

WEBVTT

NOTE duration:"00:29:44"

NOTE recognizability:0.876

NOTE language:en-us

NOTE Confidence: 0.886608268

00:00:10.200 --> 00:00:10.944 Hello everyone.

NOTE Confidence: 0.886608268

00:00:10.944 --> 00:00:12.804 Today we are welcoming back

NOTE Confidence: 0.886608268

00:00:12.804 --> 00:00:13.920 Doctor Lindsay McAlpine.

NOTE Confidence: 0.886608268

00:00:13.920 --> 00:00:15.600 Lindsay was here for the

NOTE Confidence: 0.886608268

00:00:15.600 --> 00:00:16.884 Kindred Cafe in July,

NOTE Confidence: 0.886608268

00:00:16.884 --> 00:00:18.810 and she has kindly offered to

NOTE Confidence: 0.886608268

00:00:18.873 --> 00:00:20.987 come back and answer a few more

NOTE Confidence: 0.886608268

00:00:20.987 --> 00:00:23.014 of the questions that were in the

NOTE Confidence: 0.886608268

00:00:23.014 --> 00:00:24.736 chat when Doctor Lindsay McAlpine

NOTE Confidence: 0.886608268

00:00:24.736 --> 00:00:26.556 is a neuro neuroimmunologist and

NOTE Confidence: 0.886608268

00:00:26.556 --> 00:00:28.664 an instructor in the Division

NOTE Confidence: 0.886608268

00:00:28.664 --> 00:00:30.348 of Neurological Infections and

NOTE Confidence: 0.886608268

00:00:30.348 --> 00:00:32.272 Global Neurology at the Yale

NOTE Confidence: 0.886608268

00:00:32.272 --> 00:00:33.636 University School of Medicine.
NOTE Confidence: 0.886608268

00:00:33.640 --> 00:00:35.422 She started the Neuro COVID Clinic
NOTE Confidence: 0.886608268

00:00:35.422 --> 00:00:37.377 at Yale in October 2020 and
NOTE Confidence: 0.886608268

00:00:37.377 --> 00:00:38.789 sees patients with neurological
NOTE Confidence: 0.886608268

00:00:38.789 --> 00:00:40.600 issues related to long COVID.
NOTE Confidence: 0.886608268

00:00:40.600 --> 00:00:41.950 She is an investigator in the
NOTE Confidence: 0.886608268

00:00:41.950 --> 00:00:43.665 COVID MIND study at Yale and her
NOTE Confidence: 0.886608268

00:00:43.665 --> 00:00:44.940 research interests are related to
NOTE Confidence: 0.886608268

00:00:44.940 --> 00:00:46.619 the pathophysiology of cognitive
NOTE Confidence: 0.886608268

00:00:46.619 --> 00:00:48.511 impairment after COVID-19 using
NOTE Confidence: 0.886608268

00:00:48.511 --> 00:00:50.200 several modalities including MRI.
NOTE Confidence: 0.815263084444444

00:00:52.920 --> 00:00:54.888 A question for Doctor McAlpine if
NOTE Confidence: 0.815263084444444

00:00:54.888 --> 00:00:56.633 there is time, can small fiber
NOTE Confidence: 0.815263084444444

00:00:56.633 --> 00:00:57.888 neuropathy resolve over time or
NOTE Confidence: 0.815263084444444

00:00:57.888 --> 00:00:59.678 is it permanent for Progressive?
NOTE Confidence: 0.815263084444444

00:00:59.680 --> 00:01:01.560 What are some of the theories behind this?

NOTE Confidence: 0.815263084444444

00:01:01.560 --> 00:01:03.225 The 'cause, this common long

NOTE Confidence: 0.815263084444444

00:01:03.225 --> 00:01:04.557 COVID long back symptom?

NOTE Confidence: 0.879207305

00:01:08.040 --> 00:01:11.608 Yeah, so I think that's a important question

NOTE Confidence: 0.879207305

00:01:11.608 --> 00:01:14.984 because so many patients with long COVID

NOTE Confidence: 0.879207305

00:01:14.984 --> 00:01:18.120 are found to have small fiber neuropathy.

NOTE Confidence: 0.879207305

00:01:18.120 --> 00:01:22.120 So the first does it resolve over time?

NOTE Confidence: 0.879207305

00:01:22.120 --> 00:01:25.754 In a lot of cases it does resolve

NOTE Confidence: 0.879207305

00:01:25.754 --> 00:01:28.838 and in other cases it doesn't.

NOTE Confidence: 0.879207305

00:01:28.840 --> 00:01:31.395 Usually there's a complicating factor

NOTE Confidence: 0.879207305

00:01:31.395 --> 00:01:34.204 when it's not resolving like diabetes

NOTE Confidence: 0.879207305

00:01:34.204 --> 00:01:36.878 or pre diabetes can be another reason

NOTE Confidence: 0.879207305

00:01:36.878 --> 00:01:39.320 to have small fiber neuropathy,

NOTE Confidence: 0.879207305

00:01:39.320 --> 00:01:42.600 another disease that's damaging

NOTE Confidence: 0.879207305

00:01:42.600 --> 00:01:45.880 and affecting the nerves.

NOTE Confidence: 0.879207305

00:01:45.880 --> 00:01:48.400 Is it permanent or progressive?

NOTE Confidence: 0.879207305

00:01:48.400 --> 00:01:52.710 After COVID, in my experience
NOTE Confidence: 0.879207305

00:01:52.710 --> 00:01:55.880 it is worst at onset,
NOTE Confidence: 0.879207305

00:01:55.880 --> 00:02:00.320 so it's the worst right after the infection.
NOTE Confidence: 0.879207305

00:02:00.320 --> 00:02:02.528 Usually comes on within one to
NOTE Confidence: 0.879207305

00:02:02.528 --> 00:02:04.494 six weeks after the infection
NOTE Confidence: 0.879207305

00:02:04.494 --> 00:02:06.960 and that's the worst it gets.
NOTE Confidence: 0.879207305

00:02:06.960 --> 00:02:09.235 It doesn't usually progress unless
NOTE Confidence: 0.879207305

00:02:09.235 --> 00:02:11.130 you have another inflammatory
NOTE Confidence: 0.879207305

00:02:11.130 --> 00:02:12.720 influence causing progression.
NOTE Confidence: 0.879207305

00:02:12.720 --> 00:02:16.320 And what are the theories behind this?
NOTE Confidence: 0.879207305

00:02:16.320 --> 00:02:20.970 So one of the theories is that
NOTE Confidence: 0.879207305

00:02:20.970 --> 00:02:24.168 there is during the acute infection
NOTE Confidence: 0.879207305

00:02:24.168 --> 00:02:26.416 there's such significant inflammation
NOTE Confidence: 0.879207305

00:02:26.416 --> 00:02:28.771 that's triggered that it damages
NOTE Confidence: 0.879207305

00:02:28.771 --> 00:02:30.315 the small fiber nerves.
NOTE Confidence: 0.879207305

00:02:30.320 --> 00:02:32.516 The exact mechanism of the damage,

NOTE Confidence: 0.879207305

00:02:32.520 --> 00:02:35.999 we're not sure is that molecular mimicry.

NOTE Confidence: 0.879207305

00:02:36.000 --> 00:02:38.996 So do the small nerve fibers to

NOTE Confidence: 0.879207305

00:02:38.996 --> 00:02:41.372 the immune system look like the

NOTE Confidence: 0.879207305

00:02:41.372 --> 00:02:43.519 virus and therefore cross react?

NOTE Confidence: 0.879207305

00:02:43.520 --> 00:02:46.080 That's one of the thoughts.

NOTE Confidence: 0.879207305

00:02:46.080 --> 00:02:49.176 But what we think it is given the

NOTE Confidence: 0.879207305

00:02:49.176 --> 00:02:52.296 time of onset post viral autoimmune

NOTE Confidence: 0.879207305

00:02:52.296 --> 00:02:54.664 conditions almost always happen

NOTE Confidence: 0.879207305

00:02:54.664 --> 00:02:58.225 within the first one to 12 weeks

NOTE Confidence: 0.879207305

00:02:58.225 --> 00:02:59.917 after a viral infection.

NOTE Confidence: 0.879207305

00:02:59.920 --> 00:03:02.776 And so because it comes on in that

NOTE Confidence: 0.879207305

00:03:02.776 --> 00:03:05.160 window and is maximal at onset,

NOTE Confidence: 0.879207305

00:03:05.160 --> 00:03:08.268 it makes sense that it's an autoimmune

NOTE Confidence: 0.879207305

00:03:08.268 --> 00:03:09.600 condition that's triggered.

NOTE Confidence: 0.879207305

00:03:09.600 --> 00:03:13.160 And often we see that there are also

NOTE Confidence: 0.879207305

00:03:13.160 --> 00:03:15.960 auto antibodies that are developed
NOTE Confidence: 0.879207305

00:03:15.960 --> 00:03:19.440 Like I mentioned during the panel
NOTE Confidence: 0.879207305

00:03:19.440 --> 00:03:22.972 last time that the University of
NOTE Confidence: 0.879207305

00:03:22.972 --> 00:03:25.937 Saint Louis or Universe Washington
NOTE Confidence: 0.879207305

00:03:25.937 --> 00:03:28.448 University in Saint Louis has an
NOTE Confidence: 0.879207305

00:03:28.448 --> 00:03:30.272 excellent panel that tests for some
NOTE Confidence: 0.879207305

00:03:30.272 --> 00:03:31.920 auto antibodies that are linked
NOTE Confidence: 0.879207305

00:03:31.920 --> 00:03:33.236 with small fibro neuropathy.
NOTE Confidence: 0.896683844545454

00:03:35.880 --> 00:03:38.337 And you know that addresses one of
NOTE Confidence: 0.896683844545454

00:03:38.337 --> 00:03:42.460 the other questions that when when
NOTE Confidence: 0.896683844545454

00:03:42.460 --> 00:03:44.360 you have an autoimmune disease,
NOTE Confidence: 0.896683844545454

00:03:44.360 --> 00:03:47.192 every time you get a viral
NOTE Confidence: 0.896683844545454

00:03:47.192 --> 00:03:49.800 infection or any infection really,
NOTE Confidence: 0.896683844545454

00:03:49.800 --> 00:03:52.158 you can have worsening of your
NOTE Confidence: 0.896683844545454

00:03:52.158 --> 00:03:53.730 autoimmune symptoms because you're
NOTE Confidence: 0.896683844545454

00:03:53.790 --> 00:03:55.946 turning on and turning up and revving

NOTE Confidence: 0.896683844545454
00:03:55.946 --> 00:03:58.334 up the immune system and that's going
NOTE Confidence: 0.896683844545454
00:03:58.334 --> 00:04:00.434 to Rev up your autoimmune disease.
NOTE Confidence: 0.896683844545454
00:04:00.440 --> 00:04:02.568 So one of the other questions was that
NOTE Confidence: 0.896683844545454
00:04:02.568 --> 00:04:04.438 they got worse during viral infections
NOTE Confidence: 0.896683844545454
00:04:04.438 --> 00:04:07.240 after this that that makes a lot of sense.
NOTE Confidence: 0.711080748823529
00:04:08.920 --> 00:04:10.280 Thank you so much.
NOTE Confidence: 0.711080748823529
00:04:10.280 --> 00:04:12.320 Next question is related to migraine
NOTE Confidence: 0.711080748823529
00:04:12.388 --> 00:04:14.023 and face a recent appointment
NOTE Confidence: 0.711080748823529
00:04:14.023 --> 00:04:15.358 with an MECFS practitioner.
NOTE Confidence: 0.711080748823529
00:04:15.358 --> 00:04:17.392 It was proposed that the initial
NOTE Confidence: 0.711080748823529
00:04:17.392 --> 00:04:19.211 long COVID symptoms were atypical
NOTE Confidence: 0.711080748823529
00:04:19.211 --> 00:04:20.655 migraine that after persisting
NOTE Confidence: 0.711080748823529
00:04:20.655 --> 00:04:22.960 caused POTS a month later and all
NOTE Confidence: 0.711080748823529
00:04:22.960 --> 00:04:24.779 the other symptoms my husband has
NOTE Confidence: 0.711080748823529
00:04:24.779 --> 00:04:26.657 been bedridden since the fall and
NOTE Confidence: 0.711080748823529

00:04:26.657 --> 00:04:28.158 extremely severe at this point.
NOTE Confidence: 0.711080748823529

00:04:28.160 --> 00:04:31.460 Does the explanation of untreated
NOTE Confidence: 0.711080748823529

00:04:31.460 --> 00:04:33.720 persistent migraine track? So
NOTE Confidence: 0.924239775

00:04:33.720 --> 00:04:36.858 I think that in some individuals
NOTE Confidence: 0.924239775

00:04:36.858 --> 00:04:40.023 that untreated migraine is definitely
NOTE Confidence: 0.924239775

00:04:40.023 --> 00:04:44.680 considering contributing to long COVID.
NOTE Confidence: 0.924239775

00:04:44.680 --> 00:04:48.565 We've seen an increase in new migraines
NOTE Confidence: 0.924239775

00:04:48.565 --> 00:04:51.725 after COVID and also an increase in
NOTE Confidence: 0.924239775

00:04:51.725 --> 00:04:54.272 severity of migraines after COVID in
NOTE Confidence: 0.924239775

00:04:54.272 --> 00:04:56.798 people who have already had migraines.
NOTE Confidence: 0.924239775

00:04:56.800 --> 00:05:00.368 So as a neurologist we call almost all
NOTE Confidence: 0.924239775

00:05:00.368 --> 00:05:03.417 headache migraine because it is mediated
NOTE Confidence: 0.924239775

00:05:03.417 --> 00:05:06.007 through the same trigeminal ganglion
NOTE Confidence: 0.924239775

00:05:06.007 --> 00:05:08.757 which mediates pain in the brain.
NOTE Confidence: 0.924239775

00:05:08.760 --> 00:05:14.792 So I don't think that migraine is an
NOTE Confidence: 0.924239775

00:05:14.792 --> 00:05:17.920 explanation for all of long COVID.

NOTE Confidence: 0.924239775

00:05:17.920 --> 00:05:18.880 It's certainly

NOTE Confidence: 0.80189802

00:05:21.560 --> 00:05:25.550 is common in some of is commonly

NOTE Confidence: 0.80189802

00:05:25.550 --> 00:05:28.005 comorbid with some of the conditions

NOTE Confidence: 0.80189802

00:05:28.005 --> 00:05:30.702 that come on after COVID like pots,

NOTE Confidence: 0.80189802

00:05:30.702 --> 00:05:33.066 pots and migraine can be linked

NOTE Confidence: 0.80189802

00:05:33.066 --> 00:05:35.500 same with you know elderstand lows

NOTE Confidence: 0.80189802

00:05:35.500 --> 00:05:37.764 or chronic fatigue or mast cell

NOTE Confidence: 0.80189802

00:05:37.764 --> 00:05:39.274 and migraine are closely linked.

NOTE Confidence: 0.80189802

00:05:39.280 --> 00:05:41.986 So there's a connection but I

NOTE Confidence: 0.80189802

00:05:41.986 --> 00:05:44.520 don't think it's the entire,

NOTE Confidence: 0.80189802

00:05:44.520 --> 00:05:47.478 you know explanation.

NOTE Confidence: 0.80189802

00:05:47.480 --> 00:05:50.096 And so treating each of those

NOTE Confidence: 0.80189802

00:05:50.096 --> 00:05:51.840 individual conditions is what

NOTE Confidence: 0.80189802

00:05:51.840 --> 00:05:54.948 is going to kind of remove the

NOTE Confidence: 0.80189802

00:05:54.948 --> 00:05:57.144 roadblocks to recovery and making

NOTE Confidence: 0.80189802

00:05:57.144 --> 00:05:59.736 sure that each migraine is treated
NOTE Confidence: 0.80189802

00:05:59.736 --> 00:06:01.760 effectively is very important.
NOTE Confidence: 0.80189802

00:06:01.760 --> 00:06:04.496 You want to treat a migraine at the
NOTE Confidence: 0.80189802

00:06:04.496 --> 00:06:07.068 very onset of the headache before it
NOTE Confidence: 0.80189802

00:06:07.068 --> 00:06:10.560 ramps up into a a major painful attack.
NOTE Confidence: 0.969185828

00:06:13.200 --> 00:06:16.418 Some of the other questions include head
NOTE Confidence: 0.969185828

00:06:16.418 --> 00:06:20.200 pressure and pain at the back of the head.
NOTE Confidence: 0.969185828

00:06:20.200 --> 00:06:22.384 So we've seen quite a bit
NOTE Confidence: 0.969185828

00:06:22.384 --> 00:06:23.476 of occipital neuralgia.
NOTE Confidence: 0.969185828

00:06:23.480 --> 00:06:27.808 So the occipital nerves comes out
NOTE Confidence: 0.969185828

00:06:27.808 --> 00:06:30.944 of the neck and it comes through the
NOTE Confidence: 0.969185828

00:06:30.944 --> 00:06:33.434 neck muscles and tight neck muscles
NOTE Confidence: 0.969185828

00:06:33.434 --> 00:06:36.575 pinch the occipital nerve and then it
NOTE Confidence: 0.969185828

00:06:36.575 --> 00:06:38.900 causes this numbness, tingling pain
NOTE Confidence: 0.969185828

00:06:38.900 --> 00:06:41.840 in this distribution on each side.
NOTE Confidence: 0.969185828

00:06:41.840 --> 00:06:45.600 So we've seen that quite frequently as well.

NOTE Confidence: 0.969185828

00:06:45.600 --> 00:06:47.480 And then there's a question here about what,

NOTE Confidence: 0.969185828

00:06:47.480 --> 00:06:49.280 what's headache and what's migraine.

NOTE Confidence: 0.969185828

00:06:49.280 --> 00:06:51.440 So I think we call almost

NOTE Confidence: 0.969185828

00:06:51.440 --> 00:06:52.160 everything migraine.

NOTE Confidence: 0.969185828

00:06:52.160 --> 00:06:53.918 Typically a migraine can be associated

NOTE Confidence: 0.969185828

00:06:53.918 --> 00:06:55.960 with a bunch of other symptoms.

NOTE Confidence: 0.969185828

00:06:55.960 --> 00:06:57.935 So migraine can be associated

NOTE Confidence: 0.969185828

00:06:57.935 --> 00:06:59.515 with sensitivity to light,

NOTE Confidence: 0.969185828

00:06:59.520 --> 00:07:02.520 sensitivity to sound and smell.

NOTE Confidence: 0.969185828

00:07:02.520 --> 00:07:05.400 You become sensitized to everything.

NOTE Confidence: 0.969185828

00:07:05.400 --> 00:07:08.730 It's associated with nausea because migraine

NOTE Confidence: 0.969185828

00:07:08.730 --> 00:07:12.400 involves the vagus nerve which slows down,

NOTE Confidence: 0.969185828

00:07:12.400 --> 00:07:14.878 causes some gastroparesis as well and it

NOTE Confidence: 0.969185828

00:07:14.878 --> 00:07:18.200 also can be associated with neck discomfort,

NOTE Confidence: 0.969185828

00:07:18.200 --> 00:07:20.900 neck pain, irritability,

NOTE Confidence: 0.969185828

00:07:20.900 --> 00:07:23.600 word finding difficulty,
NOTE Confidence: 0.969185828

00:07:23.600 --> 00:07:25.058 what else specifically?
NOTE Confidence: 0.969185828

00:07:25.058 --> 00:07:26.516 Aura as well.
NOTE Confidence: 0.969185828

00:07:26.520 --> 00:07:30.744 So visual aura, sensory aura can all be
NOTE Confidence: 0.969185828

00:07:30.744 --> 00:07:33.359 involved and so migraine is is a syndrome.
NOTE Confidence: 0.969185828

00:07:33.360 --> 00:07:34.656 It's just not head,
NOTE Confidence: 0.969185828

00:07:34.656 --> 00:07:36.276 it's not just head pain.
NOTE Confidence: 0.969185828

00:07:36.280 --> 00:07:37.120 Next question.
NOTE Confidence: 0.92262276

00:07:41.520 --> 00:07:42.675 Next question is,
NOTE Confidence: 0.92262276

00:07:42.675 --> 00:07:44.600 any suggestions for screen sensitivity?
NOTE Confidence: 0.92262276

00:07:44.600 --> 00:07:47.965 Since COVID, I have developed
NOTE Confidence: 0.92262276

00:07:47.965 --> 00:07:49.936 atypical treadmill neuralgia and
NOTE Confidence: 0.92262276

00:07:49.936 --> 00:07:53.480 feel like I am in a sci-fi film.
NOTE Confidence: 0.92262276

00:07:53.480 --> 00:07:55.320 Looking at any screen through my right eye,
NOTE Confidence: 0.92262276

00:07:55.320 --> 00:07:57.680 sets the entire left side of my face on fire,
NOTE Confidence: 0.92262276

00:07:57.680 --> 00:07:59.516 even with my left eye closed.

NOTE Confidence: 0.92262276

00:07:59.520 --> 00:08:00.228 Incredibly debilitating.

NOTE Confidence: 0.92262276

00:08:00.228 --> 00:08:01.998 Can't work hard to function.

NOTE Confidence: 0.797893436

00:08:03.240 --> 00:08:05.652 Yeah. So I think when, when I was

NOTE Confidence: 0.797893436

00:08:05.652 --> 00:08:06.800 looking through a lot of the questions,

NOTE Confidence: 0.797893436

00:08:06.800 --> 00:08:09.368 I think this is really important

NOTE Confidence: 0.797893436

00:08:09.368 --> 00:08:11.928 because not everything that comes

NOTE Confidence: 0.797893436

00:08:11.928 --> 00:08:15.120 on after COVID is long COVID.

NOTE Confidence: 0.797893436

00:08:15.120 --> 00:08:17.808 So a lot of patients have other

NOTE Confidence: 0.797893436

00:08:17.808 --> 00:08:20.517 conditions that come on after long COVID.

NOTE Confidence: 0.797893436

00:08:20.520 --> 00:08:23.754 So I would call new trigeminal neuralgia,

NOTE Confidence: 0.797893436

00:08:23.760 --> 00:08:24.768 that's trigeminal neuralgia.

NOTE Confidence: 0.797893436

00:08:24.768 --> 00:08:27.120 We're not going to treat it any

NOTE Confidence: 0.797893436

00:08:27.179 --> 00:08:29.093 differently because it came on after

NOTE Confidence: 0.797893436

00:08:29.093 --> 00:08:31.231 COVID and I wouldn't put it in

NOTE Confidence: 0.797893436

00:08:31.231 --> 00:08:32.833 that bucket of long COVID either.

NOTE Confidence: 0.797893436

00:08:32.840 --> 00:08:34.760 And I think that's important
NOTE Confidence: 0.797893436

00:08:34.760 --> 00:08:36.680 because you want your physicians,
NOTE Confidence: 0.797893436

00:08:36.680 --> 00:08:39.272 your care team to treat that
NOTE Confidence: 0.797893436

00:08:39.272 --> 00:08:41.000 condition like that condition,
NOTE Confidence: 0.797893436

00:08:41.000 --> 00:08:43.360 no different because of COVID.
NOTE Confidence: 0.797893436

00:08:43.360 --> 00:08:45.598 And so trigeminal neuralgia is really
NOTE Confidence: 0.797893436

00:08:45.600 --> 00:08:47.840 painful, uncomfortable, awful condition.
NOTE Confidence: 0.797893436

00:08:47.840 --> 00:08:50.080 I'm sorry that happened.
NOTE Confidence: 0.797893436

00:08:50.080 --> 00:08:51.808 And there's a lot of different
NOTE Confidence: 0.797893436

00:08:51.808 --> 00:08:52.960 therapies you can try,
NOTE Confidence: 0.797893436

00:08:52.960 --> 00:08:55.219 making sure you get a full work up with
NOTE Confidence: 0.797893436

00:08:55.219 --> 00:08:57.398 imaging and everything is really important.
NOTE Confidence: 0.797893436

00:08:57.400 --> 00:08:59.200 And then going through, you know,
NOTE Confidence: 0.797893436

00:08:59.200 --> 00:09:00.912 just like any condition,
NOTE Confidence: 0.797893436

00:09:00.912 --> 00:09:03.918 it's important to try each thing and
NOTE Confidence: 0.797893436

00:09:03.918 --> 00:09:06.438 and see what works for you 'cause

NOTE Confidence: 0.797893436

00:09:06.438 --> 00:09:09.718 it's going to be different for each patient.

NOTE Confidence: 0.797893436

00:09:09.720 --> 00:09:11.519 One of the other things is that,

NOTE Confidence: 0.797893436

00:09:11.520 --> 00:09:12.330 you know,

NOTE Confidence: 0.797893436

00:09:12.330 --> 00:09:14.760 seeing patients with Yon Bray syndrome,

NOTE Confidence: 0.797893436

00:09:14.760 --> 00:09:19.170 which is a distal progressive numbness,

NOTE Confidence: 0.797893436

00:09:19.170 --> 00:09:23.120 tingling and weakness that develops,

NOTE Confidence: 0.797893436

00:09:23.120 --> 00:09:24.716 that is going to come on.

NOTE Confidence: 0.797893436

00:09:24.720 --> 00:09:26.280 We do see it after COVID,

NOTE Confidence: 0.797893436

00:09:26.280 --> 00:09:28.037 we do see it after the vaccines.

NOTE Confidence: 0.797893436

00:09:28.040 --> 00:09:30.170 We see it after any viral

NOTE Confidence: 0.797893436

00:09:30.170 --> 00:09:31.235 infection or vaccine.

NOTE Confidence: 0.797893436

00:09:31.240 --> 00:09:34.480 It has reports and it's an autoimmune attack

NOTE Confidence: 0.797893436

00:09:34.480 --> 00:09:37.920 of the myelin on the peripheral nerves.

NOTE Confidence: 0.797893436

00:09:37.920 --> 00:09:40.615 And so it it's triggered by the

NOTE Confidence: 0.797893436

00:09:40.615 --> 00:09:43.298 infection and then it comes on within

NOTE Confidence: 0.797893436

00:09:43.298 --> 00:09:46.320 a couple few weeks after the infection.
NOTE Confidence: 0.797893436

00:09:46.320 --> 00:09:49.146 And so if you're kind of falling into that
NOTE Confidence: 0.797893436

00:09:49.146 --> 00:09:51.875 long COVID bucket of after three months,
NOTE Confidence: 0.797893436

00:09:51.880 --> 00:09:54.008 then it's not going to be related
NOTE Confidence: 0.797893436

00:09:54.008 --> 00:09:54.920 to Guillain Barre.
NOTE Confidence: 0.797893436

00:09:54.920 --> 00:09:59.690 And it has a very classic symptoms
NOTE Confidence: 0.797893436

00:09:59.690 --> 00:10:02.120 and timeline too.
NOTE Confidence: 0.797893436

00:10:02.120 --> 00:10:04.360 So one of the other questions is
NOTE Confidence: 0.797893436

00:10:04.360 --> 00:10:07.440 a patient wrote in about being
NOTE Confidence: 0.797893436

00:10:07.440 --> 00:10:09.880 diagnosed with transverse myelitis.
NOTE Confidence: 0.797893436

00:10:09.880 --> 00:10:11.100 And again,
NOTE Confidence: 0.797893436

00:10:11.100 --> 00:10:15.370 I would say transverse myelitis can be
NOTE Confidence: 0.797893436

00:10:15.370 --> 00:10:18.760 triggered after COVID or after a vaccine,
NOTE Confidence: 0.797893436

00:10:18.760 --> 00:10:21.160 but I would not call it long COVID.
NOTE Confidence: 0.797893436

00:10:21.160 --> 00:10:22.441 It's transverse myelitis,
NOTE Confidence: 0.797893436

00:10:22.441 --> 00:10:25.760 it has its own set of work up,

NOTE Confidence: 0.797893436

00:10:25.760 --> 00:10:28.520 has its own set of treatments,

NOTE Confidence: 0.797893436

00:10:28.520 --> 00:10:30.880 and it's I wouldn't consider that long COVID.

NOTE Confidence: 0.77899265

00:10:33.280 --> 00:10:33.960 Let's see

NOTE Confidence: 0.93393008

00:10:36.280 --> 00:10:42.212 and same with the GAD 65 S GAD 65

NOTE Confidence: 0.93393008

00:10:42.212 --> 00:10:45.240 is an auto antibody that develops

NOTE Confidence: 0.93393008

00:10:45.240 --> 00:10:48.240 and it causes stiff person syndrome.

NOTE Confidence: 0.93393008

00:10:48.240 --> 00:10:50.354 So one of the patients said that

NOTE Confidence: 0.93393008

00:10:50.354 --> 00:10:52.388 was positive in both both their

NOTE Confidence: 0.93393008

00:10:52.388 --> 00:10:54.158 blood and their spinal fluid.

NOTE Confidence: 0.93393008

00:10:54.160 --> 00:10:56.880 And so I would say to that that's

NOTE Confidence: 0.93393008

00:10:56.880 --> 00:10:59.250 you know probably early stiff

NOTE Confidence: 0.93393008

00:10:59.250 --> 00:11:01.193 person syndrome and that warrants

NOTE Confidence: 0.93393008

00:11:01.193 --> 00:11:04.146 a full work up and treatment,

NOTE Confidence: 0.93393008

00:11:04.146 --> 00:11:08.746 so disease modifying therapy and close

NOTE Confidence: 0.93393008

00:11:08.746 --> 00:11:11.438 monitoring with a neuroimmunologist.

NOTE Confidence: 0.93393008

00:11:11.440 --> 00:11:14.758 And so I would take that approach.
NOTE Confidence: 0.93393008

00:11:14.760 --> 00:11:17.357 You know, when I see a patient,
NOTE Confidence: 0.93393008

00:11:17.360 --> 00:11:19.240 I'm always making sure that
NOTE Confidence: 0.93393008

00:11:19.240 --> 00:11:21.120 we're not missing something else,
NOTE Confidence: 0.93393008

00:11:21.120 --> 00:11:23.345 we're not missing another disease
NOTE Confidence: 0.93393008

00:11:23.345 --> 00:11:25.570 and just lumping the symptoms
NOTE Confidence: 0.93393008

00:11:25.647 --> 00:11:27.838 in with a bucket of long COVID,
NOTE Confidence: 0.93393008

00:11:27.840 --> 00:11:30.640 things that aren't long COVID.
NOTE Confidence: 0.93393008

00:11:30.640 --> 00:11:32.110 Yeah, next question.
NOTE Confidence: 0.93393008

00:11:32.110 --> 00:11:32.600 Thank
NOTE Confidence: 0.759767655

00:11:32.600 --> 00:11:36.638 you. That's a really important distinction.
NOTE Confidence: 0.759767655

00:11:36.640 --> 00:11:38.192 Next question, can you briefly
NOTE Confidence: 0.759767655

00:11:38.192 --> 00:11:40.100 mention the theories of what causes
NOTE Confidence: 0.759767655

00:11:40.156 --> 00:11:41.302 persistent neurological COVID
NOTE Confidence: 0.759767655

00:11:41.302 --> 00:11:43.594 symptoms and what traction each has,
NOTE Confidence: 0.759767655

00:11:43.600 --> 00:11:45.040 EG autoimmune reaction,

NOTE Confidence: 0.759767655

00:11:45.040 --> 00:11:47.560 persistent virus viral remnants, etcetera?

NOTE Confidence: 0.93838786

00:11:48.600 --> 00:11:53.000 Yeah. So I have a slide.

NOTE Confidence: 0.943473086

00:11:56.040 --> 00:12:00.412 So here is a figure from the

NOTE Confidence: 0.943473086

00:12:00.412 --> 00:12:03.536 publication Science by my mentor

NOTE Confidence: 0.943473086

00:12:03.536 --> 00:12:08.244 Doctor Sweeney Footage and one of our

NOTE Confidence: 0.943473086

00:12:08.244 --> 00:12:11.800 colleagues at the NIH, Doctor Avinath.

NOTE Confidence: 0.943473086

00:12:11.800 --> 00:12:16.755 You can see here that it kind of reviews

NOTE Confidence: 0.943473086

00:12:16.755 --> 00:12:23.341 the mechanisms of effect and so starting

NOTE Confidence: 0.943473086

00:12:23.341 --> 00:12:25.185 generalized neuro inflammation with

NOTE Confidence: 0.943473086

00:12:25.185 --> 00:12:27.920 track of trafficking of immune cells,

NOTE Confidence: 0.943473086

00:12:27.920 --> 00:12:30.506 cytokines and auto antibodies into the

NOTE Confidence: 0.943473086

00:12:30.506 --> 00:12:33.279 brain and activation of the microglia.

NOTE Confidence: 0.943473086

00:12:33.280 --> 00:12:35.680 We know this happens during

NOTE Confidence: 0.943473086

00:12:35.680 --> 00:12:37.120 the acute infection,

NOTE Confidence: 0.943473086

00:12:37.120 --> 00:12:39.400 but once the immune system

NOTE Confidence: 0.943473086

00:12:39.400 --> 00:12:41.680 is kind of turned down,
NOTE Confidence: 0.943473086

00:12:41.680 --> 00:12:44.440 to what extent is this persisting?
NOTE Confidence: 0.943473086

00:12:44.440 --> 00:12:47.040 We're not seeing ongoing cytokine
NOTE Confidence: 0.943473086

00:12:47.040 --> 00:12:49.640 elevations in the spinal fluid.
NOTE Confidence: 0.943473086

00:12:49.640 --> 00:12:53.264 And so it's unknown the extent of the
NOTE Confidence: 0.943473086

00:12:53.264 --> 00:12:55.865 persistent neural inflammation particular
NOTE Confidence: 0.943473086

00:12:55.865 --> 00:13:00.320 particularly in the absence of objective
NOTE Confidence: 0.943473086

00:13:00.320 --> 00:13:04.720 clear inflammatory lesions on MRI.
NOTE Confidence: 0.943473086

00:13:04.720 --> 00:13:06.336 We're not seeing that.
NOTE Confidence: 0.943473086

00:13:06.336 --> 00:13:08.356 So we're not see most,
NOTE Confidence: 0.943473086

00:13:08.360 --> 00:13:11.520 the vast majority of people with long COVID
NOTE Confidence: 0.943473086

00:13:11.520 --> 00:13:15.840 have completely normal clinical Mrs.
NOTE Confidence: 0.943473086

00:13:15.840 --> 00:13:16.400 So
NOTE Confidence: 0.938918847777778

00:13:18.760 --> 00:13:21.935 antibody production within the spinal
NOTE Confidence: 0.938918847777778

00:13:21.935 --> 00:13:26.240 fluid in response to the virus and auto
NOTE Confidence: 0.938918847777778

00:13:26.240 --> 00:13:28.600 antibodies we've published on this.

NOTE Confidence: 0.938918847777778
00:13:28.600 --> 00:13:31.000 We found unique auto antibody
NOTE Confidence: 0.938918847777778
00:13:31.000 --> 00:13:33.037 signatures in the spinal fluid.
NOTE Confidence: 0.938918847777778
00:13:33.040 --> 00:13:36.400 We've also found auto antibodies
NOTE Confidence: 0.938918847777778
00:13:36.400 --> 00:13:39.478 to COVID in the spinal fluid.
NOTE Confidence: 0.938918847777778
00:13:39.480 --> 00:13:42.036 Extended portion of that is probably
NOTE Confidence: 0.938918847777778
00:13:42.036 --> 00:13:44.198 leaking over from the bloodstream
NOTE Confidence: 0.938918847777778
00:13:44.198 --> 00:13:47.254 into the spinal fluid and may or may
NOTE Confidence: 0.938918847777778
00:13:47.254 --> 00:13:49.911 not have a clinical effect because
NOTE Confidence: 0.938918847777778
00:13:49.911 --> 00:13:52.576 we see elevated antibodies in both
NOTE Confidence: 0.938918847777778
00:13:52.576 --> 00:13:55.312 our control subjects with no long
NOTE Confidence: 0.938918847777778
00:13:55.312 --> 00:13:59.056 COVID and in our long COVID subjects.
NOTE Confidence: 0.938918847777778
00:13:59.056 --> 00:14:00.838 So it's unclear.
NOTE Confidence: 0.938918847777778
00:14:00.840 --> 00:14:02.960 So there's limited, you know,
NOTE Confidence: 0.938918847777778
00:14:02.960 --> 00:14:06.320 evidence for the presidents of actual
NOTE Confidence: 0.938918847777778
00:14:06.320 --> 00:14:09.519 viral particles or proteins in the brain,
NOTE Confidence: 0.938918847777778

00:14:09.520 --> 00:14:10.750 very, very limited.
NOTE Confidence: 0.938918847777778

00:14:10.750 --> 00:14:14.440 So I think this is an unlikely scenario.
NOTE Confidence: 0.938918847777778

00:14:14.440 --> 00:14:18.118 Here the blood vessels is my
NOTE Confidence: 0.938918847777778

00:14:18.120 --> 00:14:19.980 main focus of interest.
NOTE Confidence: 0.938918847777778

00:14:19.980 --> 00:14:22.770 They may be damaged or dysfunctional
NOTE Confidence: 0.938918847777778

00:14:22.849 --> 00:14:24.925 dysfunctioning due to endothelial
NOTE Confidence: 0.938918847777778

00:14:24.925 --> 00:14:28.039 activation which is the lining of
NOTE Confidence: 0.938918847777778

00:14:28.120 --> 00:14:32.024 the blood vessel and this cascade
NOTE Confidence: 0.938918847777778

00:14:32.024 --> 00:14:35.288 of Coagulopathy and in some cases
NOTE Confidence: 0.938918847777778

00:14:35.288 --> 00:14:37.520 leading to micro bleeds or stroke
NOTE Confidence: 0.938918847777778

00:14:37.520 --> 00:14:39.840 particularly in the acute infection.
NOTE Confidence: 0.938918847777778

00:14:39.840 --> 00:14:42.639 This is not seen as frequently in long COVID.
NOTE Confidence: 0.938918847777778

00:14:42.640 --> 00:14:44.740 So after three months after
NOTE Confidence: 0.938918847777778

00:14:44.740 --> 00:14:46.000 the acute infection,
NOTE Confidence: 0.938918847777778

00:14:46.000 --> 00:14:47.988 we're not seeing strokes
NOTE Confidence: 0.938918847777778

00:14:47.988 --> 00:14:50.473 or bleeds in the brain.

NOTE Confidence: 0.938918847777778
00:14:50.480 --> 00:14:56.653 But when we talked about before the
NOTE Confidence: 0.938918847777778
00:14:56.653 --> 00:15:00.318 dysfunction of blood vessels and
NOTE Confidence: 0.938918847777778
00:15:00.320 --> 00:15:02.516 withdrawal of oxygen from the tissues,
NOTE Confidence: 0.938918847777778
00:15:02.520 --> 00:15:06.205 that occurs in chronic fatigue syndrome where
NOTE Confidence: 0.938918847777778
00:15:06.205 --> 00:15:08.480 the blood that's going through the tissues,
NOTE Confidence: 0.938918847777778
00:15:08.480 --> 00:15:08.833 you're,
NOTE Confidence: 0.938918847777778
00:15:08.833 --> 00:15:09.539 you know,
NOTE Confidence: 0.938918847777778
00:15:09.539 --> 00:15:10.951 a chronic fatigue patient
NOTE Confidence: 0.938918847777778
00:15:10.951 --> 00:15:12.360 is only extracting half,
NOTE Confidence: 0.938918847777778
00:15:12.360 --> 00:15:17.354 50% of the oxygen and an individual
NOTE Confidence: 0.938918847777778
00:15:17.354 --> 00:15:19.839 without that would extract 80%.
NOTE Confidence: 0.938918847777778
00:15:19.840 --> 00:15:21.820 So that dysfunction of the
NOTE Confidence: 0.938918847777778
00:15:21.820 --> 00:15:24.252 diameter of the blood vessels and
NOTE Confidence: 0.938918847777778
00:15:24.252 --> 00:15:26.538 shunting at the tissue level may
NOTE Confidence: 0.938918847777778
00:15:26.538 --> 00:15:28.679 also be happening at the brain.
NOTE Confidence: 0.938918847777778

00:15:28.680 --> 00:15:31.055 So that would explain why
NOTE Confidence: 0.938918847777778

00:15:31.055 --> 00:15:32.480 there's such exquisite
NOTE Confidence: 0.839757809090909

00:15:35.200 --> 00:15:37.853 sensitivity. So the brain is a very
NOTE Confidence: 0.839757809090909

00:15:37.853 --> 00:15:39.792 sensitive organ to any dysregulation
NOTE Confidence: 0.839757809090909

00:15:39.792 --> 00:15:41.840 or disruption and function.
NOTE Confidence: 0.839757809090909

00:15:41.840 --> 00:15:43.877 So even if there's a little bit
NOTE Confidence: 0.839757809090909

00:15:43.877 --> 00:15:45.680 of disruption in the function of
NOTE Confidence: 0.839757809090909

00:15:45.680 --> 00:15:47.720 the blood vessels in the brain,
NOTE Confidence: 0.839757809090909

00:15:47.720 --> 00:15:48.875 I would expect there to
NOTE Confidence: 0.839757809090909

00:15:48.875 --> 00:15:49.799 be symptoms from that.
NOTE Confidence: 0.839757809090909

00:15:49.800 --> 00:15:52.160 And so that's my theory,
NOTE Confidence: 0.839757809090909

00:15:52.160 --> 00:15:54.638 but I have no proof for this.
NOTE Confidence: 0.839757809090909

00:15:54.640 --> 00:15:56.838 There is some preliminary evidence out of
NOTE Confidence: 0.800519983333333

00:15:58.920 --> 00:16:03.876 Harvard that there is cerebral hypoperfusion.
NOTE Confidence: 0.800519983333333

00:16:03.880 --> 00:16:05.984 And I think this all goes
NOTE Confidence: 0.800519983333333

00:16:05.984 --> 00:16:08.320 on the same spectrum.

NOTE Confidence: 0.800519983333333
00:16:08.320 --> 00:16:10.920 And what we're not seeing
NOTE Confidence: 0.800519983333333
00:16:10.920 --> 00:16:13.000 is objective frank strokes.
NOTE Confidence: 0.800519983333333
00:16:13.000 --> 00:16:15.238 So that is the good news.
NOTE Confidence: 0.800519983333333
00:16:15.240 --> 00:16:18.720 So there's subtle dysfunction but no
NOTE Confidence: 0.800519983333333
00:16:18.720 --> 00:16:21.156 severe lack of oxygen to the brain.
NOTE Confidence: 0.832729882
00:16:24.360 --> 00:16:28.027 Thank you so much. Yeah, next question,
NOTE Confidence: 0.832729882
00:16:28.027 --> 00:16:30.109 are there reliable tests available here
NOTE Confidence: 0.832729882
00:16:30.109 --> 00:16:32.799 in the US to diagnose micro clotting?
NOTE Confidence: 0.741060055454545
00:16:35.480 --> 00:16:36.570 We addressed this a little
NOTE Confidence: 0.741060055454545
00:16:36.570 --> 00:16:38.080 bit that at the last meeting,
NOTE Confidence: 0.741060055454545
00:16:38.080 --> 00:16:42.625 but we haven't found clear evidence
NOTE Confidence: 0.741060055454545
00:16:42.625 --> 00:16:45.691 of micro clots, actual clots in
NOTE Confidence: 0.741060055454545
00:16:45.691 --> 00:16:48.433 the tissue in the blood vessels.
NOTE Confidence: 0.741060055454545
00:16:48.440 --> 00:16:51.560 It's more the activation of the
NOTE Confidence: 0.741060055454545
00:16:51.560 --> 00:16:53.776 endothelial lining and subtle
NOTE Confidence: 0.741060055454545

00:16:53.776 --> 00:16:55.744 persistent vascular inflammation.
NOTE Confidence: 0.741060055454545

00:16:55.744 --> 00:16:59.680 There's a number of clinical blood
NOTE Confidence: 0.741060055454545

00:16:59.774 --> 00:17:02.779 tests that can tease this out.
NOTE Confidence: 0.741060055454545

00:17:02.779 --> 00:17:06.090 One of them I'm trying to think of
NOTE Confidence: 0.741060055454545

00:17:06.090 --> 00:17:10.560 a lot of them are research tests.
NOTE Confidence: 0.741060055454545

00:17:10.560 --> 00:17:14.624 C reactive protein can be a very general
NOTE Confidence: 0.741060055454545

00:17:14.624 --> 00:17:18.120 marker of inflammation of the blood.
NOTE Confidence: 0.741060055454545

00:17:18.120 --> 00:17:21.051 Elevated Von Willebrand factor has
NOTE Confidence: 0.741060055454545

00:17:21.051 --> 00:17:24.208 been shown to be elevated in acute
NOTE Confidence: 0.741060055454545

00:17:24.208 --> 00:17:26.879 COVID linked to endotheliopathy.
NOTE Confidence: 0.741060055454545

00:17:26.880 --> 00:17:29.916 There's there's a number of different
NOTE Confidence: 0.741060055454545

00:17:29.920 --> 00:17:32.352 markers that can be used both in research
NOTE Confidence: 0.741060055454545

00:17:32.352 --> 00:17:33.997 and clinically to tease this out.
NOTE Confidence: 0.857341355555555

00:17:35.480 --> 00:17:37.184 How are you diagnosing the vascular
NOTE Confidence: 0.857341355555555

00:17:37.184 --> 00:17:38.036 inflammation you described?
NOTE Confidence: 0.797776807692308

00:17:38.760 --> 00:17:41.704 Right, so it's in the in the blood

NOTE Confidence: 0.797776807692308
00:17:41.704 --> 00:17:44.555 we're we're using research tests and
NOTE Confidence: 0.797776807692308
00:17:44.555 --> 00:17:47.600 in the brain we're using also research
NOTE Confidence: 0.797776807692308
00:17:47.600 --> 00:17:50.740 tests sequences to look at subtle
NOTE Confidence: 0.797776807692308
00:17:50.740 --> 00:17:53.840 perfusion differences in the brain. Yeah.
NOTE Confidence: 0.752490475
00:17:58.040 --> 00:18:00.720 Next question. Do
NOTE Confidence: 0.882129871666667
00:18:00.720 --> 00:18:03.600 you have an experience opinion about
NOTE Confidence: 0.882129871666667
00:18:03.600 --> 00:18:05.466 HBOT following up on the theory
NOTE Confidence: 0.882129871666667
00:18:05.466 --> 00:18:07.799 of poor oxygen at the micro level?
NOTE Confidence: 0.9571649875
00:18:11.320 --> 00:18:15.590 Yeah, So there have been some small
NOTE Confidence: 0.9571649875
00:18:15.590 --> 00:18:19.526 promising studies that show that H Bot
NOTE Confidence: 0.9571649875
00:18:19.526 --> 00:18:23.187 can improve fatigue and some of the
NOTE Confidence: 0.9571649875
00:18:23.187 --> 00:18:25.880 neuropsychiatric symptoms of long COVID.
NOTE Confidence: 0.9571649875
00:18:25.880 --> 00:18:29.660 I do think it's related to this
NOTE Confidence: 0.9571649875
00:18:29.660 --> 00:18:31.280 chronic fatigue pathology.
NOTE Confidence: 0.9571649875
00:18:31.280 --> 00:18:34.228 So the dysautonomia pathology,
NOTE Confidence: 0.9571649875

00:18:34.228 --> 00:18:38.822 the one issue is that in patients

NOTE Confidence: 0.9571649875

00:18:38.822 --> 00:18:41.077 who undergo H bot therapy,

NOTE Confidence: 0.9571649875

00:18:41.080 --> 00:18:43.360 it improves while they're on it,

NOTE Confidence: 0.9571649875

00:18:43.360 --> 00:18:45.340 which is, you know,

NOTE Confidence: 0.9571649875

00:18:45.340 --> 00:18:47.920 and it time intensive therapy.

NOTE Confidence: 0.9571649875

00:18:47.920 --> 00:18:50.320 But once it finishes,

NOTE Confidence: 0.9571649875

00:18:50.320 --> 00:18:54.520 it doesn't seem to have a lasting

NOTE Confidence: 0.9571649875

00:18:54.520 --> 00:18:58.330 recovery effect like like the DIS

NOTE Confidence: 0.9571649875

00:18:58.330 --> 00:19:01.680 Autonomia PT exercise protocols do.

NOTE Confidence: 0.9571649875

00:19:01.680 --> 00:19:02.920 Yeah. And then you know,

NOTE Confidence: 0.9571649875

00:19:02.920 --> 00:19:04.605 one of the other thoughts

NOTE Confidence: 0.9571649875

00:19:04.605 --> 00:19:06.138 is with severe fatigue,

NOTE Confidence: 0.9571649875

00:19:06.138 --> 00:19:08.283 it's also important to look

NOTE Confidence: 0.9571649875

00:19:08.283 --> 00:19:10.160 for those other things.

NOTE Confidence: 0.9571649875

00:19:10.160 --> 00:19:11.960 So we'll talk about sleep next,

NOTE Confidence: 0.9571649875

00:19:11.960 --> 00:19:14.070 but making sure that everybody

NOTE Confidence: 0.9571649875

00:19:14.070 --> 00:19:15.758 has a cortisol test,

NOTE Confidence: 0.9571649875

00:19:15.760 --> 00:19:18.248 making sure that there's

NOTE Confidence: 0.9571649875

00:19:18.248 --> 00:19:20.114 no adrenal insufficiency,

NOTE Confidence: 0.9571649875

00:19:20.120 --> 00:19:21.416 that's really important.

NOTE Confidence: 0.9571649875

00:19:21.416 --> 00:19:24.440 And then there was another question here.

NOTE Confidence: 0.822367945

00:19:29.240 --> 00:19:32.168 I think it's important to a lot of

NOTE Confidence: 0.822367945

00:19:32.168 --> 00:19:34.458 patients come to me really wanting to

NOTE Confidence: 0.822367945

00:19:34.458 --> 00:19:37.512 know was it COVID that caused my post

NOTE Confidence: 0.822367945

00:19:37.512 --> 00:19:40.396 viral syndrome or was it something else?

NOTE Confidence: 0.822367945

00:19:40.400 --> 00:19:43.508 And I know that an A definitive

NOTE Confidence: 0.822367945

00:19:43.508 --> 00:19:45.280 answer would be helpful,

NOTE Confidence: 0.822367945

00:19:45.280 --> 00:19:47.480 would make patients feel better,

NOTE Confidence: 0.822367945

00:19:47.480 --> 00:19:50.702 but from my perspective it doesn't

NOTE Confidence: 0.822367945

00:19:50.702 --> 00:19:54.080 matter because this condition post viral

NOTE Confidence: 0.822367945

00:19:54.080 --> 00:19:57.670 syndrome can happen after anything, right.

NOTE Confidence: 0.822367945

00:19:57.670 --> 00:20:02.920 So it can happen after Mono CMV.
NOTE Confidence: 0.822367945

00:20:02.920 --> 00:20:07.346 You know, GYN infections any the
NOTE Confidence: 0.822367945

00:20:07.346 --> 00:20:09.824 flu parafluenza you know can happen
NOTE Confidence: 0.822367945

00:20:09.824 --> 00:20:12.839 after any inflammatory viral illness.
NOTE Confidence: 0.822367945

00:20:12.840 --> 00:20:18.121 And so I would say take what you
NOTE Confidence: 0.822367945

00:20:18.121 --> 00:20:20.830 have and what symptoms you have and
NOTE Confidence: 0.822367945

00:20:20.913 --> 00:20:23.753 focus on how to heal and get better.
NOTE Confidence: 0.822367945

00:20:23.760 --> 00:20:26.098 And that that answer is like something
NOTE Confidence: 0.822367945

00:20:26.098 --> 00:20:28.557 we can't always provide and doesn't
NOTE Confidence: 0.822367945

00:20:28.557 --> 00:20:30.877 won't necessarily change your treatment,
NOTE Confidence: 0.822367945

00:20:30.880 --> 00:20:31.480 if that makes sense.
NOTE Confidence: 0.890877001764706

00:20:32.040 --> 00:20:33.715 Have there been patients post
NOTE Confidence: 0.890877001764706

00:20:33.715 --> 00:20:35.915 COVID who you have sent for
NOTE Confidence: 0.890877001764706

00:20:35.915 --> 00:20:37.755 further evaluation for narcolepsy
NOTE Confidence: 0.890877001764706

00:20:37.755 --> 00:20:40.920 or autoimmune eccentral latest?
NOTE Confidence: 0.890877001764706

00:20:40.920 --> 00:20:42.560 Yes, sorry. Yeah,

NOTE Confidence: 0.880283133846154
00:20:43.360 --> 00:20:45.040 yeah. So we've seen and there were
NOTE Confidence: 0.880283133846154
00:20:45.040 --> 00:20:46.958 quite a few questions about sleep.
NOTE Confidence: 0.880283133846154
00:20:46.960 --> 00:20:49.048 We've seen a lot of sleep
NOTE Confidence: 0.880283133846154
00:20:49.048 --> 00:20:50.252 disorders after COVID.
NOTE Confidence: 0.880283133846154
00:20:50.252 --> 00:20:52.808 People seem to be much more
NOTE Confidence: 0.880283133846154
00:20:52.808 --> 00:20:54.999 sensitive to sleep deprivation
NOTE Confidence: 0.880283133846154
00:20:54.999 --> 00:20:57.515 and interruption after COVID.
NOTE Confidence: 0.880283133846154
00:20:57.520 --> 00:21:00.382 One of the first things that I do for
NOTE Confidence: 0.880283133846154
00:21:00.382 --> 00:21:02.724 anyone with sleep issues and cognitive
NOTE Confidence: 0.880283133846154
00:21:02.724 --> 00:21:05.979 issues is to send them for a Sleep
NOTE Confidence: 0.880283133846154
00:21:05.979 --> 00:21:08.433 Medicine evaluation with a sleep study.
NOTE Confidence: 0.880283133846154
00:21:08.440 --> 00:21:09.823 That's really important.
NOTE Confidence: 0.880283133846154
00:21:09.823 --> 00:21:13.050 We are finding a lot of new
NOTE Confidence: 0.880283133846154
00:21:13.148 --> 00:21:15.280 sleep apnea after COVID.
NOTE Confidence: 0.880283133846154
00:21:15.280 --> 00:21:18.080 I don't think COVID necessarily caused that,
NOTE Confidence: 0.880283133846154

00:21:18.080 --> 00:21:19.700 but it's just now you're
NOTE Confidence: 0.880283133846154

00:21:19.700 --> 00:21:21.320 going to have much more,
NOTE Confidence: 0.880283133846154

00:21:21.320 --> 00:21:22.560 many more symptoms from it.
NOTE Confidence: 0.880283133846154

00:21:22.560 --> 00:21:23.760 You're not going to be
NOTE Confidence: 0.880283133846154

00:21:23.760 --> 00:21:24.960 able to tolerate it well.
NOTE Confidence: 0.880283133846154

00:21:24.960 --> 00:21:27.876 And so sleep apnea is treated,
NOTE Confidence: 0.880283133846154

00:21:27.880 --> 00:21:29.680 whether it's central or obstructive,
NOTE Confidence: 0.880283133846154

00:21:29.680 --> 00:21:32.676 it's treated very similarly with a CPAP.
NOTE Confidence: 0.880283133846154

00:21:32.680 --> 00:21:35.816 So the continuous positive
NOTE Confidence: 0.880283133846154

00:21:35.816 --> 00:21:37.434 pressure machine overnight,
NOTE Confidence: 0.880283133846154

00:21:37.434 --> 00:21:40.353 a lot of patients balk at that,
NOTE Confidence: 0.880283133846154

00:21:40.360 --> 00:21:42.800 understandably so.
NOTE Confidence: 0.880283133846154

00:21:42.800 --> 00:21:46.566 But it improves the quality of sleep
NOTE Confidence: 0.880283133846154

00:21:46.566 --> 00:21:50.359 and the quality of life so much that
NOTE Confidence: 0.880283133846154

00:21:50.360 --> 00:21:52.999 almost everybody who gets it loves it.
NOTE Confidence: 0.880283133846154

00:21:53.000 --> 00:21:55.000 They take it everywhere, vacation,

NOTE Confidence: 0.880283133846154
00:21:55.000 --> 00:21:56.155 they have to come to the hospital,
NOTE Confidence: 0.880283133846154
00:21:56.160 --> 00:21:57.840 people bring their own machine,
NOTE Confidence: 0.880283133846154
00:21:57.840 --> 00:21:59.619 they love it.
NOTE Confidence: 0.880283133846154
00:21:59.619 --> 00:22:04.120 So I really encourage all my patients to
NOTE Confidence: 0.880283133846154
00:22:04.120 --> 00:22:06.960 give it a try to pursue the full work up,
NOTE Confidence: 0.880283133846154
00:22:06.960 --> 00:22:09.480 get treatment for sleep apnea.
NOTE Confidence: 0.880283133846154
00:22:09.480 --> 00:22:11.280 And then I've had patients
NOTE Confidence: 0.880283133846154
00:22:11.280 --> 00:22:12.720 convert their entire family,
NOTE Confidence: 0.880283133846154
00:22:12.720 --> 00:22:15.600 get their entire family diagnosed and
NOTE Confidence: 0.880283133846154
00:22:15.600 --> 00:22:18.039 treated and everybody feels a lot,
NOTE Confidence: 0.880283133846154
00:22:18.040 --> 00:22:18.943 a lot better.
NOTE Confidence: 0.880283133846154
00:22:18.943 --> 00:22:21.480 So I think that's a really important thing,
NOTE Confidence: 0.880283133846154
00:22:21.480 --> 00:22:23.284 getting treatment for insomnia,
NOTE Confidence: 0.880283133846154
00:22:23.284 --> 00:22:25.539 really important to treating the
NOTE Confidence: 0.880283133846154
00:22:25.539 --> 00:22:27.679 underlying anxiety or depression that
NOTE Confidence: 0.880283133846154

00:22:27.679 --> 00:22:29.714 might be contributing to insomnia.
NOTE Confidence: 0.880283133846154

00:22:29.720 --> 00:22:32.145 The gold standard therapy is
NOTE Confidence: 0.880283133846154

00:22:32.145 --> 00:22:33.600 cognitive behavioral therapy,
NOTE Confidence: 0.880283133846154

00:22:33.600 --> 00:22:36.506 a type of you know, psychology approach.
NOTE Confidence: 0.880283133846154

00:22:36.506 --> 00:22:37.652 It's wonderful.
NOTE Confidence: 0.880283133846154

00:22:37.652 --> 00:22:42.083 We have a wonderful team here that does
NOTE Confidence: 0.880283133846154

00:22:42.083 --> 00:22:45.120 CBT for insomnia and my patients love it.
NOTE Confidence: 0.880283133846154

00:22:45.120 --> 00:22:47.856 It's a really healthy approach to
NOTE Confidence: 0.880283133846154

00:22:47.856 --> 00:22:51.023 sleep and it gives you the coping
NOTE Confidence: 0.880283133846154

00:22:51.023 --> 00:22:54.020 tool tools to manage insomnia.
NOTE Confidence: 0.880283133846154

00:22:54.020 --> 00:22:55.720 Some of the medicines that
NOTE Confidence: 0.880283133846154

00:22:55.720 --> 00:22:57.080 I'll use one second
NOTE Confidence: 0.848216996153846

00:23:00.320 --> 00:23:02.776 or insomnia, one of the ones I use
NOTE Confidence: 0.848216996153846

00:23:02.776 --> 00:23:05.039 the most is probably Trazodone.
NOTE Confidence: 0.848216996153846

00:23:05.040 --> 00:23:08.000 It's well tolerated, lower doses,
NOTE Confidence: 0.848216996153846

00:23:08.000 --> 00:23:12.484 not habit forming and generates sleepiness.

NOTE Confidence: 0.848216996153846
00:23:12.484 --> 00:23:14.676 In addition to that,
NOTE Confidence: 0.848216996153846
00:23:14.680 --> 00:23:17.038 all of the sleep, hygiene things,
NOTE Confidence: 0.848216996153846
00:23:17.040 --> 00:23:20.520 so no blue light, no screens,
NOTE Confidence: 0.848216996153846
00:23:20.520 --> 00:23:23.760 cool bedroom wine down before bed.
NOTE Confidence: 0.848216996153846
00:23:23.760 --> 00:23:26.515 It's all of the lifestyle
NOTE Confidence: 0.848216996153846
00:23:26.515 --> 00:23:28.719 factors are so important.
NOTE Confidence: 0.848216996153846
00:23:28.720 --> 00:23:32.560 We can put medicine band aids on top of them,
NOTE Confidence: 0.848216996153846
00:23:32.560 --> 00:23:34.780 but if we don't change the
NOTE Confidence: 0.848216996153846
00:23:34.780 --> 00:23:36.146 underlying health, you know,
NOTE Confidence: 0.848216996153846
00:23:36.146 --> 00:23:37.398 create a healthy lifestyle,
NOTE Confidence: 0.848216996153846
00:23:37.400 --> 00:23:39.920 it's really hard to to medicate over
NOTE Confidence: 0.823674658571429
00:23:39.920 --> 00:23:42.398 that. Hi, I got the COVID shots.
NOTE Confidence: 0.823674658571429
00:23:42.400 --> 00:23:44.200 I have stomach issues since I got the shots.
NOTE Confidence: 0.823674658571429
00:23:44.200 --> 00:23:46.120 Now I have ticks going on.
NOTE Confidence: 0.823674658571429
00:23:46.120 --> 00:23:50.620 Plus this month alone I I was plus stutter.
NOTE Confidence: 0.823674658571429

00:23:50.620 --> 00:23:55.118 I was in the ER on July 9th.
NOTE Confidence: 0.823674658571429

00:23:55.120 --> 00:23:56.240 Yeah. Plus I stutter.
NOTE Confidence: 0.661599816

00:23:57.840 --> 00:24:00.200 So stutter and ticks. Yeah, it
NOTE Confidence: 0.89334763875

00:24:02.320 --> 00:24:06.370 it's COVID itself can cause
NOTE Confidence: 0.89334763875

00:24:06.370 --> 00:24:08.800 new psychiatric issues.
NOTE Confidence: 0.89334763875

00:24:08.800 --> 00:24:11.200 Anxiety, depression, panic attacks.
NOTE Confidence: 0.89334763875

00:24:11.200 --> 00:24:14.200 I've had patients who during
NOTE Confidence: 0.89334763875

00:24:14.200 --> 00:24:16.519 their acute illness were,
NOTE Confidence: 0.89334763875

00:24:16.520 --> 00:24:17.740 you know, suicidal and never
NOTE Confidence: 0.89334763875

00:24:17.740 --> 00:24:18.960 been suicidal in their life.
NOTE Confidence: 0.89334763875

00:24:18.960 --> 00:24:21.426 Like, there is objective evidence that
NOTE Confidence: 0.89334763875

00:24:21.426 --> 00:24:24.757 it does alter the function of the brain.
NOTE Confidence: 0.89334763875

00:24:24.760 --> 00:24:28.128 And then the experience of long
NOTE Confidence: 0.89334763875

00:24:28.128 --> 00:24:30.780 COVID is so difficult that it's
NOTE Confidence: 0.89334763875

00:24:30.867 --> 00:24:33.079 not surprising that people,
NOTE Confidence: 0.89334763875

00:24:33.080 --> 00:24:36.560 in reaction to the difficult experience,

NOTE Confidence: 0.89334763875
00:24:36.560 --> 00:24:38.044 develop anxiety,
NOTE Confidence: 0.89334763875
00:24:38.044 --> 00:24:41.754 depression and other psychological disorders.
NOTE Confidence: 0.89334763875
00:24:41.760 --> 00:24:44.772 I've seen it a lot, you know,
NOTE Confidence: 0.89334763875
00:24:44.772 --> 00:24:46.716 new ticks and stutters.
NOTE Confidence: 0.89334763875
00:24:46.720 --> 00:24:48.268 Sometimes people with stutter
NOTE Confidence: 0.89334763875
00:24:48.268 --> 00:24:51.414 will have had it as a kid and
NOTE Confidence: 0.89334763875
00:24:51.414 --> 00:24:53.634 then it comes back after COVID.
NOTE Confidence: 0.89334763875
00:24:53.640 --> 00:24:59.440 Sometimes it's it's as a stress response to,
NOTE Confidence: 0.89334763875
00:24:59.440 --> 00:25:03.240 you know, I think one of the other
NOTE Confidence: 0.89334763875
00:25:03.240 --> 00:25:05.478 participants mentioned developing
NOTE Confidence: 0.89334763875
00:25:05.478 --> 00:25:07.716 somatic symptom disorder,
NOTE Confidence: 0.89334763875
00:25:07.720 --> 00:25:11.920 which is basically excessive anxiety about,
NOTE Confidence: 0.89334763875
00:25:11.920 --> 00:25:12.776 you know,
NOTE Confidence: 0.89334763875
00:25:12.776 --> 00:25:14.916 physical symptoms in their body,
NOTE Confidence: 0.89334763875
00:25:14.920 --> 00:25:17.040 which again is an understandable
NOTE Confidence: 0.89334763875

00:25:17.040 --> 00:25:19.880 response to having so many symptoms.

NOTE Confidence: 0.89334763875

00:25:19.880 --> 00:25:22.478 Developing long COVID,

NOTE Confidence: 0.89334763875

00:25:22.480 --> 00:25:23.244 you know,

NOTE Confidence: 0.89334763875

00:25:23.244 --> 00:25:25.796 there's such an interplay between mood,

NOTE Confidence: 0.89334763875

00:25:25.796 --> 00:25:27.068 cognition, sleep,

NOTE Confidence: 0.89334763875

00:25:27.068 --> 00:25:30.248 function all well-being that you

NOTE Confidence: 0.89334763875

00:25:30.248 --> 00:25:33.919 really can't tease those things apart.

NOTE Confidence: 0.89334763875

00:25:33.920 --> 00:25:36.694 And so I really encourage all of

NOTE Confidence: 0.89334763875

00:25:36.694 --> 00:25:39.543 my patients to address all of the

NOTE Confidence: 0.89334763875

00:25:39.543 --> 00:25:41.622 psychological issues because they can

NOTE Confidence: 0.89334763875

00:25:41.622 --> 00:25:44.492 be a big roadblock to healing and

NOTE Confidence: 0.89334763875

00:25:44.492 --> 00:25:46.931 to feeling better because no one,

NOTE Confidence: 0.89334763875

00:25:46.931 --> 00:25:47.348 well,

NOTE Confidence: 0.89334763875

00:25:47.348 --> 00:25:50.315 I'm not and and certainly no one

NOTE Confidence: 0.89334763875

00:25:50.315 --> 00:25:52.565 in our clinics is saying that

NOTE Confidence: 0.89334763875

00:25:52.565 --> 00:25:54.974 any of this is in someone's head,

NOTE Confidence: 0.89334763875

00:25:54.974 --> 00:25:57.296 but the suffering in your head

NOTE Confidence: 0.89334763875

00:25:57.296 --> 00:25:59.518 can make your symptoms and make

NOTE Confidence: 0.89334763875

00:25:59.518 --> 00:26:01.238 you feel a lot worse.

NOTE Confidence: 0.89334763875

00:26:01.240 --> 00:26:04.384 And so I really encourage all of my

NOTE Confidence: 0.89334763875

00:26:04.384 --> 00:26:07.116 patients who are struggling to get

NOTE Confidence: 0.89334763875

00:26:07.116 --> 00:26:09.912 the help they need with therapists,

NOTE Confidence: 0.89334763875

00:26:09.920 --> 00:26:10.281 psychiatrists,

NOTE Confidence: 0.89334763875

00:26:10.281 --> 00:26:12.447 sometimes going on a medicine for

NOTE Confidence: 0.89334763875

00:26:12.447 --> 00:26:15.071 six months to a year while you're

NOTE Confidence: 0.89334763875

00:26:15.071 --> 00:26:16.916 going through this really struggling,

NOTE Confidence: 0.89334763875

00:26:16.920 --> 00:26:18.780 you know this difficult time while

NOTE Confidence: 0.89334763875

00:26:18.780 --> 00:26:20.432 you recover, it's not forever.

NOTE Confidence: 0.89334763875

00:26:20.432 --> 00:26:22.560 You know, I I think it's really,

NOTE Confidence: 0.89334763875

00:26:22.560 --> 00:26:23.502 really important.

NOTE Confidence: 0.89334763875

00:26:23.502 --> 00:26:26.799 And and on on the same vein,

NOTE Confidence: 0.89334763875

00:26:26.800 --> 00:26:30.008 I have seen quite a few patients with
NOTE Confidence: 0.89334763875

00:26:30.008 --> 00:26:31.560 functional neurologic disorders,
NOTE Confidence: 0.89334763875

00:26:31.560 --> 00:26:34.626 which is where neurology and psychology
NOTE Confidence: 0.89334763875

00:26:34.626 --> 00:26:38.238 really kind of overlap and come together.
NOTE Confidence: 0.89334763875

00:26:38.240 --> 00:26:41.056 Functional neurologic disorders are
NOTE Confidence: 0.89334763875

00:26:41.056 --> 00:26:43.101 basically they're not volitional.
NOTE Confidence: 0.89334763875

00:26:43.101 --> 00:26:45.336 Patients are not doing these
NOTE Confidence: 0.89334763875

00:26:45.336 --> 00:26:46.880 things on purpose.
NOTE Confidence: 0.89334763875

00:26:46.880 --> 00:26:50.336 There's no like awareness that this
NOTE Confidence: 0.89334763875

00:26:50.336 --> 00:26:52.300 is on purpose, it's not on purpose,
NOTE Confidence: 0.89334763875

00:26:52.300 --> 00:26:54.760 but it can come in many different ways.
NOTE Confidence: 0.89334763875

00:26:54.760 --> 00:26:59.011 So it can be new tremors of a certain
NOTE Confidence: 0.89334763875

00:26:59.011 --> 00:27:00.839 they're very distinct characteristics.
NOTE Confidence: 0.89334763875

00:27:00.840 --> 00:27:02.280 So it's hard to describe,
NOTE Confidence: 0.89334763875

00:27:02.280 --> 00:27:07.440 but tremors, seizure like events,
NOTE Confidence: 0.89334763875

00:27:07.440 --> 00:27:09.528 lower extremity, weakness,

NOTE Confidence: 0.89334763875

00:27:09.528 --> 00:27:10.920 trouble walking,

NOTE Confidence: 0.89334763875

00:27:10.920 --> 00:27:13.578 these are all common ways that

NOTE Confidence: 0.89334763875

00:27:13.578 --> 00:27:15.350 functional neurologic disorders develop

NOTE Confidence: 0.89334763875

00:27:15.417 --> 00:27:17.757 and these things develop in response,

NOTE Confidence: 0.89334763875

00:27:17.760 --> 00:27:20.280 typically to stress.

NOTE Confidence: 0.89334763875

00:27:20.280 --> 00:27:23.170 The way that we describe it is it's

NOTE Confidence: 0.89334763875

00:27:23.170 --> 00:27:26.110 a it's a dissociative disorder where

NOTE Confidence: 0.89334763875

00:27:26.110 --> 00:27:28.200 your your mind and your body's

NOTE Confidence: 0.89334763875

00:27:28.200 --> 00:27:29.415 experiencing stress, depression,

NOTE Confidence: 0.89334763875

00:27:29.415 --> 00:27:33.440 anxiety, and it's difficult to cope with.

NOTE Confidence: 0.89334763875

00:27:33.440 --> 00:27:34.925 Your subconscious doesn't know how

NOTE Confidence: 0.89334763875

00:27:34.925 --> 00:27:36.113 to deal with it.

NOTE Confidence: 0.89334763875

00:27:36.120 --> 00:27:37.560 And so this is how it comes out.

NOTE Confidence: 0.89334763875

00:27:37.560 --> 00:27:39.198 It comes out as a new tremor,

NOTE Confidence: 0.89334763875

00:27:39.200 --> 00:27:42.280 comes out as kind of complete dissociation,

NOTE Confidence: 0.89334763875

00:27:42.280 --> 00:27:43.360 seizure like events.
NOTE Confidence: 0.89334763875

00:27:43.360 --> 00:27:45.520 It comes out as difficulty walking.
NOTE Confidence: 0.89334763875

00:27:45.520 --> 00:27:46.234 And so,
NOTE Confidence: 0.89334763875

00:27:46.234 --> 00:27:46.948 you know,
NOTE Confidence: 0.89334763875

00:27:46.948 --> 00:27:48.733 the number one thing for
NOTE Confidence: 0.89334763875

00:27:48.733 --> 00:27:51.079 getting better from a functional
NOTE Confidence: 0.89334763875

00:27:51.079 --> 00:27:52.516 neurologic disorder is
NOTE Confidence: 0.810687288

00:27:52.520 --> 00:27:56.213 insight, really insight into Oh yes,
NOTE Confidence: 0.810687288

00:27:56.213 --> 00:27:59.197 I have been, this has been really hard.
NOTE Confidence: 0.810687288

00:27:59.200 --> 00:28:00.436 I have not been feeling well.
NOTE Confidence: 0.810687288

00:28:00.440 --> 00:28:02.624 I've been dealing with so many
NOTE Confidence: 0.810687288

00:28:02.624 --> 00:28:04.080 other symptoms and issues.
NOTE Confidence: 0.810687288

00:28:04.080 --> 00:28:06.482 I it makes sense that, you know,
NOTE Confidence: 0.810687288

00:28:06.482 --> 00:28:08.169 I'm having a hard time and and
NOTE Confidence: 0.810687288

00:28:08.169 --> 00:28:10.346 one of the treatments is also
NOTE Confidence: 0.810687288

00:28:10.346 --> 00:28:11.474 cognitive behavioral therapy,

NOTE Confidence: 0.810687288

00:28:11.480 --> 00:28:16.640 so using relaxation and coping methods to

NOTE Confidence: 0.810687288

00:28:16.640 --> 00:28:19.480 address address the psychological issues.

NOTE Confidence: 0.810687288

00:28:19.480 --> 00:28:21.923 So we've seen that a lot in

NOTE Confidence: 0.810687288

00:28:21.923 --> 00:28:23.880 conjunction with long COVID too. Yeah.

NOTE Confidence: 0.75837875

00:28:26.560 --> 00:28:28.200 Thank you. I

NOTE Confidence: 0.96104728

00:28:28.200 --> 00:28:31.616 do think you know another question when

NOTE Confidence: 0.96104728

00:28:31.616 --> 00:28:35.960 it comes to like the somatic symptoms is,

NOTE Confidence: 0.96104728

00:28:35.960 --> 00:28:38.480 you know a lot of people have said

NOTE Confidence: 0.96104728

00:28:38.480 --> 00:28:40.874 they've had so much work up, they've had

NOTE Confidence: 0.96104728

00:28:40.874 --> 00:28:42.953 so many tests and they're all normal.

NOTE Confidence: 0.96104728

00:28:42.960 --> 00:28:44.904 You know in in this condition

NOTE Confidence: 0.96104728

00:28:44.904 --> 00:28:47.240 we expect them to be all normal.

NOTE Confidence: 0.96104728

00:28:47.240 --> 00:28:49.221 We, you know, you may have a

NOTE Confidence: 0.96104728

00:28:49.221 --> 00:28:50.967 positive tilt table test from POTS

NOTE Confidence: 0.96104728

00:28:50.967 --> 00:28:52.906 if you're lucky enough to get an

NOTE Confidence: 0.96104728

00:28:52.973 --> 00:28:55.157 invasive CPAP that would be abnormal.
NOTE Confidence: 0.96104728

00:28:55.160 --> 00:28:56.960 But we expect the MRI,
NOTE Confidence: 0.96104728

00:28:56.960 --> 00:29:00.336 the lab test to be normal and if
NOTE Confidence: 0.96104728

00:29:00.336 --> 00:29:04.020 you've had a thorough work up for
NOTE Confidence: 0.96104728

00:29:04.020 --> 00:29:06.120 all of the symptoms that you have,
NOTE Confidence: 0.96104728

00:29:06.120 --> 00:29:09.940 then usually I say to my patients we
NOTE Confidence: 0.96104728

00:29:09.940 --> 00:29:13.440 can stop looking and focus on recovery.
NOTE Confidence: 0.96104728

00:29:13.440 --> 00:29:16.504 So I think that's like a really hard
NOTE Confidence: 0.96104728

00:29:16.504 --> 00:29:19.842 balance is when to know when to stop
NOTE Confidence: 0.96104728

00:29:19.842 --> 00:29:22.817 going down the diagnostic pathway and
NOTE Confidence: 0.96104728

00:29:22.817 --> 00:29:26.759 turning into the healing recovery pathway.
NOTE Confidence: 0.96104728

00:29:26.760 --> 00:29:29.735 So you know working closely with your
NOTE Confidence: 0.96104728

00:29:29.735 --> 00:29:32.596 doctor to kind of figure out where
NOTE Confidence: 0.96104728

00:29:32.596 --> 00:29:35.264 that line is and then moving ahead
NOTE Confidence: 0.96104728

00:29:35.264 --> 00:29:38.091 with the with the therapies and the
NOTE Confidence: 0.96104728

00:29:38.091 --> 00:29:40.000 treatments that that work, yeah.