



1
00:00:01,467 --> 00:00:02,902
>> And welcome back inside
Mission Control Houston.

2
00:00:02,902 --> 00:00:05,771
[Inaudible] a look at Karen
Nyberg, her love of running,

3
00:00:05,771 --> 00:00:08,574
something she'll be doing quite
a bit of while she's in space.

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00:00:08,574 --> 00:00:10,776
Joining me now, another
NASA astronaut Dottie

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00:00:10,776 --> 00:00:13,579
Metcalf-Lindenburger,
also a pretty avid runner

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00:00:13,579 --> 00:00:14,914
from what I understand.

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00:00:14,914 --> 00:00:16,048
Dottie, thanks for being here.

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00:00:16,048 --> 00:00:19,618
So real quick, you run
with Karen quite a bit

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00:00:19,618 --> 00:00:23,122
>> Yeah. I did run with Karen
before she started training

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00:00:23,122 --> 00:00:25,491
and back when we
didn't have kids

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00:00:25,491 --> 00:00:28,994

and when we were doing this
during the shuttle days,

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00:00:28,994 --> 00:00:30,362

I was running with her.

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00:00:30,362 --> 00:00:32,364

We would meet once
a week at a track

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00:00:32,364 --> 00:00:35,534

with several other astronauts
and do some interval training,

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00:00:35,534 --> 00:00:39,038

and then we've had a chance
to do a marathon together,

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00:00:39,038 --> 00:00:41,373

some relay races,
which are kind of fun

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00:00:41,373 --> 00:00:43,976

because you drop a runner
off and then you have

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00:00:43,976 --> 00:00:48,214

to go run your leg and then
you hand off to another one.

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00:00:48,214 --> 00:00:50,382

So we've done that with
the [inaudible] too.

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00:00:50,382 --> 00:00:52,685

And then, the most recent
time I had a chance to run

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00:00:52,685 --> 00:00:54,854

with her was in Moscow.

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00:00:54,854 --> 00:00:56,422

There was a race there.

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00:00:56,422 --> 00:00:58,958

And it's -- it was a
totally different experience,

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00:00:58,958 --> 00:01:01,827

and so that was two summers ago

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00:01:01,827 --> 00:01:04,430

and we enjoyed cheering
each other on, and --

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00:01:04,430 --> 00:01:07,633

as we made these laps around
the monument in Moscow.

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00:01:07,633 --> 00:01:09,001

>> Very, very cool.

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00:01:09,001 --> 00:01:12,238

Now, you, kind of like Karen,
you're really into running.

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00:01:12,238 --> 00:01:14,406

It's a big part of your life.

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00:01:14,406 --> 00:01:15,641

You really advocate it.

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00:01:15,641 --> 00:01:16,809

You know, why?

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00:01:16,809 --> 00:01:17,843

>> Why run?

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00:01:17,843 --> 00:01:19,278

>> I'm one of those
people, I just --

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00:01:19,278 --> 00:01:21,046

I can't run as hard as I try.

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00:01:21,046 --> 00:01:24,316

>> Right. People always
say that, you know,

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00:01:24,316 --> 00:01:26,252

my sport is like their workout

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00:01:26,252 --> 00:01:28,053

for getting ready
for their sport.

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00:01:28,053 --> 00:01:30,055

But that's one of the
reasons why I run is

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00:01:30,055 --> 00:01:31,657

that you can do it anywhere.

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00:01:31,657 --> 00:01:36,262

I was just out at Wallops and I
was running there on the island

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00:01:36,262 --> 00:01:39,832

with another astronaut,
and it's really a sport

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00:01:39,832 --> 00:01:43,068

that you can take
anywhere, even into space.

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00:01:43,068 --> 00:01:45,437

And it's important
to do it in space.

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00:01:45,437 --> 00:01:51,110

So I've enjoyed running on other continents and in other states,

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00:01:51,110 --> 00:01:54,547

and it's something that just allows you to kind of get away

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00:01:54,547 --> 00:01:57,850

from what you've been doing for the day, and just kind

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00:01:57,850 --> 00:02:01,320

of a nice release, burn off some stress, or just think

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00:02:01,320 --> 00:02:03,322

about something else for a while.

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00:02:03,322 --> 00:02:06,458

>> And now real quick, running in space; I mean,

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00:02:06,458 --> 00:02:08,561

you can't just -- we have treadmills in space,

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00:02:08,561 --> 00:02:10,829

but you can't just, you know, turn it on and start running.

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00:02:10,829 --> 00:02:12,198

>> That's right.

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00:02:12,198 --> 00:02:16,468

It's actually important to strap yourself down, that's going

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00:02:16,468 --> 00:02:19,605

to add loading onto your
body, and we use that loading

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00:02:19,605 --> 00:02:22,508

to help our bones
stay strong in space.

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00:02:22,508 --> 00:02:25,611

And so the treadmill
was designed

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00:02:25,611 --> 00:02:28,647

to have both an automatic
phase and then, also,

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00:02:28,647 --> 00:02:30,749

a human propelled phase.

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00:02:30,749 --> 00:02:33,352

And that's important as
well because as you are

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00:02:33,352 --> 00:02:38,123

up in space longer, you want
to have some of that experience

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00:02:38,123 --> 00:02:40,159

of really pushing off

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00:02:40,159 --> 00:02:42,995

and generating your own
energy on the treadmill.

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00:02:42,995 --> 00:02:45,831

So they have the
two different ways

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00:02:45,831 --> 00:02:49,101

that you can work the treadmill,
but you have to strap down,

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00:02:49,101 --> 00:02:52,304

and that's what adds loading
to the body and adds loading

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00:02:52,304 --> 00:02:54,206

to the bones so that
they'll stay strong.

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00:02:54,206 --> 00:02:56,208

And it gives you that
cardiovascular workout

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00:02:56,208 --> 00:02:57,309

because that's something

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00:02:57,309 --> 00:02:59,645

that decreases is your
endurance in space.

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00:02:59,645 --> 00:03:02,481

So not only does bone density
decrease, but so does endurance,

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00:03:02,481 --> 00:03:06,685

and it's in very important
to have that treadmill.

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00:03:06,685 --> 00:03:08,287

>> And, you know, aside
from the treadmill,

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00:03:08,287 --> 00:03:10,189

you told me you haven't had
a chance to run in space --

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00:03:10,189 --> 00:03:11,557

>> Right.

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00:03:11,557 --> 00:03:12,858

>> -- but you have worked out
in space quite a bit before.

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00:03:12,858 --> 00:03:15,227

I mean, what are some of the
more common exercises also

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00:03:15,227 --> 00:03:17,763

that the astronauts are doing
while they're up in space?

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00:03:17,763 --> 00:03:19,131

>> Right. So I was
on a shuttle mission

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00:03:19,131 --> 00:03:22,868

and we have an ergometer, which
is basically like a bicycle,

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00:03:22,868 --> 00:03:26,705

and you could, again, do it,
like, just with different loads

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00:03:26,705 --> 00:03:30,976

on it, and you would dial in
the load that you needed and try

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00:03:30,976 --> 00:03:33,279

to do this at least every
other day while I was up there.

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00:03:33,279 --> 00:03:35,080

Now, for space station
astronauts,

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00:03:35,080 --> 00:03:37,716

it is really important to
work out every single day,

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00:03:37,716 --> 00:03:41,086
and they have at least
two hours of exercise

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00:03:41,086 --> 00:03:41,854
where they're lifting --

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00:03:41,854 --> 00:03:43,122
>> Wow.

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00:03:43,122 --> 00:03:44,657
>> -- on ARED, or they're
actually doing resistance

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00:03:44,657 --> 00:03:47,293
on the advanced resistive
exercise device;

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00:03:47,293 --> 00:03:50,963
and then they've also got either
CEVIS, which is a cycle --

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00:03:50,963 --> 00:03:56,268
bicycle, and -- or the treadmill
to run on; so a combination

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00:03:56,268 --> 00:03:59,738
of all that keeps them healthy
for the duration of, you know,

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00:03:59,738 --> 00:04:03,042
upwards of 160 days in space.

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00:04:03,042 --> 00:04:06,345
And so I really enjoyed
using the bicycle.

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00:04:06,345 --> 00:04:09,448

It was kind of fun to say,
hey, I've biked halfway

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00:04:09,448 --> 00:04:11,216

around the earth, or,
you know, I spent --

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00:04:11,216 --> 00:04:14,620

if you spend like 90
minutes, you've done an orbit.

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00:04:14,620 --> 00:04:16,822

And so I didn't quite make
a full orbit I don't think,

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00:04:16,822 --> 00:04:20,626

but it's a -- it's quite
a long bicycle trip.

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00:04:20,626 --> 00:04:23,362

But it was a good workout,
and when I returned home,

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00:04:23,362 --> 00:04:26,999

I did notice that my endurance
had decreased a little bit

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00:04:26,999 --> 00:04:30,235

in the time, but I felt
that at least I had tried

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00:04:30,235 --> 00:04:32,938

to maintain a little bit
of it with the bicycle.

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00:04:32,938 --> 00:04:35,140

>> Okay. Now, you're
into running.

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00:04:35,140 --> 00:04:38,644

Karen's, you know, as we just saw, really into running.

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00:04:38,644 --> 00:04:39,945

Any advice?

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00:04:39,945 --> 00:04:42,114

Anything that you could tell someone like me who just,

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00:04:42,114 --> 00:04:43,215

you know, can't get into it?

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00:04:43,215 --> 00:04:46,018

You know, what really drives you to --

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00:04:46,018 --> 00:04:48,887

>> Well, some advice that I would give is to start slow.

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00:04:48,887 --> 00:04:50,789

Don't just go out and say I'm going

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00:04:50,789 --> 00:04:53,158

to run a marathon tomorrow, because it's very difficult.

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00:04:53,158 --> 00:04:53,959

>> That won't work?

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00:04:53,959 --> 00:04:55,160

>> That's not going to work.

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00:04:55,160 --> 00:04:58,163

So you want to start out in chunks, and it's great

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00:04:58,163 --> 00:04:59,431
to do it with other people.

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00:04:59,431 --> 00:05:01,266
I think that's one of the
reasons I love running is

118
00:05:01,266 --> 00:05:04,837
that I've met many different
people throughout my journey

119
00:05:04,837 --> 00:05:06,605
since I've been running
since ninth grade,

120
00:05:06,605 --> 00:05:10,943
and just had the chance to
talk with different people.

121
00:05:10,943 --> 00:05:14,046
So meet up with a friend,
because you're definitely going

122
00:05:14,046 --> 00:05:16,115
to tag up with them,
you don't want

123
00:05:16,115 --> 00:05:17,616
to leave them hanging out there.

124
00:05:17,616 --> 00:05:22,154
So -- and then, find
something to run for.

125
00:05:22,154 --> 00:05:25,557
There's all these different
types of races that have causes,

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00:05:25,557 --> 00:05:28,060
and it feels good to

run for someone else

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00:05:28,060 --> 00:05:31,130
and to do it for the cause.

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00:05:31,130 --> 00:05:33,632
So those three things
might help you get out.

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00:05:33,632 --> 00:05:36,001
I've been trying to give some of
this advice to my own daughter

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00:05:36,001 --> 00:05:38,737
because she's just starting
to do running in PE.

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00:05:38,737 --> 00:05:42,174
And, again, she's starting
out with a small distance

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00:05:42,174 --> 00:05:44,543
and she'll continue to
build up her endurance,

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00:05:44,543 --> 00:05:46,111
and that's what people
need to do.

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00:05:46,111 --> 00:05:47,646
But it's a lifelong sport.

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00:05:47,646 --> 00:05:49,181
It's one you have to
listen to your body.

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00:05:49,181 --> 00:05:51,683
You don't want to injure
yourself, so you do have

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00:05:51,683 --> 00:05:55,020

to listen to your body and
that, but it's a great sport

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00:05:55,020 --> 00:05:58,157

to take anywhere
-- even to space.

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00:05:58,157 --> 00:05:59,324

>> Very cool.

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00:05:59,324 --> 00:06:00,793

Hopefully, I can start
getting into it now.

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00:06:00,793 --> 00:06:01,460

>> Yeah, I hope so.

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00:06:01,460 --> 00:06:02,594

>> I'll go drag some

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00:06:02,594 --> 00:06:03,362

of my friends off the
couch or something --

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00:06:03,362 --> 00:06:04,196

>> Sounds good.

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00:06:04,196 --> 00:06:04,696

>> -- and see what we can do.

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00:06:04,696 --> 00:06:06,031

All right.

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00:06:06,031 --> 00:06:08,600

Well, again, NASA astronaut
Dottie Metcalf-Lindenburger,

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00:06:08,600 --> 00:06:11,503

thanks so much for joining
me today, giving a little bit

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00:06:11,503 --> 00:06:14,873

of insight into why you and
Karen love running, what someone

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00:06:14,873 --> 00:06:16,675

like me can do, and also
what they're doing in space.

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00:06:16,675 --> 00:06:17,543

I really appreciate it.

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00:06:17,543 --> 00:06:18,444

>> It was a pleasure.