WEBVTT

NOTE duration:"00:55:02.4320000"

NOTE language:en-us

NOTE Confidence: 0.8996268

00:00:14.440 --> 00:00:17.338 Alright, hello everybody.

NOTE Confidence: 0.8996268

00:00:17.340 --> 00:00:20.166 My name is Andres in check and I am

NOTE Confidence: 0.8996268

00:00:20.166 --> 00:00:22.378 from assistant professor at Yale

NOTE Confidence: 0.8996268

00:00:22.378 --> 00:00:25.550 School of Medicine and Work at the

NOTE Confidence: 0.8996268

00:00:25.550 --> 00:00:28.077 Sleep Center at Yale and so thank

NOTE Confidence: 0.8996268

00:00:28.077 --> 00:00:30.710 you very much for joining us for

NOTE Confidence: 0.8996268

00:00:30.710 --> 00:00:33.000 yet another edition of the joints.

NOTE Confidence: 0.8996268

00:00:33.000 --> 00:00:35.290 Yale, Harvard and Tufts Sleep Conference,

NOTE Confidence: 0.8996268

00:00:35.290 --> 00:00:37.964 and we're excited to have you back,

NOTE Confidence: 0.8996268

00:00:37.970 --> 00:00:40.256 and we have a special session

NOTE Confidence: 0.8996268

00:00:40.256 --> 00:00:42.214 today with Doctor Omesh Toolsie

NOTE Confidence: 0.8996268

00:00:42.214 --> 00:00:45.028 from the Tufts Medical Center is a

NOTE Confidence: 0.8996268

00:00:45.028 --> 00:00:47.340 fellow or first felt a presence.

NOTE Confidence: 0.8996268

00:00:47.340 --> 00:00:49.755 Princeton I think first hopefully of many,

NOTE Confidence: 0.8996268

00:00:49.760 --> 00:00:52.182 and I just also want to introduce

NOTE Confidence: 0.8996268

00:00:52.182 --> 00:00:52.874 Doctor already.

NOTE Confidence: 0.8996268

00:00:52.880 --> 00:00:55.646 Grover, who is from the Tufts Medical Center.

NOTE Confidence: 0.8996268

00:00:55.646 --> 00:00:57.965 Who is the medical director at the

NOTE Confidence: 0.8996268

00:00:57.965 --> 00:01:00.016 Central Sleep Medicine and a program

NOTE Confidence: 0.8996268

00:01:00.016 --> 00:01:02.557 director of the Sleep Fellowship at Tufts,

NOTE Confidence: 0.8996268

00:01:02.560 --> 00:01:04.290 and so she will kindly

NOTE Confidence: 0.8996268

00:01:04.290 --> 00:01:05.328 introduce Doctor Mitchell.

NOTE Confidence: 0.8996268

00:01:05.330 --> 00:01:08.120 See for the rest of the talk and

NOTE Confidence: 0.8996268

00:01:08.120 --> 00:01:10.605 just wanted to ask you to just

NOTE Confidence: 0.8996268

00:01:10.605 --> 00:01:12.940 keep in mind to mute yourself as

NOTE Confidence: 0.8996268

00:01:12.940 --> 00:01:14.665 the talk that progress is.

NOTE Confidence: 0.8996268

00:01:14.670 --> 00:01:17.550 If you wanted to ask a question or.

NOTE Confidence: 0.8996268

00:01:17.550 --> 00:01:18.096 Keep up,

NOTE Confidence: 0.8996268

00:01:18.096 --> 00:01:20.007 feel free to raise your hand or

NOTE Confidence: 0.8996268

00:01:20.007 --> 00:01:22.252 put your question in the chat and

NOTE Confidence: 0.8996268

00:01:22.252 --> 00:01:23.923 we can certainly stop talking

NOTE Confidence: 0.8996268

00:01:23.923 --> 00:01:25.945 and ask questions at the time.

NOTE Confidence: 0.8996268

00:01:25.950 --> 00:01:27.945 Or we can summarize things at the

NOTE Confidence: 0.8996268

00:01:27.945 --> 00:01:30.299 end and have a nice discussion then.

NOTE Confidence: 0.8996268

00:01:30.300 --> 00:01:32.477 So without further ado Doctor Eric Brewer.

NOTE Confidence: 0.84253323

00:01:36.180 --> 00:01:41.250 Hi good afternoon everyone. Thank you Andre.

NOTE Confidence: 0.7615383

00:01:41.250 --> 00:01:44.680 I again my name is Artie Grover.

NOTE Confidence: 0.7615383

00:01:44.680 --> 00:01:47.130 Like understood, I wear from

NOTE Confidence: 0.7615383

00:01:47.130 --> 00:01:49.090 Tufts Medical Center and.

NOTE Confidence: 0.7892779

00:01:51.160 --> 00:01:52.840 It's my pleasure to introduce

NOTE Confidence: 0.7892779

00:01:52.840 --> 00:01:54.184 the speaker for today.

NOTE Confidence: 0.7892779

00:01:54.190 --> 00:01:55.783 Doctor Omesh Toolsie,

NOTE Confidence: 0.7892779

00:01:55.783 --> 00:01:58.438 who's our Sleep Medicine fellow?

NOTE Confidence: 0.7892779

00:01:58.440 --> 00:02:00.140 I just to introduce

NOTE Confidence: 0.7892779

00:02:00.140 --> 00:02:01.840 Doctor Chelsea to briefly.

NOTE Confidence: 0.7892779

00:02:01.840 --> 00:02:04.664 He comes to us from New York after

NOTE Confidence: 0.7892779

00:02:04.664 --> 00:02:06.458 completing his pulmonary critical

NOTE Confidence: 0.7892779

00:02:06.458 --> 00:02:09.488 Care fellowship from the Monte Fiore.

NOTE Confidence: 0.7892779

00:02:09.490 --> 00:02:10.398 Albert Einstein,

NOTE Confidence: 0.7892779

00:02:10.398 --> 00:02:13.122 with the Bronx health care system

NOTE Confidence: 0.7892779

00:02:13.122 --> 00:02:15.078 Program combined program doctor

NOTE Confidence: 0.7892779

00:02:15.078 --> 00:02:17.030 Chelsea completed completed his

NOTE Confidence: 0.7892779

00:02:17.030 --> 00:02:19.370 residency program also at the

NOTE Confidence: 0.7892779

00:02:19.370 --> 00:02:21.278 Bronx Care Health System in New

NOTE Confidence: 0.7892779

00:02:21.278 --> 00:02:23.479 York and he completed his medical

NOTE Confidence: 0.7892779

00:02:23.479 --> 00:02:25.544 degree from University of West

NOTE Confidence: 0.7892779

00:02:25.544 --> 00:02:27.769 Indies in Trinidad and Tobago.

NOTE Confidence: 0.7892779

00:02:27.770 --> 00:02:28.680 Doctor tulsi.

NOTE Confidence: 0.7892779

00:02:28.680 --> 00:02:30.500 During his residency and

NOTE Confidence: 0.7892779

00:02:30.500 --> 00:02:31.865 fellowship has completed,

NOTE Confidence: 0.7892779

00:02:31.870 --> 00:02:33.040 several investigative research

NOTE Confidence: 0.7892779

00:02:33.040 --> 00:02:34.990 projects has been involved in

NOTE Confidence: 0.7892779

00:02:34.990 --> 00:02:36.590 many poster presentations.

NOTE Confidence: 0.7892779

00:02:36.590 --> 00:02:37.454 Oral presentations.

NOTE Confidence: 0.7892779

00:02:37.454 --> 00:02:40.046 In addition to many peer reviewed

NOTE Confidence: 0.7892779

00:02:40.046 --> 00:02:42.247 Journal articles as well as

NOTE Confidence: 0.7892779

00:02:42.247 --> 00:02:43.522 quality improvement initiatives

NOTE Confidence: 0.7892779

00:02:43.522 --> 00:02:45.600 during his fellowship this year,

NOTE Confidence: 0.7892779

00:02:45.600 --> 00:02:47.730 Doctor Chelsea has been very

NOTE Confidence: 0.7892779

00:02:47.730 --> 00:02:49.860 involved with the Fellowship in

NOTE Confidence: 0.7892779

00:02:49.935 --> 00:02:52.135 terms of teaching the residents

NOTE Confidence: 0.7892779

00:02:52.135 --> 00:02:54.335 and teaching at Ents residence

NOTE Confidence: 0.7892779

00:02:54.411 --> 00:02:56.326 in terms of sleep lectures.

NOTE Confidence: 0.7892779

00:02:56.330 --> 00:02:59.120 He has been very involved with.

NOTE Confidence: 0.7892779

00:02:59.120 --> 00:03:00.386 King lecture star.

NOTE Confidence: 0.7892779

00:03:00.386 --> 00:03:01.230 Sleep technologist.

NOTE Confidence: 0.7892779

00:03:01.230 --> 00:03:04.317 In a sleep lab as well and he's been

NOTE Confidence: 0.7892779

00:03:04.317 --> 00:03:06.716 integral part of our hypoglossal

NOTE Confidence: 0.7892779

00:03:06.716 --> 00:03:08.696 nerve stimulator program at

NOTE Confidence: 0.7892779

00:03:08.696 --> 00:03:10.910 Tufts Medical Center as well.

NOTE Confidence: 0.7892779

00:03:10.910 --> 00:03:13.015 Today he will be speaking

NOTE Confidence: 0.7892779

00:03:13.015 --> 00:03:14.278 about overlap syndrome.

NOTE Confidence: 0.7892779

00:03:14.280 --> 00:03:15.700 OSA COPD overlap syndrome,

NOTE Confidence: 0.7892779

00:03:15.700 --> 00:03:17.475 and he will be discussing

NOTE Confidence: 0.7892779

00:03:17.475 --> 00:03:18.910 the pathophysiology,

NOTE Confidence: 0.7892779

00:03:18.910 --> 00:03:20.158 clinical presentation management

NOTE Confidence: 0.7892779

00:03:20.158 --> 00:03:21.822 and morbidity and mortality

NOTE Confidence: 0.7892779

00:03:21.822 --> 00:03:23.540 associated with this disease.

NOTE Confidence: 0.7892779

00:03:23.540 --> 00:03:25.740 So, without further ado,

NOTE Confidence: 0.7892779

00:03:25.740 --> 00:03:28.490 I would like to introduce

NOTE Confidence: 0.7892779

00:03:28.490 --> 00:03:31.170 Doctor Chelsea for the talk.

NOTE Confidence: 0.7892779

00:03:31.170 --> 00:03:33.370 Thank you.

NOTE Confidence: 0.7892779

00:03:33.370 --> 00:03:33.720 So

NOTE Confidence: 0.83332604

00:03:33.720 --> 00:03:34.764 good afternoon everyone.

NOTE Confidence: 0.83332604

00:03:34.764 --> 00:03:37.206 I'm a mesh, very grateful for the

NOTE Confidence: 0.83332604

00:03:37.206 --> 00:03:39.300 opportunity to present at today's conference.

NOTE Confidence: 0.83332604

00:03:39.300 --> 00:03:41.236 So I was only able to kind of

NOTE Confidence: 0.83332604

00:03:41.236 --> 00:03:43.335 share the presentation in the

NOTE Confidence: 0.83332604

00:03:43.335 --> 00:03:44.886 traditional PowerPoint format,

NOTE Confidence: 0.83332604

00:03:44.890 --> 00:03:47.458 but nonetheless it will not take away from

NOTE Confidence: 0.83332604

00:03:47.458 --> 00:03:49.767 the essence of the presentation anyway,

NOTE Confidence: 0.83332604

00:03:49.770 --> 00:03:51.870 so there there are no Commission.

NOTE Confidence: 0.83332604

00:03:51.870 --> 00:03:53.262 There's no commercial support

NOTE Confidence: 0.83332604

00:03:53.262 --> 00:03:54.654 for this grand rounds.

NOTE Confidence: 0.83332604

00:03:54.660 --> 00:03:57.796 There are no conflicts of interest from

NOTE Confidence: 0.83332604

00:03:57.796 --> 00:04:01.799 me or any of my faculty here at Tufts.

NOTE Confidence: 0.83332604

00:04:01.800 --> 00:04:03.760 And to receive credit for.

NOTE Confidence: 0.83332604

00:04:03.760 --> 00:04:04.930 This afternoon's conference

NOTE Confidence: 0.83332604

00:04:04.930 --> 00:04:06.880 stood up to text 21610.

NOTE Confidence: 0.83332604

00:04:06.880 --> 00:04:08.840 To this number, 2034429435, OK,

NOTE Confidence: 0.83332604

00:04:08.840 --> 00:04:11.535 so I'd like to start today's conference

NOTE Confidence: 0.83332604

00:04:11.535 --> 00:04:14.657 by reviewing a case of a patient that's

NOTE Confidence: 0.83332604

00:04:14.657 --> 00:04:17.050 still being followed here at Tufts,

NOTE Confidence: 0.83332604

00:04:17.050 --> 00:04:19.506 57 year old female who was sent to

NOTE Confidence: 0.83332604

00:04:19.506 --> 00:04:21.870 us from a community health provider

NOTE Confidence: 0.83332604

00:04:21.870 --> 00:04:25.319 because of normal chest X Ray was done

NOTE Confidence: 0.83332604

00:04:25.319 --> 00:04:27.911 because she has some upper respiratory

NOTE Confidence: 0.83332604

00:04:27.911 --> 00:04:30.420 symptoms on the chest X Rays.

NOTE Confidence: 0.83332604

00:04:30.420 --> 00:04:32.060 She they saw her.

NOTE Confidence: 0.83332604

00:04:32.060 --> 00:04:34.685 Memory care physician so along module and

NOTE Confidence: 0.83332604

00:04:34.685 --> 00:04:37.398 sensor across two or pulmonary colleagues,

NOTE Confidence: 0.83332604

00:04:37.400 --> 00:04:39.044 she has medical morbidities

NOTE Confidence: 0.83332604

00:04:39.044 --> 00:04:39.866 including hypertension,

NOTE Confidence: 0.83332604

00:04:39.870 --> 00:04:40.267 diabetes,

NOTE Confidence: 0.83332604

00:04:40.267 --> 00:04:41.458 chronic kidney disease,

NOTE Confidence: 0.83332604

00:04:41.458 --> 00:04:43.840 she's obese and also has a

NOTE Confidence: 0.83332604

00:04:43.914 --> 00:04:45.582 history of hypothyroidism and

NOTE Confidence: 0.83332604

00:04:45.582 --> 00:04:48.084 while she's not a current smoker,

NOTE Confidence: 0.83332604

00:04:48.090 --> 00:04:50.090 she does have a significant

NOTE Confidence: 0.83332604

00:04:50.090 --> 00:04:52.610 smoking history of 35 pack years.

NOTE Confidence: 0.83332604

00:04:52.610 --> 00:04:54.665 So while speaking to our

NOTE Confidence: 0.83332604

00:04:54.665 --> 00:04:55.487 pulmonary colleagues,

NOTE Confidence: 0.83332604

00:04:55.490 --> 00:04:57.735 in addition to having some

NOTE Confidence: 0.83332604

00:04:57.735 --> 00:04:59.980 complaints of dyspnea on exertion

NOTE Confidence: 0.83332604

00:05:00.055 --> 00:05:02.147 and some intermittent cough.

NOTE Confidence: 0.83332604

00:05:02.150 --> 00:05:04.306 She also complained of feeling very sleepy,

NOTE Confidence: 0.83332604

00:05:04.310 --> 00:05:06.347 but after spending 10 or 12 hours

NOTE Confidence: 0.83332604

00:05:06.347 --> 00:05:08.948 in bed and she had just retired she,

NOTE Confidence: 0.83332604

00:05:08.950 --> 00:05:10.948 she worked in healthcare and while

NOTE Confidence: 0.83332604

00:05:10.948 --> 00:05:12.660 initially planning to retire at 60,

NOTE Confidence: 0.83332604

00:05:12.660 --> 00:05:15.172 she opted to retire now because of Kovid

NOTE Confidence: 0.83332604

00:05:15.172 --> 00:05:18.217 and she said that now but she has more time,

NOTE Confidence: 0.83332604

00:05:18.220 --> 00:05:20.313 which seems very sleepy during the day

NOTE Confidence: 0.83332604

00:05:20.313 --> 00:05:22.537 and she takes naps in the afternoon.

NOTE Confidence: 0.83332604

00:05:22.540 --> 00:05:24.115 So pulmonary colleagues center across

NOTE Confidence: 0.83332604

00:05:24.115 --> 00:05:26.229 to US phone evaluation in addition to

NOTE Confidence: 0.83332604

00:05:26.229 --> 00:05:28.149 ordering the see T chest on PFTS for

NOTE Confidence: 0.83332604

00:05:28.205 --> 00:05:29.957 evaluation of pulmonary complaints.

NOTE Confidence: 0.83332604

00:05:29.960 --> 00:05:31.510 So they Sleep Medicine clinic.

NOTE Confidence: 0.83332604

00:05:31.510 --> 00:05:33.974 We sort by one of our telehealth visits.

NOTE Confidence: 0.83332604

00:05:33.980 --> 00:05:35.888 She had never seen a Sleep

NOTE Confidence: 0.83332604

00:05:35.888 --> 00:05:37.160 Medicine specialist before now.

NOTE Confidence: 0.83332604

00:05:37.160 --> 00:05:39.065 How to sleep study before

NOTE Confidence: 0.83332604

00:05:39.065 --> 00:05:40.589 she complained of snoring.

NOTE Confidence: 0.83332604

00:05:40.590 --> 00:05:41.376 Nor witnessed.

NOTE Confidence: 0.83332604

00:05:41.376 --> 00:05:43.341 Apneas ducting said though she

NOTE Confidence: 0.83332604

00:05:43.341 --> 00:05:45.539 did not have a bad partner.

NOTE Confidence: 0.83332604

00:05:45.540 --> 00:05:48.207 She complained of some arousals at night,

NOTE Confidence: 0.83332604

00:05:48.210 --> 00:05:50.877 about four to five browsers at night,

NOTE Confidence: 0.83332604

00:05:50.880 --> 00:05:53.596 some of which she said were spontaneous

NOTE Confidence: 0.83332604

00:05:53.596 --> 00:05:55.450 or this triggered by cough.

NOTE Confidence: 0.83332604

00:05:55.450 --> 00:05:57.568 All this, triggered with the urge

NOTE Confidence: 0.83332604

00:05:57.568 --> 00:06:00.399 to to to to use the restroom.

NOTE Confidence: 0.83332604

00:06:00.400 --> 00:06:03.067 She very often woke up feeling tired,

NOTE Confidence: 0.83332604

00:06:03.070 --> 00:06:04.802 complaining of nonrestorative sleep,

NOTE Confidence: 0.83332604

00:06:04.802 --> 00:06:06.967 having headaches and some nights

NOTE Confidence: 0.83332604

00:06:06.967 --> 00:06:08.469 and efforts cause 12.

NOTE Confidence: 0.83332604

00:06:08.470 --> 00:06:10.360 Um, she said that while she,

NOTE Confidence: 0.83332604

00:06:10.360 --> 00:06:11.008 you know,

NOTE Confidence: 0.83332604

00:06:11.008 --> 00:06:12.628 in retrospect you noticed symptoms

NOTE Confidence: 0.83332604

00:06:12.628 --> 00:06:14.460 progressed over the past five years.

NOTE Confidence: 0.83332604

00:06:14.460 --> 00:06:16.540 It's only when she retired that she really

NOTE Confidence: 0.83332604

00:06:16.540 --> 00:06:18.550 began to appreciate these complaints.

NOTE Confidence: 0.83332604

00:06:18.550 --> 00:06:20.440 So as part of our investigation,

NOTE Confidence: 0.83332604

00:06:20.440 --> 00:06:22.645 of course, we ordered a sleep study,

NOTE Confidence: 0.83332604

00:06:22.650 --> 00:06:24.848 so while waiting for that sleep study,

NOTE Confidence: 0.83332604

00:06:24.850 --> 00:06:26.740 she had her CAT scan done.

NOTE Confidence: 0.83332604

00:06:26.740 --> 00:06:27.685 By the way,

NOTE Confidence: 0.83332604

00:06:27.685 --> 00:06:29.890 there was known audio to be found,

NOTE Confidence: 0.83332604

00:06:29.890 --> 00:06:30.691 but was found.

NOTE Confidence: 0.83332604

00:06:30.691 --> 00:06:33.231 As you may see on this axial cutter for

NOTE Confidence: 0.83332604

00:06:33.231 --> 00:06:35.663 see T chess is an exploratory film you

NOTE Confidence: 0.7804302

00:06:35.729 --> 00:06:38.396 can see basically different Shades of Grey.

NOTE Confidence: 0.7804302

00:06:38.400 --> 00:06:40.165 You can see some areas

NOTE Confidence: 0.7804302

00:06:40.165 --> 00:06:41.930 that are very hyper Lucent.

NOTE Confidence: 0.7804302

00:06:41.930 --> 00:06:43.635 On some areas that appear

NOTE Confidence: 0.7804302

00:06:43.635 --> 00:06:45.340 like normal long parent Kima,

NOTE Confidence: 0.7804302

00:06:45.340 --> 00:06:47.332 and that is really a radiological

NOTE Confidence: 0.7804302

00:06:47.332 --> 00:06:49.407 finding that we turn wiziq, music.

NOTE Confidence: 0.7804302

00:06:49.407 --> 00:06:51.309 Profusion or some people say mosaic

NOTE Confidence: 0.7804302

00:06:51.309 --> 00:06:53.518 attenuation in the right clinical context.

NOTE Confidence: 0.7804302

00:06:53.520 --> 00:06:56.224 What it basically means is that there is

NOTE Confidence: 0.7804302

00:06:56.224 --> 00:06:58.721 the presence of air trapping and there's

NOTE Confidence: 0.7804302

00:06:58.721 --> 00:07:01.368 certainly some areas of her long as well.

NOTE Confidence: 0.7804302

00:07:01.370 --> 00:07:03.070 They look hyper loose ends,

NOTE Confidence: 0.7804302

00:07:03.070 --> 00:07:04.640 especially along the power septal

NOTE Confidence: 0.7804302

00:07:04.640 --> 00:07:06.654 areas that look like it's probably

NOTE Confidence: 0.7804302

00:07:06.654 --> 00:07:08.190 emphysematous lung as well.

NOTE Confidence: 0.7804302

00:07:08.190 --> 00:07:10.647 So she then went on to get

NOTE Confidence: 0.7804302

00:07:10.647 --> 00:07:12.580 her PFTS here at Tufts.

NOTE Confidence: 0.7804302

00:07:12.580 --> 00:07:14.124 AF V1 FEC ratio,

NOTE Confidence: 0.7804302

00:07:14.124 --> 00:07:16.843 which is the marker obstruction for from

NOTE Confidence: 0.7804302

00:07:16.843 --> 00:07:19.777 for PFTS less than .70 or less than the

NOTE Confidence: 0.7804302

00:07:19.860 --> 00:07:22.458 lower limit of normal depending on.

NOTE Confidence: 0.7804302

00:07:22.460 --> 00:07:23.182 Your lab.

NOTE Confidence: 0.7804302

00:07:23.182 --> 00:07:25.348 Showed that she had evidence of

NOTE Confidence: 0.7804302

00:07:25.348 --> 00:07:27.399 obstruction and it was irreversible.

NOTE Confidence: 0.7804302

00:07:27.400 --> 00:07:29.236 Obstruction meaning that the LCD one

NOTE Confidence: 0.7804302

00:07:29.236 --> 00:07:31.505 did not improve after administration of

NOTE Confidence: 0.7804302

00:07:31.505 --> 00:07:33.477 bronchodilators that actually dropped,

NOTE Confidence: 0.7804302

00:07:33.480 --> 00:07:35.655 which means that would persistent

NOTE Confidence: 0.7804302

00:07:35.655 --> 00:07:37.395 respiratory effort hoefl who

NOTE Confidence: 0.7804302

00:07:37.395 --> 00:07:39.741 energy or the effort that it took

NOTE Confidence: 0.7804302

00:07:39.741 --> 00:07:41.444 to produce that forced expiatori

NOTE Confidence: 0.7804302

00:07:41.444 --> 00:07:43.439 flow in one minute actually.

NOTE Confidence: 0.7804302

00:07:43.440 --> 00:07:45.786 So so in addition to having

NOTE Confidence: 0.7804302

00:07:45.786 --> 00:07:46.568 irreversible obstruction,

NOTE Confidence: 0.7804302

00:07:46.570 --> 00:07:49.194 she was also found to have an increased

NOTE Confidence: 0.7804302

00:07:49.194 --> 00:07:51.705 total lung capacity and increased residual

NOTE Confidence: 0.7804302

00:07:51.705 --> 00:07:54.381 volume to total lung capacity ratio.

NOTE Confidence: 0.7804302

00:07:54.390 --> 00:07:56.538 So the residual volume is really

NOTE Confidence: 0.7804302

00:07:56.538 --> 00:07:59.719 volume of remaining A and lungs in the

NOTE Confidence: 0.7804302

00:07:59.719 --> 00:08:01.819 lungs after maximum forceful expiration.

NOTE Confidence: 0.7804302

00:08:01.820 --> 00:08:04.256 So what that ratio tells us is

NOTE Confidence: 0.7804302

00:08:04.256 --> 00:08:06.509 after you force everything out.

NOTE Confidence: 0.7804302

00:08:06.510 --> 00:08:09.401 This in very simple terms after you

NOTE Confidence: 0.7804302

00:08:09.401 --> 00:08:12.319 force everything out how much is left

NOTE Confidence: 0.7804302

00:08:12.319 --> 00:08:14.324 relative to total lung capacity.

NOTE Confidence: 0.7804302

00:08:14.330 --> 00:08:16.220 And for her it's 50%,

NOTE Confidence: 0.7804302

00:08:16.220 --> 00:08:18.100 which is very much elevated.

NOTE Confidence: 0.7804302

00:08:18.100 --> 00:08:20.466 35 to 37 really is the upper

NOTE Confidence: 0.7804302

00:08:20.466 --> 00:08:22.250 limit of what's accepted.

NOTE Confidence: 0.7804302

00:08:22.250 --> 00:08:24.506 So in addition to having this

NOTE Confidence: 0.7804302

00:08:24.506 --> 00:08:25.258 irreversible obstruction,

NOTE Confidence: 0.7804302

00:08:25.260 --> 00:08:26.756 she certainly has hyperinflation.

NOTE Confidence: 0.7804302

00:08:26.756 --> 00:08:30.538 So she came to get her sleep study here tops.

NOTE Confidence: 0.7804302

00:08:30.540 --> 00:08:33.556 She had a sleep efficiency of just 58%,

NOTE Confidence: 0.7804302

00:08:33.560 --> 00:08:35.064 about 2 hours after.

NOTE Confidence: 0.7804302

00:08:35.064 --> 00:08:38.078 You know she fell asleep, she was awake.

NOTE Confidence: 0.7804302

00:08:38.078 --> 00:08:40.334 She had very poor quality sleep,

NOTE Confidence: 0.7804302

00:08:40.340 --> 00:08:42.979 very limited amounts of sleep or REM.

NOTE Confidence: 0.7804302

00:08:42.980 --> 00:08:45.446 Duration was reduced to about 7.6%.

NOTE Confidence: 0.7804302

00:08:45.450 --> 00:08:49.386 She spent all the night in supine sleep,

NOTE Confidence: 0.7804302

00:08:49.390 --> 00:08:52.348 where she had 99 apneas and

NOTE Confidence: 0.7804302

00:08:52.348 --> 00:08:53.827 105 high partners.

NOTE Confidence: 0.7804302

00:08:53.830 --> 00:08:56.788 So that was calculated for age.

NOTE Confidence: 0.7804302

00:08:56.790 --> 00:09:00.114 I opting hypotony index of 41

NOTE Confidence: 0.7804302

00:09:00.114 --> 00:09:03.799 with an oxygen need year of 59%.

NOTE Confidence: 0.7804302

00:09:03.800 --> 00:09:05.752 And I took this out of the part

NOTE Confidence: 0.7804302

00:09:05.752 --> 00:09:07.626 of the hypnogram studies that

NOTE Confidence: 0.7804302

00:09:07.626 --> 00:09:09.386 we usually give patients,

NOTE Confidence: 0.7804302

00:09:09.390 --> 00:09:11.700 and you can see that Bahari artifacts.

NOTE Confidence: 0.7804302

00:09:11.700 --> 00:09:13.730 They are quite significant fluctuations

NOTE Confidence: 0.7804302

00:09:13.730 --> 00:09:15.760 in her oxygen saturation where

NOTE Confidence: 0.7804302

00:09:15.821 --> 00:09:17.613 it dips as low as the high 50s,

NOTE Confidence: 0.7804302

00:09:17.620 --> 00:09:18.284 low 60s.

NOTE Confidence: 0.7804302

00:09:18.284 --> 00:09:20.276 Around 1:10 you can actually actually

NOTE Confidence: 0.7804302

00:09:20.276 --> 00:09:21.899 went into REM sleep here,

NOTE Confidence: 0.7804302

00:09:21.900 --> 00:09:24.332 and you can see that that even after

NOTE Confidence: 0.7804302

00:09:24.332 --> 00:09:26.170 the significant drops in saturation,

NOTE Confidence: 0.7804302

00:09:26.170 --> 00:09:27.860 they don't actually recover to

NOTE Confidence: 0.7804302

00:09:27.860 --> 00:09:30.449 levels that she had during non REM *****.

NOTE Confidence: 0.7804302

00:09:30.450 --> 00:09:32.781 ****** 3:00 AM was when she actually

NOTE Confidence: 0.7804302

00:09:32.781 --> 00:09:35.178 woke up and she just could not.

NOTE Confidence: 0.7804302

00:09:35.180 --> 00:09:37.260 All sleep after that I took a 10

NOTE Confidence: 0.7804302

00:09:37.260 --> 00:09:39.157 minute extra from her REM sleep

NOTE Confidence: 0.7804302

00:09:39.157 --> 00:09:40.797 to kind of demonstrated pointed.

NOTE Confidence: 0.7804302

00:09:40.800 --> 00:09:45.200 I'm trying to make that she goes down to 67%.

NOTE Confidence: 0.8151015

00:09:45.200 --> 00:09:47.664 She does not actually reach anyway above 91%,

NOTE Confidence: 0.8151015

00:09:47.670 --> 00:09:50.148 so the High Street which is 91% and

NOTE Confidence: 0.8151015

00:09:50.148 --> 00:09:52.612 that's why I took this 10 minute excerpt.

NOTE Confidence: 0.8151015

00:09:52.620 --> 00:09:54.892 As you can see, it's marked with significant

NOTE Confidence: 0.8151015

00:09:54.892 --> 00:09:56.938 amount of respiratory events as well,

NOTE Confidence: 0.8151015

00:09:56.940 --> 00:10:00.110 so you know at this point she has a diagram.

NOTE Confidence: 0.8151015

00:10:00.110 --> 00:10:01.945 This is officially off obstructive

NOTE Confidence: 0.8151015

00:10:01.945 --> 00:10:03.046 obstructive sleep apnea,

NOTE Confidence: 0.8151015

00:10:03.050 --> 00:10:05.234 moderate COPD and it's likely that

NOTE Confidence: 0.8151015

00:10:05.234 --> 00:10:07.100 these two conditions were present

NOTE Confidence: 0.8151015

00:10:07.100 --> 00:10:09.522 in her for sometime prior to the

NOTE Confidence: 0.8151015

00:10:09.522 --> 00:10:11.488 presentation and very much explained.

NOTE Confidence: 0.8151015

00:10:11.490 --> 00:10:13.224 Do we should present it before

NOTE Confidence: 0.8151015

00:10:13.224 --> 00:10:15.815 I kind of go into explaining the

NOTE Confidence: 0.8151015

00:10:15.815 --> 00:10:18.085 interplay of these two conditions.

NOTE Confidence: 0.8151015

00:10:18.090 --> 00:10:21.370 I do want to touch on a little bit about

NOTE Confidence: 0.8151015

00:10:21.456 --> 00:10:24.326 COPD just for those of US demeanor.

NOTE Confidence: 0.8151015

00:10:24.330 --> 00:10:26.235 Have a background in pulmonary

NOTE Confidence: 0.8151015

00:10:26.235 --> 00:10:28.739 medicine so COPD as defined by gold.

NOTE Confidence: 0.8151015

00:10:28.740 --> 00:10:30.700 Gold is the global initiative.

NOTE Confidence: 0.8151015

00:10:30.700 --> 00:10:32.388 For chronic obstructive pulmonary

NOTE Confidence: 0.8151015

00:10:32.388 --> 00:10:34.920 disease and they really is suited,

NOTE Confidence: 0.8151015

00:10:34.920 --> 00:10:37.446 standards of care that we follow.

NOTE Confidence: 0.8151015

00:10:37.450 --> 00:10:40.404 Every ending is yearly guidelines for us,

NOTE Confidence: 0.8151015

00:10:40.410 --> 00:10:43.778 and that defines the PD as a common,

NOTE Confidence: 0.8151015

00:10:43.780 --> 00:10:46.260 preventable and treatable disease that

NOTE Confidence: 0.8151015

00:10:46.260 --> 00:10:48.244 characterized by persistent respiratory

NOTE Confidence: 0.8151015

00:10:48.244 --> 00:10:50.423 symptoms and airflow limitation that is

NOTE Confidence: 0.8151015

00:10:50.423 --> 00:10:52.539 due to airway and valvular abnormalities

NOTE Confidence: 0.8151015

00:10:52.539 --> 00:10:54.704 usually caused by significant exposure

NOTE Confidence: 0.8151015

00:10:54.704 --> 00:10:56.973 to noxious particles of gases.

NOTE Confidence: 0.8151015

00:10:56.973 --> 00:11:00.704 I really couldn't have said it better.

NOTE Confidence: 0.8151015

00:11:00.710 --> 00:11:02.822 And you know those noxious particles

NOTE Confidence: 0.8151015

00:11:02.822 --> 00:11:05.096 in gases in the developed world

NOTE Confidence: 0.8151015

00:11:05.096 --> 00:11:07.490 tends to come from cigarette smoking

NOTE Confidence: 0.8151015

00:11:07.490 --> 00:11:09.509 in the developing world.

NOTE Confidence: 0.8151015

00:11:09.510 --> 00:11:12.588 It tends to come from the use of biomass

NOTE Confidence: 0.8151015

00:11:12.588 --> 00:11:15.906 fuels for heating and for cooking especially,

NOTE Confidence: 0.8151015

00:11:15.910 --> 00:11:17.690 and there's those noxious particles

NOTE Confidence: 0.8151015

00:11:17.690 --> 00:11:19.470 that attract large numbers of

NOTE Confidence: 0.8151015

00:11:19.524 --> 00:11:21.232 inflammatory cells like neutrophils

NOTE Confidence: 0.8151015

00:11:21.232 --> 00:11:23.367 and and macrophages that produces

NOTE Confidence: 0.8151015

00:11:23.367 --> 00:11:25.110 hydrogen peroxide and proteases.

NOTE Confidence: 0.8151015

00:11:25.110 --> 00:11:27.110 So these are proteolytic enzymes,

NOTE Confidence: 0.8151015

00:11:27.110 --> 00:11:28.774 the overwhelm the antiprotease

NOTE Confidence: 0.8151015

00:11:28.774 --> 00:11:30.854 activity of the long so.

NOTE Confidence: 0.8151015

00:11:30.860 --> 00:11:33.375 Aren't proteins activity towards responsible

NOTE Confidence: 0.8151015

00:11:33.375 --> 00:11:36.320 for the normal reparative processes of

NOTE Confidence: 0.8151015

00:11:36.320 --> 00:11:38.528 the longer these ideas cellular level?

NOTE Confidence: 0.8151015

00:11:38.530 --> 00:11:40.785 So then these proteolytic enzymes

NOTE Confidence: 0.8151015

00:11:40.785 --> 00:11:43.040 destroyed along parent Kima irreversibly.

NOTE Confidence: 0.8151015

00:11:43.040 --> 00:11:45.770 So this chronic inflammation from from

NOTE Confidence: 0.8151015

00:11:45.770 --> 00:11:48.983 these cells that are present in the

NOTE Confidence: 0.8151015

00:11:48.983 --> 00:11:51.605 long leads to small airway fibrosis.

NOTE Confidence: 0.8151015

00:11:51.610 --> 00:11:53.735 So what you have developing

NOTE Confidence: 0.8151015

00:11:53.735 --> 00:11:55.860 pathologically is emphysema and air

NOTE Confidence: 0.8151015

00:11:55.936 --> 00:11:58.366 trapping from small airway fibrosis.

NOTE Confidence: 0.8151015

00:11:58.370 --> 00:11:58.874 Clinically,

NOTE Confidence: 0.8151015

00:11:58.874 --> 00:12:01.898 it presents us dyspnea chronic cough.

NOTE Confidence: 0.8151015

00:12:01.900 --> 00:12:03.476 And chronic phlegm production,

NOTE Confidence: 0.8151015

00:12:03.476 --> 00:12:04.658 chronic phlegm production,

NOTE Confidence: 0.8151015

00:12:04.660 --> 00:12:05.448 I think,

NOTE Confidence: 0.8151015

00:12:05.448 --> 00:12:08.600 is one of the last things to present.

NOTE Confidence: 0.8151015

00:12:08.600 --> 00:12:10.964 But it's one of the most

NOTE Confidence: 0.8151015

00:12:10.964 --> 00:12:12.540 debilitating along with cough,

NOTE Confidence: 0.8151015

00:12:12.540 --> 00:12:14.988 and it tends to occur when

NOTE Confidence: 0.8151015

00:12:14.988 --> 00:12:16.620 chronic inflammation has really

NOTE Confidence: 0.8151015

00:12:16.691 --> 00:12:18.446 set in in these patients,

NOTE Confidence: 0.8151015

00:12:18.450 --> 00:12:20.163 not unlike asthma,

NOTE Confidence: 0.8151015

00:12:20.163 --> 00:12:23.018 which is a clinical diagnosis.

NOTE Confidence: 0.8151015

00:12:23.020 --> 00:12:25.320 It is a spirometric diagnosis,

NOTE Confidence: 0.8151015

00:12:25.320 --> 00:12:28.533 so as I was able to demonstrate

NOTE Confidence: 0.8151015

00:12:28.533 --> 00:12:29.910 in our patient,

NOTE Confidence: 0.8151015

00:12:29.910 --> 00:12:33.116 you do need spirometry to diagnose COPD,

NOTE Confidence: 0.8151015

00:12:33.120 --> 00:12:33.939 so we use.

NOTE Confidence: 0.8151015

00:12:33.939 --> 00:12:36.513 I'm sorry we used it in a criteria

NOTE Confidence: 0.8151015

00:12:36.513 --> 00:12:39.981 after a patient has shown and

NOTE Confidence: 0.8151015

00:12:39.981 --> 00:12:41.715 demonstrated irreversible obstruction

NOTE Confidence: 0.8151015

00:12:41.793 --> 00:12:44.847 to categorize the severity of theopedia

NOTE Confidence: 0.8151015

00:12:44.847 --> 00:12:47.348 is important clinically and it's

NOTE Confidence: 0.8151015

00:12:47.348 --> 00:12:49.638 important also for research purposes.

NOTE Confidence: 0.8151015

00:12:49.640 --> 00:12:53.007 So based on the Fe V1 there.

NOTE Confidence: 0.8151015

00:12:53.010 --> 00:12:54.036 Given spirometric classifications

NOTE Confidence: 0.8151015

00:12:54.036 --> 00:12:55.746 as mild as above 80,

NOTE Confidence: 0.8151015

00:12:55.750 --> 00:12:58.137 all the way down to very severe.

NOTE Confidence: 0.8151015

00:12:58.140 --> 00:13:00.102 This lesson 30 and his symptom

NOTE Confidence: 0.8151015

00:13:00.102 --> 00:13:01.900 categories based on two things,

NOTE Confidence: 0.8151015

00:13:01.900 --> 00:13:04.147 the severity of the symptoms and we

NOTE Confidence: 0.8151015

00:13:04.147 --> 00:13:06.455 just spoke about how it affects the

NOTE Confidence: 0.8151015

00:13:06.455 --> 00:13:08.381 quality of life and the frequency

NOTE Confidence: 0.8295704

00:13:08.442 --> 00:13:09.430 of exacerbation.

NOTE Confidence: 0.8295704

00:13:09.430 --> 00:13:11.684 So they get a gold severity grade

NOTE Confidence: 0.8295704

00:13:11.684 --> 00:13:13.869 and a category symptom grade an.

NOTE Confidence: 0.8295704

00:13:13.870 --> 00:13:16.264 Those things together help us to determine,

NOTE Confidence: 0.8295704

00:13:16.270 --> 00:13:18.804 for example, when you need to escalate

NOTE Confidence: 0.8295704

00:13:18.804 --> 00:13:21.011 therapy when you need to deescalate

NOTE Confidence: 0.8295704

00:13:21.011 --> 00:13:23.117 therapy when you need to get.

NOTE Confidence: 0.8295704

00:13:23.120 --> 00:13:24.935 Pulmonary rehab or when you

NOTE Confidence: 0.8295704

00:13:24.935 --> 00:13:27.294 need to consider even that long

NOTE Confidence: 0.8295704

00:13:27.294 --> 00:13:29.178 transplant for these patients.

NOTE Confidence: 0.8295704

00:13:29.180 --> 00:13:31.966 Now in respect to Theo PD and

NOTE Confidence: 0.8295704

00:13:31.966 --> 00:13:34.045 sleep irrespective of whether or

NOTE Confidence: 0.8295704

00:13:34.045 --> 00:13:36.445 not there is a sleep disorder,

NOTE Confidence: 0.8295704

00:13:36.450 --> 00:13:40.160 patients would still be tend to have.

NOTE Confidence: 0.8295704

00:13:40.160 --> 00:13:42.295 Very much fragmented sleep because

NOTE Confidence: 0.8295704

00:13:42.295 --> 00:13:44.899 of some of these symptoms associated

NOTE Confidence: 0.8295704

00:13:44.899 --> 00:13:47.275 with UPD and also of course,

NOTE Confidence: 0.8295704

00:13:47.280 --> 00:13:49.380 because it could also be

NOTE Confidence: 0.8295704

00:13:49.380 --> 00:13:50.640 in certain phenotypes.

NOTE Confidence: 0.8295704

00:13:50.640 --> 00:13:52.464 Undiagnosed obstructive sleep apnea.

NOTE Confidence: 0.8295704

00:13:52.464 --> 00:13:55.200 So group of researchers from the

NOTE Confidence: 0.8295704

00:13:55.271 --> 00:13:57.421 Boltzmann Institute of COPD looked

NOTE Confidence: 0.8295704

00:13:57.421 --> 00:13:59.571 at this and they prospectively

NOTE Confidence: 0.8295704

00:13:59.637 --> 00:14:02.136 assessed about 50 or 52 patients with

NOTE Confidence: 0.8295704

00:14:02.136 --> 00:14:04.046 mild to moderate theopedia matched

NOTE Confidence: 0.8295704

00:14:04.046 --> 00:14:06.136 controls and administered TV stations.

NOTE Confidence: 0.8295704

00:14:06.140 --> 00:14:06.992 Sleep disorders.

NOTE Confidence: 0.8295704

00:14:06.992 --> 00:14:08.696 Question is reliable questionnaire

NOTE Confidence: 0.8295704

00:14:08.696 --> 00:14:09.974 it's a validated.

NOTE Confidence: 0.8295704

00:14:09.980 --> 00:14:12.728 Questionnaire on it uses about 175

NOTE Confidence: 0.8295704

00:14:12.728 --> 00:14:14.560 questions to categorize symptoms

NOTE Confidence: 0.8295704

00:14:14.637 --> 00:14:16.757 into four main sleep disorders,

NOTE Confidence: 0.8295704

00:14:16.760 --> 00:14:18.568 sleep apnea, narcolepsy, PLM,

NOTE Confidence: 0.8295704

00:14:18.568 --> 00:14:20.376 and psychiatric sleep disorders.

NOTE Confidence: 0.8295704

00:14:20.380 --> 00:14:23.110 So what they found was that patients

NOTE Confidence: 0.8295704

00:14:23.110 --> 00:14:25.919 with seal PD had hired higher

NOTE Confidence: 0.8295704

00:14:25.919 --> 00:14:28.509 where they complained more snoring.

NOTE Confidence: 0.8295704

00:14:28.510 --> 00:14:31.125 They complete more storing that

NOTE Confidence: 0.8295704

00:14:31.125 --> 00:14:33.740 disturbed others that these symptoms

NOTE Confidence: 0.8295704

00:14:33.826 --> 00:14:36.143 were worse if they were on their

NOTE Confidence: 0.8295704

00:14:36.143 --> 00:14:38.910 back or if they consumed alcohol.

NOTE Confidence: 0.8295704

00:14:38.910 --> 00:14:41.856 Not surprisingly, they were more smokers.

NOTE Confidence: 0.8295704

00:14:41.860 --> 00:14:43.675 These patients also week woke

NOTE Confidence: 0.8295704

00:14:43.675 --> 00:14:45.970 up more often during the night.

NOTE Confidence: 0.8295704

00:14:45.970 --> 00:14:48.970 They tended to have more in some way,

NOTE Confidence: 0.8295704

00:14:48.970 --> 00:14:51.208 and I think part of that,

NOTE Confidence: 0.8295704

00:14:51.210 --> 00:14:53.394 as well as contributed by concommitant

NOTE Confidence: 0.8295704

00:14:53.394 --> 00:14:55.626 use of stimulants like nicotine or

NOTE Confidence: 0.8295704

00:14:55.626 --> 00:14:57.774 even if there are nicotine replacements

NOTE Confidence: 0.8295704

00:14:57.774 --> 00:14:59.712 that may actually delay their

NOTE Confidence: 0.8295704

00:14:59.712 --> 00:15:02.034 sleep onset and lower the arousal

NOTE Confidence: 0.8295704

00:15:02.034 --> 00:15:04.542 thresholds very much similar to.

NOTE Confidence: 0.8295704

00:15:04.542 --> 00:15:05.598 To alcohol,

NOTE Confidence: 0.8295704

00:15:05.600 --> 00:15:07.410 and these patients tend to

NOTE Confidence: 0.8295704

00:15:07.410 --> 00:15:08.858 have more fragmented sleep,

NOTE Confidence: 0.8295704

00:15:08.860 --> 00:15:10.984 they tend to have increased wake

NOTE Confidence: 0.8295704

00:15:10.984 --> 00:15:13.202 after sleep onset periods as our

NOTE Confidence: 0.8295704

00:15:13.202 --> 00:15:14.670 patient demonstrated as well.

NOTE Confidence: 0.8295704

00:15:14.670 --> 00:15:16.122 So not surprisingly, then,

NOTE Confidence: 0.8295704

00:15:16.122 --> 00:15:18.300 they have reduced total sleep time.

NOTE Confidence: 0.8295704

00:15:18.300 --> 00:15:20.256 They have reduced REM sleep and

NOTE Confidence: 0.8295704

00:15:20.256 --> 00:15:22.394 you know they have reduced sleep

NOTE Confidence: 0.8295704

00:15:22.394 --> 00:15:24.698 efficiency so you know what you

NOTE Confidence: 0.8295704

00:15:24.698 --> 00:15:27.363 see happening then is a pattern of

NOTE Confidence: 0.8295704

00:15:27.363 --> 00:15:29.188 sleep deprivation and patients with

NOTE Confidence: 0.8295704

00:15:29.190 --> 00:15:31.128 COPD develop both the acute and

NOTE Confidence: 0.8295704

00:15:31.128 --> 00:15:33.180 chronic effects of sleep deprivation?

NOTE Confidence: 0.8295704

00:15:33.180 --> 00:15:34.446 The acute effects.

NOTE Confidence: 0.8295704

00:15:34.446 --> 00:15:36.134 Like in pair cognition,

NOTE Confidence: 0.8295704

00:15:36.140 --> 00:15:38.258 which can certainly have any effects

NOTE Confidence: 0.8295704

00:15:38.258 --> 00:15:40.208 on medication adherence or forgetting

NOTE Confidence: 0.8295704

00:15:40.208 --> 00:15:42.100 their clinic appointments or

NOTE Confidence: 0.8295704

00:15:42.100 --> 00:15:43.862 forgetting inhaler, technique use,

NOTE Confidence: 0.8295704

00:15:43.862 --> 00:15:46.122 and of course, the chronic.

NOTE Confidence: 0.8295704

00:15:46.122 --> 00:15:48.206 Effects of sleep deprivation,

NOTE Confidence: 0.8295704

00:15:48.210 --> 00:15:49.458 like systemic inflammation,

NOTE Confidence: 0.8295704

00:15:49.458 --> 00:15:50.706 altered immune function,

NOTE Confidence: 0.8295704

00:15:50.710 --> 00:15:54.046 puts them at increased risk of of infections,

NOTE Confidence: 0.8295704

00:15:54.050 --> 00:15:56.258 which which which obviously puts them

NOTE Confidence: 0.8295704

00:15:56.258 --> 00:15:58.630 an increased risk of exacerbation.

NOTE Confidence: 0.8295704

00:15:58.630 --> 00:16:01.060 So you're looking at the acute

NOTE Confidence: 0.8295704

00:16:01.060 --> 00:16:03.220 and chronic effects of sleep,

NOTE Confidence: 0.8295704

00:16:03.220 --> 00:16:05.929 adding to the burden of disease already

NOTE Confidence: 0.8295704

00:16:05.929 --> 00:16:08.638 present in COPDLCOPD affects the Physiology.

NOTE Confidence: 0.8295704

00:16:08.640 --> 00:16:11.136 The normal Physiology of normal ventilation,

NOTE Confidence: 0.8295704

00:16:11.140 --> 00:16:11.534 Physiology,

NOTE Confidence: 0.8295704

00:16:11.534 --> 00:16:13.898 and impatient with in in sleep

NOTE Confidence: 0.8295704

00:16:13.898 --> 00:16:16.149 in a very specific way,

NOTE Confidence: 0.8295704

00:16:16.150 --> 00:16:19.618 and I wanted to discuss that.

NOTE Confidence: 0.8295704

00:16:19.620 --> 00:16:20.288 A bit,

NOTE Confidence: 0.8295704

00:16:20.288 --> 00:16:22.626 but I just want to touch base

NOTE Confidence: 0.8295704

00:16:22.626 --> 00:16:25.544 very quickly on what is normal

NOTE Confidence: 0.8295704

00:16:25.544 --> 00:16:27.540 ventilation changes in sleep.

NOTE Confidence: 0.8295704

00:16:27.540 --> 00:16:30.459 So during sleep we have reduced wakefulness.

NOTE Confidence: 0.8295704

00:16:30.460 --> 00:16:32.848 You have reduced activity from the

NOTE Confidence: 0.8295704

00:16:32.848 --> 00:16:34.440 reticular activating system and

NOTE Confidence: 0.8321243

00:16:34.506 --> 00:16:36.872 that in itself can induce a physiologic

NOTE Confidence: 0.8321243

00:16:36.872 --> 00:16:39.639 ventilation of a physiologic hypoventilation.

NOTE Confidence: 0.8321243

00:16:39.640 --> 00:16:42.559 But you also have reduced metabolic rate.

NOTE Confidence: 0.8321243

00:16:42.560 --> 00:16:44.224 You have reduced chemosensitivity

NOTE Confidence: 0.8321243

00:16:44.224 --> 00:16:46.304 to oxygen to carbon dioxide,

NOTE Confidence: 0.8321243

00:16:46.310 --> 00:16:48.806 and you have increased airway resistance.

NOTE Confidence: 0.8321243

00:16:48.810 --> 00:16:50.722 So increased airway resistance

NOTE Confidence: 0.8321243

00:16:50.722 --> 00:16:52.156 is especially marked.

NOTE Confidence: 0.8321243

00:16:52.160 --> 00:16:53.492 During REM sleep,

NOTE Confidence: 0.8321243

00:16:53.492 --> 00:16:55.712 when you have respiratory muscle

NOTE Confidence: 0.8321243

00:16:55.712 --> 00:16:58.401 hypertonia and all of these factors

NOTE Confidence: 0.8321243

00:16:58.401 --> 00:17:00.556 can cause a physiologic hypoventilation

NOTE Confidence: 0.8321243

00:17:00.556 --> 00:17:03.109 as much as 1.5 liters per minute.

NOTE Confidence: 0.8321243

00:17:03.110 --> 00:17:05.390 Now those changes in a normal

NOTE Confidence: 0.8321243

00:17:05.390 --> 00:17:08.394 subject you know is is not going

NOTE Confidence: 0.8321243

00:17:08.394 --> 00:17:10.258 to be clinically significant,

NOTE Confidence: 0.8321243

00:17:10.260 --> 00:17:12.930 but there are certain factors

NOTE Confidence: 0.8321243

00:17:12.930 --> 00:17:15.066 in patients with COPD.

NOTE Confidence: 0.8321243

00:17:15.070 --> 00:17:17.236 Not really kind of exaggerates what

NOTE Confidence: 0.8321243

00:17:17.236 --> 00:17:20.110 you see in normal Physiology of sleep.

NOTE Confidence: 0.8321243

00:17:20.110 --> 00:17:22.476 So first of all you have increased

NOTE Confidence: 0.8321243

00:17:22.476 --> 00:17:24.029 load under respiratory system

NOTE Confidence: 0.8321243

00:17:24.029 --> 00:17:25.929 from increased airway resistance,

NOTE Confidence: 0.8321243

00:17:25.930 --> 00:17:28.084 which is further increased in patients

NOTE Confidence: 0.8321243

00:17:28.084 --> 00:17:30.417 with COPD and you have impaired

NOTE Confidence: 0.8321243

00:17:30.417 --> 00:17:32.913 ventilla Tori capacity on the implant.

NOTE Confidence: 0.8321243

00:17:32.920 --> 00:17:33.696 Surgery capacity.

NOTE Confidence: 0.8321243

00:17:33.696 --> 00:17:35.248 Steel especially during REM

NOTE Confidence: 0.8321243

00:17:35.248 --> 00:17:36.800 so patient with COPD.

NOTE Confidence: 0.8321243

00:17:36.800 --> 00:17:38.705 They needed the accessory muscles

NOTE Confidence: 0.8321243

00:17:38.705 --> 00:17:41.070 to help them breathe very often,

NOTE Confidence: 0.8321243

00:17:41.070 --> 00:17:42.618 especially the progress to

NOTE Confidence: 0.8321243

00:17:42.618 --> 00:17:43.779 chronic respiratory failure.

NOTE Confidence: 0.8321243

00:17:43.780 --> 00:17:46.615 That is when they become hypoxemic steel.

NOTE Confidence: 0.8321243

00:17:46.620 --> 00:17:49.404 CD's they do need the accessory

NOTE Confidence: 0.8321243

00:17:49.404 --> 00:17:51.692 muscles of respiration during REM

NOTE Confidence: 0.8321243

00:17:51.692 --> 00:17:54.142 sleep when you lose tone from the

NOTE Confidence: 0.8321243

00:17:54.142 --> 00:17:57.127 when you lose tone when you lose

NOTE Confidence: 0.8321243

00:17:57.127 --> 00:17:59.332 tone in your respiratory accessory

NOTE Confidence: 0.8321243

00:17:59.340 --> 00:18:01.585 muscles of respiration together with

NOTE Confidence: 0.8321243

00:18:01.585 --> 00:18:03.830 an inefficient flat and diaphragm

NOTE Confidence: 0.8321243

00:18:03.901 --> 00:18:06.445 that leads to reduce title volumes

NOTE Confidence: 0.8321243

00:18:06.445 --> 00:18:08.590 and reduced minute ventilations and

NOTE Confidence: 0.8321243

00:18:08.590 --> 00:18:10.900 that together with a blunted neural

NOTE Confidence: 0.8321243

00:18:10.900 --> 00:18:13.371 respiratory drive is going to cause

NOTE Confidence: 0.8321243

00:18:13.371 --> 00:18:15.119 profound alveolar hypoventilation and

NOTE Confidence: 0.8321243

00:18:15.119 --> 00:18:17.150 increased physiologic Dead Space there.

NOTE Confidence: 0.8321243

00:18:17.150 --> 00:18:18.362 So that translates.

NOTE Confidence: 0.8321243

00:18:18.362 --> 00:18:18.766 Altogether,

NOTE Confidence: 0.8321243

00:18:18.766 --> 00:18:21.699 two leading to A to causing us

NOTE Confidence: 0.8321243

00:18:21.699 --> 00:18:23.904 a clinical situation where you

NOTE Confidence: 0.8321243

00:18:23.904 --> 00:18:25.227 have profound hypoxemia,

NOTE Confidence: 0.8321243

00:18:25.230 --> 00:18:27.258 especially so in patients with with

NOTE Confidence: 0.8321243

00:18:27.258 --> 00:18:29.664 COPD and very often associated with

NOTE Confidence: 0.8321243

00:18:29.664 --> 00:18:32.124 hyperventilation as well or hypercarbia.

NOTE Confidence: 0.8321243

00:18:32.130 --> 00:18:32.535 Now,

NOTE Confidence: 0.8321243

00:18:32.535 --> 00:18:34.560 when you think about where

NOTE Confidence: 0.8321243

00:18:34.560 --> 00:18:35.775 patients with COPD,

NOTE Confidence: 0.8321243

00:18:35.780 --> 00:18:38.594 you know where they stand on the

NOTE Confidence: 0.8321243

00:18:38.594 --> 00:18:40.250 oxygen hemoglobin dissociation curve.

NOTE Confidence: 0.8321243

00:18:40.250 --> 00:18:43.282 You know they sit in a position where

NOTE Confidence: 0.8321243

00:18:43.282 --> 00:18:45.875 you know more drops in attention

NOTE Confidence: 0.8321243

00:18:45.875 --> 00:18:48.830 of oxygen or smaller drops in it.

NOTE Confidence: 0.8321243

00:18:48.830 --> 00:18:50.846 Partial pressure of oxygen is gonna

NOTE Confidence: 0.8321243

00:18:50.846 --> 00:18:53.152 cause a lot more rapid desaturations

NOTE Confidence: 0.8321243

00:18:53.152 --> 00:18:55.382 because of the allosteric effect

NOTE Confidence: 0.8321243

00:18:55.382 --> 00:18:57.823 of hemoglobin in the configuration

NOTE Confidence: 0.8321243

00:18:57.823 --> 00:18:58.857 of hemoglobin.

NOTE Confidence: 0.8321243

00:18:58.860 --> 00:19:01.488 The affinity for oxygen changes so

NOTE Confidence: 0.8321243

00:19:01.488 --> 00:19:04.299 much so that especially in REM sleep,

NOTE Confidence: 0.8321243

00:19:04.300 --> 00:19:06.390 they have more profoundly saturation.

NOTE Confidence: 0.8321243

00:19:06.390 --> 00:19:10.040 And I think that certainly.

NOTE Confidence: 0.8321243

00:19:10.040 --> 00:19:13.757 What we were able to see in our patients.

NOTE Confidence: 0.8321243

00:19:13.760 --> 00:19:16.238 So when you think about well,

NOTE Confidence: 0.8321243

00:19:16.240 --> 00:19:18.300 what is this overlap syndrome?

NOTE Confidence: 0.8321243

00:19:18.300 --> 00:19:20.310 It is this profound nocturnal

NOTE Confidence: 0.8321243

00:19:20.310 --> 00:19:22.320 desaturation that is seen in

NOTE Confidence: 0.8321243

00:19:22.395 --> 00:19:24.891 this condition that it might be

NOTE Confidence: 0.8321243

00:19:24.891 --> 00:19:26.555 otherwise present in COPDOS.

NOTE Confidence: 0.8321243

00:19:26.560 --> 00:19:28.212 Or is he alone,

NOTE Confidence: 0.8321243

00:19:28.212 --> 00:19:30.277 very often accompanied by hypercapnia.

NOTE Confidence: 0.8321243

00:19:30.280 --> 00:19:33.576 So this was first described by David Flynn,

NOTE Confidence: 0.8321243

00:19:33.580 --> 00:19:35.968 leads to Davis family was a

NOTE Confidence: 0.8321243

00:19:35.968 --> 00:19:37.560 professor of respiratory medicine

NOTE Confidence: 0.8321243

00:19:37.626 --> 00:19:39.776 from the University of Edinburgh.

NOTE Confidence: 0.8321243

00:19:39.780 --> 00:19:42.660 Gives also was a respiratory physiologist.

NOTE Confidence: 0.8321243

00:19:42.660 --> 00:19:44.976 On what he described in 1985,

NOTE Confidence: 0.8321243

00:19:44.980 --> 00:19:47.428 what was I what I like to think

NOTE Confidence: 0.8321243

00:19:47.428 --> 00:19:49.609 is just clinical suspicion,

NOTE Confidence: 0.8321243

00:19:49.610 --> 00:19:51.510 basically saying that in a

NOTE Confidence: 0.8321243

00:19:51.510 --> 00:19:53.850 patient with COPD who were tree?

NOTE Confidence: 0.8321243

00:19:53.850 --> 00:19:54.236 Who,

NOTE Confidence: 0.8321243

00:19:54.236 --> 00:19:56.166 who being hypoxemic is treated

NOTE Confidence: 0.8321243

00:19:56.166 --> 00:19:57.710 with nocturnal oxygen therapy,

NOTE Confidence: 0.8321243

00:19:57.710 --> 00:20:00.390 but then persistently has symptoms?

NOTE Confidence: 0.8321243

00:20:00.390 --> 00:20:03.010 Including headaches that these

NOTE Confidence: 0.8321243

00:20:03.010 --> 00:20:06.940 individuals should get a sleep study.

NOTE Confidence: 0.8234433

00:20:06.940 --> 00:20:09.628 To you know to rule out the coexistence

NOTE Confidence: 0.8234433

00:20:09.628 --> 00:20:11.788 of obstructive sleep apnea so patients

NOTE Confidence: 0.8234433

00:20:11.788 --> 00:20:14.420 with COPD with undiagnosed OSA of course.

NOTE Confidence: 0.8234433

00:20:14.420 --> 00:20:17.039 To run the risk of poor outcomes and it's

NOTE Confidence: 0.8234433

00:20:17.039 --> 00:20:18.808 still very much clinically applicable

NOTE Confidence: 0.8234433

00:20:18.808 --> 00:20:21.860 today so you know a group of researchers

NOTE Confidence: 0.8234433

00:20:21.860 --> 00:20:24.030 from the University of Washington.

NOTE Confidence: 0.8234433

00:20:24.030 --> 00:20:26.298 What they did is that they took

NOTE Confidence: 0.8234433

00:20:26.298 --> 00:20:28.873 the cohort that was used in the

NOTE Confidence: 0.8234433

00:20:28.873 --> 00:20:30.788 long term oxygen treatment trials.

NOTE Confidence: 0.8234433

00:20:30.790 --> 00:20:32.926 That trial also a landmark trial

NOTE Confidence: 0.8234433

00:20:32.926 --> 00:20:34.350 in in pulmonary medicine,

NOTE Confidence: 0.8234433

00:20:34.350 --> 00:20:35.666 was published in 2016.

NOTE Confidence: 0.8234433

00:20:35.666 --> 00:20:38.096 It was basically aimed at looking at

NOTE Confidence: 0.8234433

00:20:38.096 --> 00:20:40.036 mortality benefit in patients with

NOTE Confidence: 0.8234433

00:20:40.036 --> 00:20:41.950 and without nocturnal oxygen pair.

NOTE Confidence: 0.8234433

00:20:41.950 --> 00:20:44.326 Empty and they took this quarter

NOTE Confidence: 0.8234433

00:20:44.326 --> 00:20:45.514 patients direct respectively

NOTE Confidence: 0.8234433

00:20:45.514 --> 00:20:47.239 applied a modified stock bond.

NOTE Confidence: 0.8234433

00:20:47.240 --> 00:20:49.095 Scores modified because there were

NOTE Confidence: 0.8234433

00:20:49.095 --> 00:20:51.788 no next to conference data for those

NOTE Confidence: 0.8234433

00:20:51.788 --> 00:20:54.092 individuals in this cohort on the

NOTE Confidence: 0.8234433

00:20:54.092 --> 00:20:55.652 classified patients in intermediate

NOTE Confidence: 0.8234433

00:20:55.652 --> 00:20:58.207 high risk and low risk of having

NOTE Confidence: 0.8234433

00:20:58.207 --> 00:20:59.720 undiagnosed obstructive sleep apnea.

NOTE Confidence: 0.8234433

00:20:59.720 --> 00:21:02.380 And then they looked at some quality

NOTE Confidence: 0.8234433

00:21:02.447 --> 00:21:04.625 of life indices in this individual.

NOTE Confidence: 0.8234433

00:21:04.630 --> 00:21:07.227 In these individuals and what they were

NOTE Confidence: 0.8234433

00:21:07.227 --> 00:21:09.945 able to demonstrate was that patients with

NOTE Confidence: 0.8234433

00:21:09.945 --> 00:21:12.249 intermediate to higher risk of having.

NOTE Confidence: 0.8234433

00:21:12.250 --> 00:21:13.036 Undiagnosed COPD,

NOTE Confidence: 0.8234433

00:21:13.036 --> 00:21:13.822 I'm sorry.

NOTE Confidence: 0.8234433

00:21:13.822 --> 00:21:16.180 Undiagnosed OSA in CPD had lower

NOTE Confidence: 0.8234433

00:21:16.253 --> 00:21:18.305 quality of life scores and higher

NOTE Confidence: 0.8234433

00:21:18.305 --> 00:21:20.660 scores on the Saint George Respiratory

NOTE Confidence: 0.8234433

00:21:20.660 --> 00:21:23.420 Questionnaire so that reps in Georgia.

NOTE Confidence: 0.8234433

00:21:23.420 --> 00:21:25.760 Respiratory questionnaire.

NOTE Confidence: 0.8234433

00:21:25.760 --> 00:21:27.330 It basically assesses overall health

NOTE Confidence: 0.8234433

00:21:27.330 --> 00:21:29.361 and perceived well being in patients

NOTE Confidence: 0.8234433

00:21:29.361 --> 00:21:31.009 with obstructive airway diseases,

NOTE Confidence: 0.8234433

00:21:31.010 --> 00:21:33.714 and So what they what they put forward

NOTE Confidence: 0.8234433

00:21:33.714 --> 00:21:37.228 as a conclusion for this study was that.

NOTE Confidence: 0.8234433

00:21:37.230 --> 00:21:38.546 There's there's high mobility

NOTE Confidence: 0.8234433

00:21:38.546 --> 00:21:41.061 in terms of quality of life from

NOTE Confidence: 0.8234433

00:21:41.061 --> 00:21:42.957 undiagnosed obstructive sleep apnea.

NOTE Confidence: 0.8234433

00:21:42.960 --> 00:21:44.103 In you know,

NOTE Confidence: 0.8234433

00:21:44.103 --> 00:21:46.008 the population of patients with

NOTE Confidence: 0.8234433

00:21:46.008 --> 00:21:47.930 COPDI think what is lacking?

NOTE Confidence: 0.8234433

00:21:47.930 --> 00:21:50.510 Go is Israel epidemiologic studies to

NOTE Confidence: 0.8234433

00:21:50.510 --> 00:21:52.981 see which particular phenotype or which

NOTE Confidence: 0.8234433

00:21:52.981 --> 00:21:54.686 population of patients with stupid

NOTE Confidence: 0.8234433

00:21:54.686 --> 00:21:57.581 you may or may not be an increased

NOTE Confidence: 0.8234433

00:21:57.581 --> 00:21:59.747 risk of getting obstructive sleep apnea.

NOTE Confidence: 0.8234433

00:21:59.747 --> 00:22:01.889 Now, when looking at the prevalence

NOTE Confidence: 0.8234433

00:22:01.889 --> 00:22:03.590 of the overlap syndrome,

NOTE Confidence: 0.8234433

00:22:03.590 --> 00:22:05.978 it really does depend on the

NOTE Confidence: 0.8234433

00:22:05.978 --> 00:22:07.880 population that you look at.

NOTE Confidence: 0.8234433

00:22:07.880 --> 00:22:09.032 This is really good.

NOTE Confidence: 0.8234433

00:22:09.032 --> 00:22:11.515 Meta analysis was done by a group of

NOTE Confidence: 0.8234433

00:22:11.515 --> 00:22:13.230 researchers from Australia and they

NOTE Confidence: 0.8234433

00:22:13.230 --> 00:22:15.811 looked at 27 studies and found that

NOTE Confidence: 0.8234433

00:22:15.811 --> 00:22:17.676 the prevalence ranged anywhere from

NOTE Confidence: 0.8234433

00:22:17.676 --> 00:22:20.409 11% to 66% and it really did depend

NOTE Confidence: 0.8234433

00:22:20.409 --> 00:22:22.800 on the population that you looked at.

NOTE Confidence: 0.8234433

00:22:22.800 --> 00:22:25.554 If you require a high hi for your study

NOTE Confidence: 0.8234433

00:22:25.554 --> 00:22:28.218 and your patience for a bit younger,

NOTE Confidence: 0.8234433

00:22:28.220 --> 00:22:29.920 the prevalence is about 11%.

NOTE Confidence: 0.8234433

00:22:29.920 --> 00:22:32.168 If you require a lower hi and you

NOTE Confidence: 0.8234433

00:22:32.168 --> 00:22:34.319 look at some older population,

NOTE Confidence: 0.8234433

00:22:34.320 --> 00:22:37.288 it was about 41% if your population was

NOTE Confidence: 0.8234433

00:22:37.288 --> 00:22:40.389 higher 67 average it was as high as 66%.

NOTE Confidence: 0.8234433

00:22:40.390 --> 00:22:42.380 So what they're basically implying

NOTE Confidence: 0.8234433

00:22:42.380 --> 00:22:45.578 by this is that the higher the age

NOTE Confidence: 0.8234433

00:22:45.578 --> 00:22:47.840 population that you look at is,

NOTE Confidence: 0.8234433

00:22:47.840 --> 00:22:50.568 the more likely that you want to find

NOTE Confidence: 0.8234433

00:22:50.568 --> 00:22:52.928 the overlap syndrome being present.

NOTE Confidence: 0.8234433

00:22:52.930 --> 00:22:53.714 Of course,

NOTE Confidence: 0.8234433

00:22:53.714 --> 00:22:55.674 there's no direct correlation with,

NOTE Confidence: 0.8234433

00:22:55.680 --> 00:22:57.640 I just want to add,

NOTE Confidence: 0.8234433

00:22:57.640 --> 00:22:58.940 like obstructive sleep apnea,

NOTE Confidence: 0.8234433

00:22:58.940 --> 00:23:02.339 though see OPD is is a heterogeneous disease.

NOTE Confidence: 0.8234433

00:23:02.340 --> 00:23:05.476 It's not, you know, One Cup fits all.

NOTE Confidence: 0.8234433

00:23:05.480 --> 00:23:06.264 It's it's.

NOTE Confidence: 0.8234433

00:23:06.264 --> 00:23:07.440 You have clinical,

NOTE Confidence: 0.8234433

00:23:07.440 --> 00:23:09.004 physiologic and radiologic subtypes

NOTE Confidence: 0.8234433

00:23:09.004 --> 00:23:10.936 of this disease, but.

NOTE Confidence: 0.8234433

00:23:10.936 --> 00:23:14.716 Even these New York subclassifications

NOTE Confidence: 0.8234433

00:23:14.716 --> 00:23:16.228 of phenotypes.

NOTE Confidence: 0.8234433

00:23:16.230 --> 00:23:18.150 Still can broadly be still can

NOTE Confidence: 0.8234433

00:23:18.150 --> 00:23:19.430 broadly be categorized under

NOTE Confidence: 0.8035989

00:23:19.493 --> 00:23:20.567 predominant emphysematous

NOTE Confidence: 0.8035989

00:23:20.567 --> 00:23:22.715 subtypes and predominant chronic

NOTE Confidence: 0.8035989

00:23:22.715 --> 00:23:25.050 bronchitic subtypes, and you know,

NOTE Confidence: 0.8035989

00:23:25.050 --> 00:23:26.310 these phenotypic classifications.

NOTE Confidence: 0.8035989

00:23:26.310 --> 00:23:28.410 Do you know they do?

NOTE Confidence: 0.8035989

00:23:28.410 --> 00:23:30.930 They do predict in some way,

NOTE Confidence: 0.8035989

00:23:30.930 --> 00:23:33.555 and they do have an effect on

NOTE Confidence: 0.8035989

00:23:33.555 --> 00:23:35.545 on which particular types of

NOTE Confidence: 0.8035989

00:23:35.545 --> 00:23:38.282 patients may be at more risk of

NOTE Confidence: 0.8035989

00:23:38.282 --> 00:23:40.589 developing obstructive sleep apnea.

NOTE Confidence: 0.8035989

00:23:40.590 --> 00:23:41.850 So, for example,

NOTE Confidence: 0.8035989

00:23:41.850 --> 00:23:43.950 patients with predominant emphysema subtypes.

NOTE Confidence: 0.8035989

00:23:43.950 --> 00:23:47.775 You know, these folks tend to have lower BMI.

NOTE Confidence: 0.8035989

00:23:47.780 --> 00:23:50.096 They tend to have more hyperinflation

NOTE Confidence: 0.8035989

00:23:50.096 --> 00:23:53.010 and they tend to have more dyspnea,

NOTE Confidence: 0.8035989

00:23:53.010 --> 00:23:55.380 and they have a lower likelihood

NOTE Confidence: 0.8035989

00:23:55.380 --> 00:23:57.430 of having obstructive sleep apnea.

NOTE Confidence: 0.8035989

00:23:57.430 --> 00:23:59.440 And now like I said,

NOTE Confidence: 0.8035989

00:23:59.440 --> 00:24:00.643 there's no epidemiological

NOTE Confidence: 0.8035989

00:24:00.643 --> 00:24:02.247 studies to support this,

NOTE Confidence: 0.8035989

00:24:02.250 --> 00:24:04.812 but there was a really good physiologic

NOTE Confidence: 0.8035989

00:24:04.812 --> 00:24:07.708 study that I found that looked at

NOTE Confidence: 0.8035989

00:24:07.708 --> 00:24:10.288 functional residual capacity and P crit,

NOTE Confidence: 0.8035989

00:24:10.290 --> 00:24:12.588 so functional residual capacity is a

NOTE Confidence: 0.8035989

00:24:12.588 --> 00:24:14.603 direct correlation correlator with with

NOTE Confidence: 0.8035989

00:24:14.603 --> 00:24:16.718 hyperinflation and unlike residual volume,

NOTE Confidence: 0.8035989

00:24:16.720 --> 00:24:19.186 it simply represents the amount of.

NOTE Confidence: 0.8035989

00:24:19.190 --> 00:24:22.150 Air left in your lungs after a normal

NOTE Confidence: 0.8035989

00:24:22.150 --> 00:24:25.218 expiration as opposed to a forced expiration,

NOTE Confidence: 0.8035989

00:24:25.220 --> 00:24:27.626 and of course P crit windows.

NOTE Confidence: 0.8035989

00:24:27.630 --> 00:24:30.264 Really the gold standard for measuring

NOTE Confidence: 0.8035989

00:24:30.264 --> 00:24:32.429 upper respiratory collapse ability so

NOTE Confidence: 0.8035989

00:24:32.429 --> 00:24:34.487 soapy create they measured the nasal

NOTE Confidence: 0.8035989

00:24:34.487 --> 00:24:36.820 pressure or where passive upper airway

NOTE Confidence: 0.8035989

00:24:36.820 --> 00:24:38.890 collapse occurs on airflow thesis.

NOTE Confidence: 0.8035989

00:24:38.890 --> 00:24:41.394 And So what you were able to find

NOTE Confidence: 0.8035989

00:24:41.394 --> 00:24:44.519 was a negative correlation with FRC,

NOTE Confidence: 0.8035989

00:24:44.520 --> 00:24:45.404 NP, crit,

NOTE Confidence: 0.8035989

00:24:45.404 --> 00:24:47.614 basically saying that the more

NOTE Confidence: 0.8035989

00:24:47.614 --> 00:24:49.599 hyper inflation that you had.

NOTE Confidence: 0.8035989

00:24:49.600 --> 00:24:51.844 The more negative your peak rate

NOTE Confidence: 0.8035989

00:24:51.844 --> 00:24:54.680 and the less likely you are to

NOTE Confidence: 0.8035989

00:24:54.680 --> 00:24:56.364 have upper airway obstruction,

NOTE Confidence: 0.8035989

00:24:56.370 --> 00:24:58.820 the mechanism that was proposed for this

NOTE Confidence: 0.8035989

00:24:58.820 --> 00:25:01.140 is that impatient with hyperinflation,

NOTE Confidence: 0.8035989

00:25:01.140 --> 00:25:03.130 they have more chordal traction,

NOTE Confidence: 0.8035989

00:25:03.130 --> 00:25:04.722 more quarter tracheal traction.

NOTE Confidence: 0.8035989

00:25:04.722 --> 00:25:07.110 During in inflation of the lungs,

NOTE Confidence: 0.8035989

00:25:07.110 --> 00:25:08.702 producing more stiffer and

NOTE Confidence: 0.8035989

00:25:08.702 --> 00:25:10.294 less collapsible upper airway.

NOTE Confidence: 0.8035989

00:25:10.300 --> 00:25:12.834 Now this is opposed to patients with

NOTE Confidence: 0.8035989

00:25:12.834 --> 00:25:15.069 chronic bronchitis with these individuals.

NOTE Confidence: 0.8035989

00:25:15.070 --> 00:25:17.055 I'm sorry these individuals tend

NOTE Confidence: 0.8035989

00:25:17.055 --> 00:25:18.643 to have higher BMI's,

NOTE Confidence: 0.8035989

00:25:18.650 --> 00:25:20.314 more comorbidities, right heart.

NOTE Confidence: 0.8035989

00:25:20.314 --> 00:25:20.730 Celia,

NOTE Confidence: 0.8035989

00:25:20.730 --> 00:25:22.354 they have rustrel fluid

NOTE Confidence: 0.8035989

00:25:22.354 --> 00:25:23.978 shift from peripheral edema.

NOTE Confidence: 0.8035989

00:25:23.980 --> 00:25:27.160 Rostral fluid shift is really where

NOTE Confidence: 0.8035989

00:25:27.160 --> 00:25:29.880 you have redistribution of edema.

NOTE Confidence: 0.8035989

00:25:29.880 --> 00:25:32.016 Where you have very pharyngeal Perry,

NOTE Confidence: 0.8035989

00:25:32.020 --> 00:25:33.440 laryngeal and pray pharyngeal

NOTE Confidence: 0.8035989

00:25:33.440 --> 00:25:34.150 edema developing,

NOTE Confidence: 0.8035989

00:25:34.150 --> 00:25:36.070 which of course can increase your

NOTE Confidence: 0.8035989

00:25:36.070 --> 00:25:38.200 risk of upper airway obstruction and

NOTE Confidence: 0.8035989

00:25:38.200 --> 00:25:40.558 they have a lower respiratory drives.

NOTE Confidence: 0.8035989

00:25:40.560 --> 00:25:42.340 And so these individuals had

NOTE Confidence: 0.8035989

00:25:42.340 --> 00:25:43.408 a higher likelihood.

NOTE Confidence: 0.8035989

00:25:43.410 --> 00:25:45.307 I thought I should say I thought

NOTE Confidence: 0.8035989

00:25:45.307 --> 00:25:47.160 to have a higher likelihood

NOTE Confidence: 0.8035989

00:25:47.160 --> 00:25:49.100 of obstructive sleep apnea,

NOTE Confidence: 0.8035989

00:25:49.100 --> 00:25:51.200 so the Theo PD gene investigators

NOTE Confidence: 0.8035989

00:25:51.200 --> 00:25:53.269 that did your original SEAL PD

NOTE Confidence: 0.8035989

00:25:53.269 --> 00:25:55.369 gene study and that's the OPD gene

NOTE Confidence: 0.8035989

00:25:55.369 --> 00:25:58.196 study was done to kind of establish

NOTE Confidence: 0.8035989

00:25:58.196 --> 00:25:59.426 any genetic susceptibilities.

NOTE Confidence: 0.8035989

00:25:59.430 --> 00:26:00.962 In general patient populations.

NOTE Confidence: 0.8035989

00:26:00.962 --> 00:26:03.768 UPD they took this data on the

NOTE Confidence: 0.8035989

00:26:03.768 --> 00:26:05.948 divided patients into having chronic

NOTE Confidence: 0.8035989

00:26:05.948 --> 00:26:09.002 bronchitis and those that did not have

NOTE Confidence: 0.8035989

00:26:09.002 --> 00:26:11.067 chronic bronchitis based on coughing,

NOTE Confidence: 0.8035989

00:26:11.070 --> 00:26:11.488 phlegm,

NOTE Confidence: 0.8035989

00:26:11.488 --> 00:26:13.996 production for at least two years,

NOTE Confidence: 0.8035989

00:26:14.000 --> 00:26:16.856 and they found that these individuals with

NOTE Confidence: 0.8035989

00:26:16.856 --> 00:26:18.995 chronic bronchitis had a significantly

NOTE Confidence: 0.8035989

00:26:18.995 --> 00:26:21.539 higher risk of developing sleep apnea.

NOTE Confidence: 0.8035989

00:26:21.540 --> 00:26:24.132 The thought behind this is that

NOTE Confidence: 0.8035989

00:26:24.132 --> 00:26:25.860 the pathophysiology of obstructive

NOTE Confidence: 0.8035989

00:26:25.931 --> 00:26:28.256 sleep apnea and chronic bronchitis

NOTE Confidence: 0.8035989

00:26:28.256 --> 00:26:29.651 specifically overlapped more

NOTE Confidence: 0.8035989

00:26:29.651 --> 00:26:31.240 so than they did.

NOTE Confidence: 0.8035989

00:26:31.240 --> 00:26:32.848 Those individuals with emphysema

NOTE Confidence: 0.8035989

00:26:32.848 --> 00:26:34.858 adopting said our patient had

NOTE Confidence: 0.8035989

00:26:34.858 --> 00:26:36.539 significant hyperinflation and was

NOTE Confidence: 0.8035989

00:26:36.539 --> 00:26:38.574 somewhere in between both categories.

NOTE Confidence: 0.8035989

00:26:38.580 --> 00:26:40.852 Of course you have.

NOTE Confidence: 0.8035989

00:26:40.852 --> 00:26:44.260 You definitely have variations of this.

NOTE Confidence: 0.83676034

00:26:44.260 --> 00:26:47.194 You know occurring in real life so you have

NOTE Confidence: 0.83676034

00:26:47.194 --> 00:26:50.091 factors that you know also a shared between

NOTE Confidence: 0.83676034

00:26:50.091 --> 00:26:52.378 these two conditions like risk factors.

NOTE Confidence: 0.83676034

00:26:52.380 --> 00:26:54.498 There's no established risk of smoking,

NOTE Confidence: 0.83676034

00:26:54.500 --> 00:26:57.227 at least that I was able to find directly

NOTE Confidence: 0.83676034

00:26:57.227 --> 00:26:59.787 being linked to obstructive sleep apnea,

NOTE Confidence: 0.83676034

00:26:59.790 --> 00:27:02.590 there are few animal studies that I did

NOTE Confidence: 0.83676034

00:27:02.590 --> 00:27:05.436 find that was positing that to be true,

NOTE Confidence: 0.83676034

00:27:05.440 --> 00:27:08.303 but of course smoke exposure can't contribute

NOTE Confidence: 0.83676034

00:27:08.303 --> 00:27:11.163 to every information which can narrow the

NOTE Confidence: 0.83676034

00:27:11.163 --> 00:27:13.509 upper Airways and predisposed to collapse.

NOTE Confidence: 0.83676034

00:27:13.510 --> 00:27:14.830 And obstructive events.

NOTE Confidence: 0.83676034

00:27:14.830 --> 00:27:17.030 So you have these factors,

NOTE Confidence: 0.83676034

00:27:17.030 --> 00:27:19.697 then President and CEO PD that may

NOTE Confidence: 0.83676034

00:27:19.697 --> 00:27:22.459 protect or that may pretend to

NOTE Confidence: 0.83676034

00:27:22.459 --> 00:27:24.507 getting obstructive sleep apnea.

NOTE Confidence: 0.83676034

00:27:24.510 --> 00:27:28.038 So steroids of course is is is is very

NOTE Confidence: 0.83676034

00:27:28.038 --> 00:27:31.109 often used in patients with stupid,

NOTE Confidence: 0.83676034

00:27:31.110 --> 00:27:33.828 especially during exacerbations.

NOTE Confidence: 0.83676034

00:27:33.830 --> 00:27:36.254 Very much the same way as they can

NOTE Confidence: 0.83676034

00:27:36.254 --> 00:27:38.143 cause proximal myopathy of you know

NOTE Confidence: 0.83676034

00:27:38.143 --> 00:27:40.422 they can also cause you know Upper

NOTE Confidence: 0.83676034

00:27:40.422 --> 00:27:42.372 Airways upper airway myopathy as

NOTE Confidence: 0.83676034

00:27:42.372 --> 00:27:45.830 well and may potentially lead to.

NOTE Confidence: 0.83676034

00:27:45.830 --> 00:27:48.098 Um may potentially lead to increased risk

NOTE Confidence: 0.83676034

00:27:48.098 --> 00:27:50.498 of having upper airway obstruction feel.

NOTE Confidence: 0.83676034

00:27:50.500 --> 00:27:52.648 Filing is thought to be protected

NOTE Confidence: 0.83676034

00:27:52.648 --> 00:27:54.408 because of its, you know,

NOTE Confidence: 0.83676034

00:27:54.408 --> 00:27:56.442 because of its central stimulatory effect

NOTE Confidence: 0.83676034

00:27:56.442 --> 00:27:59.110 on the respiratory centers of the brain.

NOTE Confidence: 0.83676034

00:27:59.110 --> 00:28:01.324 So when you, when you clinically

NOTE Confidence: 0.83676034

00:28:01.324 --> 00:28:03.780 assess a patient who you know you,

NOTE Confidence: 0.83676034

00:28:03.780 --> 00:28:05.928 you know who may have stupidly

NOTE Confidence: 0.83676034

00:28:05.928 --> 00:28:06.644 overlap syndrome.

NOTE Confidence: 0.83676034

00:28:06.650 --> 00:28:09.170 It's so important to have clinical suspicion,

NOTE Confidence: 0.83676034

00:28:09.170 --> 00:28:11.599 OK, because if you don't know that

NOTE Confidence: 0.83676034

00:28:11.599 --> 00:28:13.469 these two conditions can coexist,

NOTE Confidence: 0.83676034

00:28:13.470 --> 00:28:15.270 you won't look for it.

NOTE Confidence: 0.83676034

00:28:15.270 --> 00:28:16.374 So if you're.

NOTE Confidence: 0.83676034

00:28:16.374 --> 00:28:18.454 For example, in a sleep clinic,

NOTE Confidence: 0.83676034

00:28:18.454 --> 00:28:20.134 your patient is telling you,

NOTE Confidence: 0.83676034

00:28:20.140 --> 00:28:21.820 hey, you know I can't.

NOTE Confidence: 0.83676034

00:28:21.820 --> 00:28:23.614 You see Pop because of persistent

NOTE Confidence: 0.83676034

00:28:23.614 --> 00:28:25.510 cough or phlegm or congestion,

NOTE Confidence: 0.83676034

00:28:25.510 --> 00:28:27.185 and they have the appropriate

NOTE Confidence: 0.83676034

00:28:27.185 --> 00:28:27.855 clinical history.

NOTE Confidence: 0.83676034

00:28:27.860 --> 00:28:29.828 Then you want to consider referring

NOTE Confidence: 0.83676034

00:28:29.828 --> 00:28:31.900 them to pulmonologists or getting PFTS.

NOTE Confidence: 0.83676034

00:28:31.900 --> 00:28:34.580 If you have the capacity to do without.

NOTE Confidence: 0.83676034

00:28:34.580 --> 00:28:36.260 And of course if you're

NOTE Confidence: 0.83676034

00:28:36.260 --> 00:28:37.604 in a pulmonary clinic.

NOTE Confidence: 0.83676034

00:28:37.610 --> 00:28:39.885 If despite optimization of Sio PD patients

NOTE Confidence: 0.83676034

00:28:39.885 --> 00:28:41.639 persistently has you know symptoms,

NOTE Confidence: 0.83676034

00:28:41.640 --> 00:28:42.358 especially headaches,

NOTE Confidence: 0.83676034

00:28:42.358 --> 00:28:43.076 for example,

NOTE Confidence: 0.83676034

00:28:43.076 --> 00:28:45.230 then you off definitely want to

NOTE Confidence: 0.83676034

00:28:45.292 --> 00:28:47.086 consider getting a full night of.

NOTE Confidence: 0.83676034

00:28:47.090 --> 00:28:49.796 Full night PSG for these individuals,

NOTE Confidence: 0.83676034

00:28:49.800 --> 00:28:53.128 so in terms of the symptoms that patients

NOTE Confidence: 0.83676034

00:28:53.128 --> 00:28:55.658 develop with the overlap syndrome,

NOTE Confidence: 0.83676034

00:28:55.660 --> 00:28:58.408 they really can be linked to

NOTE Confidence: 0.83676034

00:28:58.408 --> 00:28:59.782 the underlying pathophysiologic

NOTE Confidence: 0.83676034

00:28:59.782 --> 00:29:02.486 changes that we see so morning

NOTE Confidence: 0.83676034

00:29:02.486 --> 00:29:04.222 headaches arising from hypercapnia.

NOTE Confidence: 0.83676034

00:29:04.230 --> 00:29:06.218 Hypoxemia commit to cyanosis

NOTE Confidence: 0.83676034

00:29:06.218 --> 00:29:08.703 and polycythemia and of course

NOTE Confidence: 0.83676034

00:29:08.703 --> 00:29:10.861 peripheral edema can result from

NOTE Confidence: 0.83676034

00:29:10.861 --> 00:29:13.243 from from chronic cor pulmonale E.

NOTE Confidence: 0.83676034

00:29:13.250 --> 00:29:16.118 So these individuals as well with

NOTE Confidence: 0.83676034

00:29:16.118 --> 00:29:18.320 Overlap syndrome specifically tend to.

NOTE Confidence: 0.83676034

00:29:18.320 --> 00:29:20.630 Fall under that OSC phenotype

NOTE Confidence: 0.83676034

00:29:20.630 --> 00:29:22.940 of older more comorbid HI,

NOTE Confidence: 0.83676034

00:29:22.940 --> 00:29:26.612 HI and less time or I should say more

NOTE Confidence: 0.83676034

00:29:26.612 --> 00:29:29.791 time with saturations of less than

NOTE Confidence: 0.83676034

00:29:29.791 --> 00:29:33.180 90% and wild hypoxemia and hypoxia

NOTE Confidence: 0.83676034

00:29:33.180 --> 00:29:35.460 certainly you know contributes

NOTE Confidence: 0.83676034

00:29:35.460 --> 00:29:38.447 clinically in terms of how these

NOTE Confidence: 0.83676034

00:29:38.447 --> 00:29:40.315 individuals present it contributes

NOTE Confidence: 0.83676034

00:29:40.315 --> 00:29:43.852 in a major way to the to the to the

NOTE Confidence: 0.83676034

00:29:43.852 --> 00:29:46.078 morbidity associated with this disease.

NOTE Confidence: 0.83676034

00:29:46.078 --> 00:29:48.910 By activation off the inflammatory pathways.

NOTE Confidence: 0.83676034

00:29:48.910 --> 00:29:51.470 It's very well established in.

NOTE Confidence: 0.83676034

00:29:51.470 --> 00:29:55.110 See OPD patients that you know that

NOTE Confidence: 0.83676034

00:29:55.110 --> 00:29:57.264 interleukin six neutrophils and

NOTE Confidence: 0.83676034

00:29:57.264 --> 00:30:00.306 fibrinogen values much higher in uncon.

NOTE Confidence: 0.83676034

00:30:00.310 --> 00:30:02.866 Trolls theopedia is associated with loss,

NOTE Confidence: 0.83676034

00:30:02.870 --> 00:30:05.000 survival and cause system wide

NOTE Confidence: 0.83676034

00:30:05.000 --> 00:30:07.130 inflammation in patients with COPD.

NOTE Confidence: 0.8024891

00:30:07.130 --> 00:30:09.699 But you know the pattern of hypoxia

NOTE Confidence: 0.8024891

00:30:09.699 --> 00:30:12.834 in COPD and the pattern of hypoxia

NOTE Confidence: 0.8024891

00:30:12.834 --> 00:30:14.786 in obstructive sleep apnea.

NOTE Confidence: 0.8024891

00:30:14.790 --> 00:30:17.346 Else is is not the same.

NOTE Confidence: 0.8024891

00:30:17.350 --> 00:30:20.325 So in patients with obstructive sleep apnea,

NOTE Confidence: 0.8024891

00:30:20.330 --> 00:30:22.034 these individuals tended to.

NOTE Confidence: 0.8024891

00:30:22.034 --> 00:30:25.010 These individuals tend to have, you know,

NOTE Confidence: 0.8024891

00:30:25.010 --> 00:30:27.950 tend to have intermittent type of hypoxia

NOTE Confidence: 0.8024891

00:30:27.950 --> 00:30:31.178 as opposed to patients with with COPD.

NOTE Confidence: 0.8024891

00:30:31.180 --> 00:30:33.448 They tend to have sustained hypoxia

NOTE Confidence: 0.8024891

00:30:33.448 --> 00:30:35.540 when the two conditions overlap.

NOTE Confidence: 0.8024891

00:30:35.540 --> 00:30:38.240 Sustained hypoxia tends to be the

NOTE Confidence: 0.8024891

00:30:38.240 --> 00:30:40.616 predominant type or the predominant

NOTE Confidence: 0.8024891

00:30:40.616 --> 00:30:43.066 pattern of hypoxia that you

NOTE Confidence: 0.8024891

00:30:43.066 --> 00:30:45.740 typically see in sleep studies.

NOTE Confidence: 0.8024891

00:30:45.740 --> 00:30:48.776 Interesting physiologic study that I saw.

NOTE Confidence: 0.8024891

00:30:48.780 --> 00:30:51.840 A done in 2005.

NOTE Confidence: 0.8024891

00:30:51.840 --> 00:30:54.222 This group of researchers that took

NOTE Confidence: 0.8024891

00:30:54.222 --> 00:30:56.540 it from pronouncing this correctly,

NOTE Confidence: 0.8024891

00:30:56.540 --> 00:30:59.200 he la cells and these are basically

NOTE Confidence: 0.8024891

00:30:59.200 --> 00:31:01.206 immortal cell lines typically used

NOTE Confidence: 0.8024891

00:31:01.206 --> 00:31:03.964 in in Cancer Research on the exposed

NOTE Confidence: 0.8024891

00:31:03.964 --> 00:31:06.889 these cells to sustained hypoxia and

NOTE Confidence: 0.8024891

00:31:06.889 --> 00:31:09.344 varying degrees of intermittent hypoxia,

NOTE Confidence: 0.8024891

00:31:09.350 --> 00:31:12.339 and they looked at two inflammatory pathways.

NOTE Confidence: 0.8024891

00:31:12.340 --> 00:31:12.767 Again,

NOTE Confidence: 0.8024891

00:31:12.767 --> 00:31:14.902 these are two separate inflammatory

NOTE Confidence: 0.8024891

00:31:14.902 --> 00:31:16.610 pathways in nuclear factor.

NOTE Confidence: 0.8024891

00:31:16.610 --> 00:31:19.172 Kappa Beta Pathway is a master

NOTE Confidence: 0.8024891

00:31:19.172 --> 00:31:20.880 regulator of TNF Alpha.

NOTE Confidence: 0.8024891

00:31:20.880 --> 00:31:23.586 The hypoxia induced factor 1 pathway.

NOTE Confidence: 0.8024891

00:31:23.590 --> 00:31:25.620 ENCODE for proteins like erythropoetin

NOTE Confidence: 0.8024891

00:31:25.620 --> 00:31:27.244 vascular endothelial growth factor,

NOTE Confidence: 0.8024891

00:31:27.250 --> 00:31:28.958 and nitric oxide synthase,

NOTE Confidence: 0.8024891

00:31:28.958 --> 00:31:32.012 so they do different things in terms

NOTE Confidence: 0.8024891

00:31:32.012 --> 00:31:34.484 of how they exert a inflammatory

NOTE Confidence: 0.8024891

00:31:34.484 --> 00:31:36.868 effects and what you know what

NOTE Confidence: 0.8024891

00:31:36.868 --> 00:31:38.648 they were able to prove,

NOTE Confidence: 0.8024891

00:31:38.650 --> 00:31:40.278 that intermittent hypoxia preferentially

NOTE Confidence: 0.8024891

00:31:40.278 --> 00:31:41.499 caused increased activation,

NOTE Confidence: 0.8024891

00:31:41.500 --> 00:31:43.936 increased activity in the nuclear factor.

NOTE Confidence: 0.8024891

00:31:43.940 --> 00:31:45.975 Kappa Beta partly as opposed

NOTE Confidence: 0.8024891

00:31:45.975 --> 00:31:47.196 to sustained hypoxia,

NOTE Confidence: 0.8024891

00:31:47.200 --> 00:31:48.824 which favored the hypoxia,

NOTE Confidence: 0.8024891

00:31:48.824 --> 00:31:50.448 induced one luciferase activity.

NOTE Confidence: 0.8024891

00:31:50.450 --> 00:31:51.938 Partly so of course,

NOTE Confidence: 0.8024891

00:31:51.938 --> 00:31:54.170 I'm not saying that that's directly

NOTE Confidence: 0.8024891

00:31:54.239 --> 00:31:55.170 transmissible.

NOTE Confidence: 0.8024891

00:31:55.170 --> 00:31:57.375 Or translated into a patient

NOTE Confidence: 0.8024891

00:31:57.375 --> 00:31:58.698 with overlap syndrome,

NOTE Confidence: 0.8024891

00:31:58.700 --> 00:32:01.516 but it does help us to understand that

NOTE Confidence: 0.8024891

00:32:01.516 --> 00:32:04.419 in patients with overlap syndrome with

NOTE Confidence: 0.8024891

00:32:04.419 --> 00:32:07.079 nocturnal with profound nocturnal oxygen,

NOTE Confidence: 0.8024891

00:32:07.080 --> 00:32:07.960 D saturation.

NOTE Confidence: 0.8024891

00:32:07.960 --> 00:32:10.160 You then have this exaggerated,

NOTE Confidence: 0.8024891

00:32:10.160 --> 00:32:11.924 profound activation of system

NOTE Confidence: 0.8024891

00:32:11.924 --> 00:32:12.806 wide information.

NOTE Confidence: 0.8024891

00:32:12.810 --> 00:32:15.386 Then you might not otherwise see in

NOTE Confidence: 0.8024891

00:32:15.386 --> 00:32:17.705 either conditions alone which directly

NOTE Confidence: 0.8024891

00:32:17.705 --> 00:32:19.427 causes endothelial dysfunction.

NOTE Confidence: 0.8024891

00:32:19.430 --> 00:32:21.630 Now you have to remember,

NOTE Confidence: 0.8024891

00:32:21.630 --> 00:32:23.450 endothelial dysfunction is one

NOTE Confidence: 0.8024891

00:32:23.450 --> 00:32:25.270 of those whole normals.

NOTE Confidence: 0.8024891

00:32:25.270 --> 00:32:27.538 Tell us which I was trying,

NOTE Confidence: 0.8024891

00:32:27.540 --> 00:32:29.460 so endothelial dysfunction will in

NOTE Confidence: 0.8024891

00:32:29.460 --> 00:32:32.069 turn lead to increased risk of Trumbo,

NOTE Confidence: 0.8024891

00:32:32.070 --> 00:32:32.494 SIS,

NOTE Confidence: 0.8024891

00:32:32.494 --> 00:32:33.766 increased arterial sclerosis,

NOTE Confidence: 0.8024891

00:32:33.766 --> 00:32:35.886 increased risk of developing accurate

NOTE Confidence: 0.8024891

00:32:35.886 --> 00:32:37.968 sclerotic plugs and of course all

NOTE Confidence: 0.8024891

00:32:37.968 --> 00:32:39.252 of the cardiovascular morbidity.

NOTE Confidence: 0.8024891

00:32:39.260 --> 00:32:41.528 That's what it comes with that

NOTE Confidence: 0.8024891

00:32:41.528 --> 00:32:43.040 and so you know,

NOTE Confidence: 0.8024891

00:32:43.040 --> 00:32:45.928 in terms of not just in terms of

NOTE Confidence: 0.8024891

00:32:45.928 --> 00:32:47.569 cardiovascular disease and mobility,

NOTE Confidence: 0.8024891

00:32:47.570 --> 00:32:50.216 but also in terms of pulmonary hypertension,

NOTE Confidence: 0.8024891

00:32:50.220 --> 00:32:52.614 is something that you see more commonly

NOTE Confidence: 0.8024891

00:32:52.614 --> 00:32:56.144 in patients with overlap syndrome, you know.

NOTE Confidence: 0.8024891

00:32:56.144 --> 00:32:59.629 In patients with pure overseeing.

NOTE Confidence: 0.8024891

00:32:59.630 --> 00:33:01.206 The the pulmonary hypertension

NOTE Confidence: 0.8024891

00:33:01.206 --> 00:33:03.938 that you typically see is not as

NOTE Confidence: 0.8024891

00:33:03.938 --> 00:33:06.052 severe that you would see in a

NOTE Confidence: 0.8024891

00:33:06.052 --> 00:33:07.839 patient with overlap syndrome,

NOTE Confidence: 0.8024891

00:33:07.840 --> 00:33:10.078 and when you think about the

NOTE Confidence: 0.8024891

00:33:10.078 --> 00:33:11.570 effect of pulmonary hypertension,

NOTE Confidence: 0.8024891

00:33:11.570 --> 00:33:13.796 you think about right ventricular remodeling.

NOTE Confidence: 0.8024891

00:33:13.800 --> 00:33:14.919 Chronic cor pulmonale.

NOTE Confidence: 0.8024891

00:33:14.919 --> 00:33:17.157 When you think about endothelial dysfunction,

NOTE Confidence: 0.8024891

00:33:17.160 --> 00:33:18.297 like I said,

NOTE Confidence: 0.8024891

00:33:18.297 --> 00:33:20.192 you think about arterial sclerosis

NOTE Confidence: 0.8024891

00:33:20.192 --> 00:33:21.640 so that you know,

NOTE Confidence: 0.8024891

00:33:21.640 --> 00:33:23.500 I found it very interesting.

NOTE Confidence: 0.8024891

00:33:23.500 --> 00:33:25.600 Single center study that looked at

NOTE Confidence: 0.8024891

00:33:25.600 --> 00:33:27.461 overlap patients overlap patients with

NOTE Confidence: 0.8024891

00:33:27.461 --> 00:33:29.471 overlap syndrome and assessing right

NOTE Confidence: 0.8024891

00:33:29.471 --> 00:33:31.340 ventricular remodeling using cardiac MRI,

NOTE Confidence: 0.8024891

00:33:31.340 --> 00:33:34.084 which is not as is not Goldstein.

NOTE Confidence: 0.8024891

00:33:34.090 --> 00:33:37.016 That is not a right heart cast,

NOTE Confidence: 0.8217687

00:33:37.020 --> 00:33:39.281 but it's pretty accurate and they were

NOTE Confidence: 0.8217687

00:33:39.281 --> 00:33:42.606 able to show that in patients with overlap

NOTE Confidence: 0.8217687

00:33:42.606 --> 00:33:44.891 syndrome there was significantly increased

NOTE Confidence: 0.8217687

00:33:44.956 --> 00:33:47.734 risk or increase in significantly increased

NOTE Confidence: 0.8217687

00:33:47.734 --> 00:33:50.001 presence of right ventricular remodeling

NOTE Confidence: 0.8217687

00:33:50.001 --> 00:33:52.467 than was present in matched controls

NOTE Confidence: 0.8217687

00:33:52.467 --> 00:33:55.039 facility must for severity of disease.

NOTE Confidence: 0.8217687

00:33:55.040 --> 00:33:57.410 This was not found to be

NOTE Confidence: 0.8217687

00:33:57.410 --> 00:33:59.650 correlated with FEV one values,

NOTE Confidence: 0.8217687

00:33:59.650 --> 00:34:02.114 but it was found to be correlated

NOTE Confidence: 0.8217687

00:34:02.114 --> 00:34:04.680 with oxygen D saturation indices,

NOTE Confidence: 0.8217687

00:34:04.680 --> 00:34:08.040 oxygen D saturation indices of course is.

NOTE Confidence: 0.8217687

00:34:08.040 --> 00:34:10.476 Is the amount of time that you

NOTE Confidence: 0.8217687

00:34:10.476 --> 00:34:12.679 would spend below estate in Bill.

NOTE Confidence: 0.8217687

00:34:12.680 --> 00:34:15.641 It's it's a number of times per hour of

NOTE Confidence: 0.8217687

00:34:15.641 --> 00:34:18.746 sleep that a blood oxygen level would drop.

NOTE Confidence: 0.8217687

00:34:18.750 --> 00:34:21.249 The lowest integrate from baseline and disk.

NOTE Confidence: 0.8217687

00:34:21.250 --> 00:34:23.030 In this case they took.

NOTE Confidence: 0.8217687

00:34:23.030 --> 00:34:24.820 They took it as 3%.

NOTE Confidence: 0.8217687

00:34:24.820 --> 00:34:25.843 Another single sensor.

NOTE Confidence: 0.8217687

00:34:25.843 --> 00:34:27.889 Japanese study looked at overlap patients

NOTE Confidence: 0.8217687

00:34:27.889 --> 00:34:29.756 with overlap syndrome versus patients

NOTE Confidence: 0.8217687

00:34:29.756 --> 00:34:31.596 with just obstructive sleep apnea.

NOTE Confidence: 0.8217687

00:34:31.600 --> 00:34:34.078 Of course you see it is skewed

NOTE Confidence: 0.8217687

00:34:34.078 --> 00:34:36.239 towards patience with just two assay,

NOTE Confidence: 0.8217687

00:34:36.240 --> 00:34:38.628 but they looked at Brick Hill.

NOTE Confidence: 0.8217687

00:34:38.630 --> 00:34:39.746 Uncle Pathway Velocities,

NOTE Confidence: 0.8217687

00:34:39.746 --> 00:34:41.978 which is a direct surrogates were

NOTE Confidence: 0.8217687

00:34:41.978 --> 00:34:43.903 direct indicator of arterial stiffness

NOTE Confidence: 0.8217687

00:34:43.903 --> 00:34:45.763 right and after adjusting for

NOTE Confidence: 0.8217687

00:34:45.763 --> 00:34:47.976 even smoking status which was very

NOTE Confidence: 0.8217687

00:34:47.976 --> 00:34:50.072 interesting to be after adjusting the

NOTE Confidence: 0.8217687

00:34:50.072 --> 00:34:52.256 smoking status they were able to show

NOTE Confidence: 0.8217687

00:34:52.256 --> 00:34:54.282 that patient with overlap syndrome

NOTE Confidence: 0.8217687

00:34:54.282 --> 00:34:56.066 had significantly higher values.

NOTE Confidence: 0.8217687

00:34:56.070 --> 00:34:58.380 So this what these two studies show

NOTE Confidence: 0.8217687

00:34:58.380 --> 00:35:00.889 and even their single center studies.

NOTE Confidence: 0.8217687

00:35:00.890 --> 00:35:03.386 They were well conducted studies and

NOTE Confidence: 0.8217687

00:35:03.386 --> 00:35:06.669 they were able to show real end organ.

NOTE Confidence: 0.8217687

00:35:06.670 --> 00:35:08.225 Manifestations real end organ damage

NOTE Confidence: 0.8217687

00:35:08.225 --> 00:35:10.543 from everything that we talked about in

NOTE Confidence: 0.8217687

00:35:10.543 --> 00:35:11.967 terms of theoretical pathophysiology,

NOTE Confidence: 0.8217687

00:35:11.970 --> 00:35:14.357 and I think that has real clinical

NOTE Confidence: 0.8217687

00:35:14.357 --> 00:35:16.562 implications in terms of the mobility and

NOTE Confidence: 0.8217687

00:35:16.562 --> 00:35:18.665 attains of in terms of how aggressive

NOTE Confidence: 0.8217687

00:35:18.665 --> 00:35:21.178 we should be in ensuring that these

NOTE Confidence: 0.8217687

00:35:21.178 --> 00:35:22.938 patients are really managed properly.

NOTE Confidence: 0.8217687

00:35:22.938 --> 00:35:24.668 There are some new associations

NOTE Confidence: 0.8217687

00:35:24.668 --> 00:35:26.199 that have been looked at.

NOTE Confidence: 0.8217687

00:35:26.200 --> 00:35:28.448 I saw there was a group of researchers

NOTE Confidence: 0.8217687

00:35:28.448 --> 00:35:30.686 from the University of Buffalo and I

NOTE Confidence: 0.8217687

00:35:30.686 --> 00:35:33.113 think also with the system in Buffalo

NOTE Confidence: 0.8217687

00:35:33.113 --> 00:35:35.369 where the weather where they assessed

NOTE Confidence: 0.8217687

00:35:35.369 --> 00:35:37.339 the prevalence of atrial fibrillation.

NOTE Confidence: 0.8217687

00:35:37.339 --> 00:35:39.354 Impatients overlap syndrome as well.

NOTE Confidence: 0.8217687

00:35:39.360 --> 00:35:41.200 It was a retrospective study,

NOTE Confidence: 0.8217687

00:35:41.200 --> 00:35:43.632 but they looked at five years of data

NOTE Confidence: 0.8217687

00:35:43.632 --> 00:35:46.036 and they they they looked at patients

NOTE Confidence: 0.8217687

00:35:46.036 --> 00:35:48.717 with COPD who were then diagnosed with

NOTE Confidence: 0.8217687

00:35:48.717 --> 00:35:51.381 obstructive sleep apnea who were then

NOTE Confidence: 0.8217687

00:35:51.381 --> 00:35:53.746 diagnosed with Dean over a failed.

NOTE Confidence: 0.8217687

00:35:53.746 --> 00:35:55.960 They excluded patients with valvular disease.

NOTE Confidence: 0.8217687

00:35:55.960 --> 00:35:57.260 Included patients were diagnosed

NOTE Confidence: 0.8217687

00:35:57.260 --> 00:35:59.210 with a fit previously with other

NOTE Confidence: 0.8217687

00:35:59.260 --> 00:36:00.760 chronic respiratory disorders.

NOTE Confidence: 0.8217687

00:36:00.760 --> 00:36:03.152 Now they were not able to find a

NOTE Confidence: 0.8217687

00:36:03.152 --> 00:36:05.189 direct link between obstructive.

NOTE Confidence: 0.8217687

00:36:05.190 --> 00:36:08.466 I'm sorry, overlap syndrome and a firm.

NOTE Confidence: 0.8217687

00:36:08.470 --> 00:36:10.792 But how they reported their data

NOTE Confidence: 0.8217687

00:36:10.792 --> 00:36:11.953 was very interesting.

NOTE Confidence: 0.8217687

00:36:11.960 --> 00:36:12.342 Well,

NOTE Confidence: 0.8217687

00:36:12.342 --> 00:36:14.634 they reported was in patients with

NOTE Confidence: 0.8217687

00:36:14.634 --> 00:36:16.886 Overlap syndrome who will less adherent

NOTE Confidence: 0.8217687

00:36:16.886 --> 00:36:18.956 to CPAP that these individuals had

NOTE Confidence: 0.8217687

00:36:18.956 --> 00:36:21.560 a higher risk of developing each

NOTE Confidence: 0.8217687

00:36:21.560 --> 00:36:22.438 real fibrillation.

NOTE Confidence: 0.8217687

00:36:22.440 --> 00:36:24.380 Of course that's not surprising.

NOTE Confidence: 0.8217687

00:36:24.380 --> 00:36:26.315 CPAP we know reduces fluctuations

NOTE Confidence: 0.8217687

00:36:26.315 --> 00:36:27.476 and intrathoracic pressure.

NOTE Confidence: 0.8217687

00:36:27.480 --> 00:36:29.420 Of course, it mitigates hypoxemia.

NOTE Confidence: 0.8217687

00:36:29.420 --> 00:36:31.748 It will prevent right atrial remodeling,

NOTE Confidence: 0.8217687

00:36:31.750 --> 00:36:35.254 so there is an explanation for why they

NOTE Confidence: 0.8217687

00:36:35.254 --> 00:36:38.780 may have found why they may have had.

NOTE Confidence: 0.8217687

00:36:38.780 --> 00:36:40.274 That particular finding,

NOTE Confidence: 0.8217687

00:36:40.274 --> 00:36:42.764 so in terms of mortality,

NOTE Confidence: 0.8217687

00:36:42.770 --> 00:36:44.770 specifically in patients with

NOTE Confidence: 0.8217687

00:36:44.770 --> 00:36:45.770 overlap syndrome,

NOTE Confidence: 0.8217687

00:36:45.770 --> 00:36:48.745 and if there's any positive

NOTE Confidence: 0.8217687

00:36:48.745 --> 00:36:51.720 effect on pop therapy on

NOTE Confidence: 0.85610574

00:36:51.836 --> 00:36:54.552 mortality. This was look by

NOTE Confidence: 0.85610574

00:36:54.552 --> 00:36:56.910 list looks up at Joseph Moran.

NOTE Confidence: 0.85610574

00:36:56.910 --> 00:36:58.890 I think some University of Minnesota

NOTE Confidence: 0.85610574

00:36:58.890 --> 00:37:01.815 and it was a prospective study that was

NOTE Confidence: 0.85610574

00:37:01.815 --> 00:37:04.637 done to assess the relation of overlap

NOTE Confidence: 0.85610574

00:37:04.637 --> 00:37:07.343 syndrome to mortality and first time

NOTE Confidence: 0.85610574

00:37:07.343 --> 00:37:09.430 hospitalization due to stupid exacerbation.

NOTE Confidence: 0.85610574

00:37:09.430 --> 00:37:12.350 And then if see pub and had any

NOTE Confidence: 0.85610574

00:37:12.423 --> 00:37:14.598 effect on these major outcomes.

NOTE Confidence: 0.85610574

00:37:14.600 --> 00:37:16.952 Again, this was a prospective studies

NOTE Confidence: 0.85610574

00:37:16.952 --> 00:37:18.993 these individual these these research

NOTE Confidence: 0.85610574

00:37:18.993 --> 00:37:20.633 participants were followed for

NOTE Confidence: 0.85610574

00:37:20.633 --> 00:37:23.100 nights and average about nine years.

NOTE Confidence: 0.85610574

00:37:23.100 --> 00:37:25.755 So he categorized individuals into

NOTE Confidence: 0.85610574

00:37:25.755 --> 00:37:28.410 overlap syndrome treated with CPAP

NOTE Confidence: 0.85610574

00:37:28.494 --> 00:37:31.500 overlap syndrome not treated with CPAP,

NOTE Confidence: 0.85610574

00:37:31.500 --> 00:37:35.175 and then with and then theopedia individuals

NOTE Confidence: 0.85610574

00:37:35.175 --> 00:37:37.280 without obstructive sleep apnea.

NOTE Confidence: 0.85610574

00:37:37.280 --> 00:37:40.493 He found that there was increased all

NOTE Confidence: 0.85610574

00:37:40.493 --> 00:37:43.700 cause mortality in patients with with

NOTE Confidence: 0.85610574

00:37:43.700 --> 00:37:46.610 overlap syndrome and that exacerbation

NOTE Confidence: 0.85610574

00:37:46.610 --> 00:37:50.022 free survival and overall survival was

NOTE Confidence: 0.85610574

00:37:50.022 --> 00:37:53.268 lowest in patients with overlap syndrome.

NOTE Confidence: 0.85610574

00:37:53.270 --> 00:37:56.062 Who were not treated with CPAP and that

NOTE Confidence: 0.85610574

00:37:56.062 --> 00:37:58.294 there was a significantly increased

NOTE Confidence: 0.85610574

00:37:58.294 --> 00:38:01.204 survival in patients who were treated

NOTE Confidence: 0.85610574

00:38:01.204 --> 00:38:03.618 with CPAP in terms of you know,

NOTE Confidence: 0.85610574

00:38:03.620 --> 00:38:05.790 hypoxemic COPD as patients who with COPD

NOTE Confidence: 0.85610574

00:38:05.790 --> 00:38:08.778 you know to the progression of their

NOTE Confidence: 0.85610574

00:38:08.778 --> 00:38:10.774 disease requires supplemental oxygenation.

NOTE Confidence: 0.85610574

00:38:10.780 --> 00:38:11.974 You know this.

NOTE Confidence: 0.85610574

00:38:11.974 --> 00:38:13.964 This has also been studying.

NOTE Confidence: 0.85610574

00:38:13.970 --> 00:38:16.358 This was studied by a group

NOTE Confidence: 0.85610574

00:38:16.358 --> 00:38:17.950 of researchers from Brazil,

NOTE Confidence: 0.85610574

00:38:17.950 --> 00:38:20.617 and again this was a simple single

NOTE Confidence: 0.85610574

00:38:20.617 --> 00:38:23.340 center study was a prospective study.

NOTE Confidence: 0.85610574

00:38:23.340 --> 00:38:25.888 And they were able to demonstrate a,

NOTE Confidence: 0.85610574

00:38:25.890 --> 00:38:26.654 you know,

NOTE Confidence: 0.85610574

00:38:26.654 --> 00:38:28.564 increased survival in hypoxemic CPD

NOTE Confidence: 0.85610574

00:38:28.564 --> 00:38:31.348 patients who were treated with CPAP as well.

NOTE Confidence: 0.85610574

00:38:31.350 --> 00:38:33.534 Of course, this is patients with

NOTE Confidence: 0.85610574

00:38:33.534 --> 00:38:34.990 CPAP and oxygen therapy.

NOTE Confidence: 0.85610574

00:38:34.990 --> 00:38:36.442 So when assessing patients

NOTE Confidence: 0.85610574

00:38:36.442 --> 00:38:37.894 with the overlap syndrome,

NOTE Confidence: 0.85610574

00:38:37.900 --> 00:38:39.008 it's very,

NOTE Confidence: 0.85610574

00:38:39.008 --> 00:38:41.778 very important to think about.

NOTE Confidence: 0.85610574

00:38:41.780 --> 00:38:44.276 You know the clinical context in which in

NOTE Confidence: 0.85610574

00:38:44.276 --> 00:38:46.560 which these individuals are presenting.

NOTE Confidence: 0.85610574

00:38:46.560 --> 00:38:48.032 These patients should have,

NOTE Confidence: 0.85610574

00:38:48.032 --> 00:38:49.872 in love attended titration studies,

NOTE Confidence: 0.85610574

00:38:49.880 --> 00:38:51.638 and I think that's important because

NOTE Confidence: 0.85610574

00:38:51.638 --> 00:38:54.026 you need to have objective data and

NOTE Confidence: 0.85610574

00:38:54.026 --> 00:38:56.348 objective evidence that you are actually

NOTE Confidence: 0.85610574

00:38:56.348 --> 00:38:58.042 mitigating these significant hypoxemia

NOTE Confidence: 0.85610574

00:38:58.042 --> 00:39:00.544 that you're seeing in these individuals,

NOTE Confidence: 0.85610574

00:39:00.550 --> 00:39:03.853 that you may not get from an automated CPAP.

NOTE Confidence: 0.85610574

00:39:03.860 --> 00:39:04.596 Of course,

NOTE Confidence: 0.85610574

00:39:04.596 --> 00:39:06.068 you can do oximetry,

NOTE Confidence: 0.85610574

00:39:06.070 --> 00:39:08.782 but many times these patients also

NOTE Confidence: 0.85610574

00:39:08.782 --> 00:39:10.590 have concommitant hypoventilation that

NOTE Confidence: 0.85610574

00:39:10.657 --> 00:39:12.945 you may need to switch to buy popped.

NOTE Confidence: 0.85610574

00:39:12.950 --> 00:39:14.850 Before, during your titrations,

NOTE Confidence: 0.85610574

00:39:14.850 --> 00:39:16.750 if you have hypoventilation,

NOTE Confidence: 0.85610574

00:39:16.750 --> 00:39:19.550 Bipap or noninvasive ventilation

NOTE Confidence: 0.85610574

00:39:19.550 --> 00:39:20.950 is preferred.

NOTE Confidence: 0.85610574

00:39:20.950 --> 00:39:23.718 You know of course it's high pop Mia

NOTE Confidence: 0.85610574

00:39:23.718 --> 00:39:25.610 predominant OSA predominant CPAP,

NOTE Confidence: 0.85610574

00:39:25.610 --> 00:39:28.459 like we showed it certainly has mortality

NOTE Confidence: 0.85610574

00:39:28.459 --> 00:39:31.039 benefit and certainly will be good enough.

NOTE Confidence: 0.85610574

00:39:31.040 --> 00:39:32.536 Supplemental oxygen therapy is

NOTE Confidence: 0.85610574

00:39:32.536 --> 00:39:34.780 something you may be able to

NOTE Confidence: 0.85610574

00:39:34.848 --> 00:39:36.783 determine as necessary during your

NOTE Confidence: 0.85610574

00:39:36.783 --> 00:39:39.173 titration study as well in terms

NOTE Confidence: 0.85610574

00:39:39.173 --> 00:39:41.128 of optimization of CPD therapy.

NOTE Confidence: 0.85610574

00:39:41.130 --> 00:39:42.186 This is very,

NOTE Confidence: 0.85610574

00:39:42.186 --> 00:39:44.298 very important and I think you

NOTE Confidence: 0.85610574

00:39:44.298 --> 00:39:46.803 know in terms of the perspective

NOTE Confidence: 0.85610574

00:39:46.803 --> 00:39:48.883 of a Sleep Medicine physician,

NOTE Confidence: 0.85610574

00:39:48.890 --> 00:39:51.278 I think it's important for us.

NOTE Confidence: 0.85610574

00:39:51.280 --> 00:39:53.660 In these individuals to make sure they

NOTE Confidence: 0.85610574

00:39:53.660 --> 00:39:55.930 have established care with a pulmonologist,

NOTE Confidence: 0.85610574

00:39:55.930 --> 00:39:57.825 maybe assess their medication adherence

NOTE Confidence: 0.85610574

00:39:57.825 --> 00:40:00.320 if they have prescriptions for their Med.

NOTE Confidence: 0.85610574

00:40:00.320 --> 00:40:02.295 Patiens if they've been having

NOTE Confidence: 0.85610574

00:40:02.295 --> 00:40:03.085 frequent exacerbations,

NOTE Confidence: 0.85610574

00:40:03.090 --> 00:40:04.950 have been following up with

NOTE Confidence: 0.85610574

00:40:04.950 --> 00:40:07.286 their providers because we can be

NOTE Confidence: 0.85610574

00:40:07.286 --> 00:40:09.306 doing everything with regards to

NOTE Confidence: 0.85610574

00:40:09.306 --> 00:40:11.380 optimization of their sleep apnea,

NOTE Confidence: 0.85610574

00:40:11.380 --> 00:40:14.145 but this UPD is kind of left,

NOTE Confidence: 0.85610574

00:40:14.150 --> 00:40:16.520 you know, to its own devices,

NOTE Confidence: 0.85610574

00:40:16.520 --> 00:40:18.890 everything will be we were doing,

NOTE Confidence: 0.8277575

00:40:18.890 --> 00:40:20.126 could just be moved.

NOTE Confidence: 0.8277575

00:40:20.126 --> 00:40:22.473 I think from the perspective of a

NOTE Confidence: 0.8277575

00:40:22.473 --> 00:40:24.185 pulmonologist smoking cessation as

NOTE Confidence: 0.8277575

00:40:24.185 --> 00:40:25.897 well as pulmonary rehabilitation

NOTE Confidence: 0.8277575

00:40:25.897 --> 00:40:27.580 is certainly important.

NOTE Confidence: 0.8277575

00:40:27.580 --> 00:40:29.112 So pulmonary rehabilitation is

NOTE Confidence: 0.8277575

00:40:29.112 --> 00:40:31.027 basically where we subject tations

NOTE Confidence: 0.8277575

00:40:31.027 --> 00:40:33.109 to strength intensity exercises.

NOTE Confidence: 0.8277575

00:40:33.110 --> 00:40:34.740 But what it really does,

NOTE Confidence: 0.8277575

00:40:34.740 --> 00:40:36.040 it helps patients perception

NOTE Confidence: 0.8277575

00:40:36.040 --> 00:40:37.015 of dyspnea improve.

NOTE Confidence: 0.8277575

00:40:37.020 --> 00:40:40.996 And I think this could actually help.

NOTE Confidence: 0.8277575

00:40:41.000 --> 00:40:42.608 Their sleep quality a

NOTE Confidence: 0.8277575

00:40:42.608 --> 00:40:44.216 significantly so these two,

NOTE Confidence: 0.8277575

00:40:44.220 --> 00:40:46.060 you know, arms of management

NOTE Confidence: 0.8277575

00:40:46.060 --> 00:40:48.640 needs to be looked at together,

NOTE Confidence: 0.8277575

00:40:48.640 --> 00:40:51.640 so this is just my modified algorithm that

NOTE Confidence: 0.8277575

00:40:51.640 --> 00:40:55.065 I took from the sleep clinics or lecture.

NOTE Confidence: 0.8277575

00:40:55.070 --> 00:40:57.494 I think it's important for us

NOTE Confidence: 0.8277575

00:40:57.494 --> 00:40:59.573 to have clinical suspicion that

NOTE Confidence: 0.8277575

00:40:59.573 --> 00:41:01.498 COPD needs to be optimized.

NOTE Confidence: 0.8277575

00:41:01.500 --> 00:41:04.014 That these individuals then should have

NOTE Confidence: 0.8277575

00:41:04.014 --> 00:41:06.330 a pulmonary function tests anti SGS.

NOTE Confidence: 0.8277575

00:41:06.330 --> 00:41:08.736 If hypercapnia is present by part,

NOTE Confidence: 0.8277575

00:41:08.740 --> 00:41:11.350 may be preferred if there is.

NOTE Confidence: 0.8277575

00:41:11.350 --> 00:41:12.106 You know,

NOTE Confidence: 0.8277575

00:41:12.106 --> 00:41:13.618 no evidence of hypoventilation

NOTE Confidence: 0.8277575

00:41:13.618 --> 00:41:15.130 CPAP may be sufficient,

NOTE Confidence: 0.8277575

00:41:15.130 --> 00:41:17.398 and if there is persistent hypoxia,

NOTE Confidence: 0.8277575

00:41:17.400 --> 00:41:19.290 you may want to consider.

NOTE Confidence: 0.8277575

00:41:19.290 --> 00:41:23.190 You may want to consider getting.

NOTE Confidence: 0.8277575

00:41:23.190 --> 00:41:25.745 These patients are nocturnal oxygen as well.

NOTE Confidence: 0.8277575

00:41:25.750 --> 00:41:26.114 Now,

NOTE Confidence: 0.8277575

00:41:26.114 --> 00:41:29.026 in terms of is their role for Eva.

NOTE Confidence: 0.8944535

00:41:31.070 --> 00:41:32.534 I put the slide up because

NOTE Confidence: 0.8944535

00:41:32.534 --> 00:41:34.420 I saw a few case reports.

NOTE Confidence: 0.8944535

00:41:34.420 --> 00:41:36.430 And we've actually prescribed one

NOTE Confidence: 0.8944535

00:41:36.430 --> 00:41:38.440 individual for a vast amounts,

NOTE Confidence: 0.8944535

00:41:38.440 --> 00:41:41.284 of course, is average volume assured

NOTE Confidence: 0.8944535

00:41:41.284 --> 00:41:43.591 pressure support the particular mode

NOTE Confidence: 0.8944535

00:41:43.591 --> 00:41:45.936 of a verbs that would be preferred

NOTE Confidence: 0.8944535

00:41:45.936 --> 00:41:48.490 in these individuals is a verbs AE.

NOTE Confidence: 0.8944535

00:41:48.490 --> 00:41:51.311 So if apps is basically a motor

NOTE Confidence: 0.8944535

00:41:51.311 --> 00:41:52.910 ventilation where you can,

NOTE Confidence: 0.8944535

00:41:52.910 --> 00:41:55.724 you know you can set a preset

NOTE Confidence: 0.8944535

00:41:55.724 --> 00:41:56.930 tidal volume that,

NOTE Confidence: 0.8944535

00:41:56.930 --> 00:41:58.558 with varying inspiratory pressures,

NOTE Confidence: 0.8944535

00:41:58.558 --> 00:42:01.000 that the machine through a feedback

NOTE Confidence: 0.8944535

00:42:01.058 --> 00:42:03.063 loop either will increase or

NOTE Confidence: 0.8944535

00:42:03.063 --> 00:42:04.667 decrease the inspiratory pressure.

NOTE Confidence: 0.8944535

00:42:04.670 --> 00:42:06.850 Breath breath over a minute.

NOTE Confidence: 0.8944535

00:42:06.850 --> 00:42:09.832 Not not to get that preset

NOTE Confidence: 0.8944535

00:42:09.832 --> 00:42:12.865 title volume the Evap's AE in

NOTE Confidence: 0.8944535

00:42:12.865 --> 00:42:15.697 addition to just changing I pop.

NOTE Confidence: 0.8944535

00:42:15.700 --> 00:42:17.620 Pressures can also adjust respiratory

NOTE Confidence: 0.8944535

00:42:17.620 --> 00:42:20.478 rate and also adjust the epoch as well.

NOTE Confidence: 0.8944535

00:42:20.480 --> 00:42:23.056 One of the things I particularly like

NOTE Confidence: 0.8944535

00:42:23.056 --> 00:42:25.999 about the AE mode is because in CRPS,

NOTE Confidence: 0.8944535

00:42:26.000 --> 00:42:28.142 patient specifically is that it looks

NOTE Confidence: 0.8944535

00:42:28.142 --> 00:42:30.419 at flow decelerations and flow patterns,

NOTE Confidence: 0.8944535

00:42:30.420 --> 00:42:33.038 so you prevent Brett talking in these

NOTE Confidence: 0.8944535

00:42:33.038 --> 00:42:35.194 individuals when the machine is able

NOTE Confidence: 0.8944535

00:42:35.194 --> 00:42:37.925 to to know when their cessation of flow

NOTE Confidence: 0.8944535

00:42:37.925 --> 00:42:40.355 and then deliver the subsequent breath.

NOTE Confidence: 0.8944535

00:42:40.360 --> 00:42:42.929 So there is some rule for this.

NOTE Confidence: 0.8944535

00:42:42.930 --> 00:42:44.860 Theoretically we have used it

NOTE Confidence: 0.8944535

00:42:44.860 --> 00:42:47.460 once from a patient we saw and.

NOTE Confidence: 0.8944535

00:42:47.460 --> 00:42:49.050 Impatient console that was discharged,

NOTE Confidence: 0.8944535

00:42:49.050 --> 00:42:50.946 we able to discharge an evil,

NOTE Confidence: 0.8944535

00:42:50.950 --> 00:42:52.504 but of course you need to

NOTE Confidence: 0.8944535

00:42:52.504 --> 00:42:54.406 know what your what your local

NOTE Confidence: 0.8944535

00:42:54.406 --> 00:42:56.018 coverage determinants might be.

NOTE Confidence: 0.8944535

00:42:56.020 --> 00:42:56.638 Of course,

NOTE Confidence: 0.8944535

00:42:56.638 --> 00:42:57.874 that's very important to

NOTE Confidence: 0.8944535

00:42:57.874 --> 00:42:59.819 know and that was also there.

NOTE Confidence: 0.8944535

00:42:59.820 --> 00:43:01.405 Was definitely some hoops to

NOTE Confidence: 0.8944535

00:43:01.405 --> 00:43:02.990 go through for that individual,

NOTE Confidence: 0.8944535

00:43:02.990 --> 00:43:04.554 so the potential benefits.

NOTE Confidence: 0.8944535

00:43:04.554 --> 00:43:06.900 Of course you can get the

NOTE Confidence: 0.8944535

00:43:06.978 --> 00:43:09.158 right pressure to right time.

NOTE Confidence: 0.8944535

00:43:09.160 --> 00:43:11.548 You know you can get consistency,

NOTE Confidence: 0.8944535

00:43:11.550 --> 00:43:13.872 CO2 elimination and it guarantees there

NOTE Confidence: 0.8944535

00:43:13.872 --> 00:43:16.676 should be an an average tidal volume

NOTE Confidence: 0.8944535

00:43:16.676 --> 00:43:19.930 and the other things that can spoke about.

NOTE Confidence: 0.8944535

00:43:19.930 --> 00:43:22.330 So getting back to our patients.

NOTE Confidence: 0.8944535

00:43:22.330 --> 00:43:23.922 So she came in.

NOTE Confidence: 0.8944535

00:43:23.922 --> 00:43:25.912 She had a titration study.

NOTE Confidence: 0.8944535

00:43:25.920 --> 00:43:27.512 This is who titration

NOTE Confidence: 0.8944535

00:43:27.512 --> 00:43:29.502 done about six weeks ago.

NOTE Confidence: 0.8944535

00:43:29.510 --> 00:43:31.102 You can see significantly

NOTE Confidence: 0.8944535

00:43:31.102 --> 00:43:32.296 improved sleep efficiency.

NOTE Confidence: 0.8944535

00:43:32.300 --> 00:43:34.700 Significantly reduced wake after sleep onset.

NOTE Confidence: 0.8944535

00:43:34.700 --> 00:43:37.028 I do want to mention that

NOTE Confidence: 0.8944535

00:43:37.028 --> 00:43:39.170 this is also a time.

NOTE Confidence: 0.8944535

00:43:39.170 --> 00:43:40.850 When she was optimized with

NOTE Confidence: 0.8944535

00:43:40.850 --> 00:43:42.530 regards to see OPD control.

NOTE Confidence: 0.8944535

00:43:42.530 --> 00:43:44.492 So the decision was made by

NOTE Confidence: 0.8944535

00:43:44.492 --> 00:43:46.539 pulmonary medicine to start up in

NOTE Confidence: 0.8944535

00:43:46.539 --> 00:43:48.234 a pulmonary rehab program earlier.

NOTE Confidence: 0.8944535

00:43:48.240 --> 00:43:49.944 Rather than later she was optimized

NOTE Confidence: 0.8944535

00:43:49.944 --> 00:43:51.940 with regards to a bronchodilator.

NOTE Confidence: 0.8944535

00:43:51.940 --> 00:43:54.628 So when we got it for this titration,

NOTE Confidence: 0.8944535

00:43:54.630 --> 00:43:56.418 she was fully optimized with regards

NOTE Confidence: 0.8944535

00:43:56.418 --> 00:43:59.142 to the COPD and I think that certainly

NOTE Confidence: 0.8944535

00:43:59.142 --> 00:44:01.344 helps in having more consolidated signal.

NOTE Confidence: 0.8944535

00:44:01.350 --> 00:44:03.450 She did not have as much REM

NOTE Confidence: 0.8944535

00:44:03.450 --> 00:44:05.710 sleep as we would have liked,

NOTE Confidence: 0.8944535

00:44:05.710 --> 00:44:07.655 but you can see significantly

NOTE Confidence: 0.8944535

00:44:07.655 --> 00:44:09.600 less variations in her oxygen.

NOTE Confidence: 0.8944535

00:44:09.600 --> 00:44:11.763 Saturation levels and we did not actually

NOTE Confidence: 0.8944535

00:44:11.763 --> 00:44:14.010 have to give a supplemental oxygen.

NOTE Confidence: 0.8944535

00:44:14.010 --> 00:44:15.700 This was her REM sleep.

NOTE Confidence: 0.8944535

00:44:15.700 --> 00:44:18.404 We did have to titrated to buy part.

NOTE Confidence: 0.8944535

00:44:18.410 --> 00:44:19.966 There was evidenced hypoventilation

NOTE Confidence: 0.8944535

00:44:19.966 --> 00:44:21.522 depression that we eventually

NOTE Confidence: 0.8944535

00:44:21.522 --> 00:44:23.256 settled on with 20 / 8.

NOTE Confidence: 0.8944535

00:44:23.256 --> 00:44:25.436 She started her therapy about.

NOTE Confidence: 0.8944535

00:44:25.440 --> 00:44:28.815 Three weeks ago, so the verdict is still out.

NOTE Confidence: 0.8944535

00:44:28.820 --> 00:44:30.228 That's how she does,

NOTE Confidence: 0.8944535

00:44:30.228 --> 00:44:31.988 but the titration study certainly

NOTE Confidence: 0.8944535

00:44:31.988 --> 00:44:34.070 is encouraging in that regard.

NOTE Confidence: 0.8944535

00:44:34.070 --> 00:44:35.566 So thank you guys.

NOTE Confidence: 0.8944535

00:44:35.566 --> 00:44:36.688 That's my presentation.

NOTE Confidence: 0.8944535

00:44:36.690 --> 00:44:38.975 I'm I very much appreciate

NOTE Confidence: 0.8944535

00:44:38.975 --> 00:44:41.260 the opportunity to present on

NOTE Confidence: 0.8340398

00:44:41.342 --> 00:44:43.510 this topic. Any questions?

NOTE Confidence: 0.7872501

00:44:45.930 --> 00:44:48.010 Great, thank you very much.

NOTE Confidence: 0.7872501

00:44:48.010 --> 00:44:50.500 A mesh for this eloquent presentation

NOTE Confidence: 0.7872501

00:44:50.500 --> 00:44:52.985 and two very common conditions that

NOTE Confidence: 0.7872501

00:44:52.985 --> 00:44:55.890 tend to overlap, and somebody know as

NOTE Confidence: 0.7872501

00:44:55.890 --> 00:44:58.795 as a overlap syndrome, and so there

NOTE Confidence: 0.7872501

00:44:58.795 --> 00:45:01.285 are several questions in the chat.

NOTE Confidence: 0.84000424

00:45:02.640 --> 00:45:04.280 Sorry, let me. I

NOTE Confidence: 0.81344926

00:45:04.280 --> 00:45:06.434 might start and I'll read it

NOTE Confidence: 0.81344926

00:45:06.434 --> 00:45:08.690 to you and help navigate,

NOTE Confidence: 0.81344926

00:45:08.690 --> 00:45:12.344 and so if there is a question

NOTE Confidence: 0.81344926

00:45:12.344 --> 00:45:14.570 from Karen Johnson from.

NOTE Confidence: 0.81344926

00:45:14.570 --> 00:45:17.302 Bay State and if you are only using

NOTE Confidence: 0.81344926

00:45:17.302 --> 00:45:19.708 entitle CO2, how do you know if

NOTE Confidence: 0.81344926

00:45:19.708 --> 00:45:21.438 there is still hypercapnia needing

NOTE Confidence: 0.81344926

00:45:21.438 --> 00:45:23.797 by apps versus C Pap with oxygen?

NOTE Confidence: 0.81344926

00:45:23.800 --> 00:45:26.536 We find the intitle SEO two is often

NOTE Confidence: 0.81344926

00:45:26.536 --> 00:45:28.180 artificially low in these patients

NOTE Confidence: 0.81344926

00:45:28.180 --> 00:45:30.610 and if you rely on it you may often

NOTE Confidence: 0.81344926

00:45:30.673 --> 00:45:32.697 under treat the hyperventilation.

NOTE Confidence: 0.8007941

00:45:32.700 --> 00:45:36.828 Yeah, I don't. I don't disagree with that.

NOTE Confidence: 0.8007941

00:45:36.830 --> 00:45:39.105 You know, there is certainly not instantly.

NOTE Confidence: 0.8007941

00:45:39.110 --> 00:45:41.702 I saw it's not especially in in in these

NOTE Confidence: 0.8007941

00:45:41.702 --> 00:45:44.138 patients with CPD where there's power in

NOTE Confidence: 0.8007941

00:45:44.138 --> 00:45:46.578 kymo long destruction there you could have

NOTE Confidence: 0.8007941

00:45:46.578 --> 00:45:48.881 a dissociation between what is the actual

NOTE Confidence: 0.8007941

00:45:48.890 --> 00:45:51.824 serum CO2 values and what is what is the

NOTE Confidence: 0.8007941

00:45:51.824 --> 00:45:54.426 value that you see on your end title.

NOTE Confidence: 0.8007941

00:45:54.430 --> 00:45:56.670 So you know I think it does

NOTE Confidence: 0.8007941

00:45:56.670 --> 00:45:58.670 depend a lot on your lab.

NOTE Confidence: 0.8007941

00:45:58.670 --> 00:46:01.470 You know we don't do routine abgs that

NOTE Confidence: 0.8007941

00:46:01.470 --> 00:46:04.269 would be ideally what you should do.

NOTE Confidence: 0.8007941

00:46:04.270 --> 00:46:05.750 Um, you know, um,

NOTE Confidence: 0.8007941

00:46:05.750 --> 00:46:07.600 under certain situations I can,

NOTE Confidence: 0.8007941

00:46:07.600 --> 00:46:09.535 for example, like Thomas just

NOTE Confidence: 0.8007941

00:46:09.535 --> 00:46:12.039 said like where you where we use,

NOTE Confidence: 0.8007941

00:46:12.040 --> 00:46:13.955 especially in pediatric populations we

NOTE Confidence: 0.8007941

00:46:13.955 --> 00:46:16.294 do using the adults about transcutaneous

NOTE Confidence: 0.8007941

00:46:16.294 --> 00:46:18.089 CO2 values in this individual

NOTE Confidence: 0.8007941

00:46:18.089 --> 00:46:20.548 that we did use entitles you to,

NOTE Confidence: 0.8007941

00:46:20.550 --> 00:46:22.400 and transcutaneous was not used.

NOTE Confidence: 0.8007941

00:46:22.400 --> 00:46:24.250 I don't disagree with that.

NOTE Confidence: 0.8007941

00:46:24.250 --> 00:46:27.580 I I I think that is a valid point.

NOTE Confidence: 0.84418625

00:46:30.020 --> 00:46:31.502 Sure, great, thank you.

NOTE Confidence: 0.84418625

00:46:31.502 --> 00:46:34.050 And so I I have a question

NOTE Confidence: 0.84418625

00:46:34.142 --> 00:46:37.454 and I think this might be open for

NOTE Confidence: 0.84418625

00:46:37.454 --> 00:46:39.827 discussion with you or whoever else

NOTE Confidence: 0.84418625

00:46:39.827 --> 00:46:42.790 wants to chime in and so is the.

NOTE Confidence: 0.84418625

00:46:42.790 --> 00:46:44.342 So PD Orsay overlap.

NOTE Confidence: 0.84418625

00:46:44.342 --> 00:46:45.886 Simply two conditions sort

NOTE Confidence: 0.84418625

00:46:45.886 --> 00:46:47.044 of occurring together?

NOTE Confidence: 0.84418625

00:46:47.050 --> 00:46:49.390 Or is there some unique part

NOTE Confidence: 0.84418625

00:46:49.390 --> 00:46:50.950 of pathophysiology and clinical

NOTE Confidence: 0.84418625

00:46:51.017 --> 00:46:52.421 presentation and outcomes that

NOTE Confidence: 0.84418625

00:46:52.421 --> 00:46:55.180 are unique to this as a syndrome?

NOTE Confidence: 0.84418625

00:46:55.180 --> 00:46:57.110 Potentially unique entity, so that.

NOTE Confidence: 0.84418625

00:46:57.110 --> 00:46:59.426 So that's a very good question,

NOTE Confidence: 0.84418625

00:46:59.430 --> 00:47:00.830 and I think that.

NOTE Confidence: 0.84418625

00:47:00.830 --> 00:47:02.930 I think I personally see a

NOTE Confidence: 0.84418625

00:47:03.010 --> 00:47:05.292 sum of both and I think that

NOTE Confidence: 0.84418625

00:47:05.292 --> 00:47:07.597 what you see specifically in

NOTE Confidence: 0.84418625

00:47:07.597 --> 00:47:10.089 patients with overlap syndrome,

NOTE Confidence: 0.84418625

00:47:10.090 --> 00:47:13.162 as I was able to demonstrate some of

NOTE Confidence: 0.84418625

00:47:13.162 --> 00:47:14.715 the cardiovascular comorbidities that

NOTE Confidence: 0.84418625

00:47:14.715 --> 00:47:18.160 you see is you know you get this more

NOTE Confidence: 0.84418625

00:47:18.160 --> 00:47:20.780 profound systemic inflammatory cysts on.

NOTE Confidence: 0.84418625

00:47:20.780 --> 00:47:21.971 You know this.

NOTE Confidence: 0.84418625

00:47:21.971 --> 00:47:23.559 This system wide inflammatory

NOTE Confidence: 0.84418625

00:47:23.559 --> 00:47:26.494 state that is much higher than you

NOTE Confidence: 0.84418625

00:47:26.494 --> 00:47:28.584 would see neither condition alone.

NOTE Confidence: 0.84418625

00:47:28.590 --> 00:47:31.746 I think these individuals also need.

NOTE Confidence: 0.84418625

00:47:31.750 --> 00:47:34.108 They tend to need more advanced

NOTE Confidence: 0.84418625

00:47:34.108 --> 00:47:36.241 types of ventilla Tori options

NOTE Confidence: 0.84418625

00:47:36.241 --> 00:47:39.127 because very often they do have

NOTE Confidence: 0.84418625

00:47:39.127 --> 00:47:41.010 hypoventilation present as well.

NOTE Confidence: 0.84418625

00:47:41.010 --> 00:47:43.764 But I think that specifically if

NOTE Confidence: 0.84418625

00:47:43.764 --> 00:47:46.300 there's any specific thing that is,

NOTE Confidence: 0.84418625

00:47:46.300 --> 00:47:49.378 you know that you see in

NOTE Confidence: 0.84418625

00:47:49.378 --> 00:47:51.430 patients with overlap syndrome.

NOTE Confidence: 0.84418625

00:47:51.430 --> 00:47:51.992 You know,

NOTE Confidence: 0.84418625

00:47:51.992 --> 00:47:53.116 I'm not particularly sure,

NOTE Confidence: 0.84418625

00:47:53.120 --> 00:47:54.849 but I think that what we see

NOTE Confidence: 0.84418625

00:47:54.849 --> 00:47:56.210 is just exaggerated multitudes.

NOTE Confidence: 0.7736711

00:47:58.860 --> 00:48:01.450 Great, thank you.

NOTE Confidence: 0.87396413

00:48:01.450 --> 00:48:03.200 Let's see, there's another question,

NOTE Confidence: 0.87396413

00:48:03.200 --> 00:48:06.641 so and. From Stuart men from

NOTE Confidence: 0.87396413

00:48:06.641 --> 00:48:07.909 Pacific Sleep Medicine Group,

NOTE Confidence: 0.87396413

00:48:07.910 --> 00:48:09.800 what is the mean Epworth Sleepiness

NOTE Confidence: 0.87396413

00:48:09.800 --> 00:48:11.900 Scale found in Group of patients with

NOTE Confidence: 0.87396413

00:48:11.900 --> 00:48:14.270 mild to moderate Sophie Dee without OSA.

NOTE Confidence: 0.87396413

00:48:14.270 --> 00:48:16.566 And so this is kind of getting

NOTE Confidence: 0.87396413

00:48:16.566 --> 00:48:18.404 up the question of how sleepy,

NOTE Confidence: 0.87396413

00:48:18.404 --> 00:48:19.676 yeah, the patients basically

NOTE Confidence: 0.87396413

00:48:19.676 --> 00:48:20.948 regardless of sleep apnea.

NOTE Confidence: 0.87396413

00:48:20.950 --> 00:48:21.590 Yeah, so

NOTE Confidence: 0.789845

00:48:21.590 --> 00:48:24.014 you know, I would tell you that I

NOTE Confidence: 0.789845

00:48:24.014 --> 00:48:26.237 found studies where the update did

NOTE Confidence: 0.789845

00:48:26.237 --> 00:48:28.172 not find any significant differences

NOTE Confidence: 0.789845

00:48:28.172 --> 00:48:30.628 in effort scores between patients.

NOTE Confidence: 0.789845

00:48:30.630 --> 00:48:32.670 You know with with with multi

NOTE Confidence: 0.789845

00:48:32.670 --> 00:48:34.580 moderate COPD and it always.

NOTE Confidence: 0.789845

00:48:34.580 --> 00:48:36.734 It does all depend on the

NOTE Confidence: 0.789845

00:48:36.734 --> 00:48:38.530 study population that you use,

NOTE Confidence: 0.789845

00:48:38.530 --> 00:48:41.422 but many of these studies and I looked

NOTE Confidence: 0.789845

00:48:41.422 --> 00:48:43.908 at I didn't include it into talk.

NOTE Confidence: 0.789845

00:48:43.910 --> 00:48:46.070 Did not really find significant differences.

NOTE Confidence: 0.789845

00:48:46.070 --> 00:48:47.147 He mean efforts.

NOTE Confidence: 0.789845

00:48:47.147 --> 00:48:48.583 I remember specifically ranged

NOTE Confidence: 0.789845

00:48:48.583 --> 00:48:50.316 anywhere between 6668, I don't.

NOTE Confidence: 0.789845

00:48:50.316 --> 00:48:51.956 I don't specifically remember but

NOTE Confidence: 0.789845

00:48:51.956 --> 00:48:54.932 I found a lot of studies when no

NOTE Confidence: 0.789845

00:48:54.932 --> 00:48:56.472 significance was actually found,

NOTE Confidence: 0.789845

00:48:56.480 --> 00:48:58.304 but there was significant.

NOTE Confidence: 0.789845

00:48:58.304 --> 00:49:00.584 In where overlap syndrome occurred.

NOTE Confidence: 0.768184

00:49:02.070 --> 00:49:03.930 Sure, yeah, no, it's interesting.

NOTE Confidence: 0.768184

00:49:03.930 --> 00:49:07.260 I think the other question I might ask is,

NOTE Confidence: 0.768184

00:49:07.260 --> 00:49:09.860 you know how common is insomnia in

NOTE Confidence: 0.768184

00:49:09.860 --> 00:49:11.714 patients with SAPIEN sleep apnea?

NOTE Confidence: 0.768184

00:49:11.714 --> 00:49:14.310 Might that influence the OS? Certainly very

NOTE Confidence: 0.768184

00:49:14.310 --> 00:49:15.794 common. I said so.

NOTE Confidence: 0.768184

00:49:15.794 --> 00:49:17.649 That was sort of fun.

NOTE Confidence: 0.768184

00:49:17.650 --> 00:49:19.636 Dives to insomnia is found to

NOTE Confidence: 0.768184

00:49:19.636 --> 00:49:21.466 be significantly higher in that

NOTE Confidence: 0.768184

00:49:21.466 --> 00:49:23.218 population for multiple reasons.

NOTE Confidence: 0.768184

00:49:23.220 --> 00:49:25.446 Of course, one could be because

NOTE Confidence: 0.768184

00:49:25.446 --> 00:49:26.930 you have undiagnosed OSA,

NOTE Confidence: 0.768184

00:49:26.930 --> 00:49:28.994 but others other than that's the

NOTE Confidence: 0.768184

00:49:28.994 --> 00:49:31.269 you know the symptoms of stupid

NOTE Confidence: 0.768184

00:49:31.269 --> 00:49:32.925 cough with phlegm production.

NOTE Confidence: 0.768184

00:49:32.930 --> 00:49:34.875 See the use of nicotine

NOTE Confidence: 0.768184

00:49:34.875 --> 00:49:36.820 replacements to use of cigarettes.

NOTE Confidence: 0.768184

00:49:36.820 --> 00:49:38.655 All of these stimulants that

NOTE Confidence: 0.768184

00:49:38.655 --> 00:49:40.123 can't fragmented sleep and

NOTE Confidence: 0.768184

00:49:40.123 --> 00:49:41.878 alter the arousal threshold,

NOTE Confidence: 0.768184

00:49:41.880 --> 00:49:43.432 so insomnia certainly is

NOTE Confidence: 0.768184

00:49:43.432 --> 00:49:44.600 significantly higher, sure,

NOTE Confidence: 0.75993496

00:49:44.600 --> 00:49:46.540 absolutely, and so you're mentioning

NOTE Confidence: 0.75993496

00:49:46.540 --> 00:49:47.704 altered arousal threshold,

NOTE Confidence: 0.75993496

00:49:47.710 --> 00:49:50.848 you're familiar with some data suggesting

NOTE Confidence: 0.75993496

00:49:50.848 --> 00:49:54.398 that residential may be altered in peace.

NOTE Confidence: 0.75993496

00:49:54.400 --> 00:49:56.770 Davis is those with OSA on. You know

NOTE Confidence: 0.712368

00:49:56.770 --> 00:49:57.754 that is theoretical.

NOTE Confidence: 0.712368

00:49:57.754 --> 00:50:00.400 I saw mentioned in some studies that I do.

NOTE Confidence: 0.712368

00:50:00.400 --> 00:50:02.536 Have a title like directly to say that

NOTE Confidence: 0.712368

00:50:02.536 --> 00:50:05.059 I was able to find that will certainly

NOTE Confidence: 0.712368

00:50:05.059 --> 00:50:07.080 something I think is interesting

NOTE Confidence: 0.77458245

00:50:07.080 --> 00:50:08.670 to look at. Yeah, absolutely.

NOTE Confidence: 0.77458245

00:50:08.670 --> 00:50:09.846 I agree with you.

NOTE Confidence: 0.77458245

00:50:09.846 --> 00:50:11.610 I think there's some data from

NOTE Confidence: 0.77458245

00:50:11.675 --> 00:50:13.757 recent papers in looking at apnea,

NOTE Confidence: 0.77458245

00:50:13.760 --> 00:50:14.888 lengthening duration in patients

NOTE Confidence: 0.77458245

00:50:14.888 --> 00:50:17.010 and noticing that there is a direct

NOTE Confidence: 0.77458245

00:50:17.010 --> 00:50:18.846 correlation with shorter durations and

NOTE Confidence: 0.77458245

00:50:18.846 --> 00:50:22.348 those who have been prior smokers.

NOTE Confidence: 0.77458245

00:50:22.350 --> 00:50:24.234 And so that might suggest that

NOTE Confidence: 0.77458245

00:50:24.234 --> 00:50:26.187 because acne duration can be a

NOTE Confidence: 0.77458245

00:50:26.187 --> 00:50:27.787 surrogate of low arousal threshold,

NOTE Confidence: 0.77458245

00:50:27.790 --> 00:50:29.918 and I suggest that the lawyers that

NOTE Confidence: 0.77458245

00:50:29.918 --> 00:50:32.267 threshold like more common in those patients,

NOTE Confidence: 0.77458245

00:50:32.270 --> 00:50:34.328 so that would be an interesting question

NOTE Confidence: 0.77458245

00:50:34.328 --> 00:50:37.014 to study and see whether there is a

NOTE Confidence: 0.77458245

00:50:37.014 --> 00:50:38.990 relationship between arousability and so on.

NOTE Confidence: 0.77458245

00:50:38.990 --> 00:50:40.274 Yeah, that's more prevalent

NOTE Confidence: 0.77458245

00:50:40.274 --> 00:50:42.510 in those who have CBD in OSA.

NOTE Confidence: 0.77458245

00:50:42.510 --> 00:50:43.754 It's a great point.

NOTE Confidence: 0.77458245

00:50:43.754 --> 00:50:45.620 And so I there's another question

NOTE Confidence: 0.77458245

00:50:45.688 --> 00:50:47.626 here from Doctor Hilbert at Yale.

NOTE Confidence: 0.77458245

00:50:47.630 --> 00:50:49.531 And so she says thank you.

NOTE Confidence: 0.77458245

00:50:49.531 --> 00:50:51.939 It was an excellent talk and think she

NOTE Confidence: 0.77458245

00:50:51.939 --> 00:50:54.348 agrees that they traicion study is ideal,

NOTE Confidence: 0.77458245

00:50:54.350 --> 00:50:55.982 but. Occasionally not possible.

NOTE Confidence: 0.77458245

00:50:55.982 --> 00:50:58.790 For example, if you join the pandemic,

NOTE Confidence: 0.77458245

00:50:58.790 --> 00:51:00.790 our patient is in decline,

NOTE Confidence: 0.77458245

00:51:00.790 --> 00:51:03.558 and so and we have had to use

NOTE Confidence: 0.77458245

00:51:03.558 --> 00:51:05.570 limited APAP with downloads,

NOTE Confidence: 0.77458245

00:51:05.570 --> 00:51:06.578 oximetry and abgs.

NOTE Confidence: 0.77458245

00:51:06.578 --> 00:51:08.930 Are you aware of any data using

NOTE Confidence: 0.77458245

00:51:08.997 --> 00:51:10.877 such approaches in situations

NOTE Confidence: 0.77458245

00:51:10.877 --> 00:51:12.757 that might be constrained?

NOTE Confidence: 0.77458245

00:51:12.760 --> 00:51:13.550 Resource wise?

NOTE Confidence: 0.7552122

00:51:13.550 --> 00:51:17.681 No, I I don't think I actually came across

NOTE Confidence: 0.7552122

00:51:17.681 --> 00:51:20.577 anything for automated pop therapy.

NOTE Confidence: 0.7552122

00:51:20.580 --> 00:51:22.946 You know, I. I do agree with.

NOTE Confidence: 0.7552122

00:51:22.950 --> 00:51:25.838 I saw sided with some small studies that

NOTE Confidence: 0.7552122

00:51:25.838 --> 00:51:28.846 looked at that did actually looked at

NOTE Confidence: 0.7552122

00:51:28.846 --> 00:51:31.490 automated pap therapy in patients with.

NOTE Confidence: 0.7552122

00:51:31.490 --> 00:51:32.234 With overlap syndrome,

NOTE Confidence: 0.7552122

00:51:32.234 --> 00:51:34.610 but I I just did not include studies because

NOTE Confidence: 0.7552122

00:51:34.610 --> 00:51:36.654 of of how these studies were designed.

NOTE Confidence: 0.7552122

00:51:36.660 --> 00:51:39.000 What I will say is that I do agree with

NOTE Confidence: 0.7552122

00:51:39.060 --> 00:51:41.279 Doctor Hibbert that you need to have.

NOTE Confidence: 0.7552122

00:51:41.280 --> 00:51:42.732 I think it's not if you're

NOTE Confidence: 0.7552122

00:51:42.732 --> 00:51:44.270 going to do that approach,

NOTE Confidence: 0.7552122

00:51:44.270 --> 00:51:48.206 you really need to follow up very closely.

NOTE Confidence: 0.7552122

00:51:48.210 --> 00:51:50.028 And get their input on gather,

NOTE Confidence: 0.7552122

00:51:50.030 --> 00:51:51.860 download data and probably do get.

NOTE Confidence: 0.7552122

00:51:51.860 --> 00:51:53.582 Like she mentioned there in the

NOTE Confidence: 0.7552122

00:51:53.582 --> 00:51:55.424 comment abgs you'd have to follow

NOTE Confidence: 0.7552122

00:51:55.424 --> 00:51:57.024 those patients very very closely.

NOTE Confidence: 0.7552122

00:51:57.030 --> 00:51:57.932 For example,

NOTE Confidence: 0.7552122

00:51:57.932 --> 00:52:00.187 if they develop treatment emergent

NOTE Confidence: 0.7552122

00:52:00.187 --> 00:52:02.518 central apneas that this is a

NOTE Confidence: 0.7552122

00:52:02.518 --> 00:52:04.639 population that is on risk of that.

NOTE Confidence: 0.7552122

00:52:04.640 --> 00:52:06.840 So you'd have to follow those patients very,

NOTE Confidence: 0.7552122

00:52:06.840 --> 00:52:08.597 very closely to ensure that you know

NOTE Confidence: 0.7552122

00:52:08.597 --> 00:52:10.140 everything in the right direction.

NOTE Confidence: 0.7897786

00:52:10.970 --> 00:52:12.670 Sure, and so you know,

NOTE Confidence: 0.7897786

00:52:12.670 --> 00:52:15.280 I think we're hitting a nerve in the area

NOTE Confidence: 0.7897786

00:52:15.280 --> 00:52:18.086 of Sleep Medicine at this overlap topic,

NOTE Confidence: 0.7897786

00:52:18.090 --> 00:52:20.802 and so there's a lot of questions and

NOTE Confidence: 0.7897786

00:52:20.802 --> 00:52:23.178 another question has to do with reliability

NOTE Confidence: 0.7897786

00:52:23.178 --> 00:52:25.890 of figuring out food to test for OSA.

NOTE Confidence: 0.7897786

00:52:25.890 --> 00:52:27.630 And so questionnaires oftentimes may

NOTE Confidence: 0.7897786

00:52:27.630 --> 00:52:29.949 not be reliable in those with CPD,

NOTE Confidence: 0.7897786

00:52:29.950 --> 00:52:32.878 an OSA and so.

NOTE Confidence: 0.7897786

00:52:32.880 --> 00:52:34.868 What do you recommend as sort of

NOTE Confidence: 0.7897786

00:52:34.868 --> 00:52:37.046 the best way of who do you study?

NOTE Confidence: 0.7846368

00:52:37.600 --> 00:52:39.450 So screening questions in North,

NOTE Confidence: 0.7846368

00:52:39.450 --> 00:52:41.290 unreliable for oversea in stupid

NOTE Confidence: 0.7846368

00:52:41.290 --> 00:52:42.808 doesn't excellent. Excellent point.

NOTE Confidence: 0.7846368

00:52:42.808 --> 00:52:45.920 So that is absolutely correct and I think

NOTE Confidence: 0.7846368

00:52:45.987 --> 00:52:48.667 what we really need is short of getting,

NOTE Confidence: 0.7846368

00:52:48.670 --> 00:52:51.010 you know, good epidemiologic studies that

NOTE Confidence: 0.7846368

00:52:51.010 --> 00:52:53.676 tell us directly as to which phenotypes

NOTE Confidence: 0.7846368

00:52:53.676 --> 00:52:56.420 of stupidity maybe at more risk of OSA.

NOTE Confidence: 0.7846368

00:52:56.420 --> 00:52:58.751 Of course everything I presented was all

NOTE Confidence: 0.7846368

00:52:58.751 --> 00:53:00.850 physiologic studies and proposed hypothesis,

NOTE Confidence: 0.7846368

00:53:00.850 --> 00:53:02.986 but I think short of getting

NOTE Confidence: 0.7846368

00:53:02.986 --> 00:53:04.851 epidemiologic studies apart from getting

NOTE Confidence: 0.7846368

00:53:04.851 --> 00:53:07.021 a really good clinical history, I.

NOTE Confidence: 0.7846368

00:53:07.021 --> 00:53:09.857 You know, I I don't know if there's any just

NOTE Confidence: 0.7846368

00:53:09.857 --> 00:53:12.441 foolproof method to say that you plug in

NOTE Confidence: 0.7846368

00:53:12.441 --> 00:53:15.229 this questionnaire you plug in these risk,

NOTE Confidence: 0.7846368

00:53:15.230 --> 00:53:16.091 you know this.

NOTE Confidence: 0.7846368

00:53:16.091 --> 00:53:18.100 This calculates and you get a risk.

NOTE Confidence: 0.7846368

00:53:18.100 --> 00:53:20.053 I think it just just it just all comes

NOTE Confidence: 0.7846368

00:53:20.053 --> 00:53:21.898 down to having good clinical suspicion

NOTE Confidence: 0.7846368

00:53:21.898 --> 00:53:23.838 to look for either syndromes from

NOTE Confidence: 0.7846368

00:53:23.838 --> 00:53:25.433 either perspectives of a pulmonologist

NOTE Confidence: 0.7846368

00:53:25.433 --> 00:53:27.475 to a Sleep Medicine specialist.

NOTE Confidence: 0.7846368

00:53:27.475 --> 00:53:28.240 Great

NOTE Confidence: 0.7996449

00:53:28.240 --> 00:53:30.809 thank you. Thank you mesh and there's

NOTE Confidence: 0.7996449

00:53:30.809 --> 00:53:33.869 a couple of comments and in the in the

NOTE Confidence: 0.7996449

00:53:33.869 --> 00:53:36.882 chat and and so not as much questions

NOTE Confidence: 0.7996449

00:53:36.882 --> 00:53:39.396 and so some observations by Doctor

NOTE Confidence: 0.7996449

00:53:39.400 --> 00:53:42.568 Thomas and Doctor Johnson at yeah I saw

NOTE Confidence: 0.7996449

00:53:42.568 --> 00:53:45.382 you hypercapnic patients tend to have

NOTE Confidence: 0.7996449

00:53:45.382 --> 00:53:49.029 a deeper more amounts of N3 sleep and.

NOTE Confidence: 0.7996449

00:53:49.030 --> 00:53:51.060 Inexperience of Doctor Johnson that

NOTE Confidence: 0.7996449

00:53:51.060 --> 00:53:53.090 many of the hyperventilating patients

NOTE Confidence: 0.7996449

00:53:53.153 --> 00:53:55.289 that she takes care of no longer pursue

NOTE Confidence: 0.7996449

00:53:55.289 --> 00:53:57.328 and feel that sleep is much better

NOTE Confidence: 0.7996449

00:53:57.328 --> 00:53:59.304 and improve the quality of their life.

NOTE Confidence: 0.7996449

00:53:59.304 --> 00:54:01.808 And so I would that I wanted to thank

NOTE Confidence: 0.7996449

00:54:01.808 --> 00:54:03.543 everybody and specially you Umesh

NOTE Confidence: 0.7996449

00:54:03.543 --> 00:54:06.761 for doing a great job on the talk and

NOTE Confidence: 0.7996449

00:54:06.761 --> 00:54:08.526 thanks everybody for participating and

NOTE Confidence: 0.7996449

00:54:08.530 --> 00:54:10.155 asking all these wonderful questions

NOTE Confidence: 0.7996449

00:54:10.155 --> 00:54:11.130 before we leave.

NOTE Confidence: 0.7996449

00:54:11.130 --> 00:54:13.538 I just wanted to share a couple

NOTE Confidence: 0.7996449

00:54:13.538 --> 00:54:15.420 of announcements that we have our

NOTE Confidence: 0.7996449

00:54:15.420 --> 00:54:16.332 next weekly lecture,

NOTE Confidence: 0.7996449

00:54:16.332 --> 00:54:18.702 the Sleep Medicine grand rounds at Yale.

NOTE Confidence: 0.7996449

00:54:18.702 --> 00:54:21.904 It's going to be led by Magna Monster

NOTE Confidence: 0.7996449

00:54:21.904 --> 00:54:24.214 Connie from Mayo Clinic will be

NOTE Confidence: 0.7996449

00:54:24.214 --> 00:54:25.999 speaking about opioids and sleep,

NOTE Confidence: 0.7996449

00:54:26.000 --> 00:54:27.790 and so another highly relevant

NOTE Confidence: 0.7996449

00:54:27.790 --> 00:54:29.580 clinical topic is Sleep Medicine.

NOTE Confidence: 0.7996449

00:54:29.580 --> 00:54:30.654 And so again,

NOTE Confidence: 0.7996449

00:54:30.654 --> 00:54:32.798 if you wanted to obtain CME

NOTE Confidence: 0.7996449

00:54:32.800 --> 00:54:34.232 credit for today's session,

NOTE Confidence: 0.7996449

00:54:34.232 --> 00:54:36.723 please take a look in the chat

NOTE Confidence: 0.7996449

00:54:36.723 --> 00:54:38.931 and you can text a code 21610 to

NOTE Confidence: 0.7996449

00:54:38.931 --> 00:54:41.039 the telephone number provided,

NOTE Confidence: 0.7996449

00:54:41.040 --> 00:54:43.008 which is 2034429435 and wanted to

NOTE Confidence: 0.7996449

00:54:43.008 --> 00:54:45.157 thank again to all the participants

NOTE Confidence: 0.7996449

00:54:45.157 --> 00:54:47.467 and looking forward to seeing you

NOTE Confidence: 0.7996449

00:54:47.467 --> 00:54:49.886 again next week and resumption of

NOTE Confidence: 0.7996449

00:54:49.886 --> 00:54:51.984 the joint conference. In April.

NOTE Confidence: 0.7996449

00:54:51.984 --> 00:54:52.888 Thanks everybody.

NOTE Confidence: 0.9037889

00:54:53.700 --> 00:54:56.370 I think you guys. Thank you.