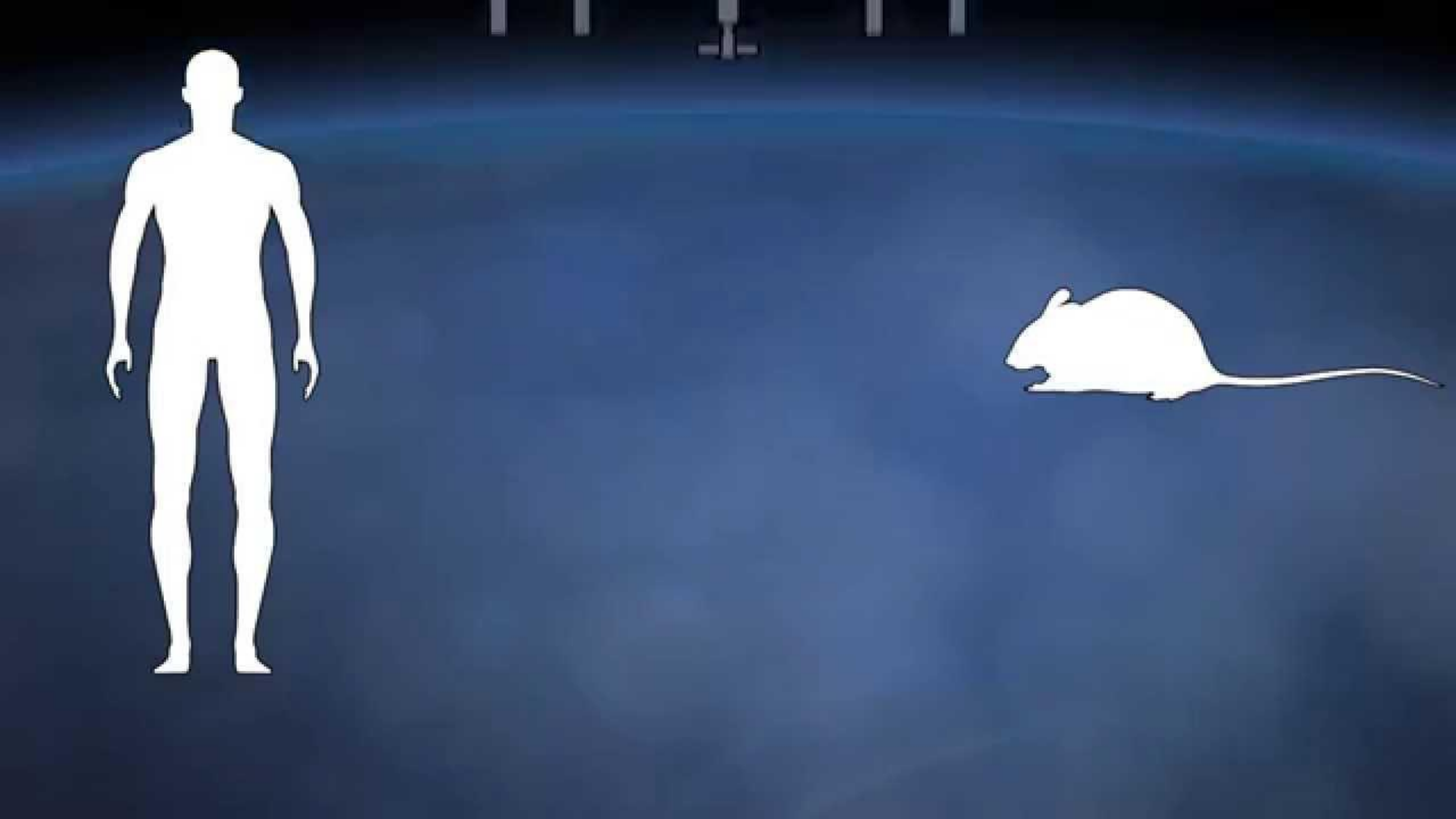

1
00:00:00,780 --> 00:00:05,829
[Music]

2
00:00:09,830 --> 00:00:07,590
space flight causes many changes in

3
00:00:11,430 --> 00:00:09,840
human health understanding these changes

4
00:00:13,430 --> 00:00:11,440
is important when planning for human

5
00:00:19,029 --> 00:00:13,440
exploration beyond low earth orbit and

6
00:00:22,390 --> 00:00:20,870
there are components of rodent biology

7
00:00:28,300 --> 00:00:22,400
that are directly related to human

8
00:00:33,910 --> 00:00:31,429
[Music]

9
00:00:36,150 --> 00:00:33,920
almost every gene found in humans so far

10
00:00:44,869 --> 00:00:36,160
has been found in a closely related form

11
00:00:53,750 --> 00:00:46,630
we can use the rodent research model for

12
00:00:57,350 --> 00:00:55,430
because changes occur more quickly in

13
00:00:58,510 --> 00:00:57,360

rodents we can study these changes more

14
00:01:04,650 --> 00:00:58,520
effectively

15
00:01:04,660 --> 00:01:11,429
[Music]

16
00:01:18,770 --> 00:01:12,950
on the space station the rodents will

17
00:01:18,780 --> 00:01:30,469
[Music]

18
00:01:34,310 --> 00:01:32,630
researchers use both similarities and

19
00:01:36,069 --> 00:01:34,320
differences between humans and rodents

20
00:01:39,350 --> 00:01:36,079
to gain insight into changes brought

21
00:01:40,950 --> 00:01:39,360
about by spaceflight

22
00:01:47,980 --> 00:01:40,960
these insights can improve the health of

23
00:01:47,990 --> 00:01:51,590
[Music]

24
00:01:54,630 --> 00:01:53,350
rodent space flight studies have already

25
00:01:58,290 --> 00:01:54,640
contributed to pharmaceutical

26
00:02:01,670 --> 00:01:58,300
development for treating osteoporosis

27
00:02:05,350 --> 00:02:03,270
the knowledge and applications that we

28
00:02:07,429 --> 00:02:05,360
gain from rodent research in space are