WEBVTT

NOTE duration:"01:05:46.6880000"

NOTE language:en-us

NOTE Confidence: 0.83665353

00:00:13.160 --> 00:00:15.540 Why don't I just start?

NOTE Confidence: 0.83665353

00:00:15.540 --> 00:00:19.057 I think people are spilling in from

NOTE Confidence: 0.83665353

00:00:19.057 --> 00:00:21.657 faculty meeting as I mentioned.

NOTE Confidence: 0.83665353

00:00:21.660 --> 00:00:23.914 I just want to welcome you today

NOTE Confidence: 0.83665353

00:00:23.914 --> 00:00:25.989 to the Yale Sleep Seminar.

NOTE Confidence: 0.83665353

00:00:25.990 --> 00:00:28.018 I just have a few announcements

NOTE Confidence: 0.83665353

00:00:28.018 --> 00:00:30.319 before I introduce our speaker today.

NOTE Confidence: 0.83665353

00:00:30.320 --> 00:00:31.764 First, everyone please make

NOTE Confidence: 0.83665353

00:00:31.764 --> 00:00:33.208 sure to mute yourself.

NOTE Confidence: 0.83665353

00:00:33.210 --> 00:00:35.737 Secondly, in order to receive CME credit,

NOTE Confidence: 0.83665353

00:00:35.740 --> 00:00:37.924 you're going to check the chat box

NOTE Confidence: 0.83665353

00:00:37.924 --> 00:00:40.429 or the chat room for instructions.

NOTE Confidence: 0.83665353

00:00:40.430 --> 00:00:43.678 You can text the unique ID for this

NOTE Confidence: 0.83665353

00:00:43.678 --> 00:00:45.940 conference until 3:15 PM and you

1

NOTE Confidence: 0.83665353

00:00:45.940 --> 00:00:48.442 have to register with the LC ME

NOTE Confidence: 0.83665353

00:00:48.442 --> 00:00:50.969 before you before you can do this.

NOTE Confidence: 0.83665353

00:00:50.970 --> 00:00:52.896 If you have any questions during

NOTE Confidence: 0.83665353

00:00:52.896 --> 00:00:53.538 the presentation,

NOTE Confidence: 0.83665353

00:00:53.540 --> 00:00:55.787 please just write in the chat box.

NOTE Confidence: 0.83665353

00:00:55.790 --> 00:00:58.670 I'm at the end if we have some time,

NOTE Confidence: 0.83665353

00:00:58.670 --> 00:01:00.668 we can go through that recorded

NOTE Confidence: 0.83665353

00:01:00.668 --> 00:01:02.673 versions of these lectures will be

NOTE Confidence: 0.83665353

00:01:02.673 --> 00:01:04.193 available online within two weeks

NOTE Confidence: 0.83665353

00:01:04.193 --> 00:01:06.380 at the link provided in the chat.

NOTE Confidence: 0.83665353

00:01:06.380 --> 00:01:06.982 And finally,

NOTE Confidence: 0.83665353

00:01:06.982 --> 00:01:09.390 please feel free to share any of these

NOTE Confidence: 0.83665353

00:01:09.452 --> 00:01:11.517 announcements for the weekly lecture

NOTE Confidence: 0.83665353

00:01:11.517 --> 00:01:13.994 series to anyone who's interested in

NOTE Confidence: 0.83665353

00:01:13.994 --> 00:01:16.070 give Debbie Lovejoy the email contact.

NOTE Confidence: 0.83665353

00:01:16.070 --> 00:01:18.254 So I also want to make a couple

NOTE Confidence: 0.83665353

00:01:18.254 --> 00:01:19.760 of specific announcements.

NOTE Confidence: 0.83665353

00:01:19.760 --> 00:01:22.432 One to let you know that the sleep

NOTE Confidence: 0.83665353

00:01:22.432 --> 00:01:24.447 seminar next week is next week,

NOTE Confidence: 0.83665353

00:01:24.450 --> 00:01:25.088 February 24th.

NOTE Confidence: 0.83665353

00:01:25.088 --> 00:01:27.002 I'm sorry the sleep someone are

NOTE Confidence: 0.83665353

00:01:27.002 --> 00:01:29.296 neck is not going to happen next

NOTE Confidence: 0.83665353

00:01:29.296 --> 00:01:30.891 week on February 24th because

NOTE Confidence: 0.83665353

00:01:30.953 --> 00:01:32.489 of this sectional retreat.

NOTE Confidence: 0.83665353

00:01:32.490 --> 00:01:34.578 And it's also not going to happen on

NOTE Confidence: 0.83665353

00:01:34.578 --> 00:01:37.174 March 3rd the following week because of

NOTE Confidence: 0.83665353

00:01:37.174 --> 00:01:39.189 the Connecticut Plumbers Society meeting.

NOTE Confidence: 0.83665353

00:01:39.190 --> 00:01:41.227 So the next time we meet will

NOTE Confidence: 0.83665353

00:01:41.227 --> 00:01:43.695 be March 10th when we do our

NOTE Confidence: 0.83665353

00:01:43.695 --> 00:01:45.219 joint Yale Harvard Conference.

NOTE Confidence: 0.83665353

00:01:45.220 --> 00:01:48.028 That's going to be held by Doctor Up.

NOTE Confidence: 0.83665353

00:01:48.030 --> 00:01:49.334 How much to see?

NOTE Confidence: 0.83665353

00:01:49.334 --> 00:01:50.638 Who's a Sleep Medicine?

NOTE Confidence: 0.83665353

00:01:50.640 --> 00:01:53.154 Felons going to speak about the

NOTE Confidence: 0.83665353

00:01:53.154 --> 00:01:54.830 COPD Orsay overlap syndrome.

NOTE Confidence: 0.83665353

00:01:54.830 --> 00:01:57.483 So with that it's my great pleasure

NOTE Confidence: 0.83665353

00:01:57.483 --> 00:02:00.018 pleasure to introduce our today's speaker,

NOTE Confidence: 0.83665353

00:02:00.020 --> 00:02:00.464 doctor,

NOTE Confidence: 0.83665353

00:02:00.464 --> 00:02:00.908 faculty,

NOTE Confidence: 0.83665353

00:02:00.908 --> 00:02:03.128 Doctor Fakel completing her medical

NOTE Confidence: 0.83665353

00:02:03.128 --> 00:02:05.282 training at Georgetown and then

NOTE Confidence: 0.83665353

00:02:05.282 --> 00:02:07.177 spent several years at Northwestern

NOTE Confidence: 0.83665353

00:02:07.177 --> 00:02:09.097 where she completed her residency

NOTE Confidence: 0.83665353

00:02:09.097 --> 00:02:11.263 in OBGYN and have fellowship and

NOTE Confidence: 0.83665353

00:02:11.263 --> 00:02:12.971 maternal fetal medicine as well

NOTE Confidence: 0.83665353

00:02:12.971 --> 00:02:15.260 as well as a Masters of Science

NOTE Confidence: 0.83665353

00:02:15.330 --> 00:02:17.169 and clinical investigation.

NOTE Confidence: 0.83665353

00:02:17.170 --> 00:02:19.921 And I see that that you published

NOTE Confidence: 0.83665353

00:02:19.921 --> 00:02:21.560 with Doctor Phil's nice,

NOTE Confidence: 0.83665353

00:02:21.560 --> 00:02:24.808 so I'm assuming that's where your contact.

NOTE Confidence: 0.83665353

00:02:24.810 --> 00:02:26.086 This nature since 2011,

NOTE Confidence: 0.83665353

00:02:26.086 --> 00:02:28.000 she has been at the University

NOTE Confidence: 0.83665353

00:02:28.067 --> 00:02:30.053 of Pittsburgh where she is now

NOTE Confidence: 0.83665353

00:02:30.053 --> 00:02:31.872 an associate professor in the

NOTE Confidence: 0.83665353

00:02:31.872 --> 00:02:33.159 Department of Obstetrics,

NOTE Confidence: 0.83665353

00:02:33.160 --> 00:02:35.464 Gynecology and Women's Health in the

NOTE Confidence: 0.83665353

00:02:35.464 --> 00:02:37.620 division of Maternal Fetal Medicine.

NOTE Confidence: 0.83665353

00:02:37.620 --> 00:02:39.425 Doctor Factless Research is instrumental

NOTE Confidence: 0.83665353

00:02:39.425 --> 00:02:41.606 in advancing our knowledge in the

NOTE Confidence: 0.83665353

00:02:41.606 --> 00:02:43.196 nature of sleep during pregnancy.

NOTE Confidence: 0.83665353

00:02:43.200 --> 00:02:45.790 She is a Co investigator in the

NOTE Confidence: 0.83665353

00:02:45.790 --> 00:02:48.245 Multi center new mom to be study

NOTE Confidence: 0.83665353

00:02:48.245 --> 00:02:50.530 and as I was just telling her,

NOTE Confidence: 0.83665353

00:02:50.530 --> 00:02:53.410 we're very excited about her research

NOTE Confidence: 0.83665353

00:02:53.410 --> 00:02:55.940 because it's gonna really impact.

NOTE Confidence: 0.83665353

00:02:55.940 --> 00:02:57.840 Our guidelines or clinical care

NOTE Confidence: 0.83665353

00:02:57.840 --> 00:02:59.740 of patients in the future,

NOTE Confidence: 0.83665353

00:02:59.740 --> 00:03:00.880 particularly sleep disordered

NOTE Confidence: 0.83665353

00:03:00.880 --> 00:03:02.780 breathing and and perinatal outcomes.

NOTE Confidence: 0.83665353

00:03:02.780 --> 00:03:05.102 She has authored numerous peer reviewed

NOTE Confidence: 0.83665353

00:03:05.102 --> 00:03:07.435 publications on this topic and she

NOTE Confidence: 0.83665353

00:03:07.435 --> 00:03:09.235 said well celebrated against sorry.

NOTE Confidence: 0.83665353

00:03:09.240 --> 00:03:11.460 Active clinical educator as well as

NOTE Confidence: 0.83665353

00:03:11.460 --> 00:03:13.420 recipient of many research awards,

NOTE Confidence: 0.83665353

00:03:13.420 --> 00:03:14.940 academic Rewards Education Awards.

NOTE Confidence: 0.83665353

00:03:14.940 --> 00:03:17.220 She's got the trifecta in place.

NOTE Confidence: 0.83665353

00:03:17.220 --> 00:03:18.752 So without further ado,

NOTE Confidence: 0.83665353

00:03:18.752 --> 00:03:21.050 I'd like to let Doctor Fackler

NOTE Confidence: 0.8053021

00:03:21.121 --> 00:03:22.537 start host her talk.

NOTE Confidence: 0.8053021

00:03:22.540 --> 00:03:24.440 Thank you. Well, thank you

NOTE Confidence: 0.850804715384616

00:03:24.440 --> 00:03:27.326 so much for that. Very kind

NOTE Confidence: 0.850804715384616

00:03:27.326 --> 00:03:30.318 introduction and I'm happy to be here.

NOTE Confidence: 0.850804715384616

00:03:30.320 --> 00:03:34.181 Kind of sharing some of my work in the

NOTE Confidence: 0.850804715384616

00:03:34.181 --> 00:03:37.906 work of others in the arena of sleep,

NOTE Confidence: 0.850804715384616

00:03:37.910 --> 00:03:40.135 health and the topic of

NOTE Confidence: 0.850804715384616

00:03:40.135 --> 00:03:41.915 my presentation is sleep.

NOTE Confidence: 0.850804715384616

00:03:41.920 --> 00:03:43.066 Health of question.

NOTE Confidence: 0.850804715384616

00:03:43.066 --> 00:03:45.358 Is it a modifiable risk factor

NOTE Confidence: 0.850804715384616

00:03:45.358 --> 00:03:47.718 for adverse pregnancy outcomes?

NOTE Confidence: 0.850804715384616

00:03:47.720 --> 00:03:49.172 And as you mentioned,

NOTE Confidence: 0.850804715384616

00:03:49.172 --> 00:03:51.955 I got started in this work at

NOTE Confidence: 0.850804715384616

00:03:51.955 --> 00:03:54.071 Northwestern through kind of

NOTE Confidence: 0.850804715384616

00:03:54.071 --> 00:03:56.187 collaboration with Doctor Phil.

NOTE Confidence: 0.850804715384616

00:03:56.190 --> 00:03:57.279 A see who.

NOTE Confidence: 0.850804715384616

00:03:57.279 --> 00:04:00.340 That was part of my mentor ship team.

NOTE Confidence: 0.850804715384616

00:04:00.340 --> 00:04:02.392 As a fellow and through that

NOTE Confidence: 0.850804715384616

00:04:02.392 --> 00:04:03.760 kind of initial work,

NOTE Confidence: 0.850804715384616

00:04:03.760 --> 00:04:06.262 I've been very fortunate to be

NOTE Confidence: 0.850804715384616

00:04:06.262 --> 00:04:09.408 involved in a lot of multi center.

NOTE Confidence: 0.850804715384616

00:04:09.410 --> 00:04:11.822 Studies that have kind of led

NOTE Confidence: 0.850804715384616

00:04:11.822 --> 00:04:13.430 to publications and expansion

NOTE Confidence: 0.850804715384616

00:04:13.498 --> 00:04:15.268 of the data in this arena,

NOTE Confidence: 0.850804715384616

00:04:15.270 --> 00:04:17.734 so I'm very excited to share some

NOTE Confidence: 0.850804715384616

00:04:17.734 --> 00:04:20.020 of this work with you today.

NOTE Confidence: 0.850804715384616

00:04:20.020 --> 00:04:22.174 I don't have any conflicts of

NOTE Confidence: 0.850804715384616

00:04:22.174 --> 00:04:25.144 interest and I always like to start my

NOTE Confidence: 0.850804715384616

00:04:25.144 --> 00:04:27.340 slide with my favorite sneak quote,

NOTE Confidence: 0.850804715384616

00:04:27.340 --> 00:04:29.170 which is from a researcher,

NOTE Confidence: 0.850804715384616

8

00:04:29.170 --> 00:04:30.379 Doctor Alan Rahxephon.

NOTE Confidence: 0.850804715384616

00:04:30.379 --> 00:04:32.797 If sleep does not serve an

NOTE Confidence: 0.850804715384616

00:04:32.797 --> 00:04:35.074 absolutely vital function that is

NOTE Confidence: 0.850804715384616

00:04:35.074 --> 00:04:37.324 the biggest mistake the evolutionary

NOTE Confidence: 0.850804715384616

00:04:37.324 --> 00:04:38.790 process has ever made.

NOTE Confidence: 0.850804715384616

00:04:38.790 --> 00:04:40.939 So my outline for today we're going

NOTE Confidence: 0.850804715384616

00:04:40.939 --> 00:04:43.604 to start by kind of just reviewing

NOTE Confidence: 0.850804715384616

00:04:43.604 --> 00:04:45.694 sleep disruption and its potential

NOTE Confidence: 0.850804715384616

00:04:45.694 --> 00:04:48.150 linked to adverse pregnancy outcomes.

NOTE Confidence: 0.850804715384616

00:04:48.150 --> 00:04:51.174 Focusing on the question of is

NOTE Confidence: 0.850804715384616

00:04:51.174 --> 00:04:52.686 there biologic plausibility?

NOTE Confidence: 0.850804715384616

00:04:52.690 --> 00:04:55.156 And then I'm going to review

NOTE Confidence: 0.850804715384616

00:04:55.156 --> 00:04:57.719 studies that have given us some

NOTE Confidence: 0.850804715384616

00:04:57.719 --> 00:04:59.809 good objective data on sleep,

NOTE Confidence: 0.850804715384616

00:04:59.810 --> 00:05:00.899 destruction and pregnancy,

NOTE Confidence: 0.850804715384616

00:05:00.899 --> 00:05:04.000 as well as the link of that sleep

NOTE Confidence: 0.850804715384616

00:05:04.000 --> 00:05:06.940 disruption has an adverse pregnancy outcomes,

NOTE Confidence: 0.850804715384616

00:05:06.940 --> 00:05:08.194 principally reviewing today.

NOTE Confidence: 0.850804715384616

00:05:08.194 --> 00:05:10.702 The link to just stational diabetes,

NOTE Confidence: 0.850804715384616

00:05:10.710 --> 00:05:12.918 hypertension and create clamp

NOTE Confidence: 0.850804715384616

00:05:12.918 --> 00:05:15.678 Sia and Preacher in Burg.

NOTE Confidence: 0.850804715384616

00:05:15.680 --> 00:05:18.144 And then we'll end with the question

NOTE Confidence: 0.850804715384616

00:05:18.144 --> 00:05:20.498 that I posed at the beginning.

NOTE Confidence: 0.850804715384616

00:05:20.500 --> 00:05:22.755 Is sleep disruption a modifiable

NOTE Confidence: 0.850804715384616

00:05:22.755 --> 00:05:24.559 respecter for adverse pregnancy

NOTE Confidence: 0.850804715384616

00:05:24.559 --> 00:05:27.002 outcomes will review some of kind of

NOTE Confidence: 0.850804715384616

00:05:27.002 --> 00:05:29.007 the literature out there on sleep

NOTE Confidence: 0.850804715384616

00:05:29.007 --> 00:05:30.969 interventions and focus on a CPAP

NOTE Confidence: 0.850804715384616

00:05:30.969 --> 00:05:34.180 trial that is currently recruiting.

NOTE Confidence: 0.850804715384616

00:05:34.180 --> 00:05:37.444 So when we think of sleep and its

NOTE Confidence: 0.850804715384616

00:05:37.444 --> 00:05:40.129 potential role in health in general,

NOTE Confidence: 0.850804715384616

00:05:40.130 --> 00:05:42.680 we think of how you know.

NOTE Confidence: 0.850804715384616

00:05:42.680 --> 00:05:44.810 We know that sleep disruption

NOTE Confidence: 0.850804715384616

00:05:44.810 --> 00:05:47.780 can come in a variety of forms.

NOTE Confidence: 0.850804715384616

00:05:47.780 --> 00:05:51.836 It can come in short and sleep duration.

NOTE Confidence: 0.850804715384616

00:05:51.840 --> 00:05:53.072 Sleep fragmentation,

NOTE Confidence: 0.850804715384616

00:05:53.072 --> 00:05:54.304 circadian disruption,

NOTE Confidence: 0.850804715384616

00:05:54.304 --> 00:05:54.920 or,

NOTE Confidence: 0.850804715384616

00:05:54.920 --> 00:05:58.546 in the case of some Fabian specifically

NOTE Confidence: 0.850804715384616

00:05:58.546 --> 00:06:01.029 nocturnal hypoxemia or nocturnal

NOTE Confidence: 0.850804715384616

00:06:01.029 --> 00:06:03.540 intrathoracic pressure swings,

NOTE Confidence: 0.850804715384616

00:06:03.540 --> 00:06:06.978 and that these derangements and sleep

NOTE Confidence: 0.850804715384616

00:06:06.978 --> 00:06:10.716 have been linked to the following

NOTE Confidence: 0.850804715384616

00:06:10.716 --> 00:06:14.016 derangements in our taxes, theology.

NOTE Confidence: 0.850804715384616

00:06:14.016 --> 00:06:16.480 Dysregulation of adipocyte kinds.

NOTE Confidence: 0.850804715384616

00:06:16.480 --> 00:06:20.870 Activation of the HPA access.

NOTE Confidence: 0.850804715384616

00:06:20.870 --> 00:06:22.805 Surges of cortisol that are

NOTE Confidence: 0.850804715384616

00:06:22.805 --> 00:06:25.285 generally in this time with our

NOTE Confidence: 0.850804715384616

00:06:25.285 --> 00:06:27.640 circadian rhythms and increase in

NOTE Confidence: 0.850804715384616

00:06:27.640 --> 00:06:30.026 sympathetic activity at night and

NOTE Confidence: 0.850804715384616

00:06:30.026 --> 00:06:32.558 as well as oxidative stress and

NOTE Confidence: 0.850804715384616

00:06:32.558 --> 00:06:34.576 inflammation and outside of pregnancy.

NOTE Confidence: 0.850804715384616

00:06:34.576 --> 00:06:37.187 There has been a lot of research

NOTE Confidence: 0.850804715384616

00:06:37.187 --> 00:06:39.879 out of slinkies sleep disruptions.

NOTE Confidence: 0.850804715384616

00:06:39.880 --> 00:06:41.604 These alterations in pathophysiology

NOTE Confidence: 0.850804715384616

00:06:41.604 --> 00:06:42.466 and hypertension,

NOTE Confidence: 0.850804715384616

00:06:42.470 --> 00:06:44.330 cardiac disease and diabetes,

NOTE Confidence: 0.850804715384616

00:06:44.330 --> 00:06:47.120 and what my interest was when

NOTE Confidence: 0.850804715384616

00:06:47.204 --> 00:06:49.778 I started in fellowship at was

NOTE Confidence: 0.850804715384616

00:06:49.778 --> 00:06:51.065 to understand how.

NOTE Confidence: 0.850804715384616

00:06:51.070 --> 00:06:53.930 Sleep through similar mechanisms can

NOTE Confidence: 0.850804715384616

00:06:53.930 --> 00:06:56.218 potentially influence pregnancy outcomes

NOTE Confidence: 0.850804715384616

00:06:56.218 --> 00:06:59.059 and kind of when we think about it,

NOTE Confidence: 0.850804715384616

00:06:59.060 --> 00:07:01.514 we know that a pregnant woman

NOTE Confidence: 0.850804715384616

00:07:01.514 --> 00:07:03.726 can come into pregnancy with

NOTE Confidence: 0.850804715384616

00:07:03.726 --> 00:07:05.702 sleep disruptions that preexist

NOTE Confidence: 0.850804715384616

00:07:05.702 --> 00:07:08.172 they could have issues with

NOTE Confidence: 0.8656727

00:07:08.254 --> 00:07:10.338 insomnia or sleep duration,

NOTE Confidence: 0.8656727

00:07:10.340 --> 00:07:11.280 sleep fragmentation.

NOTE Confidence: 0.8656727

00:07:11.280 --> 00:07:14.570 They could have pre existing sleep apnea.

NOTE Confidence: 0.8656727

00:07:14.570 --> 00:07:17.678 However, we also know that pregnancy in

NOTE Confidence: 0.8656727

00:07:17.678 --> 00:07:21.530 and of itself predisposes to sleep changes.

NOTE Confidence: 0.8656727

00:07:21.530 --> 00:07:24.456 And these sleep changes can lead to

NOTE Confidence: 0.8656727

00:07:24.456 --> 00:07:27.471 more disturbed sleep on top of any pre

NOTE Confidence: 0.8656727

00:07:27.471 --> 00:07:29.782 existing issues they can in introduce

NOTE Confidence: 0.8656727

00:07:29.782 --> 00:07:32.547 new sleep problems and certainly

NOTE Confidence: 0.8656727

00:07:32.547 --> 00:07:34.759 for sleep disordered breathing.

NOTE Confidence: 0.8656727

00:07:34.760 --> 00:07:37.336 I'll show you data that there is an

NOTE Confidence: 0.8656727

00:07:37.336 --> 00:07:39.652 increase in sleep disordered breathing

NOTE Confidence: 0.8656727

00:07:39.652 --> 00:07:42.856 as pregnancy progresses due to the

NOTE Confidence: 0.8656727

00:07:42.856 --> 00:07:44.370 pathophysiologic changes associated

NOTE Confidence: 0.8656727

00:07:44.370 --> 00:07:47.082 with normal weight gain in pregnancy

NOTE Confidence: 0.8656727

00:07:47.082 --> 00:07:49.338 and plasma volume expansion and edema.

NOTE Confidence: 0.8656727

00:07:49.338 --> 00:07:51.837 So we have that women can enter

NOTE Confidence: 0.8656727

00:07:51.837 --> 00:07:53.902 pregnancy with sleep problems or

NOTE Confidence: 0.8656727

00:07:53.902 --> 00:07:56.002 can develop sleep problems because

NOTE Confidence: 0.8656727

00:07:56.002 --> 00:07:57.907 of the changes of pregnancy.

NOTE Confidence: 0.8656727

00:07:57.910 --> 00:08:00.310 And we know that those we problems have

NOTE Confidence: 0.8656727

00:08:00.310 --> 00:08:02.771 been linked to those pathways that I

NOTE Confidence: 0.8656727

00:08:02.771 --> 00:08:04.566 mentioned earlier and what pregnancy

NOTE Confidence: 0.8656727

00:08:04.631 --> 00:08:06.713 researchers know is that those very

NOTE Confidence: 0.8656727

00:08:06.713 --> 00:08:08.768 same pathways have been linked to

NOTE Confidence: 0.8656727

00:08:08.768 --> 00:08:10.084 metabolic dysfunction in pregnancy

NOTE Confidence: 0.8656727

00:08:10.084 --> 00:08:11.771 as well as endothelial abnormalities

NOTE Confidence: 0.8656727

00:08:11.771 --> 00:08:13.661 in pregnancy and those have been

NOTE Confidence: 0.8656727

00:08:13.661 --> 00:08:15.589 linked to adverse pregnancy outcomes.

NOTE Confidence: 0.8656727

00:08:15.590 --> 00:08:18.326 So there is a lot of biological plausibility

NOTE Confidence: 0.8656727

00:08:18.326 --> 00:08:20.817 and interest in understanding the role of.

NOTE Confidence: 0.8656727

00:08:20.820 --> 00:08:23.940 Sleep in pregnancy health.

NOTE Confidence: 0.8656727

00:08:23.940 --> 00:08:26.040 And when we think of sleep in

NOTE Confidence: 0.8656727

00:08:26.040 --> 00:08:28.280 pregnancy or do an Internet search,

NOTE Confidence: 0.8656727

00:08:28.280 --> 00:08:30.284 we often come across kind of

NOTE Confidence: 0.8656727

00:08:30.284 --> 00:08:31.286 pictures like this.

NOTE Confidence: 0.8656727

00:08:31.290 --> 00:08:33.362 But what those of us who practice

NOTE Confidence: 0.8656727

00:08:33.362 --> 00:08:35.296 either in the pregnancy world or

NOTE Confidence: 0.8656727

00:08:35.296 --> 00:08:37.585 in the sleep world know that it's

NOTE Confidence: 0.8656727

00:08:37.655 --> 00:08:39.845 often not quite a prettier picture

NOTE Confidence: 0.8656727

00:08:39.845 --> 00:08:42.309 and that sleep problems are a real

NOTE Confidence: 0.8656727

00:08:42.309 --> 00:08:44.307 clinical issue for our pregnant moms,

15

NOTE Confidence: 0.8656727

00:08:44.310 --> 00:08:46.648 and it's for a variety of reasons.

NOTE Confidence: 0.8656727

00:08:46.650 --> 00:08:47.990 As I mentioned earlier,

NOTE Confidence: 0.8656727

00:08:47.990 --> 00:08:50.000 you can either come into pregnancy

NOTE Confidence: 0.8656727

00:08:50.063 --> 00:08:51.883 with previous pre existing problem

NOTE Confidence: 0.8656727

00:08:51.883 --> 00:08:54.066 that gets exacerbated or you can

NOTE Confidence: 0.8656727

00:08:54.066 --> 00:08:55.266 develop a new problem.

NOTE Confidence: 0.8656727

00:08:55.270 --> 00:08:58.420 Whether that be sleep apnea that can

NOTE Confidence: 0.8656727

00:08:58.420 --> 00:09:01.160 disrupt your sleep but also other

NOTE Confidence: 0.8656727

00:09:01.160 --> 00:09:04.198 things like back pain and the increase

NOTE Confidence: 0.8656727

00:09:04.283 --> 00:09:07.146 in reflex disease as well as the

NOTE Confidence: 0.8656727

00:09:07.146 --> 00:09:10.128 increased need to wake up and urinate

NOTE Confidence: 0.8656727

00:09:10.128 --> 00:09:12.750 at night can all disrupt sleep.

NOTE Confidence: 0.8656727

00:09:12.750 --> 00:09:14.310 For a pregnant woman,

NOTE Confidence: 0.8656727

00:09:14.310 --> 00:09:16.650 we know that restless leg syndrome

NOTE Confidence: 0.8656727

00:09:16.728 --> 00:09:19.028 symptoms are increased as pregnancy

NOTE Confidence: 0.8656727

00:09:19.028 --> 00:09:21.328 progressives and that can lead

NOTE Confidence: 0.8656727

00:09:21.404 --> 00:09:22.799 to sleep disruption.

NOTE Confidence: 0.8656727

00:09:22.800 --> 00:09:25.831 And we also know that the hormonal

NOTE Confidence: 0.8656727

00:09:25.831 --> 00:09:28.600 changes that occur in pregnancy can.

NOTE Confidence: 0.8656727

00:09:28.600 --> 00:09:31.876 Ultra Moudan can alter other CNS

NOTE Confidence: 0.8656727

00:09:31.876 --> 00:09:34.060 functions that can ultimately

NOTE Confidence: 0.8656727

00:09:34.151 --> 00:09:36.966 lead to disrupt disrupted sleep.

NOTE Confidence: 0.8343823

00:09:39.490 --> 00:09:41.282 What I'm going to review now is

NOTE Confidence: 0.8343823

00:09:41.282 --> 00:09:42.945 what was alluded to earlier than

NOTE Confidence: 0.8343823

00:09:42.945 --> 00:09:44.619 you Mom to be pregnancy cohort.

NOTE Confidence: 0.8343823

00:09:44.620 --> 00:09:46.756 I'm going to present a lot of data

NOTE Confidence: 0.8343823

00:09:46.756 --> 00:09:48.667 from the new mom to be cohort,

NOTE Confidence: 0.8343823

00:09:48.670 --> 00:09:50.998 so I thought I would spend just a

NOTE Confidence: 0.8343823

00:09:50.998 --> 00:09:52.484 second reviewing with this cohort

NOTE Confidence: 0.8343823

00:09:52.484 --> 00:09:54.444 was and what kind of sleep data

NOTE Confidence: 0.8343823

00:09:54.502 --> 00:09:56.307 was collected from this cohort.

NOTE Confidence: 0.8343823

00:09:56.310 --> 00:09:58.977 So then you want to be stands

NOTE Confidence: 0.8343823

00:09:58.977 --> 00:10:00.120 for Nulliparous pregnancy.

NOTE Confidence: 0.8343823

00:10:00.120 --> 00:10:01.596 Outcomes study monitoring mothers

NOTE Confidence: 0.8343823

00:10:01.596 --> 00:10:05.100 to be and it was a cohort of 10,000.

NOTE Confidence: 0.8343823

00:10:05.100 --> 00:10:07.320 The liparus women meaning first time

NOTE Confidence: 0.8343823

00:10:07.320 --> 00:10:09.262 moms who were followed prospectively

NOTE Confidence: 0.8343823

00:10:09.262 --> 00:10:11.632 in pregnancy and the visit times

NOTE Confidence: 0.8343823

00:10:11.632 --> 00:10:13.626 in pregnancy are outlined here

NOTE Confidence: 0.8343823

00:10:13.626 --> 00:10:15.476 visit one was conducted between

NOTE Confidence: 0.8343823

00:10:15.476 --> 00:10:18.480 six weeks and 13 weeks and six days

NOTE Confidence: 0.8343823

00:10:18.480 --> 00:10:21.195 visit to between 16 and 21 weeks

NOTE Confidence: 0.8343823

00:10:21.195 --> 00:10:23.778 and six days and visit 3 between

NOTE Confidence: 0.8343823

00:10:23.778 --> 00:10:26.928 22 weeks and 29 weeks and six days.

NOTE Confidence: 0.8343823

00:10:26.930 --> 00:10:30.422 So I'll be referring to these kind of early.

NOTE Confidence: 0.8343823

00:10:30.430 --> 00:10:33.766 Mid and late pregnancy visits throughout

NOTE Confidence: 0.8343823

00:10:33.766 --> 00:10:36.510 the slides represent the data.

NOTE Confidence: 0.8343823

00:10:36.510 --> 00:10:39.100 Sleep data was collected in various ways.

NOTE Confidence: 0.8343823

00:10:39.100 --> 00:10:41.224 There was subjective sleep data in

NOTE Confidence: 0.8343823

00:10:41.224 --> 00:10:43.749 the form of sleep surveys that was

NOTE Confidence: 0.8343823

00:10:43.749 --> 00:10:45.831 collected at visit one and visit

NOTE Confidence: 0.8343823

00:10:45.831 --> 00:10:47.610 3 on all participants.

NOTE Confidence: 0.8343823

00:10:47.610 --> 00:10:49.265 There was objective sleep data

NOTE Confidence: 0.8343823

00:10:49.265 --> 00:10:51.681 that was collected on a subset of

NOTE Confidence: 0.8343823

00:10:51.681 --> 00:10:53.775 participants at visit one and visit

NOTE Confidence: 0.8343823

00:10:53.775 --> 00:10:56.208 3A subgroup of women completed home

NOTE Confidence: 0.8343823

00:10:56.208 --> 00:10:58.293 sleep testing for sleep disordered

NOTE Confidence: 0.8343823

00:10:58.293 --> 00:11:00.402 breathing assessment and our sample

NOTE Confidence: 0.8343823

00:11:00.402 --> 00:11:03.490 size for that was about 3600 women.

NOTE Confidence: 0.8343823

00:11:03.490 --> 00:11:06.101 Add visit to a subgroup of women

NOTE Confidence: 0.8343823

00:11:06.101 --> 00:11:08.280 completed seven days of Actigraphy,

NOTE Confidence: 0.8343823

00:11:08.280 --> 00:11:11.080 along with a sleep log and the

NOTE Confidence: 0.8343823

00:11:11.080 --> 00:11:13.069 sample size for them to.

NOTE Confidence: 0.8343823

00:11:13.070 --> 00:11:15.458 This analysis was around 780 women.

NOTE Confidence: 0.76799285

00:11:19.580 --> 00:11:20.624 Middle review first.

NOTE Confidence: 0.76799285

00:11:20.624 --> 00:11:22.712 The data on that actigraphy subset,

NOTE Confidence: 0.76799285

00:11:22.720 --> 00:11:25.510 so it's called the new mom to be sleep

NOTE Confidence: 0.76799285

00:11:25.510 --> 00:11:27.608 duration and continuity side study.

NOTE Confidence: 0.76799285

00:11:27.610 --> 00:11:29.158 And as I mentioned,

NOTE Confidence: 0.76799285

00:11:29.158 --> 00:11:32.405 it was conducted at visit 2 where women

NOTE Confidence: 0.76799285

00:11:32.405 --> 00:11:35.345 were sent home to wear an actigraph

NOTE Confidence: 0.76799285

00:11:35.345 --> 00:11:38.569 and act to watch and complete asleep.

NOTE Confidence: 0.76799285

00:11:38.570 --> 00:11:39.998 Survey athlete blog.

NOTE Confidence: 0.76799285

00:11:39.998 --> 00:11:42.854 And like I said about 780

NOTE Confidence: 0.76799285

00:11:42.854 --> 00:11:45.349 women completed this study.

NOTE Confidence: 0.76799285

00:11:45.350 --> 00:11:48.020 And here are sleep characteristics

NOTE Confidence: 0.76799285

00:11:48.020 --> 00:11:51.625 from that subgroup that I'm in bed

NOTE Confidence: 0.76799285

00:11:51.625 --> 00:11:54.145 for this subgroup was 8.7 hours,

NOTE Confidence: 0.76799285

00:11:54.150 --> 00:11:57.720 and in this slide I also showed

NOTE Confidence: 0.76799285

00:11:57.720 --> 00:11:59.885 the standard deviations here

NOTE Confidence: 0.76799285

00:11:59.885 --> 00:12:02.590 sleep duration with 7.4 hours.

NOTE Confidence: 0.76799285

00:12:02.590 --> 00:12:05.985 Wake after sleep onset was 42 minutes.

NOTE Confidence: 0.76799285

00:12:05.990 --> 00:12:08.456 Sleep midpoint for the group as

NOTE Confidence: 0.76799285

00:12:08.456 --> 00:12:11.220 a whole was 3:38 AM and 27.9%

NOTE Confidence: 0.76799285

00:12:11.220 --> 00:12:13.476 of women had a sleep duration

NOTE Confidence: 0.76799285

00:12:13.476 --> 00:12:16.439 of less than 7 hours per night.

NOTE Confidence: 0.76799285

00:12:16.440 --> 00:12:18.594 Typically kind of what is used

NOTE Confidence: 0.76799285

00:12:18.594 --> 00:12:20.860 to define a short situation.

NOTE Confidence: 0.76799285

00:12:20.860 --> 00:12:24.297 2.6% of women had asleep ship for

NOTE Confidence: 0.76799285

00:12:24.297 --> 00:12:27.068 duration of greater than 9 hours.

NOTE Confidence: 0.76799285

00:12:27.070 --> 00:12:29.416 And this is just the distribution

NOTE Confidence: 0.76799285

00:12:29.416 --> 00:12:30.980 of the sleep duration,

NOTE Confidence: 0.76799285

00:12:30.980 --> 00:12:33.194 just to kind of show where

NOTE Confidence: 0.76799285

00:12:33.194 --> 00:12:35.670 it lies and it mimics it.

NOTE Confidence: 0.76799285

00:12:35.670 --> 00:12:36.053 Mirrors,

NOTE Confidence: 0.76799285

00:12:36.053 --> 00:12:38.734 I should say what we see in

NOTE Confidence: 0.76799285

00:12:38.734 --> 00:12:40.363 non pregnant populations where

NOTE Confidence: 0.76799285

00:12:40.363 --> 00:12:43.100 there is about a 20 to 30%.

NOTE Confidence: 0.829774

00:12:45.610 --> 00:12:47.810 Incidents of short sleep duration.

NOTE Confidence: 0.7885925

00:12:50.630 --> 00:12:52.766 Um, regarding our sleep timing data,

NOTE Confidence: 0.7885925

00:12:52.770 --> 00:12:55.992 we found that 18.9% of women had a sleep

NOTE Confidence: 0.7885925

00:12:55.992 --> 00:12:58.476 midpoint that was later than 5:00 AM.

NOTE Confidence: 0.7885925

00:12:58.480 --> 00:13:00.856 So these are people that are

NOTE Confidence: 0.7885925

00:13:00.856 --> 00:13:03.509 considered to have late sleep timing.

NOTE Confidence: 0.7885925

00:13:03.510 --> 00:13:06.149 What we found was that women who

NOTE Confidence: 0.7885925

00:13:06.149 --> 00:13:08.120 reported working regular day shifts

NOTE Confidence: 0.7885925

00:13:08.120 --> 00:13:10.424 tended to have earlier sleep midpoints

NOTE Confidence: 0.7885925

00:13:10.424 --> 00:13:13.115 and that the women that really had

NOTE Confidence: 0.7885925

00:13:13.115 --> 00:13:15.281 the later sleep midpoints were women

NOTE Confidence: 0.7885925

00:13:15.281 --> 00:13:17.458 who reported some form of shift work

NOTE Confidence: 0.7885925

00:13:17.458 --> 00:13:19.549 but also unemployed individuals.

NOTE Confidence: 0.7885925

00:13:19.550 --> 00:13:21.752 Those are the individuals that tended

NOTE Confidence: 0.7885925

00:13:21.752 --> 00:13:24.140 to have more later sleep timing.

NOTE Confidence: 0.8789184

00:13:26.500 --> 00:13:28.810 Here are some other data that we

NOTE Confidence: 0.8789184

00:13:28.810 --> 00:13:31.409 got from this cohort regarding the

NOTE Confidence: 0.8789184

00:13:31.409 --> 00:13:33.964 sleep in pregnancy and demographics.

NOTE Confidence: 0.8789184

00:13:33.970 --> 00:13:35.370 Regarding race and ethnicity,

NOTE Confidence: 0.8789184

00:13:35.370 --> 00:13:37.120 we found that non Hispanic,

NOTE Confidence: 0.8789184

00:13:37.120 --> 00:13:39.235 black and Asian women had

NOTE Confidence: 0.8789184

00:13:39.235 --> 00:13:40.927 the shortest sleep duration.

NOTE Confidence: 0.8789184

00:13:40.930 --> 00:13:42.710 And non Hispanic black women

NOTE Confidence: 0.8789184

00:13:42.710 --> 00:13:44.490 also had the worst sleep,

NOTE Confidence: 0.8789184

00:13:44.490 --> 00:13:47.700 continuity and the latest sleep midpoint.

NOTE Confidence: 0.8789184

00:13:47.700 --> 00:13:48.552 Regarding age,

NOTE Confidence: 0.8789184

00:13:48.552 --> 00:13:51.108 we found that younger women had

NOTE Confidence: 0.8789184

00:13:51.108 --> 00:13:53.727 the highest wake after sleep onset.

NOTE Confidence: 0.8789184

00:13:53.730 --> 00:13:55.454 The lowest sleep efficiency,

NOTE Confidence: 0.8789184

00:13:55.454 --> 00:13:57.178 the latest sleep midpoint,

NOTE Confidence: 0.8789184

00:13:57.180 --> 00:14:00.280 and the most variable sleep.

NOTE Confidence: 0.8789184

00:14:00.280 --> 00:14:01.264 And regarding BMI,

NOTE Confidence: 0.8789184

00:14:01.264 --> 00:14:03.560 we found that women with a BMI

NOTE Confidence: 0.8789184

00:14:03.630 --> 00:14:05.737 of greater than or equal to 30

NOTE Confidence: 0.8789184

00:14:05.737 --> 00:14:07.650 had high sleep fragmentation,

NOTE Confidence: 0.8789184

00:14:07.650 --> 00:14:08.703 low sleep efficiency,

NOTE Confidence: 0.8789184

00:14:08.703 --> 00:14:10.809 and long way after sleep onset.

NOTE Confidence: 0.8789184

00:14:10.810 --> 00:14:12.214 While sleep duration was

NOTE Confidence: 0.8789184

00:14:12.214 --> 00:14:13.618 not associated with BMI,

NOTE Confidence: 0.8789184

00:14:13.620 --> 00:14:15.624 obese women had a medium sleep

NOTE Confidence: 0.8789184

00:14:15.624 --> 00:14:17.396 duration that was 36 minutes

NOTE Confidence: 0.8789184

00:14:17.396 --> 00:14:19.586 less than the lowest BMI group.

NOTE Confidence: 0.8647781

00:14:21.710 --> 00:14:23.915 And we took all this objective data

NOTE Confidence: 0.8647781

00:14:23.915 --> 00:14:26.009 on sleep duration and sleep timing

NOTE Confidence: 0.8647781

00:14:26.009 --> 00:14:28.181 and then looked at associations with

NOTE Confidence: 0.8647781

00:14:28.181 --> 00:14:30.059 average pregnancy outcomes and what

NOTE Confidence: 0.8647781

00:14:30.059 --> 00:14:32.231 we found was a strong Association

NOTE Confidence: 0.8647781

00:14:32.240 --> 00:14:34.238 between both sleep duration and sleep

NOTE Confidence: 0.8647781

00:14:34.238 --> 00:14:36.100 timing and just stational diabetes.

NOTE Confidence: 0.8647781

00:14:36.100 --> 00:14:38.708 So this is our.

NOTE Confidence: 0.8647781

00:14:38.710 --> 00:14:42.252 Data on short sleep duration defined as

NOTE Confidence: 0.8647781

00:14:42.252 --> 00:14:45.769 a sleep duration of less than 7 hours.

NOTE Confidence: 0.8647781

00:14:45.770 --> 00:14:47.370 And just stational diabetes risk.

NOTE Confidence: 0.8647781

00:14:47.370 --> 00:14:49.800 And as you can see in the blue bar

NOTE Confidence: 0.8647781

00:14:49.800 --> 00:14:51.953 are women with the sleep duration

NOTE Confidence: 0.8647781

00:14:51.953 --> 00:14:53.763 of less than 7 hours.

NOTE Confidence: 0.8647781

00:14:53.770 --> 00:14:56.970 The red bar greater than or equal to 7 hours,

NOTE Confidence: 0.8647781

00:14:56.970 --> 00:14:58.728 and women who had short sleep

NOTE Confidence: 0.8647781

00:14:58.728 --> 00:15:00.653 durations had about two fold increase

NOTE Confidence: 0.8647781

00:15:00.653 --> 00:15:02.729 in the rate of gestational diabetes.

NOTE Confidence: 0.8475878

00:15:05.240 --> 00:15:08.136 And this was our late sleep midpoint data,

NOTE Confidence: 0.8475878

00:15:08.140 --> 00:15:10.366 which was defined as a sleep

NOTE Confidence: 0.8475878

00:15:10.366 --> 00:15:12.480 midpoint of greater than 5:00 AM.

NOTE Confidence: 0.8475878

00:15:12.480 --> 00:15:14.544 And this group also had significantly

NOTE Confidence: 0.8475878

00:15:14.544 --> 00:15:16.460 higher rates of gestational diabetes.

NOTE Confidence: 0.8475878

00:15:16.460 --> 00:15:19.078 As you can see in the blue

NOTE Confidence: 0.8475878

00:15:19.078 --> 00:15:21.120 bar late sleep midpoint.

NOTE Confidence: 0.8475878

00:15:21.120 --> 00:15:23.112 Participants had eight point,

NOTE Confidence: 0.8475878

00:15:23.112 --> 00:15:25.842 1% rate of gestational diabetes

NOTE Confidence: 0.8475878

00:15:25.842 --> 00:15:28.632 versus individuals who sleep midpoint

NOTE Confidence: 0.8475878

00:15:28.632 --> 00:15:31.057 preceded 5:00 AM was three point,

NOTE Confidence: 0.8475878

00:15:31.060 --> 00:15:33.550 3% rate of gestational diabetes.

NOTE Confidence: 0.82052845

26

00:15:36.280 --> 00:15:40.410 And this is a kind of table from our paper.

NOTE Confidence: 0.82052845

00:15:40.410 --> 00:15:44.540 I'm not going to go through all of the data,

NOTE Confidence: 0.82052845

00:15:44.540 --> 00:15:47.221 but given our sample size and the

NOTE Confidence: 0.82052845

00:15:47.221 --> 00:15:49.080 rates of gestational diabetes,

NOTE Confidence: 0.82052845

00:15:49.080 --> 00:15:51.444 we weren't able to perform adjusted

NOTE Confidence: 0.82052845

00:15:51.444 --> 00:15:54.802 analysis that grouped kind of all of our

NOTE Confidence: 0.82052845

00:15:54.802 --> 00:15:56.518 known covariates demographic covariates,

NOTE Confidence: 0.82052845

00:15:56.520 --> 00:16:00.003 but we were able to look at kind of

NOTE Confidence: 0.82052845

00:16:00.003 --> 00:16:02.267 individual adjustments and what we

NOTE Confidence: 0.82052845

00:16:02.267 --> 00:16:05.710 found is when we adjusted for age BMI.

NOTE Confidence: 0.82052845

00:16:05.710 --> 00:16:08.854 Race, race, ethnicity as well as

NOTE Confidence: 0.82052845

00:16:08.854 --> 00:16:10.950 frequent soaring or employment

NOTE Confidence: 0.82052845

00:16:11.036 --> 00:16:14.180 categories that are odds ratios affect

NOTE Confidence: 0.82052845

00:16:14.180 --> 00:16:17.327 sizes for just stational diabetes in

NOTE Confidence: 0.82052845

00:16:17.327 --> 00:16:20.701 both the sleep duration and the sleep

NOTE Confidence: 0.82052845

00:16:20.701 --> 00:16:22.738 midpoint analysis remained consistent.

NOTE Confidence: 0.82585466

00:16:25.680 --> 00:16:28.354 I'm going to step away just from

NOTE Confidence: 0.82585466

00:16:28.354 --> 00:16:31.129 the Newmont to be data to kind of.

NOTE Confidence: 0.82585466

00:16:31.130 --> 00:16:33.450 Define this discussion on sleep

NOTE Confidence: 0.82585466

00:16:33.450 --> 00:16:35.770 duration and just stational diabetes

NOTE Confidence: 0.82585466

00:16:35.844 --> 00:16:38.028 to show you some other research.

NOTE Confidence: 0.82585466

00:16:38.030 --> 00:16:40.256 'cause the question comes up OK.

NOTE Confidence: 0.82585466

00:16:40.260 --> 00:16:43.104 Well sleep you've shown us that sleep is a

NOTE Confidence: 0.82585466

00:16:43.104 --> 00:16:45.837 risk factor for just stational diabetes.

NOTE Confidence: 0.82585466

00:16:45.840 --> 00:16:48.255 But then what happens once a woman

NOTE Confidence: 0.82585466

00:16:48.255 --> 00:16:49.930 gets just stational diabetes?

NOTE Confidence: 0.82585466

00:16:49.930 --> 00:16:52.170 What is what role does risk this

NOTE Confidence: 0.82585466

00:16:52.170 --> 00:16:54.768 League play in their glycemic profile?

NOTE Confidence: 0.82585466

00:16:54.770 --> 00:16:57.226 And so this was a study where we

NOTE Confidence: 0.82585466

00:16:57.226 --> 00:16:59.529 recruited women who were very newly

NOTE Confidence: 0.82585466

00:16:59.529 --> 00:17:01.145 diagnosed with gestational diabetes

NOTE Confidence: 0.82585466

00:17:01.145 --> 00:17:03.973 and ask them where in actigraph and

NOTE Confidence: 0.82585466

00:17:03.973 --> 00:17:05.928 record their blood glucose values

NOTE Confidence: 0.82585466

00:17:05.930 --> 00:17:08.604 and what we do in our practice.

NOTE Confidence: 0.82585466

00:17:08.610 --> 00:17:10.098 As we meet women,

NOTE Confidence: 0.82585466

00:17:10.098 --> 00:17:12.330 do uniform teaching on dietary changes

NOTE Confidence: 0.82585466

00:17:12.403 --> 00:17:14.398 to help control blood glucose.

NOTE Confidence: 0.82585466

00:17:14.400 --> 00:17:17.488 Have them do a week of dietary modification,

NOTE Confidence: 0.82585466

00:17:17.490 --> 00:17:20.185 and then after that very uniform education,

NOTE Confidence: 0.82585466

00:17:20.190 --> 00:17:22.878 bring them back in to meet with a

NOTE Confidence: 0.82585466

00:17:22.878 --> 00:17:25.448 physician to decide if they need

NOTE Confidence: 0.82585466

00:17:25.448 --> 00:17:27.264 medical management with insulin

NOTE Confidence: 0.82585466

00:17:27.264 --> 00:17:29.905 to control their blood sugars on

NOTE Confidence: 0.82585466

00:17:29.905 --> 00:17:31.980 top of their dietary changes.

NOTE Confidence: 0.82585466

00:17:31.980 --> 00:17:34.221 And So what we did is we study women

NOTE Confidence: 0.82585466

00:17:34.221 --> 00:17:36.869 in that one week period from education

NOTE Confidence: 0.82585466

00:17:36.869 --> 00:17:39.171 and initiation of dietary changes to

NOTE Confidence: 0.82585466

00:17:39.171 --> 00:17:41.537 their physician visit and ask them to

NOTE Confidence: 0.82585466

00:17:41.537 --> 00:17:43.530 wear the actigraph during that time.

NOTE Confidence: 0.82585466

00:17:43.530 --> 00:17:45.180 And in that time period,

NOTE Confidence: 0.82585466

00:17:45.180 --> 00:17:47.364 when they were asked to do diet

NOTE Confidence: 0.82585466

00:17:47.364 --> 00:17:49.050 modifications to see what their

NOTE Confidence: 0.82585466

00:17:49.050 --> 00:17:51.120 blood sugar values would look like,

NOTE Confidence: 0.82585466

00:17:51.120 --> 00:17:53.318 we found that shorter sleep duration was

NOTE Confidence: 0.82585466

00:17:53.318 --> 00:17:55.002 associated with worse glucose control

NOTE Confidence: 0.82585466

00:17:55.002 --> 00:17:57.054 in women with just stational diabetes.

NOTE Confidence: 0.82585466

00:17:57.060 --> 00:17:59.085 And we found that there was a 2 to

NOTE Confidence: 0.82585466

00:17:59.085 --> 00:18:01.310 6 milligrams per deciliter increase

NOTE Confidence: 0.82585466

00:18:01.310 --> 00:18:02.759 in glucose observed.

NOTE Confidence: 0.82585466

00:18:02.760 --> 00:18:06.050 For every hour or less of sleep.

NOTE Confidence: 0.82585466

00:18:06.050 --> 00:18:08.206 And this is an effect size similar

NOTE Confidence: 0.82585466

00:18:08.206 --> 00:18:10.461 to what we would see in starting

NOTE Confidence: 0.82585466

00:18:10.461 --> 00:18:13.310 someone on a low dose of Libra Raiden,

NOTE Confidence: 0.82585466

00:18:13.310 --> 00:18:15.290 pregnancy or low dose of insulin

NOTE Confidence: 0.82585466

00:18:15.290 --> 00:18:15.950 in pregnancy.

NOTE Confidence: 0.82585466

00:18:15.950 --> 00:18:18.438 So certainly sleep has a role in potentially

NOTE Confidence: 0.82585466

00:18:18.438 --> 00:18:20.567 achieving a glycemic control in women,

NOTE Confidence: 0.82585466

00:18:20.570 --> 00:18:21.890 which is stational diabetes.

NOTE Confidence: 0.8299864

00:18:24.950 --> 00:18:28.802 Moving on, I'm going to kind of now cover

NOTE Confidence: 0.8299864

00:18:28.802 --> 00:18:32.305 some data on sleep and preterm birth.

NOTE Confidence: 0.8299864

00:18:32.310 --> 00:18:34.074 People often ask me,

NOTE Confidence: 0.8299864

00:18:34.074 --> 00:18:37.246 is there a link between sleep and

NOTE Confidence: 0.8299864

00:18:37.246 --> 00:18:40.270 preterm birth and the data here is

NOTE Confidence: 0.8299864

00:18:40.270 --> 00:18:43.350 still kind of continuing to emerge.

NOTE Confidence: 0.8299864

00:18:43.350 --> 00:18:46.318 I showing here a study that was

NOTE Confidence: 0.8299864

00:18:46.318 --> 00:18:48.778 a California database study that

NOTE Confidence: 0.8299864

00:18:48.778 --> 00:18:51.538 compared women without a recorded

NOTE Confidence: 0.8299864

00:18:51.538 --> 00:18:54.320 sleep disorder diagnosis in the chart.

NOTE Confidence: 0.8299864

00:18:54.320 --> 00:18:56.378 Two women with an insomnia diagnosis

NOTE Confidence: 0.8299864

00:18:56.378 --> 00:18:58.471 and they found that women with

NOTE Confidence: 0.8299864

00:18:58.471 --> 00:19:00.421 insomnia had a nearly two fold

NOTE Confidence: 0.8299864

00:19:00.421 --> 00:19:02.549 higher risk of early preterm birth,

NOTE Confidence: 0.8299864

00:19:02.550 --> 00:19:05.015 defined as less than 34

NOTE Confidence: 0.8299864

00:19:05.015 --> 00:19:06.987 weeks gestation at delivery.

NOTE Confidence: 0.8299864

00:19:06.990 --> 00:19:10.206 And the adjusted odds ratio is shown here.

NOTE Confidence: 0.8299864

00:19:10.210 --> 00:19:12.634 So while not directly measuring sleep

NOTE Confidence: 0.8299864

00:19:12.634 --> 00:19:14.650 duration or objectively measuring sleep,

NOTE Confidence: 0.8299864

00:19:14.650 --> 00:19:16.660 it's showing that women with

NOTE Confidence: 0.8299864

00:19:16.660 --> 00:19:18.268 kind of sleep disorder,

NOTE Confidence: 0.8299864

00:19:18.270 --> 00:19:21.819 diagnosis in their chart seem to be

NOTE Confidence: 0.8299864

00:19:21.819 --> 00:19:25.160 at increased risk for preterm birth.

NOTE Confidence: 0.8299864

00:19:25.160 --> 00:19:28.190 So now will take us back to the new mom

NOTE Confidence: 0.8299864

00:19:28.269 --> 00:19:31.293 to be cohort to see what data has been.

NOTE Confidence: 0.8299864

00:19:31.300 --> 00:19:34.108 Has come from that regarding pre term birth.

NOTE Confidence: 0.8299864

00:19:34.110 --> 00:19:36.490 I'm going to take you now to

NOTE Confidence: 0.8299864

00:19:36.490 --> 00:19:37.970 the sleep survey data.

NOTE Confidence: 0.8299864

00:19:37.970 --> 00:19:39.740 The Sleep survey data again

NOTE Confidence: 0.8299864

00:19:39.740 --> 00:19:41.917 to remind everyone a curd and

NOTE Confidence: 0.8299864

00:19:41.917 --> 00:19:43.587 visit one and visit three.

NOTE Confidence: 0.8299864

00:19:43.590 --> 00:19:46.590 It was given to all of the women

NOTE Confidence: 0.8299864

00:19:46.590 --> 00:19:48.846 who enrolled in new mom to be.

NOTE Confidence: 0.8299864

00:19:48.850 --> 00:19:50.806 But after some cleanup of the

NOTE Confidence: 0.8299864

00:19:50.806 --> 00:19:53.665 data to make sure that all of the

NOTE Confidence: 0.8299864

00:19:53.665 --> 00:19:55.515 entries were valid and complete,

NOTE Confidence: 0.8299864

00:19:55.520 --> 00:19:58.000 we ended up with about 75 to 7600

NOTE Confidence: 0.8299864

00:19:58.000 --> 00:20:00.179 women with complete survey data.

NOTE Confidence: 0.8299864

00:20:00.180 --> 00:20:05.549 At visit one and visit three respectively.

NOTE Confidence: 0.8299864

00:20:05.550 --> 00:20:08.538 So what did the sleep survey data show us?

NOTE Confidence: 0.8299864

00:20:08.540 --> 00:20:08.893 Well,

NOTE Confidence: 0.8299864

00:20:08.893 --> 00:20:11.011 it showed us that short sleep

NOTE Confidence: 0.8299864

00:20:11.011 --> 00:20:13.178 duration was present at 17% of our

NOTE Confidence: 0.8299864

00:20:13.178 --> 00:20:15.481 participants at visit one and at the

NOTE Confidence: 0.8299864

00:20:15.481 --> 00:20:17.844 rate of short sleep duration went up

NOTE Confidence: 0.8299864

00:20:17.844 --> 00:20:20.780 to 20% of participants at visit 3.

NOTE Confidence: 0.8299864

00:20:20.780 --> 00:20:23.559 And that late sleep timing and sleep

NOTE Confidence: 0.8299864

00:20:23.559 --> 00:20:25.991 timing of greater midpoint of greater

NOTE Confidence: 0.8299864

00:20:25.991 --> 00:20:28.714 than 5:00 AM was present in 11.6%

NOTE Confidence: 0.8299864

00:20:28.720 --> 00:20:31.506 of visit one and stay pretty much

NOTE Confidence: 0.8299864

00:20:31.506 --> 00:20:34.680 stable at 12 point 2% at visit 3.

NOTE Confidence: 0.8252026

00:20:37.210 --> 00:20:39.502 And what we found regarding pre

NOTE Confidence: 0.8252026

00:20:39.502 --> 00:20:42.369 term birth in this cohort is that

NOTE Confidence: 0.8252026

00:20:42.369 --> 00:20:44.889 lately midpoint greater than 5:00 AM

NOTE Confidence: 0.8252026

00:20:44.889 --> 00:20:47.760 was associated with pre term birth.

NOTE Confidence: 0.8252026

00:20:47.760 --> 00:20:51.120 The rate in women with a late sleep

NOTE Confidence: 0.8252026

00:20:51.120 --> 00:20:54.044 midpoint was 9.5% and when we looked

NOTE Confidence: 0.8252026

00:20:54.044 --> 00:20:56.510 at women without a sleep lately

NOTE Confidence: 0.8252026

00:20:56.593 --> 00:20:59.630 midpoint the rate was 6.9% and that

NOTE Confidence: 0.8252026

00:20:59.630 --> 00:21:01.880 the Association was and remains

NOTE Confidence: 0.8252026

00:21:01.880 --> 00:21:03.712 statistically significant after adjustment

NOTE Confidence: 0.8252026

00:21:03.712 --> 00:21:06.226 for all of the important covariates.

NOTE Confidence: 0.8252026

00:21:06.230 --> 00:21:08.491 We looked at our visit to our

NOTE Confidence: 0.8252026

00:21:08.491 --> 00:21:10.260 objective data from Actigraphy,

NOTE Confidence: 0.8252026

00:21:10.260 --> 00:21:11.840 which was a smaller,

NOTE Confidence: 0.8252026

00:21:11.840 --> 00:21:13.420 obviously a smaller subgroup

NOTE Confidence: 0.8252026

00:21:13.420 --> 00:21:15.928 about this 10th of the size of

NOTE Confidence: 0.8252026

00:21:15.928 --> 00:21:17.573 the data collected by surveys.

NOTE Confidence: 0.8252026

00:21:17.580 --> 00:21:20.356 But we also found similar trends in preterm

NOTE Confidence: 0.8252026

00:21:20.356 --> 00:21:22.700 birth rates by sweet midpoint status,

NOTE Confidence: 0.8252026

00:21:22.700 --> 00:21:24.445 but because of the smaller

NOTE Confidence: 0.8252026

00:21:24.445 --> 00:21:27.022 sample size and the low rate of

NOTE Confidence: 0.8252026

00:21:27.022 --> 00:21:28.917 overall rate of preterm birth,

NOTE Confidence: 0.8252026

00:21:28.920 --> 00:21:30.750 we did not demonstrate statistical

NOTE Confidence: 0.8252026

00:21:30.750 --> 00:21:32.580 significance in the actigraphy data,

NOTE Confidence: 0.8252026

00:21:32.580 --> 00:21:34.410 but in, but importantly showed,

NOTE Confidence: 0.8252026

00:21:34.410 --> 00:21:36.780 a very similar.

NOTE Confidence: 0.8252026

00:21:36.780 --> 00:21:39.468 Effect size and direction of the effect.

NOTE Confidence: 0.8252026

00:21:39.470 --> 00:21:41.732 We did not find any relationship

NOTE Confidence: 0.8252026

00:21:41.732 --> 00:21:44.252 in this cohort either by the Sleep

NOTE Confidence: 0.8252026

00:21:44.252 --> 00:21:46.450 survey data or in looking at the

NOTE Confidence: 0.8252026

00:21:46.522 --> 00:21:48.752 visit to objective data between

NOTE Confidence: 0.8252026

00:21:48.752 --> 00:21:50.982 self reported or objective sleep

NOTE Confidence: 0.8252026

00:21:50.990 --> 00:21:52.910 duration and pre term birth.

NOTE Confidence: 0.76726204

00:21:56.730 --> 00:22:01.970 You get that kind of now shift over to talk

NOTE Confidence: 0.76726204

00:22:01.970 --> 00:22:06.858 about the new mom to be study and its sub.

NOTE Confidence: 0.76726204

00:22:06.860 --> 00:22:09.566 Sub study on sleep disordered breathing.

NOTE Confidence: 0.76726204

00:22:09.570 --> 00:22:12.722 So as I mentioned at the very beginning

NOTE Confidence: 0.76726204

00:22:12.722 --> 00:22:16.349 when I described this study about 3500,

NOTE Confidence: 0.76726204

00:22:16.350 --> 00:22:19.145 women underwent objective sleep assessments

NOTE Confidence: 0.76726204

00:22:19.145 --> 00:22:22.692 for sleep disordered breathing and at both

NOTE Confidence: 0.76726204

00:22:22.692 --> 00:22:25.388 the early visit one and the late visit,

NOTE Confidence: 0.76726204

00:22:25.390 --> 00:22:29.590 three time points, and we use the

NOTE Confidence: 0.76726204

00:22:29.590 --> 00:22:32.759 embedded device for this study.

NOTE Confidence: 0.76726204

00:22:32.760 --> 00:22:35.520 And here is our data regarding the prevalence

NOTE Confidence: 0.76726204

00:22:35.520 --> 00:22:37.355 of sleep disordered breathing defined

NOTE Confidence: 0.76726204

00:22:37.355 --> 00:22:40.927 as an age I of greater than or equal to

NOTE Confidence: 0.76726204

00:22:40.927 --> 00:22:43.251 five in this cohort of nulliparous women

NOTE Confidence: 0.76726204

00:22:43.260 --> 00:22:46.044 in this slide I'm showing the rates in

NOTE Confidence: 0.76726204

00:22:46.044 --> 00:22:48.848 the early pregnancy visit one in orange

NOTE Confidence: 0.76726204

00:22:48.848 --> 00:22:51.609 and in mid pregnancy visit 3IN blue.

NOTE Confidence: 0.76726204

00:22:51.610 --> 00:22:53.750 And as you can see,

NOTE Confidence: 0.76726204

00:22:53.750 --> 00:22:56.354 the rate of sleep apnea increases

NOTE Confidence: 0.76726204

00:22:56.354 --> 00:22:59.030 from early to mid pregnancy.

NOTE Confidence: 0.76726204

00:22:59.030 --> 00:23:01.846 Also, what you can see is the vast

NOTE Confidence: 0.76726204

00:23:01.846 --> 00:23:04.225 majority of sleep apnea in pregnancy

NOTE Confidence: 0.76726204

00:23:04.225 --> 00:23:07.371 is mild sleep apnea with an age I

NOTE Confidence: 0.76726204

00:23:07.371 --> 00:23:09.730 between 5:00 and less than 15 and

NOTE Confidence: 0.76726204

00:23:09.730 --> 00:23:12.470 that moderate to severe sleep apnea.

NOTE Confidence: 0.76726204

00:23:12.470 --> 00:23:14.266 Remains rare in pregnancy,

NOTE Confidence: 0.76726204

00:23:14.266 --> 00:23:17.799 even in late pregnancy with only one point,

NOTE Confidence: 0.76726204

00:23:17.800 --> 00:23:21.344 2% of women in late pregnancy at visit,

NOTE Confidence: 0.76726204

00:23:21.350 --> 00:23:25.578 3 having moderate to severe sleep apnea.

NOTE Confidence: 0.76726204

00:23:25.580 --> 00:23:26.702 So in summary,

NOTE Confidence: 0.76726204

00:23:26.702 --> 00:23:29.851 what we found is that in early pregnancy

NOTE Confidence: 0.76726204

00:23:29.851 --> 00:23:32.973 the rate of sleep apnea was 3.6%,

NOTE Confidence: 0.76726204

00:23:32.980 --> 00:23:35.857 but as we anticipate given the pregnancy,

NOTE Confidence: 0.76726204

00:23:35.860 --> 00:23:37.500 associated changes that might

NOTE Confidence: 0.76726204

00:23:37.500 --> 00:23:38.730 increase sleep apnea,

NOTE Confidence: 0.76726204

00:23:38.730 --> 00:23:41.602 that in fact we do see an increase

NOTE Confidence: 0.76726204

00:23:41.602 --> 00:23:43.794 in objectively measured sleep apnea

NOTE Confidence: 0.76726204

00:23:43.794 --> 00:23:46.129 in pregnancy with eight point,

NOTE Confidence: 0.76726204

00:23:46.130 --> 00:23:48.190 3% prevalence in mid pregnancy.

NOTE Confidence: 0.76726204

00:23:48.190 --> 00:23:50.745 What we learned from this study is

NOTE Confidence: 0.76726204

00:23:50.745 --> 00:23:53.310 also that snores women with self

NOTE Confidence: 0.76726204

00:23:53.310 --> 00:23:55.635 reported frequent snoring and women.

NOTE Confidence: 0.76726204

00:23:55.640 --> 00:23:57.540 With obesity going into pregnancy,

NOTE Confidence: 0.76726204

00:23:57.540 --> 00:24:00.212 a BMI of greater than or equal to

NOTE Confidence: 0.76726204

00:24:00.212 --> 00:24:03.063 30 had the highest rates of sleep

NOTE Confidence: 0.76726204

00:24:03.063 --> 00:24:05.874 apnea at about 20% in the mid

NOTE Confidence: 0.76726204

00:24:05.874 --> 00:24:07.386 pregnancy time point assessment.

NOTE Confidence: 0.87425935

00:24:10.810 --> 00:24:14.044 So now we looked at our data

NOTE Confidence: 0.87425935

00:24:14.044 --> 00:24:16.530 and looked at rates of.

NOTE Confidence: 0.87425935

00:24:16.530 --> 00:24:18.470 Metabolic issues just stational

NOTE Confidence: 0.87425935

00:24:18.470 --> 00:24:20.895 diabetes and hypertensive issues in

NOTE Confidence: 0.87425935

00:24:20.895 --> 00:24:23.079 pregnancy and what I'm showing here

NOTE Confidence: 0.87425935

00:24:23.079 --> 00:24:25.265 is our data on gestational diabetes

NOTE Confidence: 0.87425935

00:24:25.265 --> 00:24:27.680 by sleep disordered breathing status.

NOTE Confidence: 0.87425935

00:24:27.680 --> 00:24:30.696 On the left hand side is the early

NOTE Confidence: 0.87425935

00:24:30.696 --> 00:24:33.036 pregnancy data on the right hand

NOTE Confidence: 0.87425935

00:24:33.036 --> 00:24:35.298 side is the mid pregnancy data.

NOTE Confidence: 0.87425935

00:24:35.300 --> 00:24:38.348 The blue bars are women without sleep apnea,

NOTE Confidence: 0.87425935

00:24:38.350 --> 00:24:40.842 and the yellow bars are women with

NOTE Confidence: 0.87425935

00:24:40.842 --> 00:24:43.574 sleep apnea and this is just stational

NOTE Confidence: 0.87425935

00:24:43.574 --> 00:24:45.962 diabetes rates in the two groups.

NOTE Confidence: 0.87425935

00:24:45.970 --> 00:24:47.870 And as you can see,

NOTE Confidence: 0.87425935

00:24:47.870 --> 00:24:50.054 the rate of gestational diabetes was

NOTE Confidence: 0.87425935

00:24:50.054 --> 00:24:51.888 significantly higher in women with

NOTE Confidence: 0.87425935

00:24:51.888 --> 00:24:54.128 sleep apnea and the adjusted odds ratios

NOTE Confidence: 0.87425935

00:24:54.128 --> 00:24:56.259 here remains statistically significant.

NOTE Confidence: 0.87425935

00:24:56.260 --> 00:24:58.690 After we adjusted for age.

NOTE Confidence: 0.87425935

00:24:58.690 --> 00:25:02.625 BMI and presence of met

NOTE Confidence: 0.87425935

00:25:02.625 --> 00:25:04.986 other medical comorbidities.

NOTE Confidence: 0.89436394

00:25:08.530 --> 00:25:11.635 And this is our data on the rates of

NOTE Confidence: 0.89436394

00:25:11.635 --> 00:25:13.677 preeclampsia in this group of women,

NOTE Confidence: 0.89436394

00:25:13.680 --> 00:25:17.110 and again, as you can see by the yellow bars,

NOTE Confidence: 0.89436394

00:25:17.110 --> 00:25:19.516 the women with sleep apnea had

NOTE Confidence: 0.89436394

00:25:19.516 --> 00:25:21.578 higher rates of preeclampsia compared

NOTE Confidence: 0.89436394

00:25:21.578 --> 00:25:23.906 to women without a sleep apnea.

NOTE Confidence: 0.89436394

00:25:23.910 --> 00:25:26.745 And again, adjusted odds ratios

NOTE Confidence: 0.89436394

00:25:26.745 --> 00:25:28.446 remained statistically significant.

NOTE Confidence: 0.8410933

00:25:31.240 --> 00:25:33.896 I'm gonna take a little break now from

NOTE Confidence: 0.8410933

00:25:33.896 --> 00:25:36.864 the new mom to be data to share some

NOTE Confidence: 0.8410933

00:25:36.864 --> 00:25:39.385 other data from some other researchers

NOTE Confidence: 0.8410933

00:25:39.385 --> 00:25:42.373 that have looked at sleep disordered

NOTE Confidence: 0.8410933

00:25:42.373 --> 00:25:44.820 breathing and kind of specifically again,

NOTE Confidence: 0.8410933

00:25:44.820 --> 00:25:45.984 asking the question.

NOTE Confidence: 0.8410933

00:25:45.984 --> 00:25:48.308 OK, well, we know it increases

NOTE Confidence: 0.8410933

00:25:48.308 --> 00:25:50.243 the risk of gestational diabetes,

NOTE Confidence: 0.8410933

00:25:50.250 --> 00:25:53.042 but what about after they have gotten that

NOTE Confidence: 0.8410933

00:25:53.042 --> 00:25:55.298 diagnosis and just stational diabetes?

NOTE Confidence: 0.8410933

00:25:55.300 --> 00:25:57.295 Is there any Association with

NOTE Confidence: 0.8410933

00:25:57.295 --> 00:25:58.891 sleep disordered breathing and

NOTE Confidence: 0.8410933

00:25:58.891 --> 00:26:00.320 worsening glycemic control?

NOTE Confidence: 0.8410933

00:26:00.320 --> 00:26:02.624 And what they found here in this study

NOTE Confidence: 0.8410933

00:26:02.624 --> 00:26:05.112 where they hit took 65 participants with

NOTE Confidence: 0.8410933

00:26:05.112 --> 00:26:07.380 just stational diabetes and sleep apnea.

NOTE Confidence: 0.8410933

00:26:07.380 --> 00:26:09.055 And they had them undergo

NOTE Confidence: 0.8410933

00:26:09.055 --> 00:26:10.060 continuous glucose monitoring.

NOTE Confidence: 0.8410933

00:26:10.060 --> 00:26:11.740 And as you can see,

NOTE Confidence: 0.8410933

00:26:11.740 --> 00:26:14.204 the women with the highest age eyes

NOTE Confidence: 0.8410933

00:26:14.204 --> 00:26:16.780 with shown in the red bars up top.

NOTE Confidence: 0.8410933

00:26:16.780 --> 00:26:19.564 Those with the age eyes of

NOTE Confidence: 0.8410933

00:26:19.564 --> 00:26:22.100 greater than or equal to 30.

NOTE Confidence: 0.8410933

00:26:22.100 --> 00:26:24.635 They had the highest nocturnal

NOTE Confidence: 0.8410933

00:26:24.635 --> 00:26:27.170 and morning levels of glucose,

NOTE Confidence: 0.8410933

00:26:27.170 --> 00:26:29.705 so an Association here in

NOTE Confidence: 0.8410933

00:26:29.705 --> 00:26:32.240 this small study with Ahi,

NOTE Confidence: 0.8410933

00:26:32.240 --> 00:26:34.268 an worsening lexemic control.

NOTE Confidence: 0.8478917

00:26:38.200 --> 00:26:41.800 Would it take a few minutes now I'm kind of

NOTE Confidence: 0.8478917

00:26:41.888 --> 00:26:45.171 to cover some other sleep related questions

NOTE Confidence: 0.8478917

00:26:45.171 --> 00:26:49.180 that come up in in talking about pregnancy.

NOTE Confidence: 0.8478917

00:26:49.180 --> 00:26:53.368 One is the sleep position controversy.

NOTE Confidence: 0.8478917

00:26:53.370 --> 00:26:56.770 So it's been kind of common for women to get

NOTE Confidence: 0.8478917

00:26:56.847 --> 00:27:00.165 advice about how to sleep during pregnancy,

NOTE Confidence: 0.8478917

00:27:00.170 --> 00:27:02.170 especially after 20 weeks gestation.

43

NOTE Confidence: 0.8478917

00:27:02.170 --> 00:27:03.770 And if you search,

NOTE Confidence: 0.8478917

00:27:03.770 --> 00:27:06.170 sleep or sleep positions in pregnancy,

NOTE Confidence: 0.8478917

00:27:06.170 --> 00:27:09.326 you'll often find pictures like the

NOTE Confidence: 0.8478917

00:27:09.326 --> 00:27:13.364 one here where it's like 7 best or

NOTE Confidence: 0.8478917

00:27:13.364 --> 00:27:16.118 seven safe positions to sleep in.

NOTE Confidence: 0.8478917

00:27:16.120 --> 00:27:18.052 And the reason for this is

NOTE Confidence: 0.8478917

00:27:18.052 --> 00:27:19.840 kind of through the years.

NOTE Confidence: 0.8478917

00:27:19.840 --> 00:27:21.675 Women have been discouraged from

NOTE Confidence: 0.8478917

00:27:21.675 --> 00:27:24.287 sleeping on their back or on their

NOTE Confidence: 0.8478917

00:27:24.287 --> 00:27:26.411 right side because it was thought

NOTE Confidence: 0.8478917

00:27:26.411 --> 00:27:28.581 that sleeping on your back or on

NOTE Confidence: 0.8478917

00:27:28.581 --> 00:27:31.074 the right side would lead to more

NOTE Confidence: 0.8478917

00:27:31.074 --> 00:27:33.809 cable cable compression that can.

NOTE Confidence: 0.8478917

00:27:33.810 --> 00:27:39.490 Alter blood flow to the.

NOTE Confidence: 0.8478917

00:27:39.490 --> 00:27:41.828 Uterus and decrease blood flow to the

NOTE Confidence: 0.8478917

00:27:41.828 --> 00:27:44.246 uterus has been postulated as potentially

NOTE Confidence: 0.8478917

00:27:44.246 --> 00:27:46.940 a risk for adverse pregnancy outcomes.

NOTE Confidence: 0.5580192

00:27:50.610 --> 00:27:52.550 Um so.

NOTE Confidence: 0.85415095

00:27:55.310 --> 00:27:57.884 And there's been a lot of interest in this,

NOTE Confidence: 0.85415095

00:27:57.890 --> 00:27:59.038 because obviously seek position

NOTE Confidence: 0.85415095

00:27:59.038 --> 00:27:59.899 is potentially modifiable,

NOTE Confidence: 0.85415095

00:27:59.900 --> 00:28:02.332 so there's been a lot of interest in

NOTE Confidence: 0.85415095

00:28:02.332 --> 00:28:04.319 giving campaigns to tell women to sleep

NOTE Confidence: 0.85415095

00:28:04.319 --> 00:28:06.498 on their sides or sleep on their back.

NOTE Confidence: 0.85415095

00:28:06.500 --> 00:28:08.796 But this, instead of sleeping on their back

NOTE Confidence: 0.85415095

00:28:08.796 --> 00:28:10.519 and specifically favoring the left side,

NOTE Confidence: 0.85415095

00:28:10.520 --> 00:28:12.529 if they can over the right side.

NOTE Confidence: 0.85415095

00:28:12.530 --> 00:28:13.965 But obviously this leads to

NOTE Confidence: 0.85415095

00:28:13.965 --> 00:28:15.400 a lot of maternal anxiety,

NOTE Confidence: 0.85415095

00:28:15.400 --> 00:28:16.840 'cause you get questions about.

NOTE Confidence: 0.85415095

00:28:16.840 --> 00:28:18.828 Well, what if I wake up and

NOTE Confidence: 0.85415095

00:28:18.828 --> 00:28:20.279 I'm sleeping on my back?

NOTE Confidence: 0.85415095

00:28:20.280 --> 00:28:21.081 Is that bad?

NOTE Confidence: 0.85415095

00:28:21.081 --> 00:28:22.950 Or do I need to use pillows

NOTE Confidence: 0.85415095

00:28:23.018 --> 00:28:24.418 and prompts to avoid?

NOTE Confidence: 0.85415095

00:28:24.420 --> 00:28:26.692 Kind of rolling on to my back and

NOTE Confidence: 0.85415095

00:28:26.692 --> 00:28:29.136 she's been a lot of anxiety about this.

NOTE Confidence: 0.85415095

00:28:29.140 --> 00:28:32.083 And you know when we look at the sleep

NOTE Confidence: 0.85415095

00:28:32.083 --> 00:28:34.067 position data and pregnancy outcomes

NOTE Confidence: 0.85415095

00:28:34.067 --> 00:28:36.931 which we have to recognize is that

NOTE Confidence: 0.85415095

00:28:36.931 --> 00:28:39.391 the prior studies have included small

NOTE Confidence: 0.85415095

00:28:39.391 --> 00:28:41.524 numbers of women and importantly,

NOTE Confidence: 0.85415095

00:28:41.524 --> 00:28:43.312 the interviews regarding maternal

NOTE Confidence: 0.85415095

00:28:43.312 --> 00:28:45.490 sleep were conducted after a

NOTE Confidence: 0.85415095

00:28:45.490 --> 00:28:47.440 still birth or another adverse of

NOTE Confidence: 0.85415095

00:28:47.440 --> 00:28:49.059 pregnancy outcome of the Kurds.

NOTE Confidence: 0.85415095

00:28:49.060 --> 00:28:51.734 So especially in the still birth literature,

00:28:51.740 --> 00:28:53.610 that's usually like case control

00:28:53.610 --> 00:28:55.892 studies where they take cases of

00:28:55.892 --> 00:28:57.956 stillbirths and compare it to kind

00:28:57.956 --> 00:28:59.780 of controls without stillbirths.

00:28:59.780 --> 00:29:02.432 And they ask women about their

00:29:02.432 --> 00:29:03.316 sleep position.

00:29:03.320 --> 00:29:06.304 And have come up with kind of some

00:29:06.304 --> 00:29:08.959 Association with sleeping on your back or.

00:29:08.960 --> 00:29:11.150 Left on the right side and

00:29:11.150 --> 00:29:12.245 adverse pregnancy outcomes.

00:29:12.250 --> 00:29:14.819 But by conducting studies in this way,

00:29:14.820 --> 00:29:17.977 we all know that it introduces the

00:29:17.977 --> 00:29:20.299 potential for considerable recall bias.

00:29:20.300 --> 00:29:22.436 So what was nice about the new mom

00:29:22.436 --> 00:29:24.986 to be data is that we actually

NOTE Confidence: 0.85415095

00:29:24.986 --> 00:29:26.926 had collected sleep position data

NOTE Confidence: 0.85415095

00:29:26.998 --> 00:29:28.938 prospectively in this cohort,

NOTE Confidence: 0.85415095

00:29:28.940 --> 00:29:30.851 both with the Sleep survey data and

NOTE Confidence: 0.85415095

00:29:30.851 --> 00:29:33.634 also in the subgroup that did sleep

NOTE Confidence: 0.85415095

00:29:33.634 --> 00:29:35.056 disordered breathing assessments.

NOTE Confidence: 0.85415095

00:29:35.060 --> 00:29:36.930 The embedded device recorded sleep

NOTE Confidence: 0.85415095

00:29:36.930 --> 00:29:38.800 position during the night that

NOTE Confidence: 0.85415095

00:29:38.862 --> 00:29:40.818 they were the sleep apnea monitor.

NOTE Confidence: 0.85415095

00:29:40.820 --> 00:29:42.580 So this was prospectively collected

NOTE Confidence: 0.85415095

00:29:42.580 --> 00:29:45.140 data and visit one and visit three.

NOTE Confidence: 0.85415095

00:29:45.140 --> 00:29:47.860 And what we found was in the survey

NOTE Confidence: 0.85415095

00:29:47.860 --> 00:29:50.550 data that going to sleep in the

NOTE Confidence: 0.85415095

00:29:50.550 --> 00:29:52.094 supine or right lateral.

NOTE Confidence: 0.85415095

00:29:52.100 --> 00:29:54.095 Position was not associated with

NOTE Confidence: 0.85415095

00:29:54.095 --> 00:29:56.090 an increased risk of composite

NOTE Confidence: 0.85415095

00:29:56.153 --> 00:29:57.608 outcome of stillbirths.

NOTE Confidence: 0.85415095

00:29:57.610 --> 00:29:58.930 Small Burgess Stational

NOTE Confidence: 0.85415095

00:29:58.930 --> 00:30:00.250 age newborn gestation.

NOTE Confidence: 0.85415095

00:30:00.250 --> 00:30:01.838 Hypertensive disorders compared to

NOTE Confidence: 0.85415095

00:30:01.838 --> 00:30:04.220 going to sleep within the quote.

NOTE Confidence: 0.85415095

00:30:04.220 --> 00:30:05.012 Ideal position,

NOTE Confidence: 0.85415095

00:30:05.012 --> 00:30:07.388 which is what has traditionally been

NOTE Confidence: 0.85415095

00:30:07.388 --> 00:30:09.170 considered. The left lateral position.

NOTE Confidence: 0.85415095

00:30:09.170 --> 00:30:11.644 And the null finding was also shown

NOTE Confidence: 0.85415095

00:30:11.644 --> 00:30:13.678 using the objective data on sleep

NOTE Confidence: 0.85415095

00:30:13.678 --> 00:30:16.430 position in the subgroup of women in

NOTE Confidence: 0.85415095

00:30:16.430 --> 00:30:18.520 the sleep disordered breathing substudy.

NOTE Confidence: 0.85415095

00:30:18.520 --> 00:30:20.560 So even though it was smaller

NOTE Confidence: 0.85415095

00:30:20.560 --> 00:30:21.580 and less powered,

NOTE Confidence: 0.85415095

00:30:21.580 --> 00:30:23.722 that's that objective data confirmed to

NOTE Confidence: 0.85415095

00:30:23.722 --> 00:30:26.358 what we were seeing in the survey data,

NOTE Confidence: 0.85415095

00:30:26.360 --> 00:30:28.290 which was no Association between

NOTE Confidence: 0.85415095

00:30:28.290 --> 00:30:30.220 sleep position and this composite

NOTE Confidence: 0.85415095

00:30:30.286 --> 00:30:32.216 of adverse pregnancy outcomes so.

NOTE Confidence: 0.85415095

00:30:32.220 --> 00:30:34.572 It's not kind of a definitive, I think.

NOTE Confidence: 0.85415095

00:30:34.572 --> 00:30:36.469 Nail on the coffin on this question

NOTE Confidence: 0.85415095

00:30:36.469 --> 00:30:38.480 on sleep position and pregnancy,

NOTE Confidence: 0.85415095

00:30:38.480 --> 00:30:40.208 but certainly data to reassure our

NOTE Confidence: 0.85415095

00:30:40.208 --> 00:30:42.267 pregnant women who come to us with

NOTE Confidence: 0.85415095

00:30:42.267 --> 00:30:43.965 these questions about sleep position or

NOTE Confidence: 0.85415095

00:30:43.965 --> 00:30:45.797 waking up in the middle of the night,

NOTE Confidence: 0.85415095

00:30:45.800 --> 00:30:47.426 or having anxiety of not being

NOTE Confidence: 0.85415095

00:30:47.426 --> 00:30:48.510 able to sleep in,

NOTE Confidence: 0.85415095

00:30:48.510 --> 00:30:50.407 quote unquote the right position at night.

NOTE Confidence: 0.85900927

00:30:54.080 --> 00:30:56.250 I'm gonna just say a word on

NOTE Confidence: 0.85900927

00:30:56.250 --> 00:30:57.938 restless leg syndrome and periodic

NOTE Confidence: 0.85900927

00:30:57.938 --> 00:31:00.020 limb movements in sleep because I

NOTE Confidence: 0.85900927

00:31:00.020 --> 00:31:02.577 think not doing asleep talk without

NOTE Confidence: 0.85900927

00:31:02.577 --> 00:31:04.373 addressing this important issue.

NOTE Confidence: 0.85900927

00:31:04.380 --> 00:31:05.852 Asleep talking pregnancy without

NOTE Confidence: 0.85900927

00:31:05.852 --> 00:31:08.060 addressing it would not be correct,

NOTE Confidence: 0.85900927

00:31:08.060 --> 00:31:11.174 but I will also say that I'm not an

NOTE Confidence: 0.85900927

00:31:11.174 --> 00:31:14.247 expert in this area and has not been kind

NOTE Confidence: 0.85900927

00:31:14.247 --> 00:31:17.630 of an area of ongoing research for me,

NOTE Confidence: 0.85900927

00:31:17.630 --> 00:31:19.300 but other researchers have been

NOTE Confidence: 0.85900927

00:31:19.300 --> 00:31:21.407 very interested in RLS or periodic

NOTE Confidence: 0.85900927

00:31:21.407 --> 00:31:23.282 limb movements in pregnancy because

NOTE Confidence: 0.85900927

00:31:23.282 --> 00:31:25.430 we know that during pregnancy.

NOTE Confidence: 0.85900927

00:31:25.430 --> 00:31:27.290 The rates of these disorders

NOTE Confidence: 0.85900927

00:31:27.290 --> 00:31:28.778 do increase during pregnancy.

NOTE Confidence: 0.85900927

00:31:28.780 --> 00:31:30.775 About 20% of women experience

NOTE Confidence: 0.85900927

00:31:30.775 --> 00:31:32.770 these symptoms compared to two

NOTE Confidence: 0.85900927

00:31:32.841 --> 00:31:34.676 to 10% of the general population.

NOTE Confidence: 0.85900927

00:31:34.676 --> 00:31:36.830 The symptoms seem to peak in

NOTE Confidence: 0.85900927

00:31:36.903 --> 00:31:38.079 the 3rd trimester,

NOTE Confidence: 0.85900927

00:31:38.080 --> 00:31:39.835 but often can resolve around

NOTE Confidence: 0.85900927

00:31:39.835 --> 00:31:41.590 delivery and studies have shown

NOTE Confidence: 0.85900927

00:31:41.655 --> 00:31:43.623 that women with just stational RLS

NOTE Confidence: 0.85900927

00:31:43.623 --> 00:31:45.914 are at increased risk of difficulty

NOTE Confidence: 0.85900927

00:31:45.914 --> 00:31:47.750 initiating and maintaining sleep.

NOTE Confidence: 0.85900927

00:31:47.750 --> 00:31:49.962 They are at increased risk of poor

NOTE Confidence: 0.85900927

00:31:49.962 --> 00:31:51.893 sleep quality for daytime function

NOTE Confidence: 0.85900927

00:31:51.893 --> 00:31:53.737 and excessive daytime sleepiness

NOTE Confidence: 0.85900927

00:31:53.737 --> 00:31:56.379 compared to pregnant women without RLS.

NOTE Confidence: 0.85900927

00:31:56.380 --> 00:31:58.546 And there's also data showing a

NOTE Confidence: 0.85900927

00:31:58.546 --> 00:32:00.379 potential link between our less

NOTE Confidence: 0.85900927

00:32:00.379 --> 00:32:01.357 or periodic PMS.

NOTE Confidence: 0.85900927

00:32:01.360 --> 00:32:02.840 Two adverse pregnancy outcomes,

NOTE Confidence: 0.85900927

00:32:02.840 --> 00:32:05.789 and I'm not going to review all that

NOTE Confidence: 0.85900927

00:32:05.789 --> 00:32:07.763 data here because of time issues,

NOTE Confidence: 0.85900927

00:32:07.770 --> 00:32:11.010 but I kind of this is a good review that

NOTE Confidence: 0.85900927

00:32:11.097 --> 00:32:14.177 I have come across and have used that.

NOTE Confidence: 0.85900927

00:32:14.180 --> 00:32:16.316 I've provided the reference here for.

NOTE Confidence: 0.86001426

00:32:18.580 --> 00:32:21.370 And then I want to before I move into

NOTE Confidence: 0.86001426

00:32:21.370 --> 00:32:23.967 kind of the second half of my talk,

NOTE Confidence: 0.86001426

00:32:23.970 --> 00:32:25.788 I just want to mention also

NOTE Confidence: 0.86001426

00:32:25.788 --> 00:32:27.460 sleep and maternal mental health.

NOTE Confidence: 0.86001426

00:32:27.460 --> 00:32:29.768 This is a huge.

NOTE Confidence: 0.86001426

00:32:29.770 --> 00:32:31.765 Area of research into clinical

NOTE Confidence: 0.86001426

00:32:31.765 --> 00:32:33.760 relevance to our pregnant women.

NOTE Confidence: 0.86001426

00:32:33.760 --> 00:32:36.546 It's a whole lecture on its own.

NOTE Confidence: 0.86001426

00:32:36.550 --> 00:32:38.950 We recognize that there's a bidirectional

NOTE Confidence: 0.86001426

00:32:38.950 --> 00:32:41.002 relationship between sleep and mental

NOTE Confidence: 0.86001426

00:32:41.002 --> 00:32:43.336 health issues like anxiety and depression,

NOTE Confidence: 0.86001426

00:32:43.340 --> 00:32:44.864 and that in pregnancy.

NOTE Confidence: 0.86001426

00:32:44.864 --> 00:32:46.769 Mental health issues can often

NOTE Confidence: 0.86001426

00:32:46.769 --> 00:32:48.919 be exacerbated or new onset.

NOTE Confidence: 0.86001426

00:32:48.920 --> 00:32:50.920 Also in the postpartum period,

NOTE Confidence: 0.86001426

00:32:50.920 --> 00:32:53.308 which presents its whole unique sleep,

NOTE Confidence: 0.86001426

00:32:53.310 --> 00:32:56.096 challenges relating to caring for a newborn.

NOTE Confidence: 0.86001426

00:32:56.100 --> 00:32:58.680 So this is a super interesting

NOTE Confidence: 0.86001426

00:32:58.680 --> 00:33:00.400 area of research other.

NOTE Confidence: 0.86001426

00:33:00.400 --> 00:33:02.570 Researchers in pregnancy and also

NOTE Confidence: 0.86001426

00:33:02.570 --> 00:33:05.175 sleep have focused on this and

NOTE Confidence: 0.86001426

00:33:05.175 --> 00:33:07.660 just want to make sure that we

NOTE Confidence: 0.86001426

00:33:07.660 --> 00:33:09.636 recognize this as an important

NOTE Confidence: 0.86001426

00:33:09.636 --> 00:33:11.626 area in sleep and pregnancy.

NOTE Confidence: 0.8398661

00:33:14.340 --> 00:33:15.010 Research.

NOTE Confidence: 0.8480881

00:33:17.230 --> 00:33:19.950 Alright, and so now kind of the second

NOTE Confidence: 0.8480881

00:33:19.950 --> 00:33:23.242 half of my talk is going to focus on the

NOTE Confidence: 0.8480881

00:33:23.242 --> 00:33:26.029 question I posed at the very beginning,

NOTE Confidence: 0.8480881

00:33:26.030 --> 00:33:27.790 which was is sleep healthy?

NOTE Confidence: 0.8480881

00:33:27.790 --> 00:33:29.194 Modifiable risk factor for

NOTE Confidence: 0.8480881

00:33:29.194 --> 00:33:30.247 adverse pregnancy outcomes?

NOTE Confidence: 0.8480881

00:33:30.250 --> 00:33:32.970 So I showed you kind of the data

NOTE Confidence: 0.8480881

00:33:32.970 --> 00:33:34.486 suggesting that sleep disruption

NOTE Confidence: 0.8480881

00:33:34.486 --> 00:33:37.160 is a real issue in our pregnant

NOTE Confidence: 0.8480881

00:33:37.160 --> 00:33:39.387 women that pregnant women have.

NOTE Confidence: 0.8480881

00:33:39.390 --> 00:33:42.126 Significant rates of short sleep duration

NOTE Confidence: 0.8480881

00:33:42.126 --> 00:33:44.800 of circadian disruption with later sleep,

NOTE Confidence: 0.8480881

00:33:44.800 --> 00:33:47.446 tight time timing and that pregnancy

NOTE Confidence: 0.8480881

00:33:47.446 --> 00:33:50.210 increases the rate of sleep apnea,

NOTE Confidence: 0.8480881

00:33:50.210 --> 00:33:52.916 especially in our most at risk,

NOTE Confidence: 0.8480881

00:33:52.920 --> 00:33:54.273 individuals frequent snores

NOTE Confidence: 0.8480881

00:33:54.273 --> 00:33:56.077 and individuals with obesity.

NOTE Confidence: 0.8480881

00:33:56.080 --> 00:33:59.028 So what do we know, though,

NOTE Confidence: 0.8480881

00:33:59.028 --> 00:34:01.820 from these Association studies?

NOTE Confidence: 0.8480881

00:34:01.820 --> 00:34:06.916 In terms of can we modify the?

NOTE Confidence: 0.8480881

00:34:06.920 --> 00:34:10.622 The Sleep risk factor an improved

NOTE Confidence: 0.8480881

00:34:10.622 --> 00:34:11.856 pregnancy outcomes.

NOTE Confidence: 0.8480881

00:34:11.860 --> 00:34:15.217 And the issue is what that we don't know.

NOTE Confidence: 0.8480881

00:34:15.220 --> 00:34:18.140 We don't have a lot of data regarding

NOTE Confidence: 0.8480881

00:34:18.140 --> 00:34:19.766 interventions in pregnancy that

NOTE Confidence: 0.8480881

00:34:19.766 --> 00:34:22.238 have addressed sleep and how they

NOTE Confidence: 0.8480881

00:34:22.238 --> 00:34:24.219 could impact maternal health.

NOTE Confidence: 0.8480881

00:34:24.220 --> 00:34:26.596 The majority of studies that have

NOTE Confidence: 0.8480881

00:34:26.596 --> 00:34:28.180 looked at sleep interventions

NOTE Confidence: 0.8480881

00:34:28.251 --> 00:34:29.699 are small pilot trials.

NOTE Confidence: 0.8480881

00:34:29.700 --> 00:34:31.555 And the outcomes are typically

NOTE Confidence: 0.8480881

00:34:31.555 --> 00:34:33.410 focused on subjective sleep symptoms,

NOTE Confidence: 0.8480881

00:34:33.410 --> 00:34:34.814 as now common.

NOTE Confidence: 0.8480881

00:34:34.814 --> 00:34:37.154 Some have addressed maternal mood.

NOTE Confidence: 0.8480881

00:34:37.160 --> 00:34:37.870 As outcomes,

NOTE Confidence: 0.8480881

00:34:37.870 --> 00:34:40.000 this is a good systematic review

NOTE Confidence: 0.8480881

00:34:40.000 --> 00:34:41.969 that was published in 2020.

NOTE Confidence: 0.85071534

00:34:44.670 --> 00:34:48.214 In this review they looked and found 16

NOTE Confidence: 0.85071534

00:34:48.214 --> 00:34:51.758 studies of about 1250 expectant mothers.

NOTE Confidence: 0.85071534

00:34:51.760 --> 00:34:54.203 And they found that the studies evaluated

NOTE Confidence: 0.85071534

00:34:54.203 --> 00:34:56.346 the efficacy of various interventions

NOTE Confidence: 0.85071534

00:34:56.346 --> 00:34:58.926 such as cognitive behavioral therapy.

NOTE Confidence: 0.85071534

00:34:58.930 --> 00:35:00.979 Cite pharmacotherapy, acupuncture,

NOTE Confidence: 0.85071534

00:35:00.979 --> 00:35:03.028 mindfulness, and yoga,

NOTE Confidence: 0.85071534

00:35:03.030 --> 00:35:05.770 relaxation and herbal medications.

NOTE Confidence: 0.80066943

00:35:08.150 --> 00:35:11.740 Only six were randomized control trial and

NOTE Confidence: 0.80066943

00:35:11.740 --> 00:35:14.600 only four evaluated longitudinal outcomes.

NOTE Confidence: 0.80066943

00:35:14.600 --> 00:35:16.875 And they, the authors of this review,

NOTE Confidence: 0.80066943

00:35:16.880 --> 00:35:18.410 noted that there was preliminary

NOTE Confidence: 0.80066943

00:35:18.410 --> 00:35:20.692 support that was found for all the

NOTE Confidence: 0.80066943

00:35:20.692 --> 00:35:22.076 interventions that were studied,

NOTE Confidence: 0.80066943

00:35:22.080 --> 00:35:26.296 but that the knowledge is still too limited.

NOTE Confidence: 0.80066943

00:35:26.300 --> 00:35:28.716 At this point in time to really understand

NOTE Confidence: 0.80066943

00:35:28.716 --> 00:35:30.898 how sleep interventions can improve.

NOTE Confidence: 0.80066943

00:35:30.900 --> 00:35:33.276 Sleep in pregnancy and how this

NOTE Confidence: 0.80066943

00:35:33.276 --> 00:35:34.860 should translate to improved

NOTE Confidence: 0.80066943

00:35:34.929 --> 00:35:36.577 maternal is the outcomes.

NOTE Confidence: 0.80066943

00:35:36.580 --> 00:35:39.002 This is one of the largest trials

NOTE Confidence: 0.80066943

00:35:39.002 --> 00:35:41.599 that has been published on a

NOTE Confidence: 0.80066943

00:35:41.599 --> 00:35:43.575 sleep intervention in pregnancy.

NOTE Confidence: 0.80066943

00:35:43.580 --> 00:35:45.996 It was a study that was titled efficacy

NOTE Confidence: 0.80066943

00:35:45.996 --> 00:35:48.295 of a digital cognitive behavioral

NOTE Confidence: 0.80066943

00:35:48.295 --> 00:35:51.000 therapy for treatment of insomnia,

NOTE Confidence: 0.80066943

00:35:51.000 --> 00:35:53.060 symptoms and among pregnant women.

NOTE Confidence: 0.80066943

00:35:53.060 --> 00:35:56.356 It was one of the randomized control trials.

NOTE Confidence: 0.80066943

00:35:56.360 --> 00:35:59.090 It included 200 women who are randomized

NOTE Confidence: 0.80066943

00:35:59.090 --> 00:36:01.192 to either receive cognitive behavioral

NOTE Confidence: 0.80066943

00:36:01.192 --> 00:36:03.766 therapy or kind of usual care,

NOTE Confidence: 0.80066943

00:36:03.770 --> 00:36:06.608 and they found that women randomized.

NOTE Confidence: 0.80066943

00:36:06.610 --> 00:36:08.745 Received the digital Cognitive Behavioral

NOTE Confidence: 0.80066943

00:36:08.745 --> 00:36:10.453 therapy experience statistically significant.

NOTE Confidence: 0.80066943

00:36:10.460 --> 00:36:12.052 Greater improvements in insomnia

NOTE Confidence: 0.80066943

00:36:12.052 --> 00:36:14.042 symptom severity from baseline to

NOTE Confidence: 0.80066943

00:36:14.042 --> 00:36:16.313 post intervention compared to women

NOTE Confidence: 0.80066943

00:36:16.313 --> 00:36:18.583 randomized to receive standard treatments,

NOTE Confidence: 0.80066943

00:36:18.590 --> 00:36:22.442 so this is kind of a very important study,

NOTE Confidence: 0.80066943

00:36:22.450 --> 00:36:23.252 but again,

NOTE Confidence: 0.80066943

00:36:23.252 --> 00:36:26.059 kind of very focused on the maternal

NOTE Confidence: 0.80066943

00:36:26.059 --> 00:36:27.150 sleep symptom,

NOTE Confidence: 0.80066943

00:36:27.150 --> 00:36:29.978 which is a first step in understanding

NOTE Confidence: 0.80066943

00:36:29.978 --> 00:36:32.207 sleep as potentially modifiable for

NOTE Confidence: 0.80066943

00:36:32.207 --> 00:36:35.039 maternal fetal health and certainly helping

NOTE Confidence: 0.80066943

00:36:35.039 --> 00:36:37.976 women feel better in terms of insomnia.

NOTE Confidence: 0.80066943

00:36:37.980 --> 00:36:39.685 Symptoms and just the quality

NOTE Confidence: 0.80066943

00:36:39.685 --> 00:36:42.140 of the sleep is very important,

NOTE Confidence: 0.80066943

00:36:42.140 --> 00:36:44.025 but as a maternal fetal

NOTE Confidence: 0.80066943

00:36:44.025 --> 00:36:45.533 medicine physician and clinic,

NOTE Confidence: 0.80066943

00:36:45.540 --> 00:36:48.450 I'm also interested in kind of

NOTE Confidence: 0.80066943

00:36:48.450 --> 00:36:51.529 taking it to the next step.

NOTE Confidence: 0.80066943

00:36:51.530 --> 00:36:54.060 Which is understanding how potentially

NOTE Confidence: 0.80066943

00:36:54.060 --> 00:36:56.084 sleep interventions can improve

NOTE Confidence: 0.80066943

00:36:56.084 --> 00:36:57.860 pregnancy outcomes for women,

NOTE Confidence: 0.80066943

00:36:57.860 --> 00:37:00.295 and particularly given the associations

NOTE Confidence: 0.80066943

00:37:00.295 --> 00:37:02.730 we found which stational diabetes,

NOTE Confidence: 0.80066943

00:37:02.730 --> 00:37:05.370 preeclampsia and preterm birth

NOTE Confidence: 0.80066943

00:37:05.370 --> 00:37:08.010 could sleep interventions help

NOTE Confidence: 0.80066943

00:37:08.010 --> 00:37:11.530 reduce the rate of these outcomes.

NOTE Confidence: 0.80066943

00:37:11.530 --> 00:37:13.990 So one of the most interesting

NOTE Confidence: 0.80066943

00:37:13.990 --> 00:37:16.884 areas of research in this on this

NOTE Confidence: 0.80066943

00:37:16.884 --> 00:37:18.444 topic is sleep apnea.

NOTE Confidence: 0.80066943

00:37:18.450 --> 00:37:20.640 Because we know that sleep apnea

NOTE Confidence: 0.80066943

00:37:20.640 --> 00:37:23.100 has an effective treatment which is

NOTE Confidence: 0.80066943

00:37:23.100 --> 00:37:24.960 continuous positive airway pressure,

NOTE Confidence: 0.80066943

00:37:24.960 --> 00:37:27.760 and so we have this real opportunity

NOTE Confidence: 0.80066943

00:37:27.760 --> 00:37:30.658 in pregnancy to study of sleep apnea.

NOTE Confidence: 0.80066943

00:37:30.660 --> 00:37:32.535 Treatment can reduce the incidence

NOTE Confidence: 0.80066943

00:37:32.535 --> 00:37:34.916 of kind of complications such as

NOTE Confidence: 0.80066943

00:37:34.916 --> 00:37:36.692 hypertensive disorders or just

NOTE Confidence: 0.80066943

00:37:36.692 --> 00:37:37.580 stational diabetes.

NOTE Confidence: 0.81881964

00:37:39.670 --> 00:37:42.428 CPAP trials in non primary cohorts and

NOTE Confidence: 0.81881964

00:37:42.428 --> 00:37:45.304 I don't have to tell this audience

NOTE Confidence: 0.81881964

00:37:45.304 --> 00:37:48.251 here because I'm sure you know I

NOTE Confidence: 0.81881964

00:37:48.251 --> 00:37:50.506 speak to both pregnancy audience,

NOTE Confidence: 0.81881964

00:37:50.510 --> 00:37:51.761 pregnancy centered audience

NOTE Confidence: 0.81881964

00:37:51.761 --> 00:37:53.429 and sleep centered audiences.

NOTE Confidence: 0.81881964

00:37:53.430 --> 00:37:56.286 But obviously you know this group knows

NOTE Confidence: 0.81881964

00:37:56.286 --> 00:37:59.703 that what we know from CPAP trials and

NOTE Confidence: 0.81881964

00:37:59.703 --> 00:38:02.610 non pregnant cohorts is that it works.

NOTE Confidence: 0.81881964

00:38:02.610 --> 00:38:05.137 It normalizes the HI and that very

NOTE Confidence: 0.81881964

00:38:05.137 --> 00:38:07.752 clearly is shown improved sleep quality

NOTE Confidence: 0.81881964

00:38:07.752 --> 00:38:10.674 in daytime symptoms in individuals who.

NOTE Confidence: 0.81881964

00:38:10.680 --> 00:38:13.690 Have become compliant on their see PAP.

NOTE Confidence: 0.81881964

00:38:13.690 --> 00:38:17.302 There's also some signal that CPAP may

NOTE Confidence: 0.81881964

00:38:17.302 --> 00:38:19.602 improve cardiovascular outcomes in non

NOTE Confidence: 0.81881964

00:38:19.602 --> 00:38:22.314 pregnant cohorts and this is one of the

NOTE Confidence: 0.81881964

00:38:22.388 --> 00:38:24.488 biggest trials regarding this which

NOTE Confidence: 0.81881964

00:38:24.488 --> 00:38:28.057 is a trial by Barbara at all that.

NOTE Confidence: 0.81881964

00:38:28.057 --> 00:38:30.991 Look at OSA participants without Dasein

NOTE Confidence: 0.81881964

00:38:30.991 --> 00:38:33.698 sleepiness and they prescribe them CPAP

NOTE Confidence: 0.81881964

00:38:33.698 --> 00:38:36.629 compared to usual care and what they

NOTE Confidence: 0.81881964

00:38:36.629 --> 00:38:39.485 looked at was the follow up rates of

NOTE Confidence: 0.81881964

00:38:39.490 --> 00:38:41.210 hypertension of cardiovascular events.

NOTE Confidence: 0.81881964

00:38:41.210 --> 00:38:43.790 And on the left was their

NOTE Confidence: 0.81881964

00:38:43.867 --> 00:38:45.547 sample of the entire RCT,

NOTE Confidence: 0.81881964

00:38:45.550 --> 00:38:47.350 and while the curves looked

NOTE Confidence: 0.81881964

00:38:47.350 --> 00:38:48.430 a little different,

NOTE Confidence: 0.81881964

00:38:48.430 --> 00:38:50.248 it looks like the control group

NOTE Confidence: 0.81881964

00:38:50.248 --> 00:38:51.934 had higher rates of hypertension

NOTE Confidence: 0.81881964

00:38:51.934 --> 00:38:53.574 and cardiovascular events compared

NOTE Confidence: 0.81881964

00:38:53.574 --> 00:38:55.624 to the see PAP group.

NOTE Confidence: 0.81881964

00:38:55.630 --> 00:38:58.136 But the trend that they saw did

NOTE Confidence: 0.81881964

00:38:58.136 --> 00:38:59.690 not reach statistical significance

NOTE Confidence: 0.81881964

00:38:59.690 --> 00:39:02.126 when they did a subgroup analysis

NOTE Confidence: 0.81881964

00:39:02.126 --> 00:39:04.627 based on uses of usage of C Pap.

NOTE Confidence: 0.81881964

00:39:04.630 --> 00:39:05.032 However,

NOTE Confidence: 0.81881964

00:39:05.032 --> 00:39:07.444 they did find that individuals who

NOTE Confidence: 0.81881964

00:39:07.444 --> 00:39:09.717 were compliant with CPAP by definition

NOTE Confidence: 0.81881964

00:39:09.717 --> 00:39:12.300 of using it greater than or equal to.

NOTE Confidence: 0.81881964

00:39:12.300 --> 00:39:13.756 4 hours per night.

NOTE Confidence: 0.81881964

00:39:13.756 --> 00:39:15.576 Did have a statistically significant

NOTE Confidence: 0.81881964

00:39:15.576 --> 00:39:17.850 reduction in the rate of hypertension

NOTE Confidence: 0.81881964

00:39:17.850 --> 00:39:19.700 or cardiovascular events at follow-up.

NOTE Confidence: 0.8797566

00:39:22.810 --> 00:39:25.666 The see PAP in pregnancy data is very

NOTE Confidence: 0.8797566

00:39:25.666 --> 00:39:28.256 very limited and I didn't pull up a

NOTE Confidence: 0.8797566

00:39:28.256 --> 00:39:30.688 lot of studies here because I will

NOTE Confidence: 0.8797566

00:39:30.688 --> 00:39:33.390 tell you the majority are case reports.

NOTE Confidence: 0.8797566

00:39:33.390 --> 00:39:35.460 For example, they'll have a women

NOTE Confidence: 0.8797566

00:39:35.460 --> 00:39:37.278 woman with preeclampsia in early

NOTE Confidence: 0.8797566

00:39:37.278 --> 00:39:39.522 pregnancy that they're trying to manage

NOTE Confidence: 0.8797566

00:39:39.522 --> 00:39:41.395 expectantly and not deliver because

NOTE Confidence: 0.8797566

00:39:41.395 --> 00:39:43.465 of her early just stational age,

NOTE Confidence: 0.8797566

00:39:43.470 --> 00:39:45.990 they'll find that she has sleep apnea.

NOTE Confidence: 0.8797566

00:39:45.990 --> 00:39:47.930 They'll put her on.

NOTE Confidence: 0.8797566

00:39:47.930 --> 00:39:49.956 You happen, they'll notice an

NOTE Confidence: 0.8797566

00:39:49.956 --> 00:39:51.364 improvement of blood pressure,

NOTE Confidence: 0.8797566

00:39:51.370 --> 00:39:53.811 and they'll write up that case, report,

NOTE Confidence: 0.8797566

00:39:53.811 --> 00:39:56.128 or kind of other smaller case series

NOTE Confidence: 0.8797566

00:39:56.128 --> 00:39:58.415 with very similar kind of outcomes

NOTE Confidence: 0.8797566

00:39:58.415 --> 00:40:00.360 that improved in blood pressure.

NOTE Confidence: 0.8797566

00:40:00.360 --> 00:40:03.260 In small groups of women.

NOTE Confidence: 0.8797566

00:40:03.260 --> 00:40:06.872 So we really don't know how CPAP

NOTE Confidence: 0.8797566

00:40:06.872 --> 00:40:09.380 can improve pregnancy outcomes.

NOTE Confidence: 0.8797566

00:40:09.380 --> 00:40:11.739 And this is despite the fact that

NOTE Confidence: 0.8797566

00:40:11.739 --> 00:40:13.831 actually pregnancy is an ideal scenario

NOTE Confidence: 0.8797566

00:40:13.831 --> 00:40:15.853 to better understand the role of

NOTE Confidence: 0.8797566

00:40:15.853 --> 00:40:18.675 CPAP as a preventative strategy to

NOTE Confidence: 0.8797566

00:40:18.675 --> 00:40:20.124 reduce cardiometabolic morbidity.

NOTE Confidence: 0.8797566

00:40:20.130 --> 00:40:22.818 If we think about outside of pregnancy,

NOTE Confidence: 0.8797566

00:40:22.820 --> 00:40:24.899 we know that in order to really

NOTE Confidence: 0.8797566

00:40:24.899 --> 00:40:27.408 study the see Pap's role in

NOTE Confidence: 0.8797566

00:40:27.408 --> 00:40:28.959 cardiovascular metabolic disease,

NOTE Confidence: 0.8797566

00:40:28.960 --> 00:40:31.528 we have to take individuals diagnosed

NOTE Confidence: 0.8797566

00:40:31.528 --> 00:40:34.298 him with sleep apnea and follow them

NOTE Confidence: 0.8797566

00:40:34.298 --> 00:40:37.444 for kind of years to see and look for

NOTE Confidence: 0.8797566

00:40:37.444 --> 00:40:39.826 the incidence of kind of diabetes.

NOTE Confidence: 0.8797566

00:40:39.830 --> 00:40:40.982 Or cardiovascular disease,

NOTE Confidence: 0.8797566

00:40:40.982 --> 00:40:43.670 and a lot of times some studies

NOTE Confidence: 0.8797566

00:40:43.745 --> 00:40:45.665 like the same study you know,

NOTE Confidence: 0.8797566

00:40:45.670 --> 00:40:47.889 because of the fact that you know

NOTE Confidence: 0.8797566

00:40:47.889 --> 00:40:50.528 you have to follow people for years

NOTE Confidence: 0.8797566

00:40:50.528 --> 00:40:53.377 to look at new onset hypertension or

NOTE Confidence: 0.8797566

00:40:53.377 --> 00:40:55.897 new onset diabetes or act or actually

NOTE Confidence: 0.8797566

00:40:55.897 --> 00:40:57.862 doing CPAP studies as secondary

NOTE Confidence: 0.8797566

00:40:57.862 --> 00:40:59.518 prevention taking individuals who

NOTE Confidence: 0.8797566

00:40:59.518 --> 00:41:01.185 already have underlying cardiovascular

NOTE Confidence: 0.8797566

00:41:01.185 --> 00:41:03.747 disease and using CPAP as kind of

NOTE Confidence: 0.8797566

00:41:03.747 --> 00:41:05.449 secondary prevention of like worsening

NOTE Confidence: 0.8797566

00:41:05.449 --> 00:41:07.267 of their cardiovascular status or a

NOTE Confidence: 0.8797566

00:41:07.267 --> 00:41:10.276 new event on top of their baseline.

NOTE Confidence: 0.8797566

00:41:10.280 --> 00:41:11.300 But in pregnancy,

NOTE Confidence: 0.8797566

00:41:11.300 --> 00:41:13.340 what's interesting is a woman can

NOTE Confidence: 0.8797566

00:41:13.340 --> 00:41:15.130 go from being completely,

NOTE Confidence: 0.8797566

00:41:15.130 --> 00:41:15.806 you know,

NOTE Confidence: 0.8797566

00:41:15.806 --> 00:41:17.496 euglycemic at the beginning of

NOTE Confidence: 0.8797566

00:41:17.496 --> 00:41:19.367 pregnancy and within nine months

NOTE Confidence: 0.8797566

00:41:19.367 --> 00:41:21.362 develop a real metabolic dysfunction

NOTE Confidence: 0.8797566

00:41:21.362 --> 00:41:23.339 that requires treatment with insulin.

NOTE Confidence: 0.8797566

00:41:23.340 --> 00:41:23.700 Similarly,

NOTE Confidence: 0.8797566

00:41:23.700 --> 00:41:25.860 a woman can go into pregnancy

NOTE Confidence: 0.8797566

00:41:25.860 --> 00:41:27.440 and be completely normal,

NOTE Confidence: 0.8797566

00:41:27.440 --> 00:41:29.305 tensive and developed by the

NOTE Confidence: 0.8797566

00:41:29.305 --> 00:41:30.797 end of their pregnancy.

NOTE Confidence: 0.8797566

00:41:30.800 --> 00:41:33.026 A very severe form of hypertension,

NOTE Confidence: 0.8797566

00:41:33.030 --> 00:41:35.080 such as severe preeclampsia that

NOTE Confidence: 0.8797566

00:41:35.080 --> 00:41:36.720 requires medical management and

NOTE Confidence: 0.8797566

00:41:36.720 --> 00:41:38.994 so given kind of the Physiology

NOTE Confidence: 0.8797566

00:41:38.994 --> 00:41:40.434 of normal pregnancy and.

NOTE Confidence: 0.8797566

00:41:40.440 --> 00:41:41.955 Adverse pregnancy outcomes.

NOTE Confidence: 0.8797566

00:41:41.955 --> 00:41:44.985 Studying sleep apnea in pregnancy and

NOTE Confidence: 0.8797566

00:41:44.985 --> 00:41:47.717 the role of CPAP is very exciting for

NOTE Confidence: 0.8797566

00:41:47.717 --> 00:41:50.548 me and I think exciting for the C,

NOTE Confidence: 0.8797566

00:41:50.550 --> 00:41:52.800 pap and sleep world in general

NOTE Confidence: 0.8797566

00:41:52.800 --> 00:41:55.045 because it really gives us an

NOTE Confidence: 0.8797566

00:41:55.045 --> 00:41:57.049 opportunity to understand C pap as

NOTE Confidence: 0.8797566

00:41:57.049 --> 00:42:00.290 kind of a preventative strategy for

NOTE Confidence: 0.8797566

00:42:00.290 --> 00:42:02.168 reducing cardiometabolic morbidity.

NOTE Confidence: 0.8797566

00:42:02.170 --> 00:42:04.528 So I'm going to bring you to kind of

NOTE Confidence: 0.8797566

00:42:04.528 --> 00:42:07.406 my last few sides which review a CPAP

NOTE Confidence: 0.8797566

00:42:07.406 --> 00:42:10.067 trial and pregnancy which is run by

NOTE Confidence: 0.8797566

00:42:10.067 --> 00:42:11.937 the maternal fetal medicine units.

NOTE Confidence: 0.8797566

00:42:11.940 --> 00:42:13.785 Networking is called with sleep

NOTE Confidence: 0.8797566

00:42:13.785 --> 00:42:15.979 trial and it's a multicenter RCT

NOTE Confidence: 0.8797566

00:42:15.979 --> 00:42:17.665 and yell is actually a site.

NOTE Confidence: 0.8797566

00:42:17.670 --> 00:42:19.862 I don't know if any of you here

NOTE Confidence: 0.8797566

00:42:19.862 --> 00:42:22.364 are aware of the study or have had

NOTE Confidence: 0.8797566

00:42:22.364 --> 00:42:24.131 patients that you have potentially

NOTE Confidence: 0.8797566

00:42:24.131 --> 00:42:26.765 interacted with were in our study,

NOTE Confidence: 0.8797566

00:42:26.770 --> 00:42:28.570 but yell is participating as a

NOTE Confidence: 0.8797566

00:42:28.570 --> 00:42:30.480 subsite of our Brown University,

NOTE Confidence: 0.8797566

00:42:30.480 --> 00:42:32.690 which is one of the.

NOTE Confidence: 0.84486306

00:42:32.690 --> 00:42:34.940 The central sites of the study.

NOTE Confidence: 0.84486306

00:42:34.940 --> 00:42:37.446 So pregnant individuals who have a BMI

NOTE Confidence: 0.84486306

00:42:37.446 --> 00:42:40.246 greater than or equal to 30 are actually

NOTE Confidence: 0.84486306

00:42:40.246 --> 00:42:42.692 identified to take home a home sleep

NOTE Confidence: 0.84486306

00:42:42.692 --> 00:42:45.198 test and to identify as either having

NOTE Confidence: 0.84486306

00:42:45.198 --> 00:42:47.884 sleep apnea by an HIV greater than or

NOTE Confidence: 0.84486306

00:42:47.884 --> 00:42:50.868 equal 5 or having a no sleep apnea.

NOTE Confidence: 0.84486306

00:42:50.870 --> 00:42:53.816 An women who are identified as

NOTE Confidence: 0.84486306

70

00:42:53.816 --> 00:42:56.320 sleep apnea positive are then.

NOTE Confidence: 0.84486306

00:42:56.320 --> 00:42:58.426 Recruited to be randomized into the

NOTE Confidence: 0.84486306

00:42:58.426 --> 00:43:00.800 RCT and the randomized control trials,

NOTE Confidence: 0.84486306

00:43:00.800 --> 00:43:03.624 it's the the two arms are the use

NOTE Confidence: 0.84486306

00:43:03.624 --> 00:43:06.660 of auto titrating CPAP or a sleep

NOTE Confidence: 0.84486306

00:43:06.660 --> 00:43:09.361 hygiene control or in kind of

NOTE Confidence: 0.84486306

00:43:09.361 --> 00:43:12.345 another way to say a usual care arm.

NOTE Confidence: 0.84486306

00:43:12.350 --> 00:43:13.905 Our primary hypothesis of this

NOTE Confidence: 0.84486306

00:43:13.905 --> 00:43:15.802 trial is the treatment of sleep

NOTE Confidence: 0.84486306

00:43:15.802 --> 00:43:17.500 apnea with CPAP in pregnancy will

NOTE Confidence: 0.84486306

00:43:17.500 --> 00:43:20.289 result in a reduction in the rate of

NOTE Confidence: 0.84486306

00:43:20.289 --> 00:43:21.793 hypertensive disorders of pregnancy.

NOTE Confidence: 0.8333344

00:43:24.700 --> 00:43:26.548 So why are we screaming individuals

NOTE Confidence: 0.8333344

00:43:26.548 --> 00:43:28.872 with a BMI of greater than equal

NOTE Confidence: 0.8333344

00:43:28.872 --> 00:43:30.924 30 and not all pregnant women?

NOTE Confidence: 0.8333344

00:43:30.930 --> 00:43:33.370 Well, we know from the Newmont to be

NOTE Confidence: 0.8333344

00:43:33.370 --> 00:43:36.089 data that actually this is kind of the

NOTE Confidence: 0.8333344

00:43:36.089 --> 00:43:38.487 highest risk group and it's an easy

NOTE Confidence: 0.8333344

00:43:38.487 --> 00:43:41.097 thing for us to ascertain and screen by.

NOTE Confidence: 0.8333344

00:43:41.097 --> 00:43:43.713 So from the new mom to be data,

NOTE Confidence: 0.8333344

00:43:43.720 --> 00:43:46.016 we knew that in the mid pregnancy

NOTE Confidence: 0.8333344

00:43:46.016 --> 00:43:47.680 assessment about 20% of individuals

NOTE Confidence: 0.8333344

00:43:47.680 --> 00:43:50.610 had an HIV greater than or equal to 5.

NOTE Confidence: 0.80874044

00:43:52.820 --> 00:43:55.172 In turning in terms of the timing of

NOTE Confidence: 0.80874044

00:43:55.172 --> 00:43:57.966 when we screen our women for this trial,

NOTE Confidence: 0.80874044

00:43:57.970 --> 00:43:59.896 when we kind of conceptualizes trial,

NOTE Confidence: 0.80874044

00:43:59.900 --> 00:44:02.042 we really talked a lot about the

NOTE Confidence: 0.80874044

00:44:02.042 --> 00:44:04.354 balance in terms of when to screen

NOTE Confidence: 0.80874044

00:44:04.354 --> 00:44:06.019 for sleep apnea and pregnancy.

NOTE Confidence: 0.80874044

00:44:06.020 --> 00:44:07.630 Obviously, the later you recruit,

NOTE Confidence: 0.80874044

00:44:07.630 --> 00:44:10.070 the more sleep apnea you will find as

NOTE Confidence: 0.80874044

00:44:10.070 --> 00:44:12.264 the changes weight gain, adima, etc.

NOTE Confidence: 0.80874044

00:44:12.264 --> 00:44:14.938 Of pregnancy will likely continue to increase

NOTE Confidence: 0.80874044

00:44:14.938 --> 00:44:17.828 the rate of preeclampsia in pregnant women.

NOTE Confidence: 0.80874044

00:44:17.830 --> 00:44:20.260 So you'll find more sleep apnea,

NOTE Confidence: 0.80874044

00:44:20.260 --> 00:44:22.948 but however fighting it really late

NOTE Confidence: 0.80874044

00:44:22.948 --> 00:44:25.746 really minimizes your ability to treat it

NOTE Confidence: 0.80874044

00:44:25.746 --> 00:44:28.433 in terms of getting people on the CPAP

NOTE Confidence: 0.80874044

00:44:28.433 --> 00:44:30.638 therapy and getting them comfortable

NOTE Confidence: 0.80874044

00:44:30.638 --> 00:44:32.781 and compliant with the therapy,

NOTE Confidence: 0.80874044

00:44:32.781 --> 00:44:35.378 and so the earlier you get women

NOTE Confidence: 0.80874044

00:44:35.378 --> 00:44:36.870 into the pipeline,

NOTE Confidence: 0.80874044

00:44:36.870 --> 00:44:39.186 the hopefully you'll have the highest

NOTE Confidence: 0.80874044

00:44:39.186 --> 00:44:41.320 amount of exposure to therapy,

NOTE Confidence: 0.80874044

00:44:41.320 --> 00:44:43.750 and probably the optimal treatment effect.

NOTE Confidence: 0.80874044

00:44:43.750 --> 00:44:46.375 So you have to balance these two

NOTE Confidence: 0.80874044

00:44:46.375 --> 00:44:48.680 things when you're thinking about.

NOTE Confidence: 0.80874044

00:44:48.680 --> 00:44:50.820 Screening and treating sleep apnea

NOTE Confidence: 0.80874044

00:44:50.820 --> 00:44:53.439 and pregnancy and then kind of

NOTE Confidence: 0.80874044

00:44:53.439 --> 00:44:55.474 having these discussions are group

NOTE Confidence: 0.80874044

00:44:55.474 --> 00:44:57.896 has decided to screen women and

NOTE Confidence: 0.80874044

00:44:57.896 --> 00:45:00.050 randomize them between 16 weeks and

NOTE Confidence: 0.80874044

00:45:00.050 --> 00:45:04.470 20 and 620 weeks 60s in gestation.

NOTE Confidence: 0.80874044

00:45:04.470 --> 00:45:06.282 We diagnose sleep apnea

NOTE Confidence: 0.80874044

00:45:06.282 --> 00:45:08.547 via a home sleep test,

NOTE Confidence: 0.80874044

00:45:08.550 --> 00:45:11.566 so we are using the apnea link shown

NOTE Confidence: 0.80874044

00:45:11.566 --> 00:45:14.986 here to diagnose sleep apnea and all of

NOTE Confidence: 0.80874044

00:45:14.986 --> 00:45:18.417 the acne links are downloaded an read

NOTE Confidence: 0.80874044

00:45:18.417 --> 00:45:21.675 by a centralized sleep reading center,

NOTE Confidence: 0.80874044

00:45:21.680 --> 00:45:25.411 so we all have centralized and quality

NOTE Confidence: 0.80874044

00:45:25.411 --> 00:45:28.939 control procedures for diagnosing RC Batman.

NOTE Confidence: 0.80874044

00:45:28.940 --> 00:45:31.620 We do have an exclusion for severe sleep

NOTE Confidence: 0.80874044

00:45:31.620 --> 00:45:34.437 apnea and for severe nocturnal hypoxemia,

NOTE Confidence: 0.80874044

00:45:34.440 --> 00:45:37.176 so women with an age I have greater

NOTE Confidence: 0.80874044

00:45:37.176 --> 00:45:40.095 than or equal to 30 or nocturnal

NOTE Confidence: 0.80874044

00:45:40.095 --> 00:45:42.717 hypoxemia as defined here are told

NOTE Confidence: 0.80874044

00:45:42.717 --> 00:45:45.447 that that is what the results of

NOTE Confidence: 0.80874044

00:45:45.447 --> 00:45:47.926 their sleep apnea test showed and

NOTE Confidence: 0.80874044

00:45:47.926 --> 00:45:50.470 then they are given local resources

NOTE Confidence: 0.80874044

00:45:50.553 --> 00:45:53.305 to see clinical care if they want to.

NOTE Confidence: 0.80874044

00:45:53.310 --> 00:45:55.764 It is anticipated an action we

NOTE Confidence: 0.80874044

00:45:55.764 --> 00:45:58.235 have found through the early phases

NOTE Confidence: 0.80874044

00:45:58.235 --> 00:46:00.874 of the study that this is rare.

NOTE Confidence: 0.80874044

00:46:00.880 --> 00:46:03.170 As I showed you in the new mom to be

NOTE Confidence: 0.80874044

00:46:03.234 --> 00:46:05.768 studying severe sleep apnea is rare in

NOTE Confidence: 0.80874044

00:46:05.768 --> 00:46:07.829 pregnancy and then this is anticipated

NOTE Confidence: 0.80874044

00:46:07.829 --> 00:46:11.968 to be less than 1% of our patient population.

NOTE Confidence: 0.80874044

00:46:11.970 --> 00:46:14.184 Here are two arms I mentioned

NOTE Confidence: 0.80874044

00:46:14.184 --> 00:46:16.080 that auto titrating CPAP rman.

NOTE Confidence: 0.80874044

00:46:16.080 --> 00:46:17.576 The sleep hygiene control

NOTE Confidence: 0.80874044

00:46:17.576 --> 00:46:19.446 and auto titrating CPAP farm.

NOTE Confidence: 0.80874044

00:46:19.450 --> 00:46:21.760 There given information about healthy sleep

NOTE Confidence: 0.80874044

00:46:21.760 --> 00:46:24.688 and then they are given AC pap machine,

NOTE Confidence: 0.80874044

00:46:24.690 --> 00:46:26.928 appropriate mask and a lot of

NOTE Confidence: 0.80874044

00:46:26.928 --> 00:46:29.549 education and follow up about CPAP use.

NOTE Confidence: 0.80874044

00:46:29.550 --> 00:46:32.063 They get weekly follow up in that

NOTE Confidence: 0.80874044

00:46:32.063 --> 00:46:34.640 group where we monitor compliance.

NOTE Confidence: 0.80874044

00:46:34.640 --> 00:46:36.520 In the Sleep Hygiene group,

NOTE Confidence: 0.80874044

00:46:36.520 --> 00:46:39.025 they get similar informational handouts

NOTE Confidence: 0.80874044

00:46:39.025 --> 00:46:42.023 about healthy sleep and also seek

NOTE Confidence: 0.80874044

00:46:42.023 --> 00:46:44.489 resources should they seek to too.

NOTE Confidence: 0.80874044

00:46:44.490 --> 00:46:46.956 Need to seek care for clinical

NOTE Confidence: 0.80874044

00:46:46.956 --> 00:46:49.649 issues and then they get monthly.

NOTE Confidence: 0.80874044

00:46:49.650 --> 00:46:52.230 Follow up through our study team.

NOTE Confidence: 0.80874044

00:46:52.230 --> 00:46:55.240 We do a lot of compliance monitoring.

NOTE Confidence: 0.80874044

00:46:55.240 --> 00:46:58.224 We are using the an app to help

NOTE Confidence: 0.80874044

00:46:58.224 --> 00:47:00.470 participants see their own CPAP

NOTE Confidence: 0.80874044

00:47:00.470 --> 00:47:03.314 compliance data and monitor their own

NOTE Confidence: 0.80874044

00:47:03.314 --> 00:47:06.001 progress and we also offer compliance

NOTE Confidence: 0.80874044

00:47:06.001 --> 00:47:09.392 incentives as part of this trial to

NOTE Confidence: 0.80874044

00:47:09.392 --> 00:47:14.400 help optimize C packing in our treatment arm.

NOTE Confidence: 0.80874044

00:47:14.400 --> 00:47:17.074 The primary outcome as I mentioned earlier,

NOTE Confidence: 0.8243074

00:47:17.080 --> 00:47:19.000 is hypertensive disorders of pregnancy,

NOTE Confidence: 0.8243074

00:47:19.000 --> 00:47:21.292 which is a composite of just

NOTE Confidence: 0.8243074

00:47:21.292 --> 00:47:22.444 stational hypertension, preeclampsia,

NOTE Confidence: 0.8243074

00:47:22.444 --> 00:47:23.980 superimposed pre clamp, Sia,

NOTE Confidence: 0.8243074

00:47:23.980 --> 00:47:25.364 HELLP syndrome, and eclampsia.

NOTE Confidence: 0.8243074

00:47:25.364 --> 00:47:28.287 But we are also very excited to look

NOTE Confidence: 0.8243074

00:47:28.287 --> 00:47:30.252 at some crucial secondary outcomes

NOTE Confidence: 0.8243074

00:47:30.252 --> 00:47:32.020 that include gestational diabetes,

NOTE Confidence: 0.8243074

00:47:32.020 --> 00:47:34.628 pre term birth and.

NOTE Confidence: 0.8243074

00:47:34.630 --> 00:47:36.706 The fetal fetal and neonatal outcomes,

NOTE Confidence: 0.8243074

00:47:36.710 --> 00:47:39.790 such as birth weight.

NOTE Confidence: 0.8243074

00:47:39.790 --> 00:47:43.862 I just put up here the local Contacts

NOTE Confidence: 0.8243074

00:47:43.862 --> 00:47:47.492 for the sleep trial at Yale as

NOTE Confidence: 0.8243074

00:47:47.492 --> 00:47:51.120 well as the main site at Brown.

NOTE Confidence: 0.8243074

00:47:51.120 --> 00:47:54.515 So if anyone is interested and learning

NOTE Confidence: 0.8243074

00:47:54.515 --> 00:47:57.300 more or getting more involved,

NOTE Confidence: 0.8243074

00:47:57.300 --> 00:48:00.905 locali referring a patient to be screened,

NOTE Confidence: 0.8243074

00:48:00.910 --> 00:48:05.260 we're happy to take your emails

NOTE Confidence: 0.8243074

00:48:05.260 --> 00:48:07.435 and get connected.

NOTE Confidence: 0.8243074

00:48:07.440 --> 00:48:09.421 And then this is my last slide

NOTE Confidence: 0.8243074

00:48:09.421 --> 00:48:11.620 and I thought I would just leave

NOTE Confidence: 0.8243074

00:48:11.620 --> 00:48:13.546 the last minute last 10 minutes

NOTE Confidence: 0.8243074

00:48:13.617 --> 00:48:15.507 for any questions or comments and

NOTE Confidence: 0.8243074

00:48:15.507 --> 00:48:17.703 I was just very happy to have

NOTE Confidence: 0.8243074

00:48:17.703 --> 00:48:18.947 this opportunity to present.

NOTE Confidence: 0.8243074

00:48:18.950 --> 00:48:20.500 So thank you very much.

NOTE Confidence: 0.8197691

00:48:23.530 --> 00:48:25.336 Thank you so much Doctor Fackeln,

NOTE Confidence: 0.8197691

00:48:25.340 --> 00:48:29.356 that was really a great and relevant talk.

NOTE Confidence: 0.8197691

00:48:29.360 --> 00:48:32.461 Yeah, as you mentioned the MFM you

NOTE Confidence: 0.8197691

00:48:32.461 --> 00:48:35.940 study being at yell alot of us here on

NOTE Confidence: 0.8197691

00:48:35.940 --> 00:48:39.534 the call I see part of the sleep center

NOTE Confidence: 0.8197691

00:48:39.534 --> 00:48:42.845 we actually do get the patients that I

NOTE Confidence: 0.8197691

00:48:42.845 --> 00:48:45.610 guess are excluded from this study which

NOTE Confidence: 0.8197691

00:48:45.681 --> 00:48:48.219 are the severe sleep apnea patients.

NOTE Confidence: 0.8197691

00:48:48.220 --> 00:48:50.854 An just speaking from my experience

NOTE Confidence: 0.8197691

00:48:50.854 --> 00:48:53.419 I definitely see severe sleep apnea

NOTE Confidence: 0.8197691

00:48:53.419 --> 00:48:56.424 an I get very very nervous, you know.

NOTE Confidence: 0.8197691

00:48:56.424 --> 00:49:00.230 And there's sort of this urgency to get them.

79

NOTE Confidence: 0.8197691

00:49:00.230 --> 00:49:02.370 You know, formally diagnosed and

NOTE Confidence: 0.8197691

00:49:02.370 --> 00:49:04.528 treated right away. Unfortunately just.

NOTE Confidence: 0.8197691

00:49:04.528 --> 00:49:08.000 You know are are just the way things

NOTE Confidence: 0.8197691

00:49:08.087 --> 00:49:10.649 work with insurance and all that.

NOTE Confidence: 0.8197691

00:49:10.650 --> 00:49:12.214 Often it is difficult.

NOTE Confidence: 0.8197691

00:49:12.214 --> 00:49:13.778 I wonder you know,

NOTE Confidence: 0.8197691

00:49:13.780 --> 00:49:16.932 as you had mentioned in all all your

NOTE Confidence: 0.8197691

00:49:16.932 --> 00:49:19.659 previous studies as well as other studies,

NOTE Confidence: 0.8197691

00:49:19.660 --> 00:49:20.836 the sleep apnea,

NOTE Confidence: 0.8197691

00:49:20.836 --> 00:49:22.796 the degree of sleep apnea.

NOTE Confidence: 0.8197691

00:49:22.800 --> 00:49:24.780 Often seeing these young otherwise

NOTE Confidence: 0.8197691

00:49:24.780 --> 00:49:27.110 healthy pregnant women are pretty mild,

NOTE Confidence: 0.8197691

00:49:27.110 --> 00:49:29.819 but is your feeling that it this

NOTE Confidence: 0.8197691

00:49:29.819 --> 00:49:33.148 mild group are also the mild disease

NOTE Confidence: 0.8197691

00:49:33.148 --> 00:49:35.753 is very impactful during pregnancy.

NOTE Confidence: 0.8197691

00:49:35.760 --> 00:49:36.318 And when?

NOTE Confidence: 0.8197691

00:49:36.318 --> 00:49:38.550 Or what data do we have to explore

NOTE Confidence: 0.8197691

00:49:38.615 --> 00:49:40.703 these other people who are presenting

NOTE Confidence: 0.8197691

00:49:40.703 --> 00:49:43.500 to the clinic who are just very severe?

NOTE Confidence: 0.8197691

00:49:43.500 --> 00:49:45.756 They may not be the majority of the

NOTE Confidence: 0.8197691

00:49:45.756 --> 00:49:47.448 pregnant women, but they're pretty scary.

NOTE Confidence: 0.8514287

00:49:47.450 --> 00:49:48.578 I must say, yeah,

NOTE Confidence: 0.8514287

00:49:48.578 --> 00:49:50.834 I will say first of all, thanks for

NOTE Confidence: 0.8514287

00:49:50.834 --> 00:49:52.526 the question about the mild disease.

NOTE Confidence: 0.8514287

00:49:52.530 --> 00:49:55.482 I mean, I'm always I always kind of

NOTE Confidence: 0.8514287

00:49:55.482 --> 00:49:58.397 going back to the new mom slide here.

NOTE Confidence: 0.8514287

00:49:58.400 --> 00:49:59.920 I'm always. You know?

NOTE Confidence: 0.8514287

00:49:59.920 --> 00:50:03.106 So impressed that you know the majority of

NOTE Confidence: 0.8514287

00:50:03.106 --> 00:50:06.004 these people had very mild sleep apnea,

NOTE Confidence: 0.8514287

00:50:06.010 --> 00:50:08.600 and Despite that it being very mild,

NOTE Confidence: 0.8514287

00:50:08.600 --> 00:50:11.230 the rates of their adverse

NOTE Confidence: 0.8514287

00:50:11.230 --> 00:50:12.808 outcomes compared to.

NOTE Confidence: 0.8514287

00:50:12.810 --> 00:50:14.580 To the non Seebacher group,

NOTE Confidence: 0.8514287

00:50:14.580 --> 00:50:16.340 even after adjustment for BMI

NOTE Confidence: 0.8514287

00:50:16.340 --> 00:50:17.396 and chronic hypertension,

NOTE Confidence: 0.8514287

00:50:17.400 --> 00:50:19.030 what significant here you can

NOTE Confidence: 0.8514287

00:50:19.030 --> 00:50:21.106 see odd ratios close to three

NOTE Confidence: 0.8514287

00:50:21.106 --> 00:50:22.630 for just stational hypertension

NOTE Confidence: 0.8514287

00:50:22.630 --> 00:50:25.280 and odds ratios close to two for

NOTE Confidence: 0.8514287

00:50:25.280 --> 00:50:26.970 preeclampsia so mild disease seems

NOTE Confidence: 0.8514287

00:50:26.970 --> 00:50:28.923 to be really relevant in pregnancy.

NOTE Confidence: 0.8514287

00:50:28.923 --> 00:50:30.478 In terms of that question

NOTE Confidence: 0.8514287

00:50:30.478 --> 00:50:32.229 about the severe preeclamptic.

NOTE Confidence: 0.8514287

00:50:32.230 --> 00:50:34.694 I mean, I think that's super interesting.

NOTE Confidence: 0.8514287

00:50:34.700 --> 00:50:37.340 They are very hard to gather into one

NOTE Confidence: 0.8514287

00:50:37.340 --> 00:50:40.338 cohort and study and look at their outcomes.

NOTE Confidence: 0.8514287

00:50:40.340 --> 00:50:43.300 I can only postulate that they probably have.

NOTE Confidence: 0.8514287

00:50:43.300 --> 00:50:44.845 Worse outcomes than women with

NOTE Confidence: 0.8514287

00:50:44.845 --> 00:50:47.039 mild disease and is kind of more

NOTE Confidence: 0.8514287

00:50:47.039 --> 00:50:48.809 urgent to evaluate and treat them.

NOTE Confidence: 0.8514287

00:50:48.810 --> 00:50:50.730 That was the reason our group

NOTE Confidence: 0.8514287

00:50:50.730 --> 00:50:52.788 decided to exclude women with an age.

NOTE Confidence: 0.8514287

00:50:52.790 --> 00:50:54.932 I have greater than or equal to

NOTE Confidence: 0.8514287

00:50:54.932 --> 00:50:55.850 30 from randomization.

NOTE Confidence: 0.8514287

00:50:55.850 --> 00:50:57.154 But what was interesting,

NOTE Confidence: 0.8514287

00:50:57.154 --> 00:50:59.110 your comment that you made about

NOTE Confidence: 0.8514287

00:50:59.168 --> 00:51:01.135 it's so hard to get women into

NOTE Confidence: 0.8514287

00:51:01.135 --> 00:51:02.879 treatment that's on the other hand,

NOTE Confidence: 0.8514287

00:51:02.880 --> 00:51:04.950 people were arguing we shouldn't exclude

NOTE Confidence: 0.8514287

00:51:04.950 --> 00:51:06.822 those women even though they only

NOTE Confidence: 0.8514287

00:51:06.822 --> 00:51:08.850 have a 50% chance of getting treatment,

NOTE Confidence: 0.8514287

00:51:08.850 --> 00:51:10.575 because getting treatment for them

83

NOTE Confidence: 0.8514287

00:51:10.575 --> 00:51:12.191 outside of pregnancy is really hard

NOTE Confidence: 0.8514287

00:51:12.191 --> 00:51:14.570 and 50% chance is better than 0.

NOTE Confidence: 0.8514287

00:51:14.570 --> 00:51:16.676 So was super interesting that we

NOTE Confidence: 0.8514287

00:51:16.676 --> 00:51:18.782 had kind of that, that discussion,

NOTE Confidence: 0.8514287

00:51:18.782 --> 00:51:20.537 and ultimately through the IRB,

NOTE Confidence: 0.8514287

00:51:20.540 --> 00:51:22.640 an R data safety monitoring Board.

NOTE Confidence: 0.8514287

00:51:22.640 --> 00:51:24.400 We made it an exclusion,

NOTE Confidence: 0.8514287

00:51:24.400 --> 00:51:26.008 but you're absolutely right,

NOTE Confidence: 0.8514287

00:51:26.008 --> 00:51:28.782 some people were like get them in

NOTE Confidence: 0.8514287

00:51:28.782 --> 00:51:31.126 the study 'cause at least they get a

NOTE Confidence: 0.8514287

00:51:31.126 --> 00:51:33.075 50% chance of treatment and really

NOTE Confidence: 0.8514287

00:51:33.075 --> 00:51:35.280 intense follow up through your protocol,

NOTE Confidence: 0.8514287

00:51:35.280 --> 00:51:37.569 but we you know we share that

NOTE Confidence: 0.8514287

00:51:37.569 --> 00:51:39.435 experience here of getting people

NOTE Confidence: 0.8514287

00:51:39.435 --> 00:51:41.883 into treatment and it centers like

NOTE Confidence: 0.8514287

00:51:41.883 --> 00:51:44.068 yours that really have helped.

NOTE Confidence: 0.8514287

00:51:44.070 --> 00:51:44.624 Our study,

NOTE Confidence: 0.8514287

00:51:44.624 --> 00:51:46.286 because it was crucial to develop

NOTE Confidence: 0.8514287

00:51:46.286 --> 00:51:47.630 collaborations with sleep specialist.

NOTE Confidence: 0.8514287

00:51:47.630 --> 00:51:49.604 So when we have a patient that

NOTE Confidence: 0.8514287

00:51:49.604 --> 00:51:51.455 screens out for severe sleep apnea

NOTE Confidence: 0.8514287

00:51:51.455 --> 00:51:53.646 that they're not felt to be kind

NOTE Confidence: 0.8514287

00:51:53.709 --> 00:51:55.059 of lost in the system,

NOTE Confidence: 0.8514287

00:51:55.060 --> 00:51:57.118 then we were able to get them

NOTE Confidence: 0.8514287

00:51:57.118 --> 00:51:58.620 links if they want to.

NOTE Confidence: 0.8514287

00:51:58.620 --> 00:51:59.202 You know,

NOTE Confidence: 0.8514287

00:51:59.202 --> 00:52:00.366 to get clinical treatment

NOTE Confidence: 0.8514287

00:52:00.366 --> 00:52:01.890 for their severe sleep apnea.

NOTE Confidence: 0.8993784

00:52:03.970 --> 00:52:05.170 So I'd like

NOTE Confidence: 0.8993784

00:52:05.170 --> 00:52:09.649 to ask a question. This is Mary.

NOTE Confidence: 0.8347107

00:52:13.020 --> 00:52:15.558 There I think you're frozen pregnant.

NOTE Confidence: 0.8347107

00:52:15.560 --> 00:52:19.720 Can you hear me? Yeah, I think you

NOTE Confidence: 0.8347107

00:52:19.720 --> 00:52:21.940 might have to repeat your question.

NOTE Confidence: 0.8347107

00:52:21.940 --> 00:52:24.780 Yeah, over the years I've seen a very

NOTE Confidence: 0.8347107

00:52:24.780 --> 00:52:27.489 large number of pregnant women with very

NOTE Confidence: 0.8894163

00:52:27.490 --> 00:52:30.560 severe sleep apnea. And the

NOTE Confidence: 0.8726988

00:52:30.560 --> 00:52:32.756 main concern that I have isn't

NOTE Confidence: 0.8726988

00:52:32.760 --> 00:52:34.585 sort of their acute Physiology,

NOTE Confidence: 0.8726988

00:52:34.585 --> 00:52:37.146 it's can they take care of the

NOTE Confidence: 0.8726988

00:52:37.146 --> 00:52:38.612 baby when they're discharged.

NOTE Confidence: 0.8726988

00:52:38.612 --> 00:52:40.660 Finally having given birth.

NOTE Confidence: 0.8726988

00:52:40.660 --> 00:52:42.760 And, and that's really the big

NOTE Confidence: 0.8726988

00:52:42.760 --> 00:52:44.604 challenge is getting them on

NOTE Confidence: 0.8726988

00:52:44.604 --> 00:52:46.060 treatment because many women

NOTE Confidence: 0.8726988

00:52:46.060 --> 00:52:48.220 don't have anybody to help them

NOTE Confidence: 0.8726988

00:52:48.220 --> 00:52:51.320 when they get home with the baby.

NOTE Confidence: 0.8726988

00:52:51.320 --> 00:52:54.290 And so that is that is, to me,

NOTE Confidence: 0.8726988

00:52:54.290 --> 00:52:55.770 an extremely important issue.

NOTE Confidence: 0.84362364

00:52:56.670 --> 00:52:57.702 I totally agree.

NOTE Confidence: 0.84362364

00:52:57.702 --> 00:52:59.950 I mean, I should also have put

NOTE Confidence: 0.84362364

00:52:59.950 --> 00:53:02.702 up a slide we know like I did

NOTE Confidence: 0.84362364

00:53:02.702 --> 00:53:04.557 for sleep and mental health.

NOTE Confidence: 0.84362364

00:53:04.560 --> 00:53:05.246 It's postpartum.

NOTE Confidence: 0.84362364

00:53:05.246 --> 00:53:07.990 Sleep is a lecture in and of itself,

NOTE Confidence: 0.84362364

00:53:07.990 --> 00:53:09.700 like how women cope with

NOTE Confidence: 0.84362364

00:53:09.700 --> 00:53:10.726 postpartum sleep disturbances,

NOTE Confidence: 0.84362364

00:53:10.730 --> 00:53:12.104 including sleep apnea,

NOTE Confidence: 0.84362364

00:53:12.104 --> 00:53:14.852 and also new onset disturbances related

NOTE Confidence: 0.84362364

00:53:14.852 --> 00:53:17.364 to the postpartum state is super

NOTE Confidence: 0.84362364

00:53:17.364 --> 00:53:20.189 important and I think that you really.

NOTE Confidence: 0.84362364

00:53:20.190 --> 00:53:22.406 Birth and so glad you brought that up.

NOTE Confidence: 0.84362364

00:53:22.410 --> 00:53:23.910 I will tell you what we

NOTE Confidence: 0.84362364

00:53:23.910 --> 00:53:25.470 is nice about our studies.

NOTE Confidence: 0.84362364

00:53:25.470 --> 00:53:26.874 We let the women keep their

NOTE Confidence: 0.84362364

00:53:26.874 --> 00:53:28.222 C pap machines if they're

NOTE Confidence: 0.84362364

00:53:28.222 --> 00:53:29.638 randomized to sleep apnea.

NOTE Confidence: 0.84362364

00:53:29.640 --> 00:53:31.243 So all of our patients you have

NOTE Confidence: 0.84362364

00:53:31.243 --> 00:53:32.555 sleep apnea in our randomized

NOTE Confidence: 0.84362364

00:53:32.555 --> 00:53:34.571 control trial get to continue to keep

NOTE Confidence: 0.84362364

00:53:34.571 --> 00:53:36.308 their machine and their equipment,

NOTE Confidence: 0.84362364

00:53:36.310 --> 00:53:37.732 and obviously their urge to follow

NOTE Confidence: 0.84362364

00:53:37.732 --> 00:53:39.353 up with a primary care doctor

NOTE Confidence: 0.84362364

00:53:39.353 --> 00:53:40.609 or sleep specialist regarding

NOTE Confidence: 0.84362364

00:53:40.609 --> 00:53:41.865 ongoing need and treatment.

NOTE Confidence: 0.8243576

00:53:44.580 --> 00:53:47.076 We have a lot of questions in the

NOTE Confidence: 0.8243576

00:53:47.076 --> 00:53:49.745 chat box and I'm glad you left some

NOTE Confidence: 0.8243576

00:53:49.745 --> 00:53:51.708 time for us here. Doctor tackle,

NOTE Confidence: 0.8243576

00:53:51.708 --> 00:53:53.976 but I'll try to get through them.

NOTE Confidence: 0.8243576

00:53:53.980 --> 00:53:55.344 Doctor motioning is asking

NOTE Confidence: 0.8243576

00:53:55.344 --> 00:53:56.708 if there's any relationship

NOTE Confidence: 0.8243576

00:53:56.708 --> 00:53:58.188 between weight gain and water,

NOTE Confidence: 0.8243576

00:53:58.190 --> 00:54:00.128 water weight and sleep disordered breathing.

NOTE Confidence: 0.8243576

00:54:00.130 --> 00:54:01.750 That's that's part of those

NOTE Confidence: 0.8243576

00:54:01.750 --> 00:54:03.226 factors. So great question.

NOTE Confidence: 0.8243576

00:54:03.226 --> 00:54:05.440 And actually there I want to

NOTE Confidence: 0.8243576

00:54:05.508 --> 00:54:07.489 refer you guys to a paper that

NOTE Confidence: 0.8243576

00:54:07.489 --> 00:54:09.529 was came out of Newmont to be.

NOTE Confidence: 0.8243576

00:54:09.530 --> 00:54:11.468 They didn't have time to review,

NOTE Confidence: 0.8243576

00:54:11.470 --> 00:54:12.766 which looked at prediction

NOTE Confidence: 0.8243576

00:54:12.766 --> 00:54:14.386 and sleep apnea in pregnancy.

NOTE Confidence: 0.8243576

00:54:14.390 --> 00:54:16.180 The greatest.

NOTE Confidence: 0.8243576

00:54:16.180 --> 00:54:17.970 Predictors words.

NOTE Confidence: 0.8243576

00:54:17.970 --> 00:54:19.538 BMI and frequent snoring.

NOTE Confidence: 0.8243576

00:54:19.538 --> 00:54:21.106 They did specifically look

NOTE Confidence: 0.8243576

00:54:21.106 --> 00:54:22.839 at waking and pregnancy.

NOTE Confidence: 0.8243576

00:54:22.840 --> 00:54:25.336 They found that weight gain in

NOTE Confidence: 0.8243576

00:54:25.336 --> 00:54:27.000 pregnancy was associated with

NOTE Confidence: 0.8243576

00:54:27.070 --> 00:54:29.146 sleep apnea in the mid trimester

NOTE Confidence: 0.8243576

00:54:29.146 --> 00:54:31.370 that that visit 3 assessment.

NOTE Confidence: 0.8243576

00:54:31.370 --> 00:54:33.656 But when they looked at strong

NOTE Confidence: 0.8243576

00:54:33.656 --> 00:54:35.685 predictor it didn't really improve

NOTE Confidence: 0.8243576

00:54:35.685 --> 00:54:37.855 the prediction model that much.

NOTE Confidence: 0.8243576

00:54:37.860 --> 00:54:40.152 So there is associations with excessive

NOTE Confidence: 0.8243576

00:54:40.152 --> 00:54:42.739 weight gain and an increased rate.

NOTE Confidence: 0.8243576

00:54:42.740 --> 00:54:43.572 But fundamentally,

NOTE Confidence: 0.8243576

00:54:43.572 --> 00:54:45.652 what really kind of differentiated

NOTE Confidence: 0.8243576

00:54:45.652 --> 00:54:47.200 risk was baseline BMI.

NOTE Confidence: 0.8243576

00:54:47.200 --> 00:54:49.840 I'm going into pregnancy.

NOTE Confidence: 0.8243576

00:54:49.840 --> 00:54:51.898 And that paper is the first

NOTE Confidence: 0.8243576

00:54:51.898 --> 00:54:53.270 author of that paper.

NOTE Confidence: 0.8243576

00:54:53.270 --> 00:54:54.985 Is Juliette Lewis and it's

NOTE Confidence: 0.8243576

00:54:54.985 --> 00:54:56.357 a really great paper.

NOTE Confidence: 0.8243576

00:54:56.360 --> 00:54:58.280 And it actually is links to

NOTE Confidence: 0.8243576

00:54:58.280 --> 00:55:00.000 an online risk Calculator for

NOTE Confidence: 0.8243576

00:55:00.000 --> 00:55:01.500 sleep apnea and presidency.

NOTE Confidence: 0.8747878

00:55:04.250 --> 00:55:05.776 We have a question about how many

NOTE Confidence: 0.8747878

00:55:05.776 --> 00:55:07.280 hours of sleep would you recommend

NOTE Confidence: 0.8747878

00:55:07.280 --> 00:55:08.882 for pregnant women at this point.

NOTE Confidence: 0.87208134

00:55:09.740 --> 00:55:11.804 I mean, I think that what we tell

NOTE Confidence: 0.87208134

00:55:11.804 --> 00:55:13.459 pregnant women at least clinically,

NOTE Confidence: 0.87208134

00:55:13.460 --> 00:55:15.550 you know what I do is that we should follow

NOTE Confidence: 0.87208134

00:55:15.605 --> 00:55:17.235 general sleep health recommendations that

NOTE Confidence: 0.87208134

00:55:17.235 --> 00:55:19.749 are out like the National Sleep Foundation.

NOTE Confidence: 0.87208134

00:55:19.750 --> 00:55:22.009 Kind of recommending you know 7 to 9 hours

NOTE Confidence: 0.87208134

00:55:22.009 --> 00:55:24.609 of sleep in general for healthy adult sleep.

NOTE Confidence: 0.87208134

00:55:24.610 --> 00:55:27.110 But we also do, you know, talk about that.

NOTE Confidence: 0.87208134

00:55:27.110 --> 00:55:28.930 Each individual has their own sleep need

NOTE Confidence: 0.87208134

00:55:28.977 --> 00:55:30.617 and there's certain some variations.

NOTE Confidence: 0.87208134

00:55:30.620 --> 00:55:32.629 Some people need a little less and

NOTE Confidence: 0.87208134

00:55:32.629 --> 00:55:34.340 some people need a little more,

NOTE Confidence: 0.87208134

00:55:34.340 --> 00:55:36.556 but generally I try to tell people to

NOTE Confidence: 0.87208134

00:55:36.556 --> 00:55:38.909 aim for kind of seven to nine hours,

NOTE Confidence: 0.87208134

00:55:38.910 --> 00:55:40.054 which is, I think,

NOTE Confidence: 0.87208134

00:55:40.054 --> 00:55:41.484 the general recommendation for adults.

NOTE Confidence: 0.8096609

00:55:44.560 --> 00:55:45.808 I think David has.

NOTE Confidence: 0.8096609

00:55:45.808 --> 00:55:47.056 It is very engaging.

NOTE Confidence: 0.8096609

00:55:47.060 --> 00:55:48.926 You're talking as numerous questions here,

NOTE Confidence: 0.8096609

00:55:48.930 --> 00:55:50.796 but I'm going to pick one.

NOTE Confidence: 0.8096609

00:55:50.800 --> 00:55:52.858 David, I'm sorry, maybe you can contact

NOTE Confidence: 0.8096609

00:55:52.858 --> 00:55:54.859 a perbacco faculty address these others,

NOTE Confidence: 0.8096609

00:55:54.860 --> 00:55:56.420 but you wanted to know,

NOTE Confidence: 0.8096609

00:55:56.420 --> 00:55:58.240 but I guess the trajectory of the

NOTE Confidence: 0.8096609

00:55:58.240 --> 00:56:00.112 sleep apnea is the difference between

NOTE Confidence: 0.8096609

00:56:00.112 --> 00:56:02.188 those who develop mild sleep apnea

NOTE Confidence: 0.8096609

00:56:02.188 --> 00:56:04.220 during pregnancy versus those who had

NOTE Confidence: 0.8096609

00:56:04.220 --> 00:56:05.464 it prior to pregnancy.

NOTE Confidence: 0.8096609

00:56:05.464 --> 00:56:06.397 So what's interesting,

NOTE Confidence: 0.8096609

00:56:06.400 --> 00:56:09.208 if I kind of look at this slide here,

NOTE Confidence: 0.8096609

00:56:09.210 --> 00:56:11.052 we looked at like early pregnancy

NOTE Confidence: 0.8096609

00:56:11.052 --> 00:56:12.984 and then mid pregnancy and obviously

NOTE Confidence: 0.8096609

00:56:12.984 --> 00:56:14.916 in the mid pregnancy sleep apnea.

NOTE Confidence: 0.8096609

00:56:14.920 --> 00:56:16.845 These are a lot of women who

NOTE Confidence: 0.8096609

00:56:16.845 --> 00:56:18.838 had sleep apnea and continued to

NOTE Confidence: 0.8096609

00:56:18.838 --> 00:56:20.673 have it as pregnancy progress,

NOTE Confidence: 0.8096609

00:56:20.680 --> 00:56:23.866 but it also contained nuance set.

NOTE Confidence: 0.8096609

00:56:23.870 --> 00:56:25.620 Sleep apnea out participants in,

NOTE Confidence: 0.8096609

00:56:25.620 --> 00:56:27.504 you know, in our sample we

NOTE Confidence: 0.8096609

00:56:27.504 --> 00:56:29.508 weren't able to kind of really

NOTE Confidence: 0.8096609

00:56:29.508 --> 00:56:31.548 differentiate a lot the risk of

NOTE Confidence: 0.8096609

00:56:31.548 --> 00:56:33.638 new onset versus pre existing,

NOTE Confidence: 0.8096609

00:56:33.640 --> 00:56:36.424 but I will tell you kind of clinically.

NOTE Confidence: 0.8096609

00:56:36.430 --> 00:56:38.173 In another work I do think what

NOTE Confidence: 0.8096609

00:56:38.173 --> 00:56:39.915 is probably the most relevant

NOTE Confidence: 0.8096609

00:56:39.915 --> 00:56:41.783 pathophysiological from a pathophysiology

NOTE Confidence: 0.8096609

00:56:41.783 --> 00:56:43.651 perspective is that preeclampsia

NOTE Confidence: 0.8096609

00:56:43.711 --> 00:56:45.301 that is either preexists pregnancy

NOTE Confidence: 0.8096609

00:56:45.301 --> 00:56:47.600 and you go into pregnancy with it

NOTE Confidence: 0.8096609

00:56:47.600 --> 00:56:50.050 or you develop it very early on.

NOTE Confidence: 0.8096609

00:56:50.050 --> 00:56:52.633 Between that 16 and 20 weeks with

NOTE Confidence: 0.8096609

00:56:52.633 --> 00:56:54.998 some weight gain and some of the.

NOTE Confidence: 0.8096609

00:56:55.000 --> 00:56:56.588 Physiologic changes of pregnancy

NOTE Confidence: 0.8096609

00:56:56.588 --> 00:56:58.970 so that early pregnancy period and

NOTE Confidence: 0.8096609

00:56:59.039 --> 00:57:00.880 that's why we chose in the MSM.

NOTE Confidence: 0.8096609

00:57:00.880 --> 00:57:03.435 You trial to kind of really focus

NOTE Confidence: 0.8096609

00:57:03.435 --> 00:57:05.524 on screening between 16 and 20

NOTE Confidence: 0.8096609

00:57:05.524 --> 00:57:06.760 weeks because of that,

NOTE Confidence: 0.8096609

00:57:06.760 --> 00:57:08.722 that probably the the longer exposure

NOTE Confidence: 0.8096609

00:57:08.722 --> 00:57:11.149 to the sleep apnea and the exposure

NOTE Confidence: 0.8096609

00:57:11.149 --> 00:57:12.904 earlier in pregnancy is probably

NOTE Confidence: 0.8096609

00:57:12.904 --> 00:57:14.719 leading to an increased risk.

NOTE Confidence: 0.8096609

00:57:14.720 --> 00:57:16.840 But I do think it's like looking at

NOTE Confidence: 0.8096609

00:57:16.840 --> 00:57:19.112 the the shift stational diabetes data

NOTE Confidence: 0.8096609

00:57:19.112 --> 00:57:21.626 preeclampsia data that you can't argue

NOTE Confidence: 0.8096609

00:57:21.694 --> 00:57:24.406 that even developing it later is a relevant.

NOTE Confidence: 0.8096609

00:57:24.410 --> 00:57:25.241 So what I?

NOTE Confidence: 0.8096609

00:57:25.241 --> 00:57:26.626 Typically tell people who ask

NOTE Confidence: 0.8096609

00:57:26.626 --> 00:57:28.683 about like clinically, what you do.

NOTE Confidence: 0.8096609

00:57:28.683 --> 00:57:28.964 Obviously,

NOTE Confidence: 0.8096609

00:57:28.964 --> 00:57:30.088 outside of a trial,

NOTE Confidence: 0.8096609

00:57:30.090 --> 00:57:31.620 like right now what we're trying

NOTE Confidence: 0.8096609

00:57:31.620 --> 00:57:33.615 to do is get all these women

NOTE Confidence: 0.8096609

00:57:33.615 --> 00:57:35.140 you know into these trials,

NOTE Confidence: 0.8096609

00:57:35.140 --> 00:57:37.107 but you know, outside of a trial,

NOTE Confidence: 0.8096609

00:57:37.110 --> 00:57:39.382 I tell individuals if someone is coming to

NOTE Confidence: 0.8096609

00:57:39.382 --> 00:57:41.609 you pregnant with a lot of sleep complaints.

NOTE Confidence: 0.8096609

00:57:41.610 --> 00:57:43.591 I can't stay up during the day

NOTE Confidence: 0.8096609

00:57:43.591 --> 00:57:45.260 I'm falling asleep at the wheel.

NOTE Confidence: 0.8096609

00:57:45.260 --> 00:57:47.227 I can't take care of my kids.

NOTE Confidence: 0.8096609

00:57:47.230 --> 00:57:47.790 'cause I'm,

NOTE Confidence: 0.8096609

00:57:47.790 --> 00:57:48.630 you know, sleeping.

NOTE Confidence: 0.8096609

00:57:48.630 --> 00:57:51.159 My husband tells me it's more out of time.

NOTE Confidence: 0.8096609

00:57:51.160 --> 00:57:53.408 I like CEREC because of all of this.

NOTE Confidence: 0.8096609

00:57:53.410 --> 00:57:54.990 Absolutely no matter when in

NOTE Confidence: 0.8096609

00:57:54.990 --> 00:57:56.570 pregnancy they present to you.

NOTE Confidence: 0.8096609

00:57:56.570 --> 00:57:58.220 It's important to refer them

NOTE Confidence: 0.8096609

00:57:58.220 --> 00:57:59.540 for evaluation and treatment.

NOTE Confidence: 0.8096609

00:57:59.540 --> 00:58:01.080 Do I think referring someone

NOTE Confidence: 0.8096609

00:58:01.080 --> 00:58:03.394 at 34 weeks is going to alter

NOTE Confidence: 0.8096609

00:58:03.394 --> 00:58:05.149 the course of their pregnancy?

NOTE Confidence: 0.8096609

00:58:05.150 --> 00:58:07.130 Well, I don't know for sure,

NOTE Confidence: 0.8096609

00:58:07.130 --> 00:58:08.780 and there's no definitive data,

NOTE Confidence: 0.8096609

00:58:08.780 --> 00:58:10.838 but I'm not as excited as excited

NOTE Confidence: 0.8096609

00:58:10.838 --> 00:58:13.238 about that as like in terms of

NOTE Confidence: 0.8096609

00:58:13.238 --> 00:58:15.048 more screening and treatment early,

NOTE Confidence: 0.8096609

00:58:15.050 --> 00:58:17.300 but certainly from the point of

NOTE Confidence: 0.8096609

00:58:17.300 --> 00:58:19.256 view of helping pregnant women

NOTE Confidence: 0.8096609

00:58:19.256 --> 00:58:20.808 function and have good.

NOTE Confidence: 0.8096609

00:58:20.810 --> 00:58:22.270 Sleep quality and daytime functioning

NOTE Confidence: 0.8096609

00:58:22.270 --> 00:58:24.190 if they're coming for that complete.

NOTE Confidence: 0.8096609

00:58:24.190 --> 00:58:25.414 It doesn't matter what.

NOTE Confidence: 0.8096609

00:58:25.414 --> 00:58:26.638 Just stational age period.

NOTE Confidence: 0.8250044

00:58:28.510 --> 00:58:30.410 Great and just a couple.

NOTE Confidence: 0.8250044

00:58:30.410 --> 00:58:32.545 Maybe we can get in a couple

NOTE Confidence: 0.8250044

00:58:32.545 --> 00:58:34.492 of one or two questions

NOTE Confidence: 0.8250044

00:58:34.492 --> 00:58:36.847 other than BMI and snoring.

NOTE Confidence: 0.8250044

00:58:36.850 --> 00:58:38.745 Are there any other screen

NOTE Confidence: 0.8250044

00:58:38.745 --> 00:58:40.640 screening tools for pregnancy for

NOTE Confidence: 0.8250044

00:58:40.640 --> 00:58:42.758 pregnant women and see this sort

NOTE Confidence: 0.8250044

00:58:42.758 --> 00:58:44.869 of breathing so you know there's

NOTE Confidence: 0.8250044

00:58:44.869 --> 00:58:47.053 a lot of data about using kind

NOTE Confidence: 0.8250044

00:58:47.053 --> 00:58:49.345 of the Berlin questionnaire or

NOTE Confidence: 0.8250044

00:58:49.345 --> 00:58:51.249 the Stop Bang Questionnaire?

NOTE Confidence: 0.8250044

00:58:51.250 --> 00:58:53.150 You know, those are fine,

NOTE Confidence: 0.8250044

00:58:53.150 --> 00:58:54.965 but fundamentally they don't function

NOTE Confidence: 0.8250044

00:58:54.965 --> 00:58:57.310 much better than BMI and snoring,

NOTE Confidence: 0.8250044

00:58:57.310 --> 00:58:58.862 and that's what, basically.

NOTE Confidence: 0.8250044

00:58:58.862 --> 00:59:00.669 That paper, Juliette Lewis is

NOTE Confidence: 0.8250044

00:59:00.669 --> 00:59:03.070 paper kind of came to kind of.

NOTE Confidence: 0.78442335

00:59:05.080 --> 00:59:08.960 A conclusion that those were the two best.

NOTE Confidence: 0.78442335

00:59:08.960 --> 00:59:11.284 Tools what has been shown over and

NOTE Confidence: 0.78442335

00:59:11.284 --> 00:59:13.800 over and over again at the every word

NOTE Confidence: 0.78442335

00:59:13.800 --> 00:59:16.639 is not a good tool for pregnant women.

NOTE Confidence: 0.78442335

00:59:16.640 --> 00:59:19.304 They are sleepy for way too many reasons,

NOTE Confidence: 0.78442335

00:59:19.310 --> 00:59:21.648 and the pregnancy in and of itself,

NOTE Confidence: 0.78442335

00:59:21.650 --> 00:59:24.018 and nausea and vomiting and all the other

NOTE Confidence: 0.78442335

00:59:24.018 --> 00:59:26.131 problems that are associated with that

NOTE Confidence: 0.78442335

00:59:26.131 --> 00:59:28.327 disrupt sleep or early daytime functioning.

NOTE Confidence: 0.78442335

00:59:28.330 --> 00:59:29.416 Increase those complaints.

NOTE Confidence: 0.78442335

00:59:29.416 --> 00:59:32.315 And by screening with the every work you're

NOTE Confidence: 0.78442335

00:59:32.315 --> 00:59:35.006 not really defining a good code word to test,

NOTE Confidence: 0.78442335

00:59:35.010 --> 00:59:38.072 so I will tell you, I don't think that

NOTE Confidence: 0.78442335

00:59:38.072 --> 00:59:40.160 it's necessarily wrong to use the.

NOTE Confidence: 0.78442335

00:59:40.160 --> 00:59:42.190 Or later they stopped stopping

NOTE Confidence: 0.78442335

00:59:42.190 --> 00:59:45.260 or the other kind of sleep apnea.

NOTE Confidence: 0.78442335

00:59:45.260 --> 00:59:47.360 Tools that have focused on BMI

NOTE Confidence: 0.78442335

00:59:47.360 --> 00:59:49.180 and snoring in their tool.

NOTE Confidence: 0.78442335

00:59:49.180 --> 00:59:51.700 But it turns out daytime sleepiness in

NOTE Confidence: 0.78442335

00:59:51.700 --> 00:59:54.516 and of itself is not a good predictor.

NOTE Confidence: 0.83930564

00:59:56.480 --> 00:59:58.040 We just have a comment from Doctor Rodriguez.

NOTE Confidence: 0.83930564

00:59:58.040 --> 00:59:59.405 I don't want to leave him out.

NOTE Confidence: 0.83930564

00:59:59.410 --> 01:00:00.610 He was just saying that.

NOTE Confidence: 0.83930564

01:00:00.610 --> 01:00:02.850 It would be interesting to follow the

NOTE Confidence: 0.83930564

01:00:02.850 --> 01:00:05.218 children of these pregnant women who had,

NOTE Confidence: 0.83930564

01:00:05.220 --> 01:00:07.044 I guess, untreated sleep apnea and

NOTE Confidence: 0.83930564

01:00:07.044 --> 01:00:09.160 see if there's a correlation of

NOTE Confidence: 0.839443885714286

01:00:09.160 --> 01:00:10.780 the city, yeah?

NOTE Confidence: 0.839443885714286

01:00:10.780 --> 01:00:12.940 That's not very interesting.

NOTE Confidence: 0.839443885714286

01:00:12.940 --> 01:00:14.700 And we actually do have,

NOTE Confidence: 0.839443885714286

01:00:14.700 --> 01:00:17.516 and I don't quite have the data already,

NOTE Confidence: 0.839443885714286

01:00:17.520 --> 01:00:20.304 but to stay to me actually followed all

NOTE Confidence: 0.839443885714286

01:00:20.304 --> 01:00:23.495 these new mom to be women who had untreated.

NOTE Confidence: 0.839443885714286

01:00:23.500 --> 01:00:25.712 You know, sleep is mild to moderate

NOTE Confidence: 0.839443885714286

01:00:25.712 --> 01:00:27.810 sleep apnea and pregnancy and follow

NOTE Confidence: 0.839443885714286

01:00:27.810 --> 01:00:30.330 them up two to seven years postpartum

NOTE Confidence: 0.839443885714286

01:00:30.395 --> 01:00:31.859 for cardiovascular metabolic disease

NOTE Confidence: 0.839443885714286

01:00:31.859 --> 01:00:34.412 and we will be kind of eventually,

NOTE Confidence: 0.839443885714286

01:00:34.412 --> 01:00:35.820 hopefully soon publishing data

NOTE Confidence: 0.839443885714286

01:00:35.820 --> 01:00:37.580 regarding sleep apnea in pregnancy,

NOTE Confidence: 0.839443885714286

01:00:37.580 --> 01:00:39.340 how it potentially persists or

NOTE Confidence: 0.839443885714286

01:00:39.340 --> 01:00:41.100 resolved in the postpartum period.

NOTE Confidence: 0.839443885714286

01:00:41.100 --> 01:00:43.176 Cruise is a subgroup of them

NOTE Confidence: 0.839443885714286

01:00:43.176 --> 01:00:45.390 agreed to be retested postpartum.

NOTE Confidence: 0.839443885714286

01:00:45.390 --> 01:00:47.182 At the two to seven year Mark

NOTE Confidence: 0.839443885714286

01:00:47.182 --> 01:00:50.109 and then how it how it relates to

NOTE Confidence: 0.839443885714286

01:00:50.109 --> 01:00:51.366 cardiovascular metabolic measures.

NOTE Confidence: 0.839443885714286

01:00:51.370 --> 01:00:53.356 Two to seven years after delivery.

NOTE Confidence: 0.7931389

01:00:55.690 --> 01:00:58.408 So I know a few people jumped off this.

NOTE Confidence: 0.7931389

01:00:58.410 --> 01:01:01.480 There's a follow up from.

NOTE Confidence: 0.7931389

01:01:01.480 --> 01:01:02.191 Follow up conference.

NOTE Confidence: 0.7931389

01:01:02.191 --> 01:01:03.376 Grand rounds after this book.

NOTE Confidence: 0.7931389

01:01:03.380 --> 01:01:04.796 For those who are still on,

NOTE Confidence: 0.7931389

01:01:04.800 --> 01:01:05.478 I don't know.

NOTE Confidence: 0.7931389

01:01:05.478 --> 01:01:06.834 Maybe you want to ask your

NOTE Confidence: 0.7931389

01:01:06.834 --> 01:01:08.087 question since you had a

NOTE Confidence: 0.7931389

01:01:08.087 --> 01:01:09.059 couple of questions there.

NOTE Confidence: 0.89830613

01:01:11.280 --> 01:01:14.080 I think you're muted.

NOTE Confidence: 0.89830613

01:01:14.080 --> 01:01:16.098 Yes, I am muted. Sorry it's

NOTE Confidence: 0.8259441

01:01:16.100 --> 01:01:18.445 just a really interesting topic to me

NOTE Confidence: 0.8259441

01:01:18.450 --> 01:01:21.472 and I was wondering so is there data on

NOTE Confidence: 0.8259441

01:01:21.472 --> 01:01:23.485 whether later pregnancies are more or

NOTE Confidence: 0.8259441

01:01:23.485 --> 01:01:25.166 less effective than earlier pregnancies?

NOTE Confidence: 0.8259441

01:01:25.166 --> 01:01:29.380 Like just a number of parity or gravity?

NOTE Confidence: 0.8259441

01:01:29.380 --> 01:01:30.940 Affect the results. So really

NOTE Confidence: 0.8218414

01:01:30.940 --> 01:01:33.388 interesting. And in fact in so this than

NOTE Confidence: 0.8218414

01:01:33.388 --> 01:01:36.239 you Mom data is all on the liparus within.

NOTE Confidence: 0.8218414

01:01:36.240 --> 01:01:38.440 So first time moms and it was designed

NOTE Confidence: 0.8218414

01:01:38.440 --> 01:01:40.889 that way for a reason because you kind of

NOTE Confidence: 0.8218414

01:01:40.889 --> 01:01:43.283 remove a lot of confounding factors from

NOTE Confidence: 0.8218414

01:01:43.283 --> 01:01:45.898 prior pregnancies and risks related to that.

NOTE Confidence: 0.8218414

01:01:45.898 --> 01:01:47.686 But in our trial we're not

NOTE Confidence: 0.8218414

01:01:47.686 --> 01:01:49.659 limiting it to first time moms.

NOTE Confidence: 0.8218414

01:01:49.660 --> 01:01:51.690 We're doing first time moms and Paris

NOTE Confidence: 0.8218414

01:01:51.690 --> 01:01:54.190 women and we actually do find that Paris

NOTE Confidence: 0.8218414

01:01:54.190 --> 01:01:56.520 women have higher rates of sleep apnea.

NOTE Confidence: 0.8218414

01:01:56.520 --> 01:01:59.643 In our trial day screen at a higher rate.

NOTE Confidence: 0.8218414

01:01:59.650 --> 01:02:01.220 Probably also related to the

NOTE Confidence: 0.8218414

01:02:01.220 --> 01:02:02.476 fact that they're older,

NOTE Confidence: 0.8218414

01:02:02.480 --> 01:02:04.984 'cause you know just we have more kids.

NOTE Confidence: 0.8218414

01:02:04.990 --> 01:02:05.953 You get older,

NOTE Confidence: 0.8218414

01:02:05.953 --> 01:02:08.200 so they're they're older and there they

NOTE Confidence: 0.8218414

01:02:08.261 --> 01:02:10.637 tend to have higher BMI 'cause you know,

NOTE Confidence: 0.8218414

01:02:10.640 --> 01:02:10.954 unfortunately,

NOTE Confidence: 0.8218414

01:02:10.954 --> 01:02:13.466 that's what happens as we get older too,

NOTE Confidence: 0.8218414

01:02:13.470 --> 01:02:15.348 so they are at increased rates.

NOTE Confidence: 0.8218414

01:02:15.350 --> 01:02:17.457 So actually, I don't think this is

NOTE Confidence: 0.8218414

01:02:17.457 --> 01:02:19.750 just an issue with first time moms.

NOTE Confidence: 0.8218414

01:02:19.750 --> 01:02:21.878 I think it's important also to screen other

NOTE Confidence: 0.8218414

01:02:21.878 --> 01:02:24.140 at risk women in subsequent pregnancies.

NOTE Confidence: 0.80920625

01:02:25.490 --> 01:02:27.177 That's really interesting Doctor Falco.

NOTE Confidence: 0.80920625

01:02:27.177 --> 01:02:29.880 So why do you use home sleep apnea

NOTE Confidence: 0.80920625

01:02:29.880 --> 01:02:31.910 testing that is dependent on flow

NOTE Confidence: 0.80920625

01:02:31.910 --> 01:02:34.280 'cause we wish we have both systems.

NOTE Confidence: 0.80920625

01:02:34.280 --> 01:02:36.301 We use home sleep apnea testing

NOTE Confidence: 0.80920625

01:02:36.301 --> 01:02:38.330 that is dependent and then we

NOTE Confidence: 0.80920625

01:02:38.330 --> 01:02:39.682 use pulls arterial tonometry,

NOTE Confidence: 0.80920625

01:02:39.690 --> 01:02:41.013 especially in the younger

NOTE Confidence: 0.80920625

01:02:41.013 --> 01:02:42.578 populations that the path is

NOTE Confidence: 0.80920625

01:02:42.578 --> 01:02:45.089 seems to be a lot more sensitive.

NOTE Confidence: 0.80920625

01:02:45.090 --> 01:02:47.118 You could already eyes that are

NOTE Confidence: 0.80920625

01:02:47.120 --> 01:02:49.825 much higher than the hi and so I

NOTE Confidence: 0.80920625

01:02:49.825 --> 01:02:51.514 would think that this particular

NOTE Confidence: 0.80920625

01:02:51.514 --> 01:02:53.538 population would be very amenable to

NOTE Confidence: 0.80920625

01:02:53.540 --> 01:02:55.911 that type of testing like we might

NOTE Confidence: 0.80920625

01:02:55.911 --> 01:02:57.596 have some very interesting findings.

NOTE Confidence: 0.85887825

01:02:57.840 --> 01:03:00.006 I I think that's super interesting,

NOTE Confidence: 0.85887825

01:03:00.010 --> 01:03:02.890 and in fact when we designed the trial,

NOTE Confidence: 0.85887825

01:03:02.890 --> 01:03:04.700 we brought up two things.

NOTE Confidence: 0.85887825

01:03:04.700 --> 01:03:07.949 We brought up what device to use an watch.

NOTE Confidence: 0.85887825

01:03:07.950 --> 01:03:10.554 Pat came up, you know which uses

NOTE Confidence: 0.85887825

01:03:10.554 --> 01:03:12.653 peripheral tear tanama tree and part

NOTE Confidence: 0.85887825

01:03:12.653 --> 01:03:14.781 of it was cost those systems in

NOTE Confidence: 0.85887825

01:03:14.854 --> 01:03:17.206 terms of research costs were much

NOTE Confidence: 0.85887825

01:03:17.206 --> 01:03:19.500 more prohibitive for the the study.

NOTE Confidence: 0.85887825

01:03:19.500 --> 01:03:21.580 The other concern was, you know,

NOTE Confidence: 0.85887825

01:03:21.580 --> 01:03:23.820 in gathering as much data as we

NOTE Confidence: 0.85887825

01:03:23.820 --> 01:03:26.627 could in terms of what the sleep

NOTE Confidence: 0.85887825

01:03:26.627 --> 01:03:28.235 apnea look like physiologically.

NOTE Confidence: 0.85887825

01:03:28.240 --> 01:03:30.190 From both the flow and a

NOTE Confidence: 0.85887825

01:03:30.190 --> 01:03:31.165 pulse oximetry perspective,

NOTE Confidence: 0.85887825

01:03:31.170 --> 01:03:32.800 it went back and forth.

NOTE Confidence: 0.85887825

01:03:32.800 --> 01:03:35.698 We also went back and forth in terms of

NOTE Confidence: 0.85887825

01:03:35.698 --> 01:03:38.201 should we use ody greater than or equal

NOTE Confidence: 0.85887825

01:03:38.201 --> 01:03:41.278 to five as inclusion in the trial or not,

NOTE Confidence: 0.85887825

01:03:41.280 --> 01:03:43.856 and whether or not that would be enough

NOTE Confidence: 0.85887825

01:03:43.856 --> 01:03:46.205 because some women you know meet ody

NOTE Confidence: 0.85887825

01:03:46.205 --> 01:03:48.779 criteria but don't quite have the like flow.

NOTE Confidence: 0.85887825

01:03:48.780 --> 01:03:50.910 The flow events aren't quite enough

NOTE Confidence: 0.85887825

01:03:50.910 --> 01:03:53.551 to count in those and then so they

NOTE Confidence: 0.85887825

01:03:53.551 --> 01:03:55.949 screen out based on hi and you know,

NOTE Confidence: 0.85887825

01:03:55.950 --> 01:03:57.900 I don't think there's a right

NOTE Confidence: 0.85887825

01:03:57.900 --> 01:03:58.875 or wrong answer,

NOTE Confidence: 0.85887825

01:03:58.880 --> 01:04:01.022 and obviously for a trial you just

NOTE Confidence: 0.85887825

01:04:01.022 --> 01:04:03.250 have to make some decisions and.

NOTE Confidence: 0.85887825

01:04:03.250 --> 01:04:05.200 Kind of go with them,

NOTE Confidence: 0.85887825

01:04:05.200 --> 01:04:07.867 but I do think it's super interesting

NOTE Confidence: 0.85887825

01:04:07.867 --> 01:04:10.646 to think about kind of non flow

NOTE Confidence: 0.85887825

01:04:10.646 --> 01:04:12.980 related ways to measure sleep apnea,

NOTE Confidence: 0.85887825

01:04:12.980 --> 01:04:14.920 including simpler cost, effective ways.

NOTE Confidence: 0.85887825

01:04:14.920 --> 01:04:16.472 Potentially even just with

NOTE Confidence: 0.85887825

01:04:16.472 --> 01:04:17.636 nocturnal pulse oximetry.

NOTE Confidence: 0.85887825

01:04:17.640 --> 01:04:20.448 And I know that there is some interest

NOTE Confidence: 0.85887825

01:04:20.448 --> 01:04:23.479 in we're using the Sleep Rating Center.

NOTE Confidence: 0.85887825

01:04:23.480 --> 01:04:26.049 Doctor Susan Redline is our is our

NOTE Confidence: 0.85887825

01:04:26.049 --> 01:04:28.370 coordinator of our H Set meetings

NOTE Confidence: 0.85887825

01:04:28.370 --> 01:04:30.275 and she's constantly pushing us

NOTE Confidence: 0.85887825

01:04:30.275 --> 01:04:32.429 to think about these things.

NOTE Confidence: 0.85887825

01:04:32.430 --> 01:04:34.370 And you know, who knows?

NOTE Confidence: 0.85887825

01:04:34.370 --> 01:04:35.046 Maybe download.

NOTE Confidence: 0.85887825

01:04:35.046 --> 01:04:37.412 Trying to get some modifications to our

NOTE Confidence: 0.85887825

01:04:37.412 --> 01:04:39.307 inclusion criteria to re evaluate that,

NOTE Confidence: 0.85887825

01:04:39.310 --> 01:04:41.176 but I totally agree with you

NOTE Confidence: 0.85887825

01:04:41.176 --> 01:04:43.050 and I think that it's in.

NOTE Confidence: 0.85887825

01:04:43.050 --> 01:04:45.000 It's important to think about those

NOTE Confidence: 0.85887825

01:04:45.000 --> 01:04:47.229 and also that pregnant women don't love

NOTE Confidence: 0.85887825

01:04:47.229 --> 01:04:49.266 going home with the you know nasal.

NOTE Confidence: 0.85887825

01:04:49.270 --> 01:04:49.538 Yeah,

NOTE Confidence: 0.85887825

01:04:49.538 --> 01:04:51.414 monitor it it they do well when

NOTE Confidence: 0.85887825

01:04:51.414 --> 01:04:52.999 they are properly trained,

NOTE Confidence: 0.85887825

01:04:53.000 --> 01:04:55.280 but it's a huge area where it falls

NOTE Confidence: 0.85887825

01:04:55.280 --> 01:04:57.626 offen in the trial then they if they

NOTE Confidence: 0.85887825

01:04:57.626 --> 01:04:59.878 don't get a good signal from the

NOTE Confidence: 0.85887825

01:04:59.878 --> 01:05:03.036 respiratory belts they have to like we do it.

NOTE Confidence: 0.85887825

01:05:03.036 --> 01:05:05.507 And so I agree be super interesting

NOTE Confidence: 0.85887825

01:05:05.507 --> 01:05:07.519 to explore that and in.

NOTE Confidence: 0.85887825

01:05:07.520 --> 01:05:08.920 Large group of pregnant women.

NOTE Confidence: 0.8633835

01:05:10.730 --> 01:05:12.458 Great, thank you so much for

NOTE Confidence: 0.8633835

01:05:12.458 --> 01:05:13.610 this very excellent talk.

NOTE Confidence: 0.8633835

01:05:13.610 --> 01:05:15.878 I like I said few people had to peel

NOTE Confidence: 0.8633835

01:05:15.878 --> 01:05:18.215 off because of the the grand rounds.

NOTE Confidence: 0.8633835

01:05:18.220 --> 01:05:20.230 But thank you, we really appreciate it.

NOTE Confidence: 0.8633835

01:05:20.230 --> 01:05:21.940 Really informative and we're happy as

NOTE Confidence: 0.8633835

01:05:21.940 --> 01:05:24.389 a as a institution to be part of your

NOTE Confidence: 0.8633835

01:05:24.389 --> 01:05:26.280 clinical trial with were eagerly waiting.

NOTE Confidence: 0.8633835

01:05:26.280 --> 01:05:27.720 The results of that alright?

NOTE Confidence: 0.8633835

01:05:27.720 --> 01:05:29.160 Well, thank you so much.

NOTE Confidence: 0.8633835

01:05:29.160 --> 01:05:30.600 I really appreciate the opportunity.