WEBVTT

00:00:00.000 --> 00:00:02.709 So I have the extreme pleasure of

00:00:02.709 --> 00:00:05.037 introducing our Doctor, Brian object today.

00:00:05.037 --> 00:00:07.760 He's currently an assistant professor at Yale

00:00:07.821 --> 00:00:10.191 University in the section of endocrinology

00:00:10.191 --> 00:00:12.610 who recently joined the faculty here.

00:00:12.610 --> 00:00:14.430 And we are also very fortunate to

00:00:14.430 --> 00:00:16.604 have him join us in the sleep center

00:00:16.604 --> 00:00:18.270 where he sees patients as well.

00:00:18.270 --> 00:00:20.310 He received his medical degree from

00:00:20.310 --> 00:00:22.444 University of Arizona and his Masters

00:00:22.444 --> 00:00:24.580 of Public Health from Emory University.

00:00:24.580 --> 00:00:26.470 He completed his internal medicine

00:00:26.470 --> 00:00:27.982 residency at Mayo Clinic.

00:00:27.990 --> 00:00:29.622 He then completed his

NOTE Confidence: 0.850174498

00:00:29.622 --> 00:00:30.438 subspecialty fellowship.

NOTE Confidence: 0.850174498

00:00:30.440 --> 00:00:32.410 And Sleep Medicine at Yale.

NOTE Confidence: 0.850174498

00:00:32.410 --> 00:00:33.643 And then what?

NOTE Confidence: 0.850174498

00:00:33.643 --> 00:00:35.287 Endocrinology captured his interest

NOTE Confidence: 0.850174498

00:00:35.287 --> 00:00:38.251 when he studied insomnia in women and

NOTE Confidence: 0.850174498

00:00:38.251 --> 00:00:40.336 then went into doing endocrinology

NOTE Confidence: 0.850174498

00:00:40.336 --> 00:00:42.874 fellowship at Yale University to combine

NOTE Confidence: 0.850174498

00:00:42.874 --> 00:00:45.311 these two different but interrelated fields.

NOTE Confidence: 0.850174498

00:00:45.311 --> 00:00:47.216 He has additional training in

NOTE Confidence: 0.850174498

00:00:47.216 --> 00:00:49.622 obesity medicine and is a weight

NOTE Confidence: 0.850174498

00:00:49.622 --> 00:00:51.246 management specialist as well.

NOTE Confidence: 0.850174498

00:00:51.250 --> 00:00:53.434 His clinical and research focus is

NOTE Confidence: 0.850174498

00:00:53.434 --> 00:00:55.360 the comprehensive management of the

NOTE Confidence: 0.850174498

00:00:55.360 --> 00:00:57.425 interrelated disease process of diabetes,

NOTE Confidence: 0.850174498

00:00:57.430 --> 00:01:00.890 obesity and sleep disorders specifically.

NOTE Confidence: 0.850174498

00:01:00.890 --> 00:01:03.056 In how treatment for sleep disorders,

NOTE Confidence: 0.850174498

00:01:03.060 --> 00:01:04.596 diabetes and obesity overlap,

NOTE Confidence: 0.850174498

00:01:04.596 --> 00:01:07.298 he also is interested in how new

NOTE Confidence: 0.850174498

00:01:07.298 --> 00:01:09.248 drugs might help treat sleep apnea

NOTE Confidence: 0.850174498

00:01:09.248 --> 00:01:10.820 as well as obesity.

NOTE Confidence: 0.850174498

00:01:10.820 --> 00:01:12.235 He has authored many publications

NOTE Confidence: 0.850174498

00:01:12.235 --> 00:01:14.126 in these topics and has lectured

NOTE Confidence: 0.850174498

00:01:14.126 --> 00:01:16.080 nationally and internationally as well.

NOTE Confidence: 0.850174498

00:01:16.080 --> 00:01:18.240 Thank you for being with us, Doctor Roger.

NOTE Confidence: 0.850174498

00:01:18.240 --> 00:01:19.284 And without further delay,

NOTE Confidence: 0.850174498

00:01:19.284 --> 00:01:21.462 I would like to hand it over to

NOTE Confidence: 0.850174498

00:01:21.462 --> 00:01:23.124 you to share your expertise on

NOTE Confidence: 0.850174498

00:01:23.124 --> 00:01:24.360 sleep diabetes and obesity.

NOTE Confidence: 0.850174498

00:01:24.360 --> 00:01:25.080 Thank you.

NOTE Confidence: 0.839461511666667

00:01:26.390 --> 00:01:28.520 Thank you for that rousing

NOTE Confidence: 0.839461511666667

00:01:28.520 --> 00:01:30.058 introduction. My name is Brian.

NOTE Confidence: 0.89094346

00:01:30.570 --> 00:01:32.196 We're going to be talking about

NOTE Confidence: 0.65643498

00:01:32.210 --> 00:01:34.254 sleep, diabetes and obesity.

NOTE Confidence: 0.65643498

00:01:34.254 --> 00:01:36.766 Our goals today are really to understand

NOTE Confidence: 0.65643498

00:01:36.766 --> 00:01:39.910 the prevalence and Physiology of obesity.

NOTE Confidence: 0.65643498

00:01:39.910 --> 00:01:42.726 We're going to talk about what an obesity

NOTE Confidence: 0.65643498

00:01:42.726 --> 00:01:44.854 evaluation looks like and how weight

NOTE Confidence: 0.65643498

00:01:44.854 --> 00:01:47.320 management can affect sleep and vice versa.

NOTE Confidence: 0.65643498

00:01:47.320 --> 00:01:50.407 Seeking to understand the effects of sleep

NOTE Confidence: 0.65643498

00:01:50.407 --> 00:01:54.186 disorders on diabetes. So first of all,

NOTE Confidence: 0.65643498

00:01:54.186 --> 00:01:57.538 obesity is prevalent and the prevalence in

NOTE Confidence: 0.65643498

00:01:57.538 --> 00:02:00.599 the US has been really growing each year.

NOTE Confidence: 0.65643498

00:02:00.600 --> 00:02:03.309 That and it's higher among African Americans,

NOTE Confidence: 0.65643498

00:02:03.310 --> 00:02:06.376 Hispanics, Native Americans and according to

NOTE Confidence: 0.65643498

00:02:06.376 --> 00:02:10.688 the CDC and this is really as of 2018 data,

NOTE Confidence: 0.65643498

00:02:10.690 --> 00:02:12.769 42.4% of adults greater than 20 years

4

NOTE Confidence: 0.65643498

00:02:12.769 --> 00:02:14.909 old would be classified as obese.

NOTE Confidence: 0.65643498

00:02:14.910 --> 00:02:16.250 It's actually higher now,

NOTE Confidence: 0.65643498

00:02:16.250 --> 00:02:18.183 it's closer to like 46%.

NOTE Confidence: 0.65643498

00:02:18.183 --> 00:02:22.480 So it it is a disease process.

NOTE Confidence: 0.65643498

00:02:22.480 --> 00:02:25.805 That is becoming more prevalent.

NOTE Confidence: 0.65643498

00:02:25.810 --> 00:02:30.240 Now. 200.

NOTE Confidence: 0.65643498

00:02:30.240 --> 00:02:33.418 Chronic diseases have been linked to obesity,

NOTE Confidence: 0.65643498

00:02:33.420 --> 00:02:35.164 and that's not limited,

NOTE Confidence: 0.65643498

00:02:35.164 --> 00:02:37.780 including but not limited to cardiovascular

NOTE Confidence: 0.65643498

00:02:37.853 --> 00:02:40.457 disease on 13 different kinds of cancer,

NOTE Confidence: 0.65643498

00:02:40.460 --> 00:02:43.140 cerebrovascular disease, diabetes,

NOTE Confidence: 0.65643498

00:02:43.140 --> 00:02:46.490 hypertension, asthma, psychiatric disease,

NOTE Confidence: 0.65643498

00:02:46.490 --> 00:02:49.560 PCOS, Nash, and of course.

NOTE Confidence: 0.65643498

00:02:49.560 --> 00:02:51.225 Obstructive sleep apnea.

NOTE Confidence: 0.65643498

00:02:51.230 --> 00:02:51.674 All right.

NOTE Confidence: 0.65643498

00:02:51.674 --> 00:02:53.228 So we'll we'll be talking about all,

NOTE Confidence: 0.65643498

00:02:53.230 --> 00:02:54.376 all of that.

NOTE Confidence: 0.65643498

00:02:54.376 --> 00:02:57.541 But the important piece of this is that

NOTE Confidence: 0.65643498

00:02:57.541 --> 00:03:00.383 obesity is a disease that has many,

NOTE Confidence: 0.65643498

00:03:00.390 --> 00:03:03.145 many complications and treating that

NOTE Confidence: 0.65643498

00:03:03.145 --> 00:03:07.559 disease has kind of far reaching effects.

NOTE Confidence: 0.65643498

00:03:07.560 --> 00:03:08.122 So.

NOTE Confidence: 0.65643498

00:03:08.122 --> 00:03:10.370 Few caveats to first.

NOTE Confidence: 0.65643498

00:03:10.370 --> 00:03:11.330 First of all,

NOTE Confidence: 0.65643498

00:03:11.330 --> 00:03:13.940 let's start talking about how we should view

NOTE Confidence: 0.65643498

00:03:13.940 --> 00:03:16.404 obesity and how we should think about it.

NOTE Confidence: 0.65643498

00:03:16.410 --> 00:03:18.426 We often use BMI.

NOTE Confidence: 0.65643498

00:03:18.426 --> 00:03:19.938 I use BMI.

NOTE Confidence: 0.65643498

00:03:19.940 --> 00:03:22.096 But BMI is really an imperfect measure

NOTE Confidence: 0.65643498

00:03:22.096 --> 00:03:24.659 and a better measures body composition.

NOTE Confidence: 0.65643498

00:03:24.660 --> 00:03:25.892 But often we can't.

NOTE Confidence: 0.65643498

00:03:25.892 --> 00:03:28.320 Do you know a body composition, dexa.

NOTE Confidence: 0.65643498

00:03:28.320 --> 00:03:31.800 So why do I say that?

NOTE Confidence: 0.905692498333333

00:03:29.880 --> 00:03:31.730 So we have this picture here, right?

NOTE Confidence: 0.810465423703703

00:03:31.800 --> 00:03:34.131 Of a heavier gentleman of two of

NOTE Confidence: 0.810465423703703

00:03:34.131 --> 00:03:36.397 two gentlemen that are of the same

NOTE Confidence: 0.810465423703703

00:03:36.397 --> 00:03:38.658 weight and one has a different fat

NOTE Confidence: 0.810465423703703

00:03:38.658 --> 00:03:41.004 distribution and one is more muscular.

NOTE Confidence: 0.810465423703703

00:03:41.010 --> 00:03:43.284 But they might have the same BMI, right?

NOTE Confidence: 0.810465423703703

00:03:43.284 --> 00:03:45.700 That body composition matters.

NOTE Confidence: 0.810465423703703

00:03:45.700 --> 00:03:48.916 And how might it be different among people,

NOTE Confidence: 0.810465423703703

00:03:48.920 --> 00:03:50.102 elderly people?

NOTE Confidence: 0.810465423703703

00:03:50.102 --> 00:03:53.057 Persons might have more sarcopenia,

NOTE Confidence: 0.810465423703703

00:03:53.060 --> 00:03:55.283 so they have a little bit more fat mass,

NOTE Confidence: 0.810465423703703

00:03:55.290 --> 00:03:57.930 a little less muscle.

NOTE Confidence: 0.810465423703703

00:03:57.930 --> 00:04:00.138 Cardiovascular metabolism and metabolic

NOTE Confidence: 0.810465423703703

00:04:00.138 --> 00:04:03.450 risk actually also vary by ethnicity.

NOTE Confidence: 0.810465423703703

00:04:03.450 --> 00:04:06.132 So in the Southeast Asian population

NOTE Confidence: 0.810465423703703

00:04:06.132 --> 00:04:07.956 because of fat distributions

NOTE Confidence: 0.810465423703703

00:04:07.956 --> 00:04:09.808 in in that population,

NOTE Confidence: 0.810465423703703

00:04:09.810 --> 00:04:11.770 we consider those people's overweight

NOTE Confidence: 0.810465423703703

00:04:11.770 --> 00:04:14.976 at a BMI of 23 actually and we

NOTE Confidence: 0.810465423703703

00:04:14.976 --> 00:04:17.154 so we start treating treating

NOTE Confidence: 0.810465423703703

00:04:17.154 --> 00:04:19.800 patients earlier and actually the

NOTE Confidence: 0.7063261875

00:04:20.070 --> 00:04:21.775 27 or greater because of

NOTE Confidence: 0.7063261875

00:04:21.775 --> 00:04:22.798 different Baptist tributions

NOTE Confidence: 0.877940129333333

00:04:22.970 --> 00:04:25.510 and why do I say that they have a higher

NOTE Confidence: 0.877940129333333

00:04:25.577 --> 00:04:27.927 cardiovascular and metabolic risk at.

NOTE Confidence: 0.877940129333333

00:04:27.930 --> 00:04:29.631 Lower BMI, right?

NOTE Confidence: 0.877940129333333

00:04:29.631 --> 00:04:33.033 And they have more visceral fat.

NOTE Confidence: 0.877940129333333

00:04:33.040 --> 00:04:34.322 As far as their distribution

NOTE Confidence: 0.877940129333333

00:04:34.322 --> 00:04:36.288 at a lower, lower BMI?

NOTE Confidence: 0.877940129333333

00:04:36.288 --> 00:04:38.144 Higher muscle mass will

NOTE Confidence: 0.877940129333333

00:04:38.144 --> 00:04:40.480 obviously affect this as well.

NOTE Confidence: 0.877940129333333

00:04:40.480 --> 00:04:42.440 Waist circumference is also a

NOTE Confidence: 0.877940129333333

00:04:42.440 --> 00:04:46.172 better measure and and as we as

NOTE Confidence: 0.877940129333333

00:04:46.172 --> 00:04:48.724 waste circumference increases as

NOTE Confidence: 0.877940129333333

00:04:48.724 --> 00:04:51.160 does cardiometabolic risk. So.

NOTE Confidence: 0.88372977117647

00:04:53.370 --> 00:04:54.742 Obesity is a disease.

NOTE Confidence: 0.88372977117647

00:04:54.742 --> 00:04:57.228 I will convince you or I will

NOTE Confidence: 0.88372977117647

00:04:57.228 --> 00:04:59.334 try to convince you of that.

NOTE Confidence: 0.88372977117647

00:04:59.340 --> 00:05:02.364 If we think of obesity as a disease,

NOTE Confidence: 0.88372977117647

00:05:02.370 --> 00:05:03.740 it is very undertreated and

NOTE Confidence: 0.88372977117647

00:05:03.740 --> 00:05:05.689 this is a little bit old data.

NOTE Confidence: 0.88372977117647

00:05:05.690 --> 00:05:07.634 Now this is 2016,

NOTE Confidence: 0.88372977117647

00:05:07.634 --> 00:05:12.100 but if we think of obesity as a disease.

NOTE Confidence: 0.88372977117647

00:05:12.100 --> 00:05:15.424 You know, 86% of patients with

NOTE Confidence: 0.88372977117647

00:05:15.424 --> 00:05:17.640 diabetes were on appropriate

NOTE Confidence: 0.88372977117647

00:05:17.640 --> 00:05:19.824 medicines for that disease.

NOTE Confidence: 0.88372977117647

00:05:19.824 --> 00:05:23.232 Less than .5% of patients in

NOTE Confidence: 0.88372977117647

00:05:23.232 --> 00:05:25.791 this study were on medications

NOTE Confidence: 0.88372977117647

00:05:25.791 --> 00:05:28.593 to treat obesity and this was

NOTE Confidence: 0.88372977117647

00:05:28.593 --> 00:05:30.319 retrospective analysis of just

NOTE Confidence: 0.88372977117647

00:05:30.320 --> 00:05:32.504 prescription audits of patients.

NOTE Confidence: 0.88372977117647

00:05:32.504 --> 00:05:33.668 So really

NOTE Confidence: 0.792041733333333

00:05:34.080 --> 00:05:36.126 a lot, lot of patients and

NOTE Confidence: 0.87606932

00:05:36.180 --> 00:05:39.290 obesity as a disease is undertreated.

NOTE Confidence: 0.888065

00:05:41.560 --> 00:05:46.085 So. Let's talk about why this

NOTE Confidence: 0.888065

00:05:46.085 --> 00:05:48.650 kind of shift has happened.

NOTE Confidence: 0.888065

00:05:48.650 --> 00:05:51.807 So fat mass is regulated during development.

NOTE Confidence: 0.888065

00:05:51.810 --> 00:05:54.822 So as we grow up, as we,

NOTE Confidence: 0.888065

00:05:54.822 --> 00:05:56.860 as we reach different parts of life,

NOTE Confidence: 0.888065

00:05:56.860 --> 00:05:59.072 we first in our early age we

NOTE Confidence: 0.888065

00:05:59.072 --> 00:06:01.712 have kind of baby fat and then we

NOTE Confidence: 0.888065

00:06:01.712 --> 00:06:04.732 lose that fat and then as we have

NOTE Confidence: 0.888065

00:06:04.732 --> 00:06:07.587 changes in our body composition.

NOTE Confidence: 0.888065

00:06:07.590 --> 00:06:09.540 In puberty where we have more,

NOTE Confidence: 0.888065

00:06:09.540 --> 00:06:12.746 more muscle mass and maybe changes in

NOTE Confidence: 0.888065

00:06:12.746 --> 00:06:15.788 fat distribution and we kind of see this,

NOTE Confidence: 0.888065

00:06:15.790 --> 00:06:20.140 you know? Fat free mass changes here

NOTE Confidence: 0.888065

00:06:20.140 --> 00:06:23.108 and over over the decades and fat mass.

NOTE Confidence: 0.888065

00:06:23.110 --> 00:06:25.070 So fat mass kind of goes up over

NOTE Confidence: 0.888065

00:06:25.070 --> 00:06:26.759 time and then fat free mass,

NOTE Confidence: 0.888065

00:06:26.760 --> 00:06:28.488 it goes up and then eventually

NOTE Confidence: 0.888065

00:06:28.488 --> 00:06:31.084 kind of goes down as as as we age

NOTE Confidence: 0.888065

00:06:31.084 --> 00:06:32.464 because we have sarcopenia and

NOTE Confidence: 0.888065

00:06:32.528 --> 00:06:34.328 increased fat mass with aging.

NOTE Confidence: 0.888065

00:06:34.330 --> 00:06:36.507 And we also have some body composition

NOTE Confidence: 0.888065

00:06:36.507 --> 00:06:38.071 changes with menopause and pregnancy

NOTE Confidence: 0.888065

00:06:38.071 --> 00:06:40.073 and that this is important because it

NOTE Confidence: 0.888065

00:06:40.073 --> 00:06:42.148 kind of affects our fat mass set point.

NOTE Confidence: 0.888065

00:06:42.150 --> 00:06:44.214 We'll be talking in detail on what that

NOTE Confidence: 0.888065

00:06:44.214 --> 00:06:46.626 means and how we should think about all this.

NOTE Confidence: 0.888065

00:06:46.630 --> 00:06:47.476 So this is.

NOTE Confidence: 0.888065

00:06:47.476 --> 00:06:49.586 Kind of the first steps, the nitty gritty.

NOTE Confidence: 0.888065

00:06:49.586 --> 00:06:50.050 All right.

NOTE Confidence: 0.888065

00:06:50.050 --> 00:06:52.813 So the big piece from this is fat mass

NOTE Confidence: 0.888065

00:06:52.813 --> 00:06:55.665 is regulated throughout life, right?

NOTE Confidence: 0.888065

00:06:55.665 --> 00:06:58.240 And then satiety is regulated

NOTE Confidence: 0.888065

00:06:58.240 --> 00:06:59.785 via hormone signals.

NOTE Confidence: 0.888065

00:06:59.790 --> 00:07:01.500 And there's two major pathways.

NOTE Confidence: 0.888065

00:07:01.500 --> 00:07:04.590 I'm going to say them quickly,

NOTE Confidence: 0.888065

00:07:04.590 --> 00:07:05.574 but the, the,

NOTE Confidence: 0.888065

00:07:05.574 --> 00:07:06.230 the bigger,

NOTE Confidence: 0.888065

00:07:06.230 --> 00:07:07.854 biggest idea that you should take from

NOTE Confidence: 0.888065

00:07:07.854 --> 00:07:10.320 this is that there is a hunger pathway

NOTE Confidence: 0.805630913333333

00:07:10.950 --> 00:07:12.516 and then there is a satiety

NOTE Confidence: 0.836956585714286

00:07:12.530 --> 00:07:15.315 pathway. So the hunger pathway

NOTE Confidence: 0.836956585714286

00:07:15.315 --> 00:07:18.188 is that neuropeptide will NPY.

NOTE Confidence: 0.836956585714286

00:07:18.188 --> 00:07:21.736 And a goodie related peptide and then

NOTE Confidence: 0.836956585714286

00:07:21.736 --> 00:07:23.584 POMC cart is this utility pepper,

NOTE Confidence: 0.836956585714286

00:07:23.590 --> 00:07:25.780 most things work somewhere on

NOTE Confidence: 0.836956585714286

00:07:25.780 --> 00:07:27.584 that satiety pathway, all right,

NOTE Confidence: 0.836956585714286

00:07:27.584 --> 00:07:29.278 and we won't get into too much,

NOTE Confidence: 0.836956585714286

00:07:29.280 --> 00:07:31.040 but as you can see in this slide,

NOTE Confidence: 0.836956585714286

00:07:31.040 --> 00:07:32.050 there's a lot of different

NOTE Confidence: 0.883392518888889

00:07:32.060 --> 00:07:33.240 targets that people are looking

NOTE Confidence: 0.883392518888889

00:07:33.240 --> 00:07:34.880 into to try and affect this.

NOTE Confidence: 0.806914852

00:07:37.040 --> 00:07:39.630 All right. So step one,

NOTE Confidence: 0.806914852

00:07:39.630 --> 00:07:44.174 let me first let's first talk about the old

NOTE Confidence: 0.806914852

00:07:44.174 --> 00:07:47.876 idea that calorie restriction fixes every.

NOTE Confidence: 0.806914852

00:07:47.880 --> 00:07:49.736 Calorie restriction unfortunately does

NOTE Confidence: 0.806914852

00:07:49.736 --> 00:07:52.520 not result in durable weight loss.

NOTE Confidence: 0.806914852

00:07:52.520 --> 00:07:54.570 This is from the diabetes

NOTE Confidence: 0.806914852

00:07:54.570 --> 00:07:55.800 prevention prevention program,

NOTE Confidence: 0.806914852

00:07:55.800 --> 00:07:58.404 which was an RCT to determine whether

NOTE Confidence: 0.806914852

00:07:58.404 --> 00:08:00.003 lifestyle intervention or pharmacologic

NOTE Confidence: 0.806914852

00:08:00.003 --> 00:08:02.098 therapy namely metformin would prevent

NOTE Confidence: 0.806914852

00:08:02.098 --> 00:08:04.549 the delay or onset of diabetes.

NOTE Confidence: 0.806914852

00:08:04.550 --> 00:08:07.301 So you know, you can see that

NOTE Confidence: 0.806914852

00:08:07.301 --> 00:08:09.298 patients that maintained it started

NOTE Confidence: 0.806914852

00:08:09.298 --> 00:08:11.895 on lifestyle did have an initial kind

NOTE Confidence: 0.806914852

00:08:11.895 --> 00:08:14.787 of drop in weight but then it kind

NOTE Confidence: 0.806914852

00:08:14.787 --> 00:08:16.936 of maintained at this metformin.

NOTE Confidence: 0.806914852

00:08:16.936 --> 00:08:18.993 Meager weight loss. So.

00:08:18.993 --> 00:08:20.645 So calorie restriction alone

00:08:20.645 --> 00:08:23.110 doesn't have a durable weight loss.

00:08:23.110 --> 00:08:24.587 With that and we'll talk about why.

00:08:24.590 --> 00:08:24.960 All right,

00:08:24.960 --> 00:08:26.440 this goes to the stat mass set point,

00:08:26.440 --> 00:08:27.532 but we're going to talk about

00:08:27.532 --> 00:08:27.896 that Physiology.

00:08:27.900 --> 00:08:30.119 But this is data to show you.

00:08:30.120 --> 00:08:30.996 And this data,

00:08:30.996 --> 00:08:33.040 this kind of data has been reproduced

00:08:33.099 --> 00:08:34.909 with other drugs that namely

00:08:34.909 --> 00:08:36.357 like things like phentermine,

00:08:36.360 --> 00:08:37.738 topiramate where.

00:08:37.738 --> 00:08:41.183 Where simply doing lifestyle reproduction

00:08:41.183 --> 00:08:45.260 is insufficient and not a durable therapy.

00:08:45.260 --> 00:08:45.666 Umm.

NOTE Confidence: 0.806914852

00:08:45.666 --> 00:08:48.914 And the the idea is that diets fail

NOTE Confidence: 0.806914852

00:08:48.914 --> 00:08:51.578 because you have counter regulation

NOTE Confidence: 0.806914852

00:08:51.578 --> 00:08:54.910 that maintains that adiposity.

NOTE Confidence: 0.806914852

00:08:54.910 --> 00:08:55.380 Ryan,

NOTE Confidence: 0.814049033636364

00:08:56.610 --> 00:08:58.150 you just want to come a little

NOTE Confidence: 0.814049033636364

00:08:58.150 --> 00:08:59.070 closer because you're still

NOTE Confidence: 0.732800008333333

00:08:59.520 --> 00:09:01.038 coming in and out. No problem.

NOTE Confidence: 0.844266665333333

00:09:03.440 --> 00:09:06.216 So here's the other here's the next thing

NOTE Confidence: 0.844266665333333

00:09:06.216 --> 00:09:08.900 that we should kind of think about.

NOTE Confidence: 0.844266665333333

00:09:08.900 --> 00:09:11.020 If if we could just,

NOTE Confidence: 0.844266665333333

00:09:11.020 --> 00:09:12.820 if there wasn't a counter regulation,

NOTE Confidence: 0.844266665333333

00:09:12.820 --> 00:09:14.820 we should be able to just remove fat.

NOTE Confidence: 0.844266665333333

00:09:14.820 --> 00:09:17.864 This is a study of 32 pre

NOTE Confidence: 0.844266665333333

00:09:17.864 --> 00:09:20.876 menopausal women 18 to 50 with

NOTE Confidence: 0.844266665333333

00:09:20.876 --> 00:09:24.606 you know initial BMI of 22 to 27.

16

00:09:24.610 --> 00:09:28.257 And then what we find is after

00:09:28.257 --> 00:09:31.000 liposuction there was a reaccumulation

00:09:31.000 --> 00:09:34.330 and a fact after 12 months.

00:09:34.330 --> 00:09:37.018 So liposuction doesn't is

00:09:37.018 --> 00:09:39.706 not a effective treatment.

00:09:39.710 --> 00:09:41.285 And so this was liposuction

00:09:41.285 --> 00:09:42.230 versus no treatment.

00:09:42.230 --> 00:09:44.792 If if there wasn't a counter regulation

00:09:44.792 --> 00:09:46.530 liposuction should be effective but

00:09:46.530 --> 00:09:48.680 it is not these these patients return

00:09:48.680 --> 00:09:50.479 to their prior fat mass set point.

00:09:53.830 --> 00:09:56.170 All right. And this is a study I really

00:09:56.170 --> 00:09:59.019 like or I think is really interesting.

00:09:59.020 --> 00:10:00.940 Extreme weight loss causes

00:10:00.940 --> 00:10:02.380 significant counter recognition.

00:10:02.380 --> 00:10:04.660 This was a study of the

NOTE Confidence: 0.841243457142857

00:10:04.660 --> 00:10:05.800 biggest loser competition.

NOTE Confidence: 0.841243457142857

00:10:05.800 --> 00:10:08.904 So which I'm really did extreme weight loss

NOTE Confidence: 0.841243457142857

00:10:08.904 --> 00:10:12.107 in people that were a class 3 obesity and.

NOTE Confidence: 0.841243457142857

00:10:12.110 --> 00:10:15.470 So these, these people were studied

NOTE Confidence: 0.841243457142857

00:10:15.470 --> 00:10:18.240 and they they were evaluated for

NOTE Confidence: 0.841243457142857

00:10:18.240 --> 00:10:20.450 their resting metabolic rates and

NOTE Confidence: 0.841243457142857

00:10:20.527 --> 00:10:22.739 what would happened afterwards.

NOTE Confidence: 0.841243457142857

00:10:22.740 --> 00:10:25.926 So the idea is that everyone has a fat

NOTE Confidence: 0.841243457142857

00:10:25.926 --> 00:10:28.721 master point and we'll kind of talk

NOTE Confidence: 0.841243457142857

00:10:28.721 --> 00:10:31.558 about this balance in our next slide.

NOTE Confidence: 0.841243457142857

00:10:31.560 --> 00:10:34.380 And as we lose weight,

NOTE Confidence: 0.841243457142857

00:10:34.380 --> 00:10:37.095 our resting metabolic or our

NOTE Confidence: 0.841243457142857

00:10:37.095 --> 00:10:39.810 basal metabolic rate goes down.

NOTE Confidence: 0.841243457142857

00:10:39.810 --> 00:10:41.866 Right, because you have to carry less stuff,

NOTE Confidence: 0.841243457142857

00:10:41.870 --> 00:10:44.593 it takes less energy to live and

00:10:44.593 --> 00:10:47.488 when it goes down quite quickly.

00:10:47.490 --> 00:10:49.730 You actually take a little bit of a

00:10:49.730 --> 00:10:51.990 hit and you see as these patients

00:10:51.990 --> 00:10:53.610 did to their resting metabolic rate,

00:10:53.610 --> 00:10:55.505 what's interesting about this study

00:10:55.505 --> 00:10:58.294 is that five years after the biggest

00:10:58.294 --> 00:11:00.369 loser competition where they were,

00:11:00.370 --> 00:11:01.382 you know,

00:11:01.382 --> 00:11:05.720 incredibly calorie deprived exercising.

00:11:05.720 --> 00:11:11.318 Exercising to to an extreme amount.

00:11:11.320 --> 00:11:14.153 They had a lower resting metabolic

00:11:14.153 --> 00:11:17.172 than they should have five years

00:11:17.172 --> 00:11:18.876 after the competition.

00:11:18.880 --> 00:11:20.728 Which is not what you would expect.

00:11:20.730 --> 00:11:21.465 They they should,

00:11:21.465 --> 00:11:23.180 they were worse off for the competition,

00:11:23.180 --> 00:11:25.120 which by conventional logic

00:11:25.120 --> 00:11:27.551 we should be better, right.

00:11:27.551 --> 00:11:30.497 So what do we think happened

00:11:30.497 --> 00:11:31.970 to these patients?

00:11:31.970 --> 00:11:32.407 Umm.

00:11:32.407 --> 00:11:33.718 As I mentioned,

00:11:33.718 --> 00:11:37.579 we have this fat mass set point right?

00:11:37.580 --> 00:11:39.530 And I've borrowed this from

00:11:39.530 --> 00:11:40.700 Doctor Lee Kaplan.

00:11:40.700 --> 00:11:43.196 This is a great slide on so everyone

00:11:43.196 --> 00:11:45.899 has a certain fat mass set point.

00:11:45.900 --> 00:11:49.596 And that you know gets dysregulated

00:11:49.600 --> 00:11:51.120 for lots of proposed reasons.

00:11:51.120 --> 00:11:52.480 We don't know why.

00:11:52.480 --> 00:11:53.830 I have my own postulates,

NOTE Confidence: 0.841243457142857

00:11:53.830 --> 00:11:55.790 but I don't think we have good

NOTE Confidence: 0.841243457142857

00:11:55.790 --> 00:11:58.093 data to to support that that

NOTE Confidence: 0.841243457142857

00:11:58.093 --> 00:12:00.958 any any particular theory yet.

NOTE Confidence: 0.841243457142857

00:12:00.960 --> 00:12:03.726 But we know it gets disregulated.

NOTE Confidence: 0.841243457142857

00:12:03.730 --> 00:12:08.050 And when we lose weight at a fast rate,

NOTE Confidence: 0.841243457142857

00:12:08.050 --> 00:12:12.978 our fat mass setpoint stays steady and our.

NOTE Confidence: 0.841243457142857

00:12:12.980 --> 00:12:15.460 And but our metabolic rate goes down and

NOTE Confidence: 0.841243457142857

00:12:15.460 --> 00:12:18.317 if we lose weight too quickly or very,

NOTE Confidence: 0.841243457142857

00:12:18.320 --> 00:12:20.560 very quickly takes a bit of a hit.

NOTE Confidence: 0.841243457142857

00:12:20.560 --> 00:12:22.696 We were to maintain that weight

NOTE Confidence: 0.841243457142857

00:12:22.696 --> 00:12:24.120 to kind of equilibrates.

NOTE Confidence: 0.841243457142857

00:12:24.120 --> 00:12:25.758 But what more often happens is

NOTE Confidence: 0.841243457142857

00:12:25.758 --> 00:12:27.976 you take a hit to the metabolic

NOTE Confidence: 0.841243457142857

00:12:27.976 --> 00:12:29.736 rate and patients regain weight

NOTE Confidence: 0.841243457142857

00:12:29.736 --> 00:12:31.910 and often gain a little bit more.

NOTE Confidence: 0.841243457142857

00:12:31.910 --> 00:12:33.914 So that conventional thinking,

NOTE Confidence: 0.841243457142857

00:12:33.914 --> 00:12:34.916 eat less,

NOTE Confidence: 0.841243457142857

00:12:34.920 --> 00:12:37.175 exercise more just doesn't work

NOTE Confidence: 0.841243457142857

00:12:37.175 --> 00:12:40.359 because the body defends this fat mass

NOTE Confidence: 0.841243457142857

00:12:40.359 --> 00:12:43.348 setpoint and the goal of weight management.

NOTE Confidence: 0.841243457142857

00:12:43.350 --> 00:12:45.170 Is to work on Physiology,

NOTE Confidence: 0.841243457142857

00:12:45.170 --> 00:12:46.026 all right.

NOTE Confidence: 0.841243457142857

00:12:46.026 --> 00:12:48.594 And we'll talk about how there

NOTE Confidence: 0.841243457142857

00:12:48.594 --> 00:12:50.658 are conservative ways and more

NOTE Confidence: 0.841243457142857

00:12:50.658 --> 00:12:52.548 aggressive ways to do them.

NOTE Confidence: 0.841243457142857

00:12:52.550 --> 00:12:54.170 So.

NOTE Confidence: 0.841243457142857

00:12:54.170 --> 00:12:56.264 Let's put obesity in the kind

NOTE Confidence: 0.841243457142857

00:12:56.264 --> 00:12:58.114 of classical framework we think

NOTE Confidence: 0.841243457142857

00:12:58.114 --> 00:12:59.257 of other diseases.

NOTE Confidence: 0.841243457142857

00:12:59.260 --> 00:13:01.300 Primary prevention is really to

NOTE Confidence: 0.841243457142857

00:13:01.300 --> 00:13:03.767 prevent obesity as a disease, right?

NOTE Confidence: 0.841243457142857

00:13:03.767 --> 00:13:05.048 We prevent obesity.

NOTE Confidence: 0.841243457142857

00:13:05.048 --> 00:13:09.670 We certainly will prevent its complications.

NOTE Confidence: 0.841243457142857

00:13:09.670 --> 00:13:10.358 Secondary,

NOTE Confidence: 0.841243457142857

00:13:10.358 --> 00:13:13.798 secondary prevention is to prevent

NOTE Confidence: 0.841243457142857

00:13:13.798 --> 00:13:16.550 the complications of obesity.

NOTE Confidence: 0.841243457142857

00:13:16.550 --> 00:13:18.909 So we treat the disease of obesity.

NOTE Confidence: 0.841243457142857

00:13:18.910 --> 00:13:21.530 We evaluate for the complications,

NOTE Confidence: 0.841243457142857

00:13:21.530 --> 00:13:23.370 such as obstructive sleep apnea.

NOTE Confidence: 0.859725574

00:13:24.070 --> 00:13:28.010 And then we we treat those

NOTE Confidence: 0.867015385789474

00:13:28.010 --> 00:13:29.478 in tertiary prevention, right?

NOTE Confidence: 0.867015385789474

00:13:29.478 --> 00:13:32.307 We treat complications of obesity if we find

NOTE Confidence: 0.867015385789474

00:13:32.307 --> 00:13:34.309 them and hopefully we can prevent them.

NOTE Confidence: 0.867015385789474

00:13:34.310 --> 00:13:36.135 You know, someone does not

NOTE Confidence: 0.867015385789474

00:13:36.135 --> 00:13:37.230 have those complications,

NOTE Confidence: 0.867015385789474

00:13:37.230 --> 00:13:40.219 we can simply treat the primary disease

NOTE Confidence: 0.867015385789474

00:13:40.219 --> 00:13:43.510 and and not develop those problems.

NOTE Confidence: 0.867015385789474

00:13:43.510 --> 00:13:45.570 Great, maybe I've convinced you.

NOTE Confidence: 0.867015385789474

00:13:45.570 --> 00:13:48.620 But how do we, how do we change that fatness?

NOTE Confidence: 0.867015385789474

00:13:48.620 --> 00:13:51.470 Setpoint. What do we do? All right?

NOTE Confidence: 0.867015385789474

00:13:51.470 --> 00:13:53.670 Let's talk about conservative things.

NOTE Confidence: 0.867015385789474

00:13:53.670 --> 00:13:55.950 Simple, simple things, right?

NOTE Confidence: 0.867015385789474

00:13:55.950 --> 00:13:57.927 So the what? What?

NOTE Confidence: 0.867015385789474

00:13:57.927 --> 00:13:58.728 We'll kind of.

NOTE Confidence: 0.801322871666667

00:14:01.000 --> 00:14:03.712 Affect our fat mass set point are things

NOTE Confidence: 0.801322871666667

00:14:03.712 --> 00:14:06.789 like how how calorie dense our diets are and

NOTE Confidence: 0.801322871666667

00:14:06.789 --> 00:14:11.780 what what do I mean by that? The goal of.

NOTE Confidence: 0.801322871666667

00:14:11.780 --> 00:14:15.568 Diet is not to make someone hungry, right?

NOTE Confidence: 0.801322871666667

00:14:15.568 --> 00:14:18.439 We shouldn't shake life, and all of

NOTE Confidence: 0.801322871666667

00:14:18.439 --> 00:14:20.917 that is not an effective treatment.

NOTE Confidence: 0.801322871666667

00:14:20.920 --> 00:14:24.088 Modality, as we just saw in this biggest

NOTE Confidence: 0.801322871666667

00:14:24.088 --> 00:14:27.000 loser study, are the goal should be

00:14:27.000 --> 00:14:30.160 to pick foods that are healthful,

00:14:30.160 --> 00:14:33.016 that are not very calorie dense.

00:14:33.020 --> 00:14:35.240 That's a really complicated statement.

00:14:35.240 --> 00:14:37.600 So what's the one thing you can tell

00:14:37.600 --> 00:14:39.439 your patients eat more vegetables.

00:14:39.440 --> 00:14:42.144 Very low calorie density.

00:14:42.144 --> 00:14:45.040 Right. Healthful.

00:14:45.040 --> 00:14:47.217 Not a lot of satiety with vegetables,

00:14:47.220 --> 00:14:50.300 but if you shovel enough vegetables in,

00:14:50.300 --> 00:14:53.116 you actually might have an effect on weight.

00:14:53.120 --> 00:14:54.630 Umm.

00:14:54.630 --> 00:14:57.306 Sleep deprivation certainly has an effect.

00:14:57.310 --> 00:14:59.022 Circadian disruption has an

00:14:59.022 --> 00:15:01.488 effect and high stress, you know,

00:15:01.488 --> 00:15:03.732 so and we'll talk about those

00:15:03.732 --> 00:15:05.130 findings and and why,

NOTE Confidence: 0.801322871666667

00:15:05.130 --> 00:15:07.098 why that those things might change

NOTE Confidence: 0.801322871666667

00:15:07.098 --> 00:15:08.870 the fat mass set point.

NOTE Confidence: 0.801322871666667

00:15:08.870 --> 00:15:09.440 All right.

NOTE Confidence: 0.9342246325

00:15:11.450 --> 00:15:12.578 So first of all.

NOTE Confidence: 0.706162086666667

00:15:14.720 --> 00:15:15.920 Course it does.

NOTE Confidence: 0.706162086666667

00:15:15.920 --> 00:15:18.377 I don't have to convince anyone here.

NOTE Confidence: 0.706162086666667

00:15:18.380 --> 00:15:24.768 So this was a look at 718 sleep Diaries

NOTE Confidence: 0.706162086666667

00:15:24.768 --> 00:15:27.871 in the Wisconsin Sleep cohort and

NOTE Confidence: 0.706162086666667

00:15:27.871 --> 00:15:30.888 they did vein sampling of growlin and

NOTE Confidence: 0.706162086666667

00:15:30.888 --> 00:15:33.718 leptin and you'll find that patients

NOTE Confidence: 0.706162086666667

00:15:33.718 --> 00:15:37.774 that are had a higher BMI had higher

NOTE Confidence: 0.706162086666667

00:15:37.774 --> 00:15:41.745 levels of brelan and lower levels of

NOTE Confidence: 0.706162086666667

00:15:41.745 --> 00:15:43.648 leptin and what that means is they.

NOTE Confidence: 0.706162086666667

00:15:43.650 --> 00:15:46.706 Basically had more of a feeding dry right

NOTE Confidence: 0.706162086666667

00:15:46.706 --> 00:15:49.536 and that was driven by their sleep,

NOTE Confidence: 0.706162086666667

00:15:49.540 --> 00:15:50.722 sleep deprivation, right.

NOTE Confidence: 0.706162086666667

00:15:50.722 --> 00:15:52.692 So these patients that slept

NOTE Confidence: 0.706162086666667

00:15:52.692 --> 00:15:54.764 less had hormonal changes that

NOTE Confidence: 0.706162086666667

00:15:54.764 --> 00:15:56.794 pushed their feeding drive up.

NOTE Confidence: 0.937920998

00:16:00.060 --> 00:16:01.580 So this is another study.

NOTE Confidence: 0.937920998

00:16:01.580 --> 00:16:02.920 I really like this.

NOTE Confidence: 0.937920998

00:16:02.920 --> 00:16:05.959 There's a couple of them done by Ken Wright,

NOTE Confidence: 0.937920998

00:16:05.960 --> 00:16:08.144 who's a circadian scientist.

NOTE Confidence: 0.937920998

00:16:08.144 --> 00:16:12.636 And this was a two week long study

NOTE Confidence: 0.937920998

00:16:12.636 --> 00:16:15.244 looking at energy expenditure and ad

NOTE Confidence: 0.937920998

00:16:15.244 --> 00:16:18.040 libitum food intake to assess, you know,

NOTE Confidence: 0.937920998

00:16:18.040 --> 00:16:21.225 energy balance and he also looks at.

NOTE Confidence: 0.26585364

00:16:23.900 --> 00:16:25.500 At different hormones you did vein

NOTE Confidence: 0.26585364

00:16:25.500 --> 00:16:26.948 sampling through this specifically.

NOTE Confidence: 0.26585364

00:16:26.948 --> 00:16:29.903 You know we won't get into the nitty

NOTE Confidence: 0.26585364

00:16:29.903 --> 00:16:31.698 gritty of the different hormones,

NOTE Confidence: 0.26585364

00:16:31.700 --> 00:16:33.188 but the bottom line is he

NOTE Confidence: 0.26585364

00:16:33.188 --> 00:16:34.180 did some vein sampling.

NOTE Confidence: 0.26585364

00:16:34.180 --> 00:16:36.692 So what what he would do is he

NOTE Confidence: 0.26585364

00:16:36.692 --> 00:16:39.088 had a baseline, baseline section,

NOTE Confidence: 0.26585364

00:16:39.088 --> 00:16:41.308 a sleep deprivation section and

NOTE Confidence: 0.26585364

00:16:41.308 --> 00:16:45.830 then like a recovery section, so.

NOTE Confidence: 0.26585364

00:16:45.830 --> 00:16:48.070 So the and he compared

NOTE Confidence: 0.26585364

00:16:48.070 --> 00:16:49.414 patients to themselves.

NOTE Confidence: 0.26585364

00:16:49.420 --> 00:16:54.076 And the the important piece here is that.

NOTE Confidence: 0.26585364

00:16:54.080 --> 00:16:55.232 Energy expenditure. So what?

NOTE Confidence: 0.26585364

00:16:55.232 --> 00:16:57.270 What have, what does what happens?

NOTE Confidence: 0.26585364

00:16:57.270 --> 00:16:58.365 With sleep deprivation,

NOTE Confidence: 0.26585364

00:16:58.370 --> 00:17:00.146 energy expenditure increases,

NOTE Confidence: 0.26585364

00:17:00.146 --> 00:17:04.075 so your metabolic rate increases, however.

NOTE Confidence: 0.26585364

00:17:04.075 --> 00:17:10.830 Patients had higher intake of of foods,

NOTE Confidence: 0.26585364

00:17:10.830 --> 00:17:12.723 right that outpaced.

NOTE Confidence: 0.26585364

00:17:12.723 --> 00:17:16.509 That, that energy expenditure with a

NOTE Confidence: 0.26585364

00:17:16.509 --> 00:17:19.392 preference towards carbs a little bit.

NOTE Confidence: 0.26585364

00:17:19.392 --> 00:17:20.736 And then why did it happen?

NOTE Confidence: 0.26585364

00:17:20.740 --> 00:17:22.444 Well, we thought they found increases

NOTE Confidence: 0.26585364

00:17:22.444 --> 00:17:24.780 in some of the hunger hormones, right?

NOTE Confidence: 0.26585364

00:17:24.780 --> 00:17:26.080 Same thing we saw before,

NOTE Confidence: 0.26585364

00:17:26.080 --> 00:17:29.176 increase in growing, decrease in leptin.

NOTE Confidence: 0.26585364

00:17:29.180 --> 00:17:31.560 So this kind of same consistent signal.

NOTE Confidence: 0.26585364

00:17:31.560 --> 00:17:34.362 All right, so sleep deprivation and

NOTE Confidence: 0.26585364

00:17:34.362 --> 00:17:36.860 sleep quality matter for weight.

NOTE Confidence: 0.26585364

00:17:36.860 --> 00:17:41.150 Any and and acute sleep deprivation.

NOTE Confidence: 0.26585364

00:17:41.150 --> 00:17:42.386 Because this was a short study,

NOTE Confidence: 0.26585364

00:17:42.390 --> 00:17:44.710 we saw this happened very quickly, right.

NOTE Confidence: 0.26585364

00:17:44.710 --> 00:17:46.610 This wasn't years, this was,

NOTE Confidence: 0.26585364

00:17:46.610 --> 00:17:48.250 you know, couple weeks.

NOTE Confidence: 0.26585364

00:17:48.250 --> 00:17:48.621 So,

NOTE Confidence: 0.26585364

00:17:48.621 --> 00:17:50.476 so those kind of acute

NOTE Confidence: 0.26585364

00:17:50.476 --> 00:17:51.960 changes matter for day-to-day.

NOTE Confidence: 0.83158331

00:17:54.600 --> 00:17:57.832 Stress reduction matters, right?

NOTE Confidence: 0.83158331

00:17:57.832 --> 00:18:02.336 Simple things. So this was a a study,

NOTE Confidence: 0.83158331

00:18:02.340 --> 00:18:05.986 a case control study of of the kind

NOTE Confidence: 0.83158331

00:18:05.986 --> 00:18:08.240 of women who had acute stresses in

NOTE Confidence: 0.83158331

00:18:08.310 --> 00:18:10.620 their lives and had acute weight,

NOTE Confidence: 0.83158331

00:18:10.620 --> 00:18:15.555 rapid weight gain around a stressful event.

NOTE Confidence: 0.83158331

00:18:15.560 --> 00:18:17.288 And and looking at you know

NOTE Confidence: 0.83158331

00:18:17.288 --> 00:18:18.871 reference weight non stress related

NOTE Confidence: 0.83158331

00:18:18.871 --> 00:18:20.746 obesity and stress related obesity,

NOTE Confidence: 0.83158331

00:18:20.750 --> 00:18:23.278 this is just to show that there is

NOTE Confidence: 0.83158331

00:18:23.278 --> 00:18:26.312 a what appears to be an etiology of

NOTE Confidence: 0.83158331

00:18:26.312 --> 00:18:28.709 a stress related gain in weight.

NOTE Confidence: 0.83158331

00:18:28.710 --> 00:18:31.270 These patients had 24 hour urinary free,

NOTE Confidence: 0.83158331

00:18:31.270 --> 00:18:31.946 cortisol strong.

NOTE Confidence: 0.83158331

00:18:31.946 --> 00:18:34.312 That were elevated and it was really

NOTE Confidence: 0.83158331

00:18:34.312 --> 00:18:36.744 kind of shown that that obesity was

NOTE Confidence: 0.83158331

00:18:36.744 --> 00:18:38.912 associated with that stress and and

NOTE Confidence: 0.83158331

00:18:38.912 --> 00:18:40.787 that stress increased their cortisol,

NOTE Confidence: 0.83158331

00:18:40.790 --> 00:18:43.690 increase their feeding behavior

NOTE Confidence: 0.83158331

00:18:43.690 --> 00:18:45.622 and what they counted as an event

NOTE Confidence: 0.83158331

00:18:45.622 --> 00:18:48.170 as stress is pregnancy, lactation,

NOTE Confidence: 0.83158331

00:18:48.170 --> 00:18:50.768 miscarriage, death of a family member,

NOTE Confidence: 0.83158331

00:18:50.770 --> 00:18:51.440 job change,

NOTE Confidence: 0.83158331

00:18:51.440 --> 00:18:53.115 smoking cessation and the list

NOTE Confidence: 0.83158331

00:18:53.115 --> 00:18:54.370 kind of went on.

NOTE Confidence: 0.83158331

00:18:54.370 --> 00:18:56.890 The bottom line is that acute stress

NOTE Confidence: 0.83158331

00:18:56.890 --> 00:18:58.681 caused these patients to gain

NOTE Confidence: 0.83158331

31

00:18:58.681 --> 00:19:00.619 weight and there was a physiologic

NOTE Confidence: 0.83158331

00:19:00.619 --> 00:19:02.260 change in their cortisol.

NOTE Confidence: 0.84784805

00:19:04.310 --> 00:19:06.758 So. There's all these things that

NOTE Confidence: 0.84784805

00:19:06.758 --> 00:19:09.240 affect the fat mass set point.

NOTE Confidence: 0.84784805

00:19:09.240 --> 00:19:11.010 There's a few strategies we

NOTE Confidence: 0.84784805

00:19:11.010 --> 00:19:12.780 talked about that are conservative

NOTE Confidence: 0.84784805

00:19:12.842 --> 00:19:15.180 that might have an effect on it.

NOTE Confidence: 0.84784805

00:19:15.180 --> 00:19:18.220 But you know, everyone kind of has heard

NOTE Confidence: 0.84784805

00:19:18.220 --> 00:19:21.000 that there's new medicines for this too.

NOTE Confidence: 0.84784805

00:19:21.000 --> 00:19:23.840 So why? How do these these things work?

NOTE Confidence: 0.84784805

00:19:23.840 --> 00:19:27.150 What are we doing? Well.

NOTE Confidence: 0.84784805

00:19:27.150 --> 00:19:28.900 Well, take a little bit of a

NOTE Confidence: 0.84784805

00:19:28.900 --> 00:19:30.024 history lesson here, right.

NOTE Confidence: 0.84784805

00:19:30.024 --> 00:19:33.270 There's four things we could do, right.

NOTE Confidence: 0.84784805

00:19:33.270 --> 00:19:35.897 We can, well, I'm sorry,

NOTE Confidence: 0.84784805

00:19:35.897 --> 00:19:37.360 there's two two things we can do.

NOTE Confidence: 0.84784805

00:19:37.360 --> 00:19:40.500 We can either increase exercise

NOTE Confidence: 0.84784805

00:19:40.500 --> 00:19:42.138 and thermogenesis, right.

NOTE Confidence: 0.84784805

00:19:42.138 --> 00:19:45.960 We either increase our metabolic rate or

NOTE Confidence: 0.84784805

00:19:46.052 --> 00:19:49.444 we increase satiety or or quote UN quote,

NOTE Confidence: 0.84784805

00:19:49.450 --> 00:19:51.769 decrease our appetite.

NOTE Confidence: 0.84784805

00:19:51.770 --> 00:19:52.493 Because these are,

NOTE Confidence: 0.84784805

00:19:52.493 --> 00:19:53.836 these are our goals, right?

NOTE Confidence: 0.84784805

00:19:53.836 --> 00:19:57.290 These are our targets is one of these two,

NOTE Confidence: 0.84784805

00:19:57.290 --> 00:20:00.818 but we try to do this first one,

NOTE Confidence: 0.84784805

00:20:00.820 --> 00:20:02.480 increasing exercise or thermogenic.

NOTE Confidence: 0.84784805

00:20:02.480 --> 00:20:07.010 So first of all, increasing exercise.

NOTE Confidence: 0.84784805

00:20:07.010 --> 00:20:09.026 Really effective in your

NOTE Confidence: 0.84784805

00:20:09.026 --> 00:20:12.416 20s as a weight loss target,

NOTE Confidence: 0.84784805

00:20:12.416 --> 00:20:16.746 less effective as we age.

NOTE Confidence: 0.84784805

00:20:16.750 --> 00:20:19.048 Does that make exercise less important?

NOTE Confidence: 0.84784805

33

00:20:19.050 --> 00:20:20.268 Not at all,

NOTE Confidence: 0.84784805

00:20:20.268 --> 00:20:22.959 but we have to counsel patients about

NOTE Confidence: 0.84784805

00:20:22.959 --> 00:20:24.702 that and what we'll get into the

NOTE Confidence: 0.84784805

00:20:24.702 --> 00:20:26.828 detail the nitty gritty on that as we age.

NOTE Confidence: 0.84784805

00:20:26.830 --> 00:20:29.890 Exercise is good for weight maintenance.

NOTE Confidence: 0.84784805

00:20:29.890 --> 00:20:33.450 Maintaining muscle and bone strength.

NOTE Confidence: 0.84784805

00:20:33.450 --> 00:20:35.770 And and improving metabolic health,

NOTE Confidence: 0.84784805

00:20:35.770 --> 00:20:38.083 but it doesn't cause a lot of weight loss,

NOTE Confidence: 0.84784805

00:20:38.090 --> 00:20:39.014 all right.

NOTE Confidence: 0.84784805

00:20:39.014 --> 00:20:41.786 So it's so although very important

NOTE Confidence: 0.84784805

00:20:41.786 --> 00:20:45.174 part of your plan you have to counsel

NOTE Confidence: 0.84784805

00:20:45.174 --> 00:20:47.550 patients on what that actually does.

NOTE Confidence: 0.84784805

00:20:47.550 --> 00:20:48.850 So what about thermogenesis?

NOTE Confidence: 0.84784805

00:20:48.850 --> 00:20:50.800 Why don't we just give everyone

NOTE Confidence: 0.84784805

00:20:50.855 --> 00:20:52.207 all the thyroid medicine?

NOTE Confidence: 0.84784805

00:20:52.210 --> 00:20:53.902 We can just load everyone up

NOTE Confidence: 0.84784805

00:20:53.902 --> 00:20:56.098 and make some thyrotoxic.

NOTE Confidence: 0.84784805

00:20:56.100 --> 00:20:56.556 Well,

NOTE Confidence: 0.84784805

00:20:56.556 --> 00:20:59.748 we tried that in the 70s with

NOTE Confidence: 0.84784805

00:20:59.748 --> 00:21:02.302 thyroid and DNP. And it harms people.

NOTE Confidence: 0.84784805

00:21:02.302 --> 00:21:04.030 So we don't do that anymore.

NOTE Confidence: 0.84784805

00:21:04.030 --> 00:21:05.470 There are some caveats to that.

NOTE Confidence: 0.84784805

00:21:05.470 --> 00:21:07.606 There's some research trying to learn,

NOTE Confidence: 0.84784805

00:21:07.610 --> 00:21:09.388 looking into how to do this safely.

NOTE Confidence: 0.84784805

00:21:09.390 --> 00:21:13.737 Umm, I am a little bit skeptical of it,

NOTE Confidence: 0.84784805

00:21:13.740 --> 00:21:15.336 but I think maybe we'll be

NOTE Confidence: 0.84784805

00:21:15.336 --> 00:21:17.348 able to do that in the future.

NOTE Confidence: 0.84784805

00:21:17.350 --> 00:21:20.248 But that's really not medicines do anymore.

NOTE Confidence: 0.84784805

00:21:20.250 --> 00:21:23.220 So what our medicines really do.

NOTE Confidence: 0.84784805

00:21:23.220 --> 00:21:24.924 Is the affects the tivity all

NOTE Confidence: 0.84784805

00:21:24.924 --> 00:21:27.078 right and they lower that fat mass

NOTE Confidence: 0.84784805

00:21:27.078 --> 00:21:28.673 set point by affecting satiety?

NOTE Confidence: 0.8712706

00:21:32.810 --> 00:21:37.788 So. When we talk about obesity treatment.

NOTE Confidence: 0.8712706

00:21:37.790 --> 00:21:39.570 It's we finally have medicines

NOTE Confidence: 0.8712706

00:21:39.570 --> 00:21:41.350 that are effective and they're

NOTE Confidence: 0.8712706

00:21:41.410 --> 00:21:42.960 safer than the ones that, you

NOTE Confidence: 0.941103798333333

00:21:42.970 --> 00:21:44.440 know, we've had in the past.

NOTE Confidence: 0.827556118333333

00:21:45.040 --> 00:21:47.080 But the effect of all obesity

NOTE Confidence: 0.827556118333333

00:21:47.080 --> 00:21:51.220 medicines are really variable.

NOTE Confidence: 0.827556118333333

00:21:51.220 --> 00:21:54.398 So this is the scale trial looking

NOTE Confidence: 0.827556118333333

00:21:54.398 --> 00:21:56.879 at liraglutide and weight loss.

NOTE Confidence: 0.827556118333333

00:21:56.880 --> 00:22:00.180 Versus placebo and what you'll see,

NOTE Confidence: 0.827556118333333

00:22:00.180 --> 00:22:02.322 right, is what what is often

NOTE Confidence: 0.827556118333333

00:22:02.322 --> 00:22:03.750 called a waterfall plot.

NOTE Confidence: 0.827556118333333

00:22:03.750 --> 00:22:05.220 Is there's a one, and these are

NOTE Confidence: 0.827556118333333

00:22:05.220 --> 00:22:06.947 each in each of these little lines.

NOTE Confidence: 0.827556118333333

00:22:06.950 --> 00:22:09.830 Here is an individual.

NOTE Confidence: 0.827556118333333

00:22:09.830 --> 00:22:13.114 And there's a wide variety of

NOTE Confidence: 0.827556118333333

00:22:13.114 --> 00:22:16.242 how this a few each charm.

NOTE Confidence: 0.827556118333333

00:22:16.242 --> 00:22:18.207 Have gained weight, right?

NOTE Confidence: 0.827556118333333

00:22:18.207 --> 00:22:19.818 What the heck?

NOTE Confidence: 0.827556118333333

00:22:19.818 --> 00:22:21.966 He started these medicines.

NOTE Confidence: 0.827556118333333

00:22:21.970 --> 00:22:22.942 And they didn't.

NOTE Confidence: 0.827556118333333

00:22:22.942 --> 00:22:25.780 They might have gained a little bit on them.

NOTE Confidence: 0.827556118333333

00:22:25.780 --> 00:22:27.536 And in obesity medicine,

NOTE Confidence: 0.827556118333333

00:22:27.536 --> 00:22:30.170 we're unfortunately at a place where

NOTE Confidence: 0.827556118333333

00:22:30.244 --> 00:22:32.620 there's we're still a little bit.

NOTE Confidence: 0.827556118333333

00:22:32.620 --> 00:22:34.772 Um, at a trial and error we can

NOTE Confidence: 0.827556118333333

00:22:34.772 --> 00:22:36.498 say these are the averages,

NOTE Confidence: 0.827556118333333

00:22:36.500 --> 00:22:38.930 but you can't really tell how

NOTE Confidence: 0.827556118333333

00:22:38.930 --> 00:22:41.108 well any individual therapy will

NOTE Confidence: 0.827556118333333

00:22:41.108 --> 00:22:44.325 work for an for that the patient

NOTE Confidence: 0.827556118333333

00:22:44.325 --> 00:22:47.169 that's sitting in front of you.

NOTE Confidence: 0.827556118333333

00:22:47.170 --> 00:22:48.580 The goal here?

NOTE Confidence: 0.827556118333333

00:22:48.580 --> 00:22:49.990 The Holy Grail.

NOTE Confidence: 0.827556118333333

00:22:49.990 --> 00:22:52.867 Is to be able to maybe phenotype

NOTE Confidence: 0.827556118333333

00:22:52.867 --> 00:22:55.315 obesity and and target those

NOTE Confidence: 0.827556118333333

00:22:55.315 --> 00:22:58.130 patients are correctly all right,

NOTE Confidence: 0.827556118333333

00:22:58.130 --> 00:22:59.600 but we're just not there yet.

NOTE Confidence: 0.84059227

00:23:01.920 --> 00:23:05.960 So. You know, someone comes in,

NOTE Confidence: 0.84059227

00:23:05.960 --> 00:23:09.200 they lost £10, you know, they weigh maybe

NOTE Confidence: 0.86965358

00:23:09.720 --> 00:23:10.985 £200 and they they're kind

NOTE Confidence: 0.86965358

00:23:10.985 --> 00:23:12.250 of down on themselves and

NOTE Confidence: 0.777336492857143

00:23:12.580 --> 00:23:13.368 they don't,

NOTE Confidence: 0.777336492857143

00:23:13.368 --> 00:23:15.739 they didn't lose much weight well.

NOTE Confidence: 0.777336492857143

00:23:15.739 --> 00:23:17.734 Even small changes in weight

NOTE Confidence: 0.777336492857143

00:23:17.734 --> 00:23:19.900 are important for your health.

NOTE Confidence: 0.777336492857143

00:23:19.900 --> 00:23:23.524 So even a 5% change in your weight

NOTE Confidence: 0.777336492857143

00:23:23.524 --> 00:23:27.163 will affect diabetes, cholesterol,

NOTE Confidence: 0.777336492857143

00:23:27.163 --> 00:23:30.649 hypertension, steatosis.

NOTE Confidence: 0.777336492857143

00:23:30.650 --> 00:23:35.050 And no PCOS and hypogonadism.

NOTE Confidence: 0.777336492857143

00:23:35.050 --> 00:23:39.264 So these these quote UN quote small

NOTE Confidence: 0.777336492857143

00:23:39.270 --> 00:23:43.098 changes in weight really do have important

NOTE Confidence: 0.777336492857143

00:23:43.098 --> 00:23:46.950 impacts and and should be followed.

NOTE Confidence: 0.777336492857143

00:23:46.950 --> 00:23:49.434 So even if even if it doesn't seem like

NOTE Confidence: 0.777336492857143

00:23:49.434 --> 00:23:53.410 a really big weight loss, all right.

NOTE Confidence: 0.777336492857143

00:23:53.410 --> 00:23:57.950 For obstructive sleep apnea specifically.

NOTE Confidence: 0.777336492857143

00:23:57.950 --> 00:24:01.028 Usually in here we're seeing set 7 to 11.

NOTE Confidence: 0.777336492857143

00:24:01.030 --> 00:24:03.730 I usually say if someone's

NOTE Confidence: 0.777336492857143

00:24:03.730 --> 00:24:06.600 lost 10% of their body weight.

NOTE Confidence: 0.777336492857143

00:24:06.600 --> 00:24:09.547 Maybe we can think about retesting them.

NOTE Confidence: 0.777336492857143

00:24:09.550 --> 00:24:11.623 OK, so. Fine.

NOTE Confidence: 0.777336492857143

00:24:11.623 --> 00:24:15.078 We've been talking a lot.

NOTE Confidence: 0.777336492857143

00:24:15.080 --> 00:24:18.088 Weight loss and on the, you know,

NOTE Confidence: 0.777336492857143

00:24:18.088 --> 00:24:19.898 understanding it as a disease,

NOTE Confidence: 0.777336492857143

00:24:19.900 --> 00:24:23.158 how does that affect, you know,

NOTE Confidence: 0.777336492857143

00:24:23.160 --> 00:24:26.020 sleep as a field? Well,

NOTE Confidence: 0.777336492857143

00:24:26.020 --> 00:24:28.780 weight loss has a significant effect on OSA.

NOTE Confidence: 0.777336492857143

00:24:28.780 --> 00:24:30.700 This is one of many studies.

NOTE Confidence: 0.777336492857143

00:24:30.700 --> 00:24:33.708 This was an RCT.

NOTE Confidence: 0.777336492857143

00:24:33.710 --> 00:24:34.060 Uh,

NOTE Confidence: 0.777336492857143

00:24:34.060 --> 00:24:36.236 that was 89 patients that were

NOTE Confidence: 0.777336492857143

00:24:36.236 --> 00:24:38.450 randomized to CPAC or CPAP plus

NOTE Confidence: 0.777336492857143

00:24:38.526 --> 00:24:40.651 of weight loss intervention and

NOTE Confidence: 0.777336492857143

00:24:40.651 --> 00:24:42.776 that was defined as nutrition

NOTE Confidence: 0.777336492857143

00:24:42.780 --> 00:24:44.904 plus an alcohol intervention

NOTE Confidence: 0.777336492857143

00:24:44.904 --> 00:24:47.028 plus tobacco plus exercise.

NOTE Confidence: 0.777336492857143

00:24:47.030 --> 00:24:49.960 This was 100% Hispanic population.

NOTE Confidence: 0.777336492857143

00:24:49.960 --> 00:24:51.660 middle-aged men that you know

NOTE Confidence: 0.777336492857143

00:24:51.660 --> 00:24:53.734 they were recruiting 18 to 65

NOTE Confidence: 0.777336492857143

00:24:53.734 --> 00:24:55.558 is mostly patients in their 50s.

NOTE Confidence: 0.882544383

00:24:57.690 --> 00:24:59.870 There there are some caveats

NOTE Confidence: 0.882544383

00:24:59.870 --> 00:25:02.050 to this study in general.

NOTE Confidence: 0.882544383

00:25:02.050 --> 00:25:04.098 Specifically, the alcohol cessation

NOTE Confidence: 0.882544383

00:25:04.098 --> 00:25:07.170 has effects on apnea as well,

NOTE Confidence: 0.882544383

00:25:07.170 --> 00:25:08.570 and they didn't really talk

NOTE Confidence: 0.882544383

00:25:08.570 --> 00:25:09.410 about obesogenic drugs,

NOTE Confidence: 0.882544383

00:25:09.410 --> 00:25:13.298 but without getting too far into the weeds.

NOTE Confidence: 0.882544383

00:25:13.300 --> 00:25:14.280 They found that, you know,

NOTE Confidence: 0.882544383

00:25:14.280 --> 00:25:17.285 weight loss had a significant

NOTE Confidence: 0.882544383

00:25:17.285 --> 00:25:20.290 effect on on sleep apnea.

NOTE Confidence: 0.882544383

00:25:20.290 --> 00:25:21.886 And and so when we and.

NOTE Confidence: 0.882544383

00:25:21.890 --> 00:25:22.559 Sorry for this.

NOTE Confidence: 0.67988159

00:25:26.120 --> 00:25:29.200 Picture is more significant decreases in age,

NOTE Confidence: 0.67988159

00:25:29.200 --> 00:25:33.265 I mean patients lost like 7 kilos so,

NOTE Confidence: 0.67988159

00:25:33.265 --> 00:25:36.380 so pretty substantial weight loss,

NOTE Confidence: 0.67988159

00:25:36.380 --> 00:25:40.948 so £1415 each and then.

NOTE Confidence: 0.67988159

00:25:40.950 --> 00:25:43.322 But they had significant

NOTE Confidence: 0.67988159

00:25:43.322 --> 00:25:45.694 improvements in their oxygenation.

NOTE Confidence: 0.760633948

00:25:45.770 --> 00:25:49.380 You know, mean SP O2, total sleep time,

NOTE Confidence: 0.95691641

00:25:49.390 --> 00:25:53.758 sleep efficiency, sleep latency.

NOTE Confidence: 0.95691641

00:25:53.760 --> 00:25:55.578 Wake after sleep onset there was

NOTE Confidence: 0.95691641

00:25:55.578 --> 00:25:58.314 a decrease in N1N2 and an increase

NOTE Confidence: 0.95691641

00:25:58.314 --> 00:26:01.280 in N3 and an improvement in all

NOTE Confidence: 0.704355505714286

00:26:01.290 --> 00:26:03.467 eight type of RAM and non R.E.M

NOTE Confidence: 0.78479923

00:26:03.610 --> 00:26:07.866 and and really what was most striking

NOTE Confidence: 0.78479923

00:26:07.866 --> 00:26:12.800 is of of these you know kind of treated

NOTE Confidence: 0.78479923

00:26:12.800 --> 00:26:15.556 population that when they looked at them

NOTE Confidence: 0.78479923

00:26:15.556 --> 00:26:18.135 again after the weight loss 10 out of

NOTE Confidence: 0.78479923

00:26:18.135 --> 00:26:21.070 this on 10 out of the the I think it was

NOTE Confidence: 0.78479923

00:26:21.070 --> 00:26:23.820 34 that made it to the end of the trial.

NOTE Confidence: 0.78479923

00:26:23.820 --> 00:26:26.403 We're in complete remission meaning an age

NOTE Confidence: 0.78479923

00:26:26.403 --> 00:26:29.517 high less than five which was quite exciting.

NOTE Confidence: 0.78479923

00:26:29.520 --> 00:26:32.418 So perhaps with weight loss in the

NOTE Confidence: 0.78479923

00:26:32.418 --> 00:26:35.310 right population this would be a a

NOTE Confidence: 0.78479923

00:26:35.310 --> 00:26:37.270 reasonable adjunct therapy and and

NOTE Confidence: 0.78479923

00:26:37.270 --> 00:26:39.691 might there might be a reason to

NOTE Confidence: 0.78479923

00:26:39.691 --> 00:26:44.390 repeat a study in these patients. Umm.

NOTE Confidence: 0.78479923

00:26:44.390 --> 00:26:46.374 Just kind of harping on the same idea,

NOTE Confidence: 0.78479923

00:26:46.380 --> 00:26:48.510 this specification of many studies looking

NOTE Confidence: 0.864042152

00:26:48.520 --> 00:26:50.992 at the effect of OSA, I'm sorry,

NOTE Confidence: 0.864042152

00:26:50.992 --> 00:26:52.597 effective weight loss on OSA,

NOTE Confidence: 0.928567168

00:26:53.010 --> 00:26:56.474 we can kind of predict a

NOTE Confidence: 0.928567168

00:26:56.474 --> 00:26:59.050 reduction with weight loss,

NOTE Confidence: 0.928567168

00:26:59.050 --> 00:27:00.770 but I think this works better

NOTE Confidence: 0.928567168

00:27:00.770 --> 00:27:05.290 in populations rather than

NOTE Confidence: 0.928567168

00:27:05.290 --> 00:27:08.318 individuals on security summit.

NOTE Confidence: 0.928567168

00:27:08.320 --> 00:27:11.700 Questions. Oops.

NOTE Confidence: 0.928567168

00:27:11.700 --> 00:27:14.810 Lost my mouse. Sorry.

NOTE Confidence: 0.913173594

00:27:23.240 --> 00:27:25.850 Sorry, I lost my mouse.

NOTE Confidence: 0.913173594

00:27:25.850 --> 00:27:28.210 2 seconds technical difficulties.

NOTE Confidence: 0.913173594

00:27:28.210 --> 00:27:30.400 Can I? Can I have the questions

NOTE Confidence: 0.913173594

00:27:30.400 --> 00:27:31.855 right out to me? Because I can't.

NOTE Confidence: 0.913173594

00:27:31.855 --> 00:27:33.360 I can't seem to get to them.

NOTE Confidence: 0.75634601

00:27:36.210 --> 00:27:37.600 There's no question yet, Brian.

NOTE Confidence: 0.59781726

00:27:37.610 --> 00:27:42.799 OK. This is just OK. Sorry, no worries.

NOTE Confidence: 0.9603605

00:27:57.540 --> 00:28:00.810 OK. All right.

NOTE Confidence: 0.90508681

00:28:05.380 --> 00:28:09.058 Alright, so sleep disorders and diabetes,

NOTE Confidence: 0.90508681

00:28:09.060 --> 00:28:11.636 this was, you know, I used this,

NOTE Confidence: 0.90508681

00:28:11.640 --> 00:28:13.840 this was this picture is from a review I use.

NOTE Confidence: 0.90508681

00:28:13.840 --> 00:28:15.478 I'm going to use it kind of

NOTE Confidence: 0.90508681

00:28:15.478 --> 00:28:18.859 as a framework to think about.

NOTE Confidence: 0.90508681

00:28:18.860 --> 00:28:21.268 Diabetes and sleep on the the big

NOTE Confidence: 0.90508681

00:28:21.268 --> 00:28:23.574 picture is that sleep fragmentation

NOTE Confidence: 0.90508681

00:28:23.574 --> 00:28:25.856 and disruption by really any

NOTE Confidence: 0.90508681

00:28:25.856 --> 00:28:27.657 mechanism raises sympathetic Dr.

NOTE Confidence: 0.90508681

00:28:27.657 --> 00:28:31.010 and it's thought to worsen glycemic control.

NOTE Confidence: 0.90508681

00:28:31.010 --> 00:28:32.138 And sleep deprivation,

NOTE Confidence: 0.90508681

00:28:32.138 --> 00:28:34.770 you know result in a pro inflammatory

NOTE Confidence: 0.90508681

00:28:34.841 --> 00:28:37.097 stage and and could result in

NOTE Confidence: 0.90508681

00:28:37.097 --> 00:28:40.860 hyperglycemia for that reason, so.

NOTE Confidence: 0.90508681

00:28:40.860 --> 00:28:44.654 This, this kind of review looked at

NOTE Confidence: 0.90508681

00:28:44.654 --> 00:28:46.343 different both circadian disruption

NOTE Confidence: 0.90508681

00:28:46.343 --> 00:28:48.629 and insomnia and they they kind

NOTE Confidence: 0.90508681

00:28:48.629 --> 00:28:50.599 of poorly defined insomnia.

NOTE Confidence: 0.90508681

00:28:50.600 --> 00:28:55.008 So it really was insomnia for any reason.

NOTE Confidence: 0.90508681

00:28:55.010 --> 00:28:56.735 But, but the consistent findings

NOTE Confidence: 0.90508681

00:28:56.735 --> 00:28:58.875 are really that you're the patients

NOTE Confidence: 0.90508681

00:28:58.875 --> 00:29:01.011 who were had reported insomnia or

NOTE Confidence: 0.90508681

00:29:01.011 --> 00:29:03.145 were shift workers or had some

NOTE Confidence: 0.90508681

00:29:03.145 --> 00:29:04.810 sort of circadian disruption had

NOTE Confidence: 0.90508681

00:29:04.810 --> 00:29:08.030 worsening in their A1C's?

NOTE Confidence: 0.90508681

00:29:08.030 --> 00:29:09.865 I don't really like their

NOTE Confidence: 0.90508681

00:29:09.865 --> 00:29:10.966 description of insomnia,

NOTE Confidence: 0.90508681

00:29:10.970 --> 00:29:12.832 so I I would mostly say that

NOTE Confidence: 0.90508681

00:29:12.832 --> 00:29:15.136 sure if you have sleep disruption

NOTE Confidence: 0.90508681

00:29:15.136 --> 00:29:17.531 you'll have likely have worsening

NOTE Confidence: 0.90508681

00:29:17.531 --> 00:29:19.490 of complications from diabetes,

NOTE Confidence: 0.90508681

00:29:19.490 --> 00:29:22.318 but I I think.

NOTE Confidence: 0.90508681

00:29:22.320 --> 00:29:25.456 If you have if it's just primary insomnia,

NOTE Confidence: 0.90508681

00:29:25.460 --> 00:29:28.220 maybe less so than if it were because of OSA,

NOTE Confidence: 0.90508681

00:29:28.220 --> 00:29:28.688 etcetera.

NOTE Confidence: 0.90508681

00:29:28.688 --> 00:29:31.028 There has been an association

NOTE Confidence: 0.90508681

00:29:31.028 --> 00:29:33.481 with you know worsening mental

NOTE Confidence: 0.90508681

00:29:33.481 --> 00:29:35.509 status and perhaps neuropathy

NOTE Confidence: 0.90508681

00:29:35.509 --> 00:29:37.148 with with circadian disruption.

NOTE Confidence: 0.90508681

00:29:37.148 --> 00:29:40.507 I don't think we have a good answer

NOTE Confidence: 0.90508681

00:29:40.507 --> 00:29:42.457 on macrovascular complications,

NOTE Confidence: 0.90508681

00:29:42.460 --> 00:29:44.924 but but certainly we know that there's a

NOTE Confidence: 0.90508681

00:29:44.924 --> 00:29:46.899 metabolic effect of circadian disruption.

NOTE Confidence: 0.831348325

00:29:49.830 --> 00:29:53.410 And then? In terms of OSA,

NOTE Confidence: 0.831348325

00:29:53.410 --> 00:29:55.420 there have been several studies

NOTE Confidence: 0.831348325

00:29:55.420 --> 00:29:57.466 that looked at, you know,

NOTE Confidence: 0.831348325

00:29:57.466 --> 00:30:00.392 on diabetes and OSA and whether it's

NOTE Confidence: 0.831348325

00:30:00.392 --> 00:30:03.377 because it's through you know directed

NOTE Confidence: 0.831348325

00:30:03.377 --> 00:30:06.637 directly affecting glycemia or if it is

NOTE Confidence: 0.831348325

00:30:06.637 --> 00:30:09.429 a risk factor for for other issues that

NOTE Confidence: 0.831348325

00:30:09.430 --> 00:30:13.105 can can that are associated with diabetes.

NOTE Confidence: 0.831348325

00:30:13.110 --> 00:30:15.408 I think it is is debated.

NOTE Confidence: 0.831348325

00:30:15.410 --> 00:30:18.104 But there have been associations with

NOTE Confidence: 0.831348325

00:30:18.104 --> 00:30:21.239 an increase in your A1C retinopathy.

NOTE Confidence: 0.831348325

00:30:21.240 --> 00:30:22.668 There's been some increase

NOTE Confidence: 0.831348325

00:30:22.668 --> 00:30:24.096 with chronic kidney disease,

NOTE Confidence: 0.831348325

00:30:24.100 --> 00:30:28.668 neuropathy and macrovascular complications.

NOTE Confidence: 0.831348325

00:30:28.670 --> 00:30:29.790 And that recurrent, you know,

NOTE Confidence: 0.831348325

00:30:29.790 --> 00:30:35.280 airway obstruction is thought to.

NOTE Confidence: 0.831348325

00:30:35.280 --> 00:30:40.915 It is thought to cause the the.

NOTE Confidence: 0.831348325

00:30:40.920 --> 00:30:43.938 It's thought to cause intermittent hypoxia,

NOTE Confidence: 0.831348325

00:30:43.940 --> 00:30:47.062 and that hypoxia can drive things like

NOTE Confidence: 0.831348325

00:30:47.062 --> 00:30:49.799 increasing both increased insulin resistance,

NOTE Confidence: 0.831348325

00:30:49.800 --> 00:30:52.632 increased beta cell apoptosis and animal

NOTE Confidence: 0.831348325

00:30:52.632 --> 00:30:54.520 models increased hepatic glycogen.

NOTE Confidence: 0.831348325

00:30:54.520 --> 00:30:56.858 There's a few, basically a few mechanisms.

NOTE Confidence: 0.831348325

00:30:56.860 --> 00:30:59.290 I'll I'll give a shout out

NOTE Confidence: 0.831348325

00:30:59.290 --> 00:31:01.536 to to Doctor Andre Zinchuk,

NOTE Confidence: 0.831348325

00:31:01.536 --> 00:31:04.832 who's done some work on this with

NOTE Confidence: 0.831348325

00:31:04.832 --> 00:31:07.982 me and found that there was an

NOTE Confidence: 0.831348325

00:31:07.982 --> 00:31:10.264 association with Hypopnea and hypoxia.

NOTE Confidence: 0.831348325

00:31:10.264 --> 00:31:12.554 Um, that was associated with

NOTE Confidence: 0.831348325

00:31:12.554 --> 00:31:13.470 incident diabetes.

NOTE Confidence: 0.831348325

00:31:13.470 --> 00:31:16.092 We also found in another review

NOTE Confidence: 0.831348325

00:31:16.092 --> 00:31:18.475 of the dream cohort that and

NOTE Confidence: 0.831348325

00:31:18.475 --> 00:31:20.605 this was also with Doctor Yagi.

NOTE Confidence: 0.852129503

00:31:22.960 --> 00:31:27.316 That you know more that maybe

NOTE Confidence: 0.852129503

00:31:27.316 --> 00:31:30.220 hypoxia was more associated.

NOTE Confidence: 0.852129503

00:31:30.220 --> 00:31:32.596 With instant diabetes and pre diabetes,

NOTE Confidence: 0.852129503

00:31:32.600 --> 00:31:35.029 so, so maybe there is more of

NOTE Confidence: 0.852129503

00:31:35.029 --> 00:31:37.179 an effect from that hypoxia,

NOTE Confidence: 0.852129503

49

00:31:37.180 --> 00:31:39.546 but I think that's still hotly debated.

NOTE Confidence: 0.878905582

00:31:41.640 --> 00:31:44.878 This was a study by this was our

NOTE Confidence: 0.878905582

00:31:44.878 --> 00:31:46.912 review of the, you know, sleep heart,

NOTE Confidence: 0.878905582

00:31:46.912 --> 00:31:49.030 Sleep Heart Health study that was

NOTE Confidence: 0.878905582

00:31:49.095 --> 00:31:51.517 looking at fasting blood sugars and Homa

NOTE Confidence: 0.878905582

00:31:51.517 --> 00:31:54.050 IR in patients with higher RDIS and

NOTE Confidence: 0.878905582

00:31:54.050 --> 00:31:56.605 the Homa IR was basically elevated and

NOTE Confidence: 0.878905582

00:31:56.605 --> 00:31:59.460 so and for those who are unfamiliar,

NOTE Confidence: 0.878905582

00:31:59.460 --> 00:32:01.998 it's the Homa IR is a.

NOTE Confidence: 0.898231

00:32:04.010 --> 00:32:06.380 Is a measure of insulin resistance,

NOTE Confidence: 0.898231

00:32:06.380 --> 00:32:08.275 which is the fasting insulin

NOTE Confidence: 0.898231

00:32:08.275 --> 00:32:10.170 times the fasting glucose over

NOTE Confidence: 0.898231

00:32:10.234 --> 00:32:12.546 405 and you get a score and you

NOTE Confidence: 0.898231

00:32:12.546 --> 00:32:14.409 can determine insulin resistance.

NOTE Confidence: 0.898231

00:32:14.410 --> 00:32:15.630 And this was, you know,

NOTE Confidence: 0.898231

00:32:15.630 --> 00:32:17.778 one of the earlier studies that

NOTE Confidence: 0.898231

00:32:17.778 --> 00:32:19.996 have shown there is, you know,

NOTE Confidence: 0.898231

00:32:19.996 --> 00:32:22.354 some some increase in insulin resistance

NOTE Confidence: 0.898231

00:32:22.354 --> 00:32:25.746 and I think there's a lot of data on this.

NOTE Confidence: 0.898231

00:32:25.750 --> 00:32:28.984 Off hand I'll say that the the

NOTE Confidence: 0.898231

00:32:28.984 --> 00:32:30.916 data that I know patients might

NOTE Confidence: 0.898231

00:32:30.916 --> 00:32:34.316 have an increase of .5 in their

NOTE Confidence: 0.898231

00:32:34.316 --> 00:32:38.906 A1C but but I think still not,

NOTE Confidence: 0.898231

00:32:38.906 --> 00:32:40.770 not a massive increase.

NOTE Confidence: 0.830184125

00:32:42.980 --> 00:32:45.380 And then diabetes and restless

NOTE Confidence: 0.830184125

00:32:45.380 --> 00:32:48.257 legs that the biggest thing is

NOTE Confidence: 0.830184125

00:32:48.257 --> 00:32:50.642 kind of concomitant things that

NOTE Confidence: 0.830184125

00:32:50.642 --> 00:32:53.020 might happen with restless legs.

NOTE Confidence: 0.830184125

00:32:53.020 --> 00:32:55.876 The things I think of aren't usually

NOTE Confidence: 0.830184125

00:32:55.876 --> 00:32:57.100 the macrovascular complications.

NOTE Confidence: 0.830184125

00:32:57.100 --> 00:32:59.590 There has been an increased

NOTE Confidence: 0.830184125

00:32:59.590 --> 00:33:02.080 association of neuropathy and RLS.

NOTE Confidence: 0.830184125

00:33:02.080 --> 00:33:04.754 So so in in the literature depends

NOTE Confidence: 0.830184125

00:33:04.754 --> 00:33:07.374 on where you read it can be

NOTE Confidence: 0.830184125

00:33:07.374 --> 00:33:09.526 anywhere from 55 to 5050% increase

NOTE Confidence: 0.830184125

00:33:09.526 --> 00:33:11.824 in in a in these diseases.

NOTE Confidence: 0.830184125

00:33:11.830 --> 00:33:14.134 I'm not sure if people are looking at

NOTE Confidence: 0.830184125

00:33:14.134 --> 00:33:16.715 the same time but it has been associated

NOTE Confidence: 0.830184125

00:33:16.720 --> 00:33:19.224 and the important piece of this too is

NOTE Confidence: 0.88510891

00:33:19.240 --> 00:33:20.848 that patients with.

NOTE Confidence: 0.7468716

00:33:23.720 --> 00:33:25.080 You know neuropathy and unless

NOTE Confidence: 0.7468716

00:33:25.080 --> 00:33:26.768 you might have an overlap syndrome

NOTE Confidence: 0.7468716

00:33:26.770 --> 00:33:28.600 and you they might be hard to

NOTE Confidence: 0.84803968

00:33:28.610 --> 00:33:30.934 distinguish which which they

NOTE Confidence: 0.84803968

00:33:30.934 --> 00:33:32.790 are unique diseases, but

NOTE Confidence: 0.938486296

00:33:32.800 --> 00:33:34.246 it might be hard to distinguish

NOTE Confidence: 0.938486296

00:33:34.246 --> 00:33:37.550 which one is causing the problems.

NOTE Confidence: 0.7616472675

00:33:37.550 --> 00:33:40.770 Can cause sleep disruption.

NOTE Confidence: 0.7616472675

00:33:40.770 --> 00:33:45.476 Alright, so how do we approach these

NOTE Confidence: 0.7616472675

00:33:45.476 --> 00:33:49.077 patients and and what how should we

NOTE Confidence: 0.7616472675

00:33:49.077 --> 00:33:51.586 treat obesity well weight loss goal

NOTE Confidence: 0.7616472675

00:33:51.586 --> 00:33:54.711 and I this is a you can talk about

NOTE Confidence: 0.7616472675

00:33:54.711 --> 00:33:57.285 a weight loss goal with patients.

NOTE Confidence: 0.7616472675

00:33:57.290 --> 00:34:00.118 With the idea that.

NOTE Confidence: 0.7616472675

00:34:00.120 --> 00:34:01.596 You might need to tailor therapy.

NOTE Confidence: 0.7616472675

00:34:01.600 --> 00:34:04.936 Certain certain medicines will not achieve,

NOTE Confidence: 0.7616472675

00:34:04.940 --> 00:34:06.980 you know, a weight loss goal.

NOTE Confidence: 0.7616472675

00:34:06.980 --> 00:34:08.868 Or patients might say I want to be

NOTE Confidence: 0.7616472675

00:34:08.868 --> 00:34:11.037 half my weight and you might say boy,

NOTE Confidence: 0.7616472675

00:34:11.040 --> 00:34:12.065 medicine is just not going

NOTE Confidence: 0.7616472675

00:34:12.065 --> 00:34:12.680 to accomplish that.

NOTE Confidence: 0.7616472675

00:34:12.680 --> 00:34:14.150 You might need to go to surgery.

NOTE Confidence: 0.769501365

00:34:16.440 --> 00:34:17.958 Uh, what their peak weight was.

NOTE Confidence: 0.769501365

00:34:17.960 --> 00:34:20.123 Because that might tell you where really

NOTE Confidence: 0.769501365

00:34:20.123 --> 00:34:22.299 that that's part of the weight history.

NOTE Confidence: 0.769501365

00:34:22.300 --> 00:34:24.330 And the reason the weight history is

NOTE Confidence: 0.769501365

00:34:24.330 --> 00:34:26.094 important is that tells you where

NOTE Confidence: 0.769501365

00:34:26.094 --> 00:34:28.047 the set point has become has changed

NOTE Confidence: 0.769501365

00:34:28.107 --> 00:34:29.717 over the years and how it has,

NOTE Confidence: 0.769501365

00:34:29.720 --> 00:34:32.180 how it has gone, triggers.

NOTE Confidence: 0.769501365

00:34:32.180 --> 00:34:33.176 And really, you know,

NOTE Confidence: 0.769501365

00:34:33.176 --> 00:34:35.093 kind of that goes hand in hand

NOTE Confidence: 0.769501365

00:34:35.093 --> 00:34:36.537 with the psychiatric history,

NOTE Confidence: 0.769501365

00:34:36.540 --> 00:34:38.500 looking for history of anorexia,

NOTE Confidence: 0.769501365

00:34:38.500 --> 00:34:40.760 binge eating, things like that,

NOTE Confidence: 0.769501365

00:34:40.760 --> 00:34:42.148 because those things need

NOTE Confidence: 0.769501365

00:34:42.148 --> 00:34:43.536 to be treated differently.

NOTE Confidence: 0.769501365

00:34:43.540 --> 00:34:45.700 Obviously a sleep history for

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NOTE Confidence: 0.769501365

00:34:45.700 --> 00:34:47.860 the reasons I just described.

NOTE Confidence: 0.769501365

00:34:47.860 --> 00:34:49.300 A history of alcohol,

NOTE Confidence: 0.769501365

00:34:49.300 --> 00:34:50.690 drug use, family history,

NOTE Confidence: 0.7200767575

00:34:50.700 --> 00:34:52.948 so for for cardiometabolic.

NOTE Confidence: 0.808560716666667

00:34:54.400 --> 00:34:58.330 Issues and then evaluation of medicines.

NOTE Confidence: 0.808560716666667

00:34:58.330 --> 00:35:00.192 Well, we'll take a quick look at

NOTE Confidence: 0.808560716666667

00:35:00.192 --> 00:35:01.320 what obesogenic medicines might.

NOTE Confidence: 0.7741144725

00:35:02.210 --> 00:35:03.338 An evaluation of other

NOTE Confidence: 0.767420122857143

00:35:03.350 --> 00:35:07.564 syndromes, namely I always look at cushings.

NOTE Confidence: 0.767420122857143

00:35:07.570 --> 00:35:09.578 Thyroid disease and monogenic

NOTE Confidence: 0.767420122857143

00:35:09.578 --> 00:35:12.088 obesity is a rare finding.

NOTE Confidence: 0.767420122857143

00:35:12.090 --> 00:35:13.638 But we should always, you know,

NOTE Confidence: 0.767420122857143

00:35:13.640 --> 00:35:15.691 if someone has started gaining weight before

NOTE Confidence: 0.767420122857143

00:35:15.691 --> 00:35:18.318 age 5 and they have some unusual findings

NOTE Confidence: 0.767420122857143

00:35:18.320 --> 00:35:21.038 and they're quite heavy at a very young age,

NOTE Confidence: 0.767420122857143

00:35:21.040 --> 00:35:23.648 we we should think about that as as

NOTE Confidence: 0.767420122857143

00:35:23.648 --> 00:35:27.242 a as something to chase. All right.

NOTE Confidence: 0.767420122857143

00:35:27.242 --> 00:35:30.090 So what causes weight gain?

NOTE Confidence: 0.767420122857143

00:35:30.090 --> 00:35:30.954 Lots of stuff.

NOTE Confidence: 0.767420122857143

00:35:30.954 --> 00:35:33.214 And I won't go through all of these.

NOTE Confidence: 0.767420122857143

00:35:33.214 --> 00:35:34.726 I'll highlight a few of these.

NOTE Confidence: 0.767420122857143

00:35:34.730 --> 00:35:35.399 This is recorded.

NOTE Confidence: 0.767420122857143

00:35:35.399 --> 00:35:37.247 So if someone wants to kind of go

NOTE Confidence: 0.767420122857143

00:35:37.247 --> 00:35:39.143 through each of these, that's fine, died.

NOTE Confidence: 0.767420122857143

00:35:39.143 --> 00:35:42.129 The ones I always think of in diabetes is

NOTE Confidence: 0.767420122857143

00:35:42.130 --> 00:35:46.219 insulin and sulfonylureas TZD's do too.

NOTE Confidence: 0.767420122857143

00:35:46.220 --> 00:35:50.315 But patients are often on these medicines

NOTE Confidence: 0.767420122857143

00:35:50.320 --> 00:35:52.266 and and you know switching them over

NOTE Confidence: 0.767420122857143

00:35:52.266 --> 00:35:54.139 to more weight neutral or weight,

NOTE Confidence: 0.767420122857143

00:35:54.140 --> 00:35:56.648 weight negative agents.

NOTE Confidence: 0.767420122857143

00:35:56.650 --> 00:35:59.328 Is you know kind of what I would

NOTE Confidence: 0.767420122857143

00:35:59.328 --> 00:36:00.710 say standard of care nowadays.

NOTE Confidence: 0.767420122857143

00:36:00.710 --> 00:36:02.795 Simple things that others everyone's

NOTE Confidence: 0.767420122857143

00:36:02.795 --> 00:36:03.629 on metoprolol.

NOTE Confidence: 0.767420122857143

00:36:03.630 --> 00:36:05.610 How many patients are on metoprolol?

NOTE Confidence: 0.767420122857143

00:36:05.610 --> 00:36:08.291 It's weight promoting and if if that

NOTE Confidence: 0.767420122857143

00:36:08.291 --> 00:36:12.232 patient can be changed to his CB rate right,

NOTE Confidence: 0.767420122857143

00:36:12.232 --> 00:36:15.800 that might be more of a weight neutral agent.

NOTE Confidence: 0.767420122857143

00:36:15.800 --> 00:36:18.120 The same goes with antidepressants

NOTE Confidence: 0.767420122857143

00:36:18.120 --> 00:36:20.136 and the the best one that you know,

NOTE Confidence: 0.767420122857143

00:36:20.140 --> 00:36:22.432 bupropion is the best choice from

NOTE Confidence: 0.767420122857143

00:36:22.432 --> 00:36:24.755 my standpoint just because it has a

NOTE Confidence: 0.767420122857143

00:36:24.755 --> 00:36:26.300 little bit of a weight negative effect,

NOTE Confidence: 0.767420122857143

00:36:26.300 --> 00:36:27.844 whereas sertraline and fluoxetine

NOTE Confidence: 0.767420122857143

00:36:27.844 --> 00:36:30.720 are just a little bit weight neutral.

NOTE Confidence: 0.767420122857143

00:36:30.720 --> 00:36:32.862 But there's a lot of different things

NOTE Confidence: 0.767420122857143

00:36:32.862 --> 00:36:35.147 and obviously what comes first is you know,

NOTE Confidence: 0.767420122857143

00:36:35.150 --> 00:36:37.569 the patient needs to have good

NOTE Confidence: 0.767420122857143

00:36:37.570 --> 00:36:39.545 control of their blood pressure or

NOTE Confidence: 0.767420122857143

00:36:39.545 --> 00:36:41.555 their mental health and all these

NOTE Confidence: 0.767420122857143

00:36:41.555 --> 00:36:43.080 other things work around this.

NOTE Confidence: 0.767420122857143

00:36:43.080 --> 00:36:44.532 But these are simple things that

NOTE Confidence: 0.767420122857143

00:36:44.532 --> 00:36:46.298 we might be able to change that.

NOTE Confidence: 0.767420122857143

00:36:46.300 --> 00:36:47.689 Might affect wait.

NOTE Confidence: 0.955408966666667

00:36:49.950 --> 00:36:54.330 All right. So let's talk about

NOTE Confidence: 0.955408966666667

00:36:54.330 --> 00:36:56.845 the medicines that are most

NOTE Confidence: 0.955408966666667

00:36:56.845 --> 00:36:59.840 commonly used and and are kind

NOTE Confidence: 0.79469126

00:36:59.850 --> 00:37:01.450 of the exciting medicines which

NOTE Confidence: 0.79469126

00:37:01.450 --> 00:37:03.050 are GLP one receptor agonists.

NOTE Confidence: 0.79469126

00:37:03.050 --> 00:37:05.223 The most common one used nowadays

NOTE Confidence: 0.79469126

00:37:05.223 --> 00:37:06.947 is something called semaglutide.

NOTE Confidence: 0.79469126

00:37:06.950 --> 00:37:09.438 It's also known as ozempic or we govy.

NOTE Confidence: 0.91132337

00:37:10.550 --> 00:37:13.230 This is also in the class of the new

NOTE Confidence: 0.91132337

00:37:13.230 --> 00:37:15.282 drug called terza Appetite, but we'll

NOTE Confidence: 0.91132337

00:37:15.282 --> 00:37:17.529 we'll have a separate slide on that.

NOTE Confidence: 0.91132337

00:37:17.530 --> 00:37:20.266 The big picture is, is that?

NOTE Confidence: 0.91132337

00:37:20.270 --> 00:37:21.902 GLP one receptor agonists

NOTE Confidence: 0.91132337

00:37:21.902 --> 00:37:23.942 work in the nucleus accumbens,

NOTE Confidence: 0.91132337

00:37:23.950 --> 00:37:26.830 decreasing the reward pathway in the

NOTE Confidence: 0.91132337

00:37:26.830 --> 00:37:29.310 hypothalamus and that improves your satiety.

NOTE Confidence: 0.91132337

00:37:29.310 --> 00:37:31.172 It also slows down gastric emptying and

NOTE Confidence: 0.91132337

00:37:31.172 --> 00:37:33.310 gives you some increased stomach stretch.

NOTE Confidence: 0.91132337

00:37:33.310 --> 00:37:34.830 But that's the mechanism, right?

NOTE Confidence: 0.91132337

00:37:34.830 --> 00:37:37.530 So it it it affects growing

NOTE Confidence: 0.91132337

00:37:37.530 --> 00:37:39.330 at the stomach and.

NOTE Confidence: 0.91132337

00:37:39.330 --> 00:37:42.670 Also has a direct effect on the brain.

NOTE Confidence: 0.91132337

00:37:42.670 --> 00:37:45.726 So how do we start these meds again,

NOTE Confidence: 0.91132337

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00:37:45.730 --> 00:37:47.782 not going to go into the nitty gritty here.

NOTE Confidence: 0.91132337

00:37:47.790 --> 00:37:51.199 Usually you start at a low dose.

NOTE Confidence: 0.91132337

00:37:51.200 --> 00:37:55.736 I I titrate slowly increasing only at 4

NOTE Confidence: 0.91132337

00:37:55.736 --> 00:37:59.280 weeks and then common common issues that

NOTE Confidence: 0.91132337

00:37:59.280 --> 00:38:02.130 everyone should be counseled on nausea.

NOTE Confidence: 0.91132337

00:38:02.130 --> 00:38:03.482 If someone is vomiting,

NOTE Confidence: 0.91132337

00:38:03.482 --> 00:38:05.510 the dose needs to be decreased.

NOTE Confidence: 0.91132337

00:38:05.510 --> 00:38:07.688 Some patients do have some Constipation,

NOTE Confidence: 0.91132337

00:38:07.690 --> 00:38:09.888 they can have an increased heart rate.

NOTE Confidence: 0.91132337

00:38:09.890 --> 00:38:11.030 In study it's only like 2

NOTE Confidence: 0.91132337

00:38:11.030 --> 00:38:12.170 to 3 beats per minute,

NOTE Confidence: 0.91132337

00:38:12.170 --> 00:38:13.920 but that does happen sometimes.

NOTE Confidence: 0.853846721666667

00:38:16.080 --> 00:38:17.745 Usually not an issue, usually

NOTE Confidence: 0.853846721666667

00:38:17.745 --> 00:38:19.955 not a concern for someone with

NOTE Confidence: 0.853846721666667

00:38:19.955 --> 00:38:21.428 arrhythmia. That's more of a

NOTE Confidence: 0.679327823333333

00:38:21.920 --> 00:38:23.990 a issue with phentermine than these.

NOTE Confidence: 0.7886201

00:38:24.080 --> 00:38:27.782 And then the scary things are pancreatitis,

NOTE Confidence: 0.7886201

00:38:27.782 --> 00:38:30.908 acute gallbladder disease,

NOTE Confidence: 0.7886201

00:38:30.908 --> 00:38:33.258 gastroparesis and then if someone's

NOTE Confidence: 0.7886201

00:38:33.258 --> 00:38:35.220 pregnant they can't be on this.

NOTE Confidence: 0.7886201

00:38:35.220 --> 00:38:37.758 And then there has been mixed

NOTE Confidence: 0.7886201

00:38:37.758 --> 00:38:40.040 studies on medullary thyroid cancer.

NOTE Confidence: 0.7886201

00:38:40.040 --> 00:38:42.410 These were this was really from

NOTE Confidence: 0.7886201

00:38:42.410 --> 00:38:44.220 animal studies with Victoza. That

NOTE Confidence: 0.847180717142857

00:38:44.230 --> 00:38:46.127 there was an increased risk in rats.

NOTE Confidence: 0.847180717142857

00:38:46.130 --> 00:38:48.440 There's a recent French study that was

NOTE Confidence: 0.847180717142857

00:38:48.440 --> 00:38:50.746 poorly done that said that there was

NOTE Confidence: 0.847180717142857

00:38:50.746 --> 00:38:52.924 an increase of all thyroid cancers,

NOTE Confidence: 0.847180717142857

00:38:52.930 --> 00:38:55.900 including medullary thyroid cancer.

NOTE Confidence: 0.836115335714286

00:38:55.900 --> 00:38:57.265 I won't go into the the details.

NOTE Confidence: 0.836115335714286

00:38:57.270 --> 00:38:59.454 I'm a little bit skeptical of that study.

NOTE Confidence: 0.836115335714286

61

00:38:59.460 --> 00:39:01.819 I don't think that that Hillary thyroid

NOTE Confidence: 0.836115335714286

00:39:01.819 --> 00:39:03.952 cancer as a cancer is exquisitely

NOTE Confidence: 0.836115335714286

00:39:03.952 --> 00:39:06.402 rare and I don't know that this

NOTE Confidence: 0.836115335714286

00:39:06.476 --> 00:39:08.660 is is is really significant risk,

NOTE Confidence: 0.836115335714286

00:39:08.660 --> 00:39:10.964 but patients should be made aware

NOTE Confidence: 0.836115335714286

00:39:10.964 --> 00:39:15.054 of the data. Umm. Alright, so.

NOTE Confidence: 0.836115335714286

00:39:15.054 --> 00:39:17.386 Tricep atide, right.

NOTE Confidence: 0.836115335714286

00:39:17.386 --> 00:39:20.394 So we, we we looked at these numbers

NOTE Confidence: 0.836115335714286

00:39:20.394 --> 00:39:23.766 briefly 15 to 17% average weight loss and

NOTE Confidence: 0.836115335714286

00:39:23.766 --> 00:39:26.623 we remember average weight loss, right.

NOTE Confidence: 0.836115335714286

00:39:26.623 --> 00:39:29.188 So we have this long.

NOTE Confidence: 0.836115335714286

00:39:29.190 --> 00:39:30.945 We have this waterfall plot

NOTE Confidence: 0.836115335714286

00:39:30.945 --> 00:39:32.349 that's associated with this,

NOTE Confidence: 0.836115335714286

00:39:32.350 --> 00:39:35.391 but average is 15 to 17% at Max

NOTE Confidence: 0.836115335714286

00:39:35.391 --> 00:39:37.960 dose after really 18 months or so.

NOTE Confidence: 0.836115335714286

00:39:37.960 --> 00:39:39.928 And tricep petite at Max dose,

NOTE Confidence: 0.836115335714286

00:39:39.930 --> 00:39:43.243 which is our new agent, it's 22.5%,

NOTE Confidence: 0.836115335714286

00:39:43.243 --> 00:39:44.722 which is massive.

NOTE Confidence: 0.836115335714286

00:39:44.722 --> 00:39:47.680 That's crazy because when we look

NOTE Confidence: 0.836115335714286

00:39:47.768 --> 00:39:50.148 at a gastric sleeve surgery,

NOTE Confidence: 0.836115335714286

00:39:50.150 --> 00:39:52.520 it's closer to 25 to 30%.

NOTE Confidence: 0.925078708

00:39:54.790 --> 00:39:56.490 So we're approaching those levels.

NOTE Confidence: 0.925078708

00:39:56.490 --> 00:39:59.739 So you had patients that had us in that

NOTE Confidence: 0.925078708

00:39:59.739 --> 00:40:02.845 study that had 37% of their total body

NOTE Confidence: 0.925078708

00:40:02.845 --> 00:40:06.950 weight off on Max dose tres appetite.

NOTE Confidence: 0.925078708

00:40:06.950 --> 00:40:08.842 So what's the difference

NOTE Confidence: 0.925078708

00:40:08.842 --> 00:40:13.440 between perception Jaro versus?

NOTE Confidence: 0.925078708

00:40:13.440 --> 00:40:14.600 Versus semaglutide.

NOTE Confidence: 0.925078708

00:40:14.600 --> 00:40:17.572 Well, it's a dual agent 2 hormones,

NOTE Confidence: 0.925078708

00:40:17.572 --> 00:40:20.137 it's GLP one. And G&amp;GIP, right.

NOTE Confidence: 0.925078708

00:40:20.137 --> 00:40:22.437 So this is what the new new age

NOTE Confidence: 0.925078708

00:40:22.437 --> 00:40:24.432 is and that's what people are are

NOTE Confidence: 0.925078708

00:40:24.432 --> 00:40:26.831 doing is they're going to be start

NOTE Confidence: 0.925078708

00:40:26.831 --> 00:40:30.390 combining hormones in these new agents.

NOTE Confidence: 0.925078708

00:40:30.390 --> 00:40:32.736 So let's apply that how does

NOTE Confidence: 0.925078708

00:40:32.736 --> 00:40:34.959 weight loss look in a case?

NOTE Confidence: 0.925078708

00:40:34.960 --> 00:40:37.680 So this is a patient actually saw a

NOTE Confidence: 0.925078708

00:40:37.680 --> 00:40:40.381 while ago so the the drugs are not

NOTE Confidence: 0.925078708

00:40:40.381 --> 00:40:42.818 are so it's before summer was out

NOTE Confidence: 0.925078708

00:40:42.820 --> 00:40:45.571 or was just coming out as patient

NOTE Confidence: 0.925078708

00:40:45.571 --> 00:40:48.917 was a 53 year old class three class

NOTE Confidence: 0.925078708

00:40:48.917 --> 00:40:51.990 I'm sorry Class 3 obesity this is

NOTE Confidence: 0.925078708

00:40:52.079 --> 00:40:55.551 that's that's this type BMI 48 Type

NOTE Confidence: 0.925078708

00:40:55.551 --> 00:40:58.036 2 diabetes thyroid nodules anxiety

NOTE Confidence: 0.925078708

00:40:58.036 --> 00:41:01.072 unless Lexapro who presents for weight

NOTE Confidence: 0.925078708

00:41:01.072 --> 00:41:04.006 management was overweight as a child

NOTE Confidence: 0.925078708

00:41:04.091 --> 00:41:06.862 after age 5. Peak weight was 283.

NOTE Confidence: 0.925078708

00:41:06.862 --> 00:41:09.102 Her goal weight is 200.

NOTE Confidence: 0.925078708

00:41:09.110 --> 00:41:11.530 What can be done? Well,

NOTE Confidence: 0.925078708

00:41:11.530 --> 00:41:14.354 this is her weight graph over the years.

NOTE Confidence: 0.925078708

00:41:14.360 --> 00:41:17.096 So she was initially on metformin and lira

NOTE Confidence: 0.925078708

00:41:17.100 --> 00:41:19.860 and that was titrated up and she was at 2 at,

NOTE Confidence: 0.925078708

00:41:19.860 --> 00:41:21.799 you know, in the two 80s and

NOTE Confidence: 0.925078708

00:41:21.799 --> 00:41:23.260 then didn't tolerate metformin.

NOTE Confidence: 0.925078708

00:41:23.260 --> 00:41:24.608 So she was decreased.

NOTE Confidence: 0.925078708

00:41:24.608 --> 00:41:26.293 She stopped off Metformin and

NOTE Confidence: 0.925078708

00:41:26.293 --> 00:41:27.540 Lyra was increased.

NOTE Confidence: 0.925078708

00:41:27.540 --> 00:41:29.988 So she went down all the way to,

NOTE Confidence: 0.925078708

00:41:29.990 --> 00:41:32.318 you know, 245.

NOTE Confidence: 0.925078708

00:41:32.320 --> 00:41:34.574 And then she started herself on metformin,

NOTE Confidence: 0.925078708

00:41:34.580 --> 00:41:37.060 and we they we increased

NOTE Confidence: 0.925078708

00:41:37.060 --> 00:41:39.920 her on lira some more.

NOTE Confidence: 0.925078708

00:41:39.920 --> 00:41:42.112 And she was down to two, you know,

NOTE Confidence: 0.925078708

00:41:42.112 --> 00:41:46.051 235 stabilized there, she started on.

NOTE Confidence: 0.925078708

00:41:46.051 --> 00:41:49.159 Naltrexone be propriano Contrave.

NOTE Confidence: 0.925078708

00:41:49.160 --> 00:41:51.518 Which was increased.

NOTE Confidence: 0.925078708

00:41:51.520 --> 00:41:53.816 But she didn't tolerate it very well,

NOTE Confidence: 0.925078708

00:41:53.820 --> 00:41:56.235 so she was only so she stopped.

NOTE Confidence: 0.925078708

00:41:56.240 --> 00:41:58.838 She had headaches, flushing abdominal pain.

NOTE Confidence: 0.925078708

00:41:58.840 --> 00:42:00.094 That was stopped.

NOTE Confidence: 0.925078708

00:42:00.094 --> 00:42:01.766 She started on Topiramate

NOTE Confidence: 0.925078708

00:42:01.766 --> 00:42:03.020 responded pretty well.

NOTE Confidence: 0.925078708

00:42:03.020 --> 00:42:05.316 And they get and then started on,

NOTE Confidence: 0.925078708

00:42:05.320 --> 00:42:07.875 you know, a little bit of phentermine.

NOTE Confidence: 0.925078708

00:42:07.880 --> 00:42:11.496 And she's down to £200 or abouts there,

NOTE Confidence: 0.925078708

00:42:11.500 --> 00:42:13.316 little bit above right?

NOTE Confidence: 0.925078708

00:42:13.316 --> 00:42:16.320 And this might be more of a.

NOTE Confidence: 0.83772181

00:42:18.380 --> 00:42:20.132 And I think with some of the new

NOTE Confidence: 0.83772181

00:42:20.132 --> 00:42:21.408 drugs you'll you'll see some.

NOTE Confidence: 0.83772181

00:42:21.410 --> 00:42:23.165 More impressive effects for any

NOTE Confidence: 0.83772181

00:42:23.165 --> 00:42:25.238 specific drug, although she did

NOTE Confidence: 0.83772181

00:42:25.238 --> 00:42:27.518 respond really well to lira.

NOTE Confidence: 0.83772181

00:42:27.520 --> 00:42:29.122 But this is kind of what you can expect

NOTE Confidence: 0.83772181

00:42:29.122 --> 00:42:30.695 is this is going to be a push pull.

NOTE Confidence: 0.83772181

00:42:30.700 --> 00:42:32.716 Some drugs won't work for the patient,

NOTE Confidence: 0.83772181

00:42:32.720 --> 00:42:33.880 there will be side effects.

NOTE Confidence: 0.83772181

00:42:33.880 --> 00:42:36.183 So I I've kept this slide intact

NOTE Confidence: 0.83772181

00:42:36.183 --> 00:42:38.382 to say that it's not, you know,

NOTE Confidence: 0.83772181

00:42:38.382 --> 00:42:39.999 none of these are a magic pill,

NOTE Confidence: 0.83772181

00:42:40.000 --> 00:42:41.960 but you have to kind of feel it

NOTE Confidence: 0.83772181

00:42:41.960 --> 00:42:43.982 out and see which which medicine

NOTE Confidence: 0.83772181

00:42:43.982 --> 00:42:46.172 works and what doesn't and what's

NOTE Confidence: 0.83772181

00:42:46.180 --> 00:42:48.580 side effects are tolerable or

NOTE Confidence: 0.83772181

00:42:48.580 --> 00:42:50.980 inappropriate for any given case.

00:42:50.980 --> 00:42:52.620 All right. So what's next?

00:42:52.620 --> 00:42:53.968 What's on the horizon?

00:42:53.968 --> 00:42:55.653 A whole bunch of agents,

00:42:55.660 --> 00:42:58.140 amylin, GLP, Glucagon, GLP.

00:42:58.140 --> 00:43:02.530 So Glucagon has a little bit of a.

00:43:02.530 --> 00:43:04.002 Energy effects, I'm sorry,

00:43:04.002 --> 00:43:05.159 uh, energy expenditure effect.

00:43:05.159 --> 00:43:07.370 So we'll see how that works in people.

00:43:07.370 --> 00:43:09.800 That's in mouse studies right now.

00:43:09.800 --> 00:43:12.495 And then there is a trial of

00:43:12.495 --> 00:43:14.749 Tracepath tide on sleep apnea,

00:43:14.750 --> 00:43:17.116 which is kind of exciting because they're,

00:43:17.120 --> 00:43:18.770 you know, if it comes positive,

00:43:18.770 --> 00:43:20.570 which I suspect it will,

00:43:20.570 --> 00:43:22.550 maybe there will be an indication

NOTE Confidence: 0.83772181

00:43:22.550 --> 00:43:24.689 for sleep apnea for these drugs,

NOTE Confidence: 0.83772181

00:43:24.690 --> 00:43:26.699 which would change how we start managing

NOTE Confidence: 0.83772181

00:43:26.699 --> 00:43:28.680 how we manage some of these cases.

NOTE Confidence: 0.940851583333333

00:43:30.720 --> 00:43:33.270 All right, so.

NOTE Confidence: 0.940851583333333

00:43:33.270 --> 00:43:36.966 To conclude, obesity is a complicated,

NOTE Confidence: 0.940851583333333

00:43:36.970 --> 00:43:38.410 multifactorial disease process

NOTE Confidence: 0.940851583333333

00:43:38.410 --> 00:43:40.810 that is prevalent and undertreated.

NOTE Confidence: 0.940851583333333

00:43:40.810 --> 00:43:43.358 Obesity, sleep and diabetes

NOTE Confidence: 0.940851583333333

00:43:43.358 --> 00:43:45.269 are profoundly interrelated.

NOTE Confidence: 0.940851583333333

00:43:45.270 --> 00:43:47.226 A treatment of obesity should focus

NOTE Confidence: 0.940851583333333

00:43:47.226 --> 00:43:49.289 on the adjustment of that weight,

NOTE Confidence: 0.940851583333333

00:43:49.290 --> 00:43:51.260 the weight set point right?

NOTE Confidence: 0.940851583333333

00:43:51.260 --> 00:43:53.096 And that can be done through

NOTE Confidence: 0.940851583333333

00:43:53.096 --> 00:43:53.708 multiple mechanisms,

NOTE Confidence: 0.940851583333333

00:43:53.710 --> 00:43:55.266 both conservative and medical.

NOTE Confidence: 0.940851583333333

00:43:55.266 --> 00:43:57.211 And treating obesity should be

NOTE Confidence: 0.940851583333333

00:43:57.211 --> 00:43:59.249 done with a team based approach.

NOTE Confidence: 0.940851583333333

00:43:59.250 --> 00:44:02.930 So nutritionists, you know.

NOTE Confidence: 0.940851583333333

00:44:02.930 --> 00:44:05.518 Psychiatry, sleep, medicine, GI, surgery,

NOTE Confidence: 0.940851583333333

00:44:05.518 --> 00:44:08.020 everyone is involved in these cases.

NOTE Confidence: 0.940851583333333

00:44:08.020 --> 00:44:10.024 So it's not one one person

NOTE Confidence: 0.940851583333333

00:44:10.024 --> 00:44:11.026 that's managing everything.

NOTE Confidence: 0.940851583333333

00:44:11.030 --> 00:44:13.823 We really get everyone on board and

NOTE Confidence: 0.940851583333333

00:44:13.823 --> 00:44:16.266 and then all of this, you know,

NOTE Confidence: 0.940851583333333

00:44:16.266 --> 00:44:18.002 we haven't gone through all the medicines,

NOTE Confidence: 0.940851583333333

00:44:18.010 --> 00:44:19.714 but a lot of this is figuring out

NOTE Confidence: 0.940851583333333

00:44:19.714 --> 00:44:21.646 what is the right fit for a patient.

NOTE Confidence: 0.940851583333333

00:44:21.650 --> 00:44:24.576 So medicines should be medicines and other

NOTE Confidence: 0.856723565454545

00:44:24.590 --> 00:44:26.222 therapies need to be approached through

NOTE Confidence: 0.856723565454545

00:44:26.222 --> 00:44:27.700 a shared decision making process.

NOTE Confidence: 0.844510797777778

00:44:28.660 --> 00:44:31.042 And treatments of obesity for obesity

NOTE Confidence: 0.844510797777778

00:44:31.042 --> 00:44:33.495 should be evaluated as a potential

NOTE Confidence: 0.844510797777778

00:44:33.495 --> 00:44:36.271 option for patients with OSA because it,

NOTE Confidence: 0.844510797777778

00:44:36.271 --> 00:44:38.226 you know, we we have.

NOTE Confidence: 0.844510797777778

00:44:38.230 --> 00:44:42.278 We have studies showing that weight

NOTE Confidence: 0.844510797777778

00:44:42.278 --> 00:44:44.963 significantly affects OSA and sleep

NOTE Confidence: 0.844510797777778

00:44:44.963 --> 00:44:48.433 quality and now we have medicines that

NOTE Confidence: 0.844510797777778

00:44:48.433 --> 00:44:51.225 significantly affect weight that maybe we

NOTE Confidence: 0.844510797777778

00:44:51.225 --> 00:44:54.046 should be using some of these therapies

NOTE Confidence: 0.844510797777778

00:44:54.050 --> 00:44:57.618 in concert with CPAP and then seeing if

NOTE Confidence: 0.844510797777778

00:44:57.618 --> 00:44:59.910 patients potentially can get off PAP,

NOTE Confidence: 0.844510797777778

00:44:59.910 --> 00:45:01.158 you know, in time.

NOTE Confidence: 0.844510797777778

00:45:01.158 --> 00:45:03.896 But I would say that's going to be

NOTE Confidence: 0.844510797777778

00:45:03.896 --> 00:45:06.284 probably a smaller percentage of patients.

NOTE Confidence: 0.844510797777778

00:45:06.290 --> 00:45:07.200 We're always hopeful,

NOTE Confidence: 0.844510797777778

00:45:07.200 --> 00:45:10.620 but we we should always be keeping that.

NOTE Confidence: 0.844510797777778

00:45:10.620 --> 00:45:13.488 All right, questions.

NOTE Confidence: 0.844510797777778

00:45:13.490 --> 00:45:14.230 Great.

NOTE Confidence: 0.922883971666667

00:45:14.320 --> 00:45:15.880 Thank you so much, Doctor Roger,

NOTE Confidence: 0.922883971666667

00:45:15.880 --> 00:45:18.660 for this extremely educational talk,

NOTE Confidence: 0.922883971666667

00:45:18.660 --> 00:45:20.760 excellent talk.

NOTE Confidence: 0.922883971666667

00:45:20.760 --> 00:45:23.560 So if you have any questions,

NOTE Confidence: 0.922883971666667

00:45:23.560 --> 00:45:25.919 feel free to unmute yourself and ask.

NOTE Confidence: 0.922883971666667

00:45:25.920 --> 00:45:27.246 And I do have one question

NOTE Confidence: 0.922883971666667

00:45:27.246 --> 00:45:29.040 in the chat room for you.

NOTE Confidence: 0.464507802

00:45:29.080 --> 00:45:32.440 What is monogenic versus polygenic?

NOTE Confidence: 0.464507802

00:45:32.440 --> 00:45:33.688 Sure, great question.

NOTE Confidence: 0.60861311

00:45:36.920 --> 00:45:39.540 Specific gene associated with it.

NOTE Confidence: 0.60861311

00:45:39.540 --> 00:45:43.340 So the examples I think of are specific

NOTE Confidence: 0.60861311

00:45:43.340 --> 00:45:46.710 mutations on MC4R mutation, TOMCC mutation.

NOTE Confidence: 0.60861311

00:45:46.710 --> 00:45:50.700 The reason it's important to make that

NOTE Confidence: 0.60861311

72

00:45:50.700 --> 00:45:53.705 distinction so polygenic is probably.

NOTE Confidence: 0.60861311

00:45:53.710 --> 00:45:57.742 Most patients have right or or plain old

NOTE Confidence: 0.60861311

00:45:57.742 --> 00:46:01.824 obesity that is we we don't have a specific

NOTE Confidence: 0.60861311

00:46:01.824 --> 00:46:04.307 gene to monogenic obesity usually has

NOTE Confidence: 0.60861311

00:46:04.307 --> 00:46:06.989 and other syndrome associated with it.

NOTE Confidence: 0.60861311

00:46:06.990 --> 00:46:09.600 So for instance a pomsky mutation

NOTE Confidence: 0.60861311

00:46:09.600 --> 00:46:12.066 will often present with adrenal

NOTE Confidence: 0.60861311

00:46:12.066 --> 00:46:14.642 insufficiency right because there's

NOTE Confidence: 0.60861311

00:46:14.642 --> 00:46:17.050 there's another gene issue with it.

NOTE Confidence: 0.60861311

00:46:17.050 --> 00:46:19.114 The other way you know common ones

NOTE Confidence: 0.60861311

00:46:19.114 --> 00:46:21.354 that you might think of are leptin

NOTE Confidence: 0.60861311

00:46:21.354 --> 00:46:23.320 deficient leptin receptor deficiencies.

NOTE Confidence: 0.60861311

00:46:23.320 --> 00:46:26.890 It does have a have a certain

NOTE Confidence: 0.60861311

00:46:26.890 --> 00:46:29.005 presentation many monogenic

NOTE Confidence: 0.60861311

00:46:29.005 --> 00:46:31.825 obesity presentations will have.

NOTE Confidence: 0.60861311

00:46:31.830 --> 00:46:33.155 So they're syndromic is is

NOTE Confidence: 0.60861311

00:46:33.155 --> 00:46:34.740 what I'm really trying to say.

NOTE Confidence: 0.60861311

00:46:34.740 --> 00:46:36.508 And the the reason it's there are two

NOTE Confidence: 0.60861311

00:46:36.508 --> 00:46:38.017 reasons it's important to find them.

NOTE Confidence: 0.60861311

00:46:38.020 --> 00:46:39.816 Sometimes because there's syndromic,

NOTE Confidence: 0.60861311

00:46:39.816 --> 00:46:42.510 they have another endocrine issue associated

NOTE Confidence: 0.77078281

00:46:42.820 --> 00:46:44.094 that you need to treat and find.

NOTE Confidence: 0.884319478

00:46:44.940 --> 00:46:46.884 And then the other piece is they

NOTE Confidence: 0.884319478

00:46:46.884 --> 00:46:49.026 might be a candidate for drugs

NOTE Confidence: 0.884319478

00:46:49.026 --> 00:46:51.688 that are more effective, all right.

NOTE Confidence: 0.884319478

00:46:51.688 --> 00:46:55.356 So if someone has a leptin receptor

NOTE Confidence: 0.884319478

00:46:55.356 --> 00:46:57.708 deficiency, they their candidate to

NOTE Confidence: 0.884319478

00:46:57.708 --> 00:47:01.576 be treated with MC4R or set millana

NOTE Confidence: 0.884319478

00:47:01.576 --> 00:47:04.120 tide and those patients usually

NOTE Confidence: 0.884319478

00:47:04.120 --> 00:47:06.520 are heavier and they'll have,

NOTE Confidence: 0.884319478

00:47:06.520 --> 00:47:10.080 you know I have a patient that I've

NOTE Confidence: 0.884319478

00:47:10.080 --> 00:47:13.007 had patients that are quite heavy.

NOTE Confidence: 0.884319478

00:47:13.010 --> 00:47:16.398 And they they can be treated with.

NOTE Confidence: 0.884319478

00:47:16.400 --> 00:47:18.130 That sent Melanated an average.

NOTE Confidence: 0.884319478

00:47:18.130 --> 00:47:20.685 You know we're talking 22.5

NOTE Confidence: 0.884319478

00:47:20.685 --> 00:47:22.729 at with tricep petite.

NOTE Confidence: 0.884319478

00:47:22.730 --> 00:47:25.890 Set melanotic can get like a 30% response.

NOTE Confidence: 0.884319478

00:47:25.890 --> 00:47:28.650 So, so much more impressive for

NOTE Confidence: 0.884319478

00:47:28.650 --> 00:47:31.820 the for that specific population.

NOTE Confidence: 0.884319478

00:47:31.820 --> 00:47:33.020 Is is that helpful?

NOTE Confidence: 0.788307966666667

00:47:37.720 --> 00:47:40.626 OK, I have. Uh-huh.

NOTE Confidence: 0.788307966666667

00:47:40.626 --> 00:47:44.582 I have a question about non

NOTE Confidence: 0.788307966666667

00:47:44.582 --> 00:47:46.470 pharmacologic approaches that

NOTE Confidence: 0.788307966666667

00:47:46.470 --> 00:47:49.908 there appears to be 2 popular.

NOTE Confidence: 0.788307966666667

00:47:49.910 --> 00:47:51.956 Opposing views.

NOTE Confidence: 0.788307966666667

00:47:51.956 --> 00:47:57.815 One is the benefit of frequent small.

NOTE Confidence: 0.788307966666667

00:47:57.815 --> 00:47:59.870 Meals, particularly with

NOTE Confidence: 0.788307966666667

00:47:59.870 --> 00:48:03.295 a lot of protein snacking.

NOTE Confidence: 0.788307966666667

00:48:03.300 --> 00:48:08.324 And the other is the approach of of of

NOTE Confidence: 0.788307966666667

00:48:08.324 --> 00:48:11.546 long periods of fasting between eating.

NOTE Confidence: 0.788307966666667

00:48:11.550 --> 00:48:13.650 Do you have any strong feeling

NOTE Confidence: 0.788307966666667

00:48:13.650 --> 00:48:16.390 based on your experience?

NOTE Confidence: 0.788307966666667

00:48:16.390 --> 00:48:19.190 So there's data on this,

NOTE Confidence: 0.788307966666667

00:48:19.190 --> 00:48:24.410 yes so as far so.

NOTE Confidence: 0.788307966666667

00:48:24.410 --> 00:48:26.510 The the biggest picture is I'm still

NOTE Confidence: 0.788307966666667

00:48:26.510 --> 00:48:28.470 going to stick with the idea of.

NOTE Confidence: 0.788307966666667

00:48:28.470 --> 00:48:31.322 Reducing reducing calories but

NOTE Confidence: 0.788307966666667

00:48:31.322 --> 00:48:34.887 maintaining satiety and so however

NOTE Confidence: 0.788307966666667

00:48:34.887 --> 00:48:38.570 someone accomplishes that great and

NOTE Confidence: 0.788307966666667

00:48:38.570 --> 00:48:42.792 you are obviously tailor diets to to

NOTE Confidence: 0.788307966666667

00:48:42.792 --> 00:48:44.298 someones comorbidities Mediterranean

NOTE Confidence: 0.788307966666667

00:48:44.298 --> 00:48:46.306 diet more for cardiovascular,

NOTE Confidence: 0.788307966666667

00:48:46.310 --> 00:48:47.495 dash or hypertension.

NOTE Confidence: 0.788307966666667

00:48:47.495 --> 00:48:49.865 But that's not your question right.

NOTE Confidence: 0.788307966666667

00:48:49.870 --> 00:48:51.895 Your question is does does

NOTE Confidence: 0.788307966666667

00:48:51.895 --> 00:48:53.920 intermittent fasting work and the

NOTE Confidence: 0.788307966666667

00:48:53.991 --> 00:48:56.399 answer is there was a recent study

NOTE Confidence: 0.788307966666667

00:48:56.399 --> 00:48:58.449 that mostly said no not really.

NOTE Confidence: 0.788307966666667

00:48:58.450 --> 00:49:00.172 Uh, but I think that doesn't mean

NOTE Confidence: 0.788307966666667

00:49:00.172 --> 00:49:02.137 that I haven't had patients that said,

NOTE Confidence: 0.788307966666667

00:49:02.140 --> 00:49:04.030 boy, I've done this intermittent

NOTE Confidence: 0.788307966666667

00:49:04.030 --> 00:49:05.920 fasting thing and it works.

NOTE Confidence: 0.788307966666667

00:49:05.920 --> 00:49:07.246 What about protein?

NOTE Confidence: 0.788307966666667

00:49:07.246 --> 00:49:09.014 What about composition protein?

NOTE Confidence: 0.788307966666667

00:49:09.020 --> 00:49:11.936 So what makes you feel full?

NOTE Confidence: 0.788307966666667

00:49:11.940 --> 00:49:14.406 Things that make you feel full

NOTE Confidence: 0.788307966666667

00:49:14.406 --> 00:49:17.128 are one protein, followed by fat,

NOTE Confidence: 0.788307966666667

00:49:17.128 --> 00:49:19.037 followed by carbs, right?

00:49:19.037 --> 00:49:21.956 So those things make you feel full

00:49:21.956 --> 00:49:24.376 and have a pretty good calorie

00:49:24.376 --> 00:49:27.446 density if if their health, you know,

00:49:27.446 --> 00:49:30.404 healthy if you have a good.

00:49:30.410 --> 00:49:32.692 If you have like steak that's not

00:49:32.692 --> 00:49:34.350 particularly like a lean meat,

00:49:34.350 --> 00:49:36.135 it will make you feel full at

00:49:36.135 --> 00:49:37.410 a lower calorie density.

00:49:37.410 --> 00:49:39.050 So I don't have anything,

00:49:39.050 --> 00:49:42.200 I don't have any problems with

00:49:42.200 --> 00:49:44.300 people choosing a protein,

00:49:44.300 --> 00:49:47.884 heavy or not heavy, but a protein,

00:49:47.890 --> 00:49:49.474 vegetable, vegetable based diet.

00:49:49.474 --> 00:49:52.260 And I'm more of a diabetologist, right?

00:49:52.260 --> 00:49:55.130 So if you're not eating carbs I'm

00:49:55.130 --> 00:49:57.780 happy but but but I don't have a

NOTE Confidence: 0.788307966666667

00:49:57.780 --> 00:49:59.549 problem with that diet per se.

NOTE Confidence: 0.788307966666667

00:49:59.550 --> 00:50:00.220 The, the.

NOTE Confidence: 0.788307966666667

00:50:00.220 --> 00:50:02.565 What I find is that there's some

NOTE Confidence: 0.788307966666667

00:50:02.565 --> 00:50:04.959 things that people cannot adhere to,

NOTE Confidence: 0.788307966666667

00:50:04.960 --> 00:50:07.123 and I think the the biggest thing

NOTE Confidence: 0.788307966666667

00:50:07.123 --> 00:50:09.232 is finding the right thing that

NOTE Confidence: 0.788307966666667

00:50:09.232 --> 00:50:12.030 someone can adhere to with with

NOTE Confidence: 0.788307966666667

00:50:12.030 --> 00:50:15.055 that thoughtful idea of choosing,

NOTE Confidence: 0.788307966666667

00:50:15.060 --> 00:50:16.545 choosing specific things that make

NOTE Confidence: 0.788307966666667

00:50:16.545 --> 00:50:19.320 you feel full at a lower calorie density.

NOTE Confidence: 0.788307966666667

00:50:19.320 --> 00:50:21.259 So I have no problem with that.

NOTE Confidence: 0.788307966666667

00:50:21.260 --> 00:50:23.860 So short answer is.

NOTE Confidence: 0.911528880714286

00:50:25.900 --> 00:50:27.416 From what I've seen,

NOTE Confidence: 0.911528880714286

00:50:27.416 --> 00:50:29.690 the data does not really support

NOTE Confidence: 0.911528880714286

00:50:29.769 --> 00:50:31.989 intermittent fasting very well.

NOTE Confidence: 0.911528880714286

00:50:31.990 --> 00:50:33.660 I've had anecdotally a few

NOTE Confidence: 0.911528880714286

00:50:33.660 --> 00:50:35.590 patients that do well with it.

NOTE Confidence: 0.911528880714286

00:50:35.590 --> 00:50:41.250 Great. As far as composition,

NOTE Confidence: 0.911528880714286

00:50:41.250 --> 00:50:46.150 having a higher protein with with a little

NOTE Confidence: 0.911528880714286

00:50:46.150 --> 00:50:49.218 bit of with with veg based diet is fine.

NOTE Confidence: 0.911528880714286

00:50:49.218 --> 00:50:52.372 It will make you feel full at probably

NOTE Confidence: 0.911528880714286

00:50:52.372 --> 00:50:55.732 a lower calorie density and at but won't

NOTE Confidence: 0.911528880714286

00:50:55.819 --> 00:50:58.645 fix the fix the underlying problem.

NOTE Confidence: 0.911528880714286

00:50:58.650 --> 00:51:01.110 Is that helpful?

NOTE Confidence: 0.911528880714286

00:51:01.110 --> 00:51:02.450 And one other question is,

NOTE Confidence: 0.911528880714286

00:51:02.450 --> 00:51:07.100 is it is it a serious problem of people

NOTE Confidence: 0.911528880714286

00:51:07.100 --> 00:51:12.920 eating at night in combination with with the?

NOTE Confidence: 0.911528880714286

00:51:12.920 --> 00:51:18.020 With, well, just the evening snacking

NOTE Confidence: 0.911528880714286

00:51:18.020 --> 00:51:23.660 and and the problems with melatonin,

NOTE Confidence: 0.911528880714286

00:51:23.660 --> 00:51:25.235 I haven't seen a lot of that.

NOTE Confidence: 0.911528880714286

00:51:25.240 --> 00:51:28.688 I have, I have.

NOTE Confidence: 0.911528880714286

00:51:28.690 --> 00:51:30.310 I have had patients that

NOTE Confidence: 0.911528880714286

00:51:30.310 --> 00:51:31.606 do the evening snacking,

NOTE Confidence: 0.911528880714286

00:51:31.610 --> 00:51:32.990 but that's usually because they're

NOTE Confidence: 0.911528880714286

00:51:32.990 --> 00:51:35.147 busy during the day and then they eat

NOTE Confidence: 0.911528880714286

00:51:35.147 --> 00:51:36.841 nothing and then they binge at night.

NOTE Confidence: 0.911528880714286

00:51:36.850 --> 00:51:39.160 But I haven't seen that specific

NOTE Confidence: 0.911528880714286

00:51:39.160 --> 00:51:40.315 association with melatonin,

NOTE Confidence: 0.911528880714286

00:51:40.320 --> 00:51:41.590 or at least not consistently.

NOTE Confidence: 0.788405291666667

00:51:45.480 --> 00:51:47.412 Thanks, Brian. Another question I have

NOTE Confidence: 0.788405291666667

00:51:47.412 --> 00:51:49.633 from Doctor Ruth and a comment, great.

NOTE Confidence: 0.788405291666667

00:51:49.633 --> 00:51:51.594 Doctor Brian, would you prescribe trouser

NOTE Confidence: 0.788405291666667

00:51:51.594 --> 00:51:53.652 petite for a limited period of time

NOTE Confidence: 0.788405291666667

00:51:53.652 --> 00:51:55.964 only in patients who have multinodular

NOTE Confidence: 0.788405291666667

00:51:55.964 --> 00:51:58.044 goiter or avoid these medications?

NOTE Confidence: 0.688857426666667

00:51:59.600 --> 00:52:02.168 Question. Um, so my thyroid colleagues

81

NOTE Confidence: 0.688857426666667

00:52:02.168 --> 00:52:04.330 send those patients straight to me.

NOTE Confidence: 0.688857426666667

00:52:04.330 --> 00:52:05.536 They've had cancer.

NOTE Confidence: 0.688857426666667

00:52:05.536 --> 00:52:07.948 So as long as they're not

NOTE Confidence: 0.688857426666667

00:52:07.948 --> 00:52:10.245 medullary thyroid cancer and they

NOTE Confidence: 0.688857426666667

00:52:10.245 --> 00:52:12.520 don't have that specific cancer.

NOTE Confidence: 0.688857426666667

00:52:12.520 --> 00:52:15.240 We still prescribe it. So.

NOTE Confidence: 0.688857426666667

00:52:15.240 --> 00:52:20.064 So yeah, that's if and in fact obesity.

NOTE Confidence: 0.688857426666667

00:52:20.070 --> 00:52:23.250 It's been shown to reduce incidence

NOTE Confidence: 0.688857426666667

00:52:23.250 --> 00:52:24.950 of papillary thyroid cancer,

NOTE Confidence: 0.688857426666667

00:52:24.950 --> 00:52:26.970 which is far more common, right.

NOTE Confidence: 0.688857426666667

00:52:26.970 --> 00:52:29.686 So it's one of the 13 cancers

NOTE Confidence: 0.688857426666667

00:52:29.686 --> 00:52:30.850 that's been associated.

NOTE Confidence: 0.688857426666667

00:52:30.850 --> 00:52:31.816 So, so sorry,

NOTE Confidence: 0.688857426666667

00:52:31.816 --> 00:52:34.070 obesity has been shown to increase that.

NOTE Confidence: 0.688857426666667

00:52:34.070 --> 00:52:35.366 I think I said that right.

NOTE Confidence: 0.688857426666667

00:52:35.370 --> 00:52:38.118 So treating obesity should actually improve

NOTE Confidence: 0.688857426666667

00:52:38.118 --> 00:52:41.130 thyroid cancer or most thyroid cancers,

NOTE Confidence: 0.688857426666667

00:52:41.130 --> 00:52:42.530 but it will not it,

NOTE Confidence: 0.688857426666667

00:52:42.530 --> 00:52:46.958 but treating with a GLP or GLP one Giphy

NOTE Confidence: 0.688857426666667

00:52:46.958 --> 00:52:49.624 agent may would be contraindicated.

NOTE Confidence: 0.688857426666667

00:52:49.624 --> 00:52:51.559 Than someone with a history,

NOTE Confidence: 0.688857426666667

00:52:51.560 --> 00:52:53.685 family history or personal history

NOTE Confidence: 0.688857426666667

00:52:53.685 --> 00:52:55.385 of medullary thyroid cancer.

NOTE Confidence: 0.766309472727273

00:52:57.620 --> 00:52:59.084 Thank you. Another question,

NOTE Confidence: 0.766309472727273

00:52:59.084 --> 00:53:00.914 are there any R cities

NOTE Confidence: 0.766309472727273

00:53:00.914 --> 00:53:02.640 about combined treatments

NOTE Confidence: 0.766309472727273

00:53:02.640 --> 00:53:04.326 medication with psychotherapy?

NOTE Confidence: 0.766309472727273

00:53:04.326 --> 00:53:06.138 Is the combination better

NOTE Confidence: 0.766309472727273

00:53:06.138 --> 00:53:07.950 than just one approach?

NOTE Confidence: 0.816155290909091

00:53:08.390 --> 00:53:12.989 So almost all, almost all studies consider

NOTE Confidence: 0.816155290909091

00:53:12.989 --> 00:53:15.920 conservative management as baseline.

00:53:15.920 --> 00:53:18.004 So what conservative management

00:53:18.004 --> 00:53:21.130 to me is nutrition often like

00:53:21.217 --> 00:53:23.779 consistent nutritional visits,

00:53:23.780 --> 00:53:26.036 you know some some sort of

00:53:26.036 --> 00:53:27.540 psych something you know?

00:53:27.540 --> 00:53:29.684 It's usually more of a nutrition based thing.

00:53:29.690 --> 00:53:30.566 Generally speaking,

00:53:30.566 --> 00:53:33.194 the medicines are more effective for

00:53:33.194 --> 00:53:35.847 any for an individual on average.

00:53:35.850 --> 00:53:38.010 But I think there are

00:53:38.010 --> 00:53:39.306 several important caveats.

00:53:39.310 --> 00:53:40.750 Binge eating disorder is one

00:53:40.750 --> 00:53:42.371 of the biggest ones, right?

00:53:42.371 --> 00:53:44.676 So people who have binge

00:53:44.676 --> 00:53:46.650 eating disorder need to be.

00:53:49.040 --> 00:53:51.602 With the with with a good

NOTE Confidence: 0.793398035

00:53:51.602 --> 00:53:53.310 psych team because all

NOTE Confidence: 0.762845866666667

00:53:53.320 --> 00:53:55.552 the drugs ever do is improve

NOTE Confidence: 0.762845866666667

00:53:55.552 --> 00:53:58.101 is change the fat mass setpoint

NOTE Confidence: 0.762845866666667

00:53:58.101 --> 00:54:01.017 people who binge eat past satiety.

NOTE Confidence: 0.762845866666667

00:54:01.020 --> 00:54:03.800 So I can't fix that.

NOTE Confidence: 0.762845866666667

00:54:03.800 --> 00:54:05.196 That needs a different,

NOTE Confidence: 0.762845866666667

00:54:05.196 --> 00:54:06.941 that needs a different therapy

NOTE Confidence: 0.762845866666667

00:54:06.941 --> 00:54:08.680 and that can be done with.

NOTE Confidence: 0.762845866666667

00:54:08.680 --> 00:54:09.950 So the medicine that's sometimes

NOTE Confidence: 0.762845866666667

00:54:09.950 --> 00:54:11.220 used for it is Vyvanse.

NOTE Confidence: 0.762845866666667

00:54:11.220 --> 00:54:14.252 I don't prescribe it because it's a psych

NOTE Confidence: 0.762845866666667

00:54:14.252 --> 00:54:17.076 indication or I don't usually prescribe it.

NOTE Confidence: 0.762845866666667

00:54:17.080 --> 00:54:18.768 But also there there needs to be a

NOTE Confidence: 0.762845866666667

00:54:18.768 --> 00:54:20.397 good good psych support with that.

NOTE Confidence: 0.762845866666667

00:54:20.400 --> 00:54:23.048 So I I think that the the studies

NOTE Confidence: 0.762845866666667

00:54:23.048 --> 00:54:25.386 have some sort of support maybe

NOTE Confidence: 0.762845866666667

00:54:25.386 --> 00:54:27.786 less psych support in other in

NOTE Confidence: 0.762845866666667

00:54:27.866 --> 00:54:30.449 other cases and I think the biggest

NOTE Confidence: 0.762845866666667

00:54:30.449 --> 00:54:32.805 caveat is in patients that binge.

NOTE Confidence: 0.762845866666667

00:54:32.805 --> 00:54:35.710 So most of the time the medicines.

NOTE Confidence: 0.787749388888889

00:54:37.750 --> 00:54:39.110 But it's it's really.

NOTE Confidence: 0.787749388888889

00:54:39.110 --> 00:54:40.810 You should be treating everything.

NOTE Confidence: 0.787749388888889

00:54:40.810 --> 00:54:42.090 You should be treated everything.

NOTE Confidence: 0.89524865

00:54:44.170 --> 00:54:48.698 OK. What's wrong? We have a

NOTE Confidence: 0.89524865

00:54:48.698 --> 00:54:49.766 question from Doctor Hoffman.

NOTE Confidence: 0.94212141

00:54:49.770 --> 00:54:51.918 Have you had any success with evening

NOTE Confidence: 0.94212141

00:54:51.918 --> 00:54:54.676 overnight fasting of 12 hour or more?

NOTE Confidence: 0.884516138

00:54:57.110 --> 00:54:59.338 I have, like I said, you know,

NOTE Confidence: 0.884516138

00:54:59.338 --> 00:55:00.730 anecdotally I've had,

NOTE Confidence: 0.884516138

00:55:00.730 --> 00:55:03.486 I have maybe one or two cases that

NOTE Confidence: 0.884516138

00:55:03.486 --> 00:55:05.466 do intermittent fasting and say,

NOTE Confidence: 0.884516138

00:55:05.470 --> 00:55:07.465 boy, this is really working for me

NOTE Confidence: 0.884516138

00:55:07.470 --> 00:55:09.730 and that's great, that's fantastic.

NOTE Confidence: 0.884516138

00:55:09.730 --> 00:55:12.240 Maybe they have a specific

NOTE Confidence: 0.884516138

00:55:12.240 --> 00:55:15.200 phenotype that, that, that.

NOTE Confidence: 0.884516138

00:55:15.200 --> 00:55:18.370 And so, So what often happens

NOTE Confidence: 0.792379728333333

00:55:18.380 --> 00:55:21.710 with intermittent fasting is people catch

NOTE Confidence: 0.836233975714286

00:55:21.720 --> 00:55:23.645 up during the the non fast time.

NOTE Confidence: 0.719211751428571

00:55:24.380 --> 00:55:26.084 On this far as their calorie

NOTE Confidence: 0.719211751428571

00:55:26.084 --> 00:55:28.500 intake but some people respond

NOTE Confidence: 0.8906158325

00:55:28.500 --> 00:55:31.260 well to the to that time restricted eating.

NOTE Confidence: 0.8906158325

00:55:31.260 --> 00:55:35.751 So I would say yes sometimes and I don't

NOTE Confidence: 0.8906158325

00:55:35.751 --> 00:55:37.893 necessarily see anything wrong with with

NOTE Confidence: 0.8906158325

00:55:37.893 --> 00:55:40.636 that if that works for a specific patient.

NOTE Confidence: 0.786588403529412

00:55:43.170 --> 00:55:45.641 It's David. And do you have any

NOTE Confidence: 0.786588403529412

00:55:45.641 --> 00:55:48.006 data on the wakefulness promoting

NOTE Confidence: 0.786588403529412

00:55:48.006 --> 00:55:51.056 benefits of the fasting state?

NOTE Confidence: 0.786588403529412

00:55:51.060 --> 00:55:52.888 Not necessarily for something

NOTE Confidence: 0.786588403529412

00:55:52.888 --> 00:55:54.780 that would be, you know,

NOTE Confidence: 0.786588403529412

00:55:54.780 --> 00:55:56.860 drive you down the path of weight loss,

NOTE Confidence: 0.786588403529412

00:55:56.860 --> 00:55:59.345 but maybe serve the weight promoting thing.

NOTE Confidence: 0.786588403529412

00:55:59.350 --> 00:56:01.699 Because I do know that being

NOTE Confidence: 0.786588403529412

00:56:01.699 --> 00:56:03.512 vigilant seems to be a side effect

NOTE Confidence: 0.786588403529412

00:56:03.512 --> 00:56:05.200 of being in the fasting state.

NOTE Confidence: 0.786588403529412

00:56:05.200 --> 00:56:06.280 There is some data out there,

NOTE Confidence: 0.786588403529412

00:56:06.280 --> 00:56:07.666 but I'm not too familiar with it.

NOTE Confidence: 0.786588403529412

00:56:07.670 --> 00:56:09.234 I was wondering whether

NOTE Confidence: 0.786588403529412

00:56:09.234 --> 00:56:11.189 you knew anything about it.

NOTE Confidence: 0.786588403529412

00:56:11.190 --> 00:56:15.100 I think it's hotly debated.

NOTE Confidence: 0.786588403529412

00:56:15.100 --> 00:56:17.644 I, I, I, I, you know, and there's.

NOTE Confidence: 0.786588403529412

00:56:17.644 --> 00:56:20.668 I think being in like the ketosis

NOTE Confidence: 0.786588403529412

00:56:20.668 --> 00:56:23.223 has been argued to maybe make

NOTE Confidence: 0.786588403529412

00:56:23.223 --> 00:56:25.780 you feel a little bit more,

NOTE Confidence: 0.786588403529412

00:56:25.780 --> 00:56:28.370 not like there's nausea associated

NOTE Confidence: 0.786588403529412

00:56:28.370 --> 00:56:30.246 with being ketotic, right?

NOTE Confidence: 0.786588403529412

00:56:30.246 --> 00:56:32.142 And the thought is that maybe

NOTE Confidence: 0.786588403529412

00:56:32.142 --> 00:56:34.149 if you're a little ketotic.

NOTE Confidence: 0.786588403529412

00:56:34.150 --> 00:56:34.390 You

NOTE Confidence: 0.846482300909091

00:56:34.400 --> 00:56:36.272 will have a little bit of

NOTE Confidence: 0.846482300909091

00:56:36.272 --> 00:56:37.860 nausea and maybe that will

NOTE Confidence: 0.831429408461538

00:56:38.590 --> 00:56:40.214 and that's what you're trying to accomplish

NOTE Confidence: 0.831429408461538

00:56:40.214 --> 00:56:42.140 and to some degree through fasting, right?

NOTE Confidence: 0.831429408461538

00:56:42.140 --> 00:56:43.610 It's not just that you didn't eat

NOTE Confidence: 0.831429408461538

00:56:43.610 --> 00:56:45.258 enough carbs, it's boiled, you know,

NOTE Confidence: 0.831429408461538

00:56:45.258 --> 00:56:47.497 it's this is another way to maybe

NOTE Confidence: 0.831429408461538

00:56:47.497 --> 00:56:49.495 achieve a little bit of ketosis.

NOTE Confidence: 0.831429408461538

00:56:49.500 --> 00:56:53.100 And so, so I I think.

NOTE Confidence: 0.831429408461538

00:56:53.100 --> 00:56:55.836 That is a hotly debated topic.

NOTE Confidence: 0.831429408461538

00:56:55.840 --> 00:56:59.320 I haven't been convinced that.

NOTE Confidence: 0.831429408461538

00:56:59.320 --> 00:57:01.300 Achieving ketosis through fasting

NOTE Confidence: 0.831429408461538

00:57:01.300 --> 00:57:04.270 or otherwise is is very weight

NOTE Confidence: 0.831429408461538

00:57:04.349 --> 00:57:06.977 promoting or particularly helpful?

NOTE Confidence: 0.831429408461538

00:57:06.980 --> 00:57:09.258 Umm, you know,

NOTE Confidence: 0.831429408461538

00:57:09.258 --> 00:57:11.631 certainly you can lose a lot of

NOTE Confidence: 0.831429408461538

00:57:11.631 --> 00:57:13.955 weight quickly if you eat very very

NOTE Confidence: 0.831429408461538

00:57:13.955 --> 00:57:16.900 little and on an architonic, but.

NOTE Confidence: 0.831429408461538

00:57:16.900 --> 00:57:18.540 Long term,

NOTE Confidence: 0.831429408461538

00:57:18.540 --> 00:57:20.984 I suspect you will regain it based on,

NOTE Confidence: 0.831429408461538

00:57:20.984 --> 00:57:22.456 you know understand that

NOTE Confidence: 0.831429408461538

00:57:22.456 --> 00:57:24.190 the the disease process.

NOTE Confidence: 0.6096207125

00:57:26.880 --> 00:57:29.648 Period. Is that help?

NOTE Confidence: 0.6096207125

00:57:29.650 --> 00:57:32.506 You're going back to that patient,

NOTE Confidence: 0.6096207125

00:57:32.510 --> 00:57:35.450 you showed that loss from 280 to

NOTE Confidence: 0.6096207125

00:57:35.450 --> 00:57:39.310 200 on various medications if.

NOTE Confidence: 0.6096207125

00:57:39.310 --> 00:57:41.410 Now that the patient has reached 200,

NOTE Confidence: 0.6096207125

00:57:41.410 --> 00:57:43.588 if you stopped all those medications,

NOTE Confidence: 0.6096207125

00:57:43.590 --> 00:57:45.390 what would you predict would happen?

NOTE Confidence: 0.6096207125

00:57:45.390 --> 00:57:48.127 And those, have you changed the Physiology

NOTE Confidence: 0.6096207125

00:57:48.127 --> 00:57:50.866 of that patient in any way being at

NOTE Confidence: 0.6096207125

00:57:50.866 --> 00:57:52.862 200 rather than 280, if you could?

NOTE Confidence: 0.6096207125

00:57:52.862 --> 00:57:54.398 Great, great, great question. Sorry,

NOTE Confidence: 0.6096207125

00:57:54.398 --> 00:57:57.090 I didn't make a punctuated point about this.

NOTE Confidence: 0.6096207125

00:57:57.090 --> 00:57:59.598 It's very important.

NOTE Confidence: 0.6096207125

00:57:59.600 --> 00:58:02.860 Regain the weight, right? Absolutely.

NOTE Confidence: 0.6096207125

00:58:02.860 --> 00:58:05.986 So we have not cured obesity.

NOTE Confidence: 0.6096207125

00:58:05.990 --> 00:58:10.750 Um, you have treated it and that's true of

NOTE Confidence: 0.6096207125

00:58:10.750 --> 00:58:13.350 surgery, that's true of medicine, right?

NOTE Confidence: 0.6096207125

00:58:13.350 --> 00:58:17.170 So if if I take a patient that is BMI 50,

NOTE Confidence: 0.6096207125

00:58:17.170 --> 00:58:20.286 take them to the OR and change

NOTE Confidence: 0.6096207125

00:58:20.286 --> 00:58:21.480 their Physiology, right,

NOTE Confidence: 0.6096207125

00:58:21.480 --> 00:58:22.780 because it's a metabolic surgery,

NOTE Confidence: 0.6096207125

00:58:22.780 --> 00:58:25.390 it affects hormones that it's

NOTE Confidence: 0.6096207125

00:58:25.390 --> 00:58:26.956 not just malabsorptive.

NOTE Confidence: 0.6096207125

00:58:26.960 --> 00:58:27.940 10 years down the line,

NOTE Confidence: 0.6096207125

00:58:27.940 --> 00:58:29.704 they might regain that weight and we've

NOTE Confidence: 0.6096207125

00:58:29.704 --> 00:58:31.586 seen those cases plenty of the time, right?

NOTE Confidence: 0.6096207125

00:58:31.586 --> 00:58:32.926 Is that a 10 years, hey,

NOTE Confidence: 0.6096207125

00:58:32.926 --> 00:58:34.206 this bariatric surgery didn't work.

NOTE Confidence: 0.6096207125

00:58:34.210 --> 00:58:36.190 No, their disease has progressed,

NOTE Confidence: 0.6096207125

00:58:36.190 --> 00:58:37.562 right and that is a fix to

NOTE Confidence: 0.6096207125

00:58:37.562 --> 00:58:38.710 the fat mass set point.

NOTE Confidence: 0.6096207125

00:58:38.710 --> 00:58:41.020 But disease progresses now with

NOTE Confidence: 0.6096207125

00:58:41.020 --> 00:58:42.774 medicines we've tried, right?

NOTE Confidence: 0.6096207125

00:58:42.774 --> 00:58:44.594 So there's a great study

NOTE Confidence: 0.6096207125

00:58:44.594 --> 00:58:45.686 with phentermine topiramate,

NOTE Confidence: 0.6096207125

00:58:45.690 --> 00:58:48.330 which was a crossover and they

NOTE Confidence: 0.6096207125

00:58:48.330 --> 00:58:50.698 looked and said, can we stop it?

NOTE Confidence: 0.6096207125

00:58:50.698 --> 00:58:53.132 Because no one wants to stay on medicine

NOTE Confidence: 0.6096207125

00:58:53.132 --> 00:58:54.750 forever. And the answer was no.

NOTE Confidence: 0.6096207125

00:58:54.750 --> 00:58:56.870 They they had, you know,

NOTE Confidence: 0.6096207125

00:58:56.870 --> 00:58:58.402 just a lifestyle quote,

NOTE Confidence: 0.6096207125

00:58:58.402 --> 00:59:00.700 UN quote lifestyle intervention and then

NOTE Confidence: 0.6096207125

00:59:00.760 --> 00:59:02.592 lifestyle plus phentermine topiramate

NOTE Confidence: 0.6096207125

00:59:02.592 --> 00:59:04.882 halfway through you could quit.

NOTE Confidence: 0.6096207125

00:59:04.890 --> 00:59:06.625 And they rejoined their colleagues

NOTE Confidence: 0.6096207125

00:59:06.625 --> 00:59:07.666 at the lifestyle.

NOTE Confidence: 0.6096207125

00:59:07.670 --> 00:59:10.109 So it really kind of gave you that show,

NOTE Confidence: 0.6096207125

00:59:10.110 --> 00:59:10.684 that boy,

NOTE Confidence: 0.6096207125

00:59:10.684 --> 00:59:12.693 there is that fat mass set point

NOTE Confidence: 0.6096207125

00:59:12.693 --> 00:59:14.390 because they went back to where

NOTE Confidence: 0.6096207125

00:59:14.390 --> 00:59:15.970 we would expect them to go.

NOTE Confidence: 0.6096207125

00:59:15.970 --> 00:59:16.582 So yeah,

NOTE Confidence: 0.6096207125

00:59:16.582 --> 00:59:18.418 I'd expect that patient to regain

NOTE Confidence: 0.6096207125

00:59:18.418 --> 00:59:22.420 all that weight, that being said.

NOTE Confidence: 0.6096207125

00:59:22.420 --> 00:59:23.824 I'll give you the caveat of

NOTE Confidence: 0.6096207125

00:59:23.824 --> 00:59:24.811 a super responder, right,

NOTE Confidence: 0.6096207125

00:59:24.811 --> 00:59:26.778 because I gave you an average case.

NOTE Confidence: 0.6096207125

00:59:26.780 --> 00:59:31.252 I had a case that was in the 400 about

NOTE Confidence: 0.6096207125

00:59:31.252 --> 00:59:35.652 little over £400 when they saw me on insulin.

NOTE Confidence: 0.6096207125

00:59:35.652 --> 00:59:39.276 For diabetes on statins.

NOTE Confidence: 0.6096207125

00:59:39.280 --> 00:59:43.490 Required knee surgery for osteoarthritis.

NOTE Confidence: 0.6096207125

00:59:43.490 --> 00:59:44.620 Could not get it because

NOTE Confidence: 0.6096207125

00:59:44.620 --> 00:59:45.524 of the weight requirement.

NOTE Confidence: 0.6096207125

00:59:45.530 --> 00:59:48.430 Terrible OSA, etcetera, etcetera, etcetera.

NOTE Confidence: 0.6096207125

00:59:48.430 --> 00:59:51.240 Started them on some meglitinide.

NOTE Confidence: 0.6096207125

00:59:51.240 --> 00:59:53.110 1 milligram, not full dose, right?

NOTE Confidence: 0.6096207125

00:59:53.110 --> 00:59:54.950 So I got them to 1 milligram after

NOTE Confidence: 0.6096207125

00:59:54.950 --> 00:59:56.755 three months they lost touch with me,

NOTE Confidence: 0.6096207125

00:59:56.760 --> 00:59:59.176 but I saw them in a year lost

NOTE Confidence: 0.6096207125

00:59:59.180 --> 01:00:03.280 £120.00 off insulin, off statin,

NOTE Confidence: 0.6096207125

01:00:03.280 --> 01:00:05.120 off blood pressure pills,

NOTE Confidence: 0.6096207125

01:00:05.120 --> 01:00:07.520 got their surgery, can walk now.

NOTE Confidence: 0.6096207125

01:00:07.520 --> 01:00:10.628 So like it, it really depends, right?

NOTE Confidence: 0.6096207125

01:00:10.628 --> 01:00:13.760 You can have really profound effects

NOTE Confidence: 0.6096207125

01:00:13.760 --> 01:00:15.392 and that's not an average case

NOTE Confidence: 0.6096207125

01:00:15.392 --> 01:00:17.882 is is you can have rip but you

NOTE Confidence: 0.6096207125

01:00:17.882 --> 01:00:19.552 can have really profound effects

NOTE Confidence: 0.6096207125

01:00:19.552 --> 01:00:21.500 with these medicines that are.

NOTE Confidence: 0.6096207125

01:00:21.500 --> 01:00:22.517 Really life changing.

NOTE Confidence: 0.6096207125

01:00:22.517 --> 01:00:24.890 The problem is that I don't know

NOTE Confidence: 0.6096207125

01:00:24.952 --> 01:00:27.143 the next guy might give the same

NOTE Confidence: 0.6096207125

01:00:27.143 --> 01:00:29.158 medicine and it's you got a £5

NOTE Confidence: 0.6096207125

01:00:29.158 --> 01:00:31.562 weight loss and what in this is that

NOTE Confidence: 0.6096207125

01:00:31.562 --> 01:00:34.352 worth it right and and so and so

NOTE Confidence: 0.6096207125

01:00:34.352 --> 01:00:36.518 it's a constant reevaluation of are

NOTE Confidence: 0.6096207125

01:00:36.600 --> 01:00:39.110 these medicines effective for you.

NOTE Confidence: 0.830235210555556

01:00:39.110 --> 01:00:40.868 What other medicines can we peel

NOTE Confidence: 0.830235210555556

01:00:40.868 --> 01:00:42.640 off because once you start these

NOTE Confidence: 0.830235210555556

01:00:42.640 --> 01:00:44.688 medicines my next job is to say can

NOTE Confidence: 0.830235210555556

01:00:44.688 --> 01:00:46.048 we stop the blood pressure pill

NOTE Confidence: 0.830235210555556

01:00:46.048 --> 01:00:47.776 can we stop the cholesterol pill?

NOTE Confidence: 0.830235210555556

01:00:47.780 --> 01:00:49.656 What what can we start peeling off

NOTE Confidence: 0.830235210555556

01:00:49.656 --> 01:00:51.930 so it's a it's I follow patients.

NOTE Confidence: 0.830235210555556

01:00:51.930 --> 01:00:54.174 Three to four months and and

NOTE Confidence: 0.830235210555556

01:00:54.174 --> 01:00:55.296 reevaluate pretty regularly.

NOTE Confidence: 0.494610785

01:00:58.720 --> 01:01:03.530 Thanks. Yep. Thanks a lot, Brian. We

NOTE Confidence: 0.778116921666667

01:01:03.530 --> 01:01:05.726 have one comment from Doctor Radaker.

NOTE Confidence: 0.778116921666667

01:01:05.730 --> 01:01:06.585 Nice talk, Ryan.

NOTE Confidence: 0.778116921666667

01:01:06.585 --> 01:01:10.040 Great to see everyone.

NOTE Confidence: 0.778116921666667

01:01:10.040 --> 01:01:14.520 Thanks if anyone has any questions.

NOTE Confidence: 0.778116921666667

01:01:14.520 --> 01:01:17.040 If not, thank you so much again.

NOTE Confidence: 0.778116921666667

01:01:17.040 --> 01:01:18.680 It was a terrific talk.

NOTE Confidence: 0.778116921666667

01:01:18.680 --> 01:01:20.840 More patience coming your way.

NOTE Confidence: 0.778116921666667

01:01:20.840 --> 01:01:23.555 Alright, bye everyone.

NOTE Confidence: 0.778116921666667

01:01:23.555 --> 01:01:24.910 Enjoy your vacation.