WEBVTT

NOTE duration:"00:20:03.6000000"

NOTE recognizability:0.904

NOTE language:en-us

NOTE Confidence: 0.58141196

00:00:00.000 --> 00:00:02.504 All right, everyone. We're going

NOTE Confidence: 0.58141196

00:00:02.504 --> 00:00:04.160 to go ahead and get started.

NOTE Confidence: 0.945132874

00:00:04.160 --> 00:00:07.600 And the next section of our workshop today

NOTE Confidence: 0.945132874

00:00:07.600 --> 00:00:11.156 is going to look at clinical Physiology.

NOTE Confidence: 0.945132874

00:00:11.160 --> 00:00:12.518 So those are the next two talks.

NOTE Confidence: 0.945132874

00:00:12.520 --> 00:00:13.960 So I think they're both

NOTE Confidence: 0.945132874

00:00:13.960 --> 00:00:15.400 going to be really exciting.

NOTE Confidence: 0.945132874

00:00:15.400 --> 00:00:17.535 And to kick us off with this

NOTE Confidence: 0.945132874

00:00:17.535 --> 00:00:19.160 section of the workshop,

NOTE Confidence: 0.945132874

00:00:19.160 --> 00:00:22.316 we have Doctor Michelle Van Name.

NOTE Confidence: 0.945132874

00:00:22.320 --> 00:00:24.660 So Doctor Van Name graduated from

NOTE Confidence: 0.945132874

00:00:24.660 --> 00:00:26.726 Boston College and earned her

NOTE Confidence: 0.945132874

00:00:26.726 --> 00:00:28.876 medical degree from SUNY Downstate.

NOTE Confidence: 0.945132874

00:00:28.880 --> 00:00:31.040 She completed internship and residency

NOTE Confidence: 0.945132874

00:00:31.040 --> 00:00:33.960 programs in Pediatrics at Yale University,

NOTE Confidence: 0.945132874

00:00:33.960 --> 00:00:36.600 where she also did a fellowship

NOTE Confidence: 0.945132874

00:00:36.600 --> 00:00:37.920 in pediatric endocrinology.

NOTE Confidence: 0.945132874

00:00:37.920 --> 00:00:39.872 Her research investigates the

NOTE Confidence: 0.945132874

00:00:39.872 --> 00:00:42.312 intersection of diabetes and obesity

NOTE Confidence: 0.945132874

00:00:42.312 --> 00:00:44.718 in children and young adults,

NOTE Confidence: 0.945132874

00:00:44.720 --> 00:00:46.460 as well as treatment strategies

NOTE Confidence: 0.945132874

00:00:46.460 --> 00:00:47.820 for these diseases.

NOTE Confidence: 0.945132874

00:00:47.820 --> 00:00:50.545 So welcome to the stage Doctor Van Name

NOTE Confidence: 0.945132874

00:00:50.545 --> 00:00:52.760 and we're very excited for your talk.

NOTE Confidence: 0.975040765555555

00:00:58.680 --> 00:01:01.155 Thank you. And I'm excited to be here today.

NOTE Confidence: 0.975040765555555

00:01:01.160 --> 00:01:03.144 I'm going to be telling you just a

NOTE Confidence: 0.975040765555555

00:01:03.144 --> 00:01:05.114 little bit about some of the work

NOTE Confidence: 0.975040765555555

00:01:05.114 --> 00:01:06.800 done in pediatric obesity at Yale

NOTE Confidence: 0.975040765555555

00:01:06.800 --> 00:01:09.453 as well as really focusing the talk

NOTE Confidence: 0.975040765555555

00:01:09.453 --> 00:01:12.038 on obesity and type one diabetes.

NOTE Confidence: 0.975040765555555

00:01:12.040 --> 00:01:15.066 These are my disclosures and so

NOTE Confidence: 0.975040765555555

00:01:15.066 --> 00:01:16.478 pediatric obesity research is

NOTE Confidence: 0.975040765555555

00:01:16.478 --> 00:01:18.840 not a new thing for our team.

NOTE Confidence: 0.975040765555555

00:01:18.840 --> 00:01:20.776 So many years ago,

NOTE Confidence: 0.975040765555555

00:01:20.776 --> 00:01:23.557 doctor Sonia Caprio Mary Savoy identified

NOTE Confidence: 0.975040765555555

00:01:23.557 --> 00:01:26.056 that there was a need for interventions

NOTE Confidence: 0.975040765555555

00:01:26.056 --> 00:01:28.440 for youth who are developing obesity.

NOTE Confidence: 0.975040765555555

00:01:28.440 --> 00:01:31.288 And so they not only developed but then

NOTE Confidence: 0.975040765555555

00:01:31.288 --> 00:01:33.347 rigorously tested the Bright Bodies

NOTE Confidence: 0.975040765555555

00:01:33.347 --> 00:01:35.897 program which is an intensive behavioral

NOTE Confidence: 0.975040765555555

00:01:35.897 --> 00:01:37.592 lifestyle intervention program and

NOTE Confidence: 0.975040765555555

00:01:37.592 --> 00:01:39.992 actually one of very few recommended

NOTE Confidence: 0.975040765555555

00:01:39.992 --> 00:01:42.440 by the American Academy of Pediatrics.

NOTE Confidence: 0.975040765555555

00:01:42.440 --> 00:01:45.226 And so we can see why the effectiveness

NOTE Confidence: 0.975040765555555

00:01:45.226 --> 00:01:47.734 of this program here in black,

NOTE Confidence: 0.975040765555555

00:01:47.734 --> 00:01:50.830 we can see circles for changes on the

NOTE Confidence: 0.975040765555555

00:01:50.915 --> 00:01:53.747 left in body mass index and on the

NOTE Confidence: 0.975040765555555

00:01:53.747 --> 00:01:56.436 right on body fat amongst youth who

NOTE Confidence: 0.975040765555555

00:01:56.436 --> 00:01:58.908 were randomized to the Bright Bodies

NOTE Confidence: 0.975040765555555

00:01:58.908 --> 00:02:01.380 weight management group compared to the

NOTE Confidence: 0.975040765555555

00:02:01.380 --> 00:02:03.480 control group who had increases in both

NOTE Confidence: 0.975040765555555

00:02:03.543 --> 00:02:05.838 of those measures at both 6 and 12 months.

NOTE Confidence: 0.975040765555555

00:02:05.840 --> 00:02:07.840 But just seeing the these

NOTE Confidence: 0.975040765555555

00:02:07.840 --> 00:02:10.784 outcomes was not enough.

NOTE Confidence: 0.975040765555555

00:02:10.784 --> 00:02:12.800 I'll tell you more about the Physiology

NOTE Confidence: 0.975040765555555

00:02:12.860 --> 00:02:14.479 as well as the fact that this

NOTE Confidence: 0.975040765555555

00:02:14.479 --> 00:02:16.274 effectiveness has been evaluated as

NOTE Confidence: 0.975040765555555

00:02:16.274 --> 00:02:19.096 well by newer members of our team by

NOTE Confidence: 0.975040765555555

00:02:19.096 --> 00:02:20.746 Stephanie Samuels and Mona Sharifi

NOTE Confidence: 0.975040765555555

00:02:20.746 --> 00:02:22.997 looking at at the real world adaptation.

NOTE Confidence: 0.975040765555555

00:02:23.000 --> 00:02:24.752 So we know that these programs

NOTE Confidence: 0.975040765555555

00:02:24.752 --> 00:02:26.394 are effective when used clinically

NOTE Confidence: 0.975040765555555

00:02:26.394 --> 00:02:28.074 and they're currently studying

NOTE Confidence: 0.975040765555555

00:02:28.074 --> 00:02:29.754 virtual adaptations as well.

NOTE Confidence: 0.975040765555555

00:02:29.760 --> 00:02:31.158 And now more about the background,

NOTE Confidence: 0.975040765555555

00:02:31.160 --> 00:02:32.896 we wanted to know why did they

NOTE Confidence: 0.975040765555555

00:02:32.896 --> 00:02:34.555 see these changes and what was

NOTE Confidence: 0.975040765555555

00:02:34.555 --> 00:02:36.277 happening in terms of the Physiology.

NOTE Confidence: 0.975040765555555

00:02:36.280 --> 00:02:39.700 So they studied these adolescents and

NOTE Confidence: 0.975040765555555

00:02:39.700 --> 00:02:41.677 children using oral glucose tolerance

NOTE Confidence: 0.975040765555555

00:02:41.677 --> 00:02:43.923 tests and you can see that data here

NOTE Confidence: 0.975040765555555

00:02:43.923 --> 00:02:45.787 with minutes along the X axis and we

NOTE Confidence: 0.975040765555555

00:02:45.787 --> 00:02:47.561 can see that plasma glucose in the

NOTE Confidence: 0.975040765555555

00:02:47.561 --> 00:02:49.820 graph on the left in blue declined

NOTE Confidence: 0.975040765555555

00:02:49.820 --> 00:02:52.340 in the bright bodies cohort while

NOTE Confidence: 0.975040765555555

00:02:52.340 --> 00:02:54.720 insulin also declined very nicely.

NOTE Confidence: 0.975040765555555

00:02:54.720 --> 00:02:57.387 So they were able to understand some

NOTE Confidence: 0.975040765555555

00:02:57.387 --> 00:03:00.251 of the changes in in the glycemia

NOTE Confidence: 0.975040765555555

00:03:00.251 --> 00:03:02.239 seen in these kids.

NOTE Confidence: 0.975040765555555

00:03:02.240 --> 00:03:04.480 The research has not been limited to this.

NOTE Confidence: 0.975040765555555

00:03:04.480 --> 00:03:05.323 There's, you know,

NOTE Confidence: 0.975040765555555

00:03:05.323 --> 00:03:07.009 our teams have been asking questions

NOTE Confidence: 0.975040765555555

00:03:07.009 --> 00:03:09.076 about what is the Physiology that changes

NOTE Confidence: 0.975040765555555

00:03:09.076 --> 00:03:10.560 that's promoting obesity in youth.

NOTE Confidence: 0.975040765555555

00:03:10.560 --> 00:03:12.760 And so with Sonia Caprio,

NOTE Confidence: 0.975040765555555

00:03:12.760 --> 00:03:13.994 Nikola Santoro,

NOTE Confidence: 0.975040765555555

00:03:13.994 --> 00:03:17.079 Anya Yasterboth and Alfonso Galderisi,

NOTE Confidence: 0.975040765555555

00:03:17.080 --> 00:03:18.795 you know, we have looked at ghrelin,

NOTE Confidence: 0.975040765555555

00:03:18.800 --> 00:03:19.790 the hunger hormone,

NOTE Confidence: 0.975040765555555

00:03:19.790 --> 00:03:22.100 and see how the response of that

NOTE Confidence: 0.975040765555555

00:03:22.167 --> 00:03:23.119 hormone varies,

NOTE Confidence: 0.975040765555555

00:03:23.120 --> 00:03:25.280 whether you're drinking glucose or fructose,

NOTE Confidence: 0.975040765555555

00:03:25.280 --> 00:03:27.272 whether you have a body type that is

NOTE Confidence: 0.975040765555555

00:03:27.272 --> 00:03:29.694 lean or in one of the obesity categories

NOTE Confidence: 0.975040765555555

00:03:29.694 --> 00:03:31.934 and whether that end of that child is

NOTE Confidence: 0.975040765555555

00:03:31.934 --> 00:03:33.560 insulin resistant or insulin sensitive.

NOTE Confidence: 0.975040765555555

00:03:33.560 --> 00:03:35.305 We've seen differences in the

NOTE Confidence: 0.975040765555555

00:03:35.305 --> 00:03:37.360 response of the hormone GLP One.

NOTE Confidence: 0.975040765555555

00:03:37.360 --> 00:03:39.544 One of the main discussion points

NOTE Confidence: 0.975040765555555

00:03:39.544 --> 00:03:42.652 today is GLP one and that that varies

NOTE Confidence: 0.975040765555555

00:03:42.652 --> 00:03:45.840 by drink type and your BMI status.

NOTE Confidence: 0.975040765555555

00:03:45.840 --> 00:03:49.032 And additionally we've looked at a

NOTE Confidence: 0.975040765555555

00:03:49.032 --> 00:03:51.684 high omega-3 isocaloric diet and

NOTE Confidence: 0.975040765555555

00:03:51.684 --> 00:03:54.304 seen that that decreases hepatic

NOTE Confidence: 0.975040765555555

00:03:54.304 --> 00:03:57.199 fat fraction here over 12 weeks

NOTE Confidence: 0.975040765555555

00:03:57.200 --> 00:03:59.375 in kids with metabolic associated

NOTE Confidence: 0.975040765555555

00:03:59.375 --> 00:04:00.680 steatotic liver disease.

NOTE Confidence: 0.848810372142857

00:04:00.680 --> 00:04:03.024 So that was a very nice change seen

NOTE Confidence: 0.848810372142857

00:04:03.024 --> 00:04:05.376 despite them not losing any weight and

NOTE Confidence: 0.848810372142857

00:04:05.376 --> 00:04:08.704 there was an common to decrease in their

NOTE Confidence: 0.848810372142857

00:04:08.704 --> 00:04:12.520 insulin over their tolerance study.

NOTE Confidence: 0.848810372142857

00:04:12.520 --> 00:04:13.752 We've additionally been looking

NOTE Confidence: 0.848810372142857

00:04:13.752 --> 00:04:15.600 at type 2 diabetes in youth.

NOTE Confidence: 0.848810372142857

00:04:15.600 --> 00:04:19.004 So this is data from the NIDDK Multi

NOTE Confidence: 0.848810372142857

00:04:19.004 --> 00:04:21.398 Center Today study of which Sonia Caprio

NOTE Confidence: 0.848810372142857

00:04:21.398 --> 00:04:23.878 was one of the founding investigators.

NOTE Confidence: 0.848810372142857

00:04:23.880 --> 00:04:26.540 And I was fortunate to serve as

NOTE Confidence: 0.848810372142857

00:04:26.540 --> 00:04:28.543 investigator during the extension phases

NOTE Confidence: 0.848810372142857

00:04:28.543 --> 00:04:30.955 years 6 through 15 here alongside

NOTE Confidence: 0.848810372142857

00:04:30.955 --> 00:04:33.130 Cindy Guanzolini and Paulina Rose

NOTE Confidence: 0.848810372142857

00:04:33.130 --> 00:04:35.878 who were also working on this study.

NOTE Confidence: 0.848810372142857

00:04:35.880 --> 00:04:37.416 And very importantly,

NOTE Confidence: 0.848810372142857

00:04:37.416 --> 00:04:39.976 these kids who were originally

NOTE Confidence: 0.848810372142857

00:04:39.976 --> 00:04:41.000 enrolled after,

NOTE Confidence: 0.848810372142857

00:04:41.000 --> 00:04:43.920 you know between ages 10 and 17 in

NOTE Confidence: 0.848810372142857

00:04:43.920 --> 00:04:46.440 longer term follow up after the trial.

NOTE Confidence: 0.848810372142857

00:04:46.440 --> 00:04:48.442 You know here you could see in

NOTE Confidence: 0.848810372142857

00:04:48.442 --> 00:04:50.725 yellow that a third to almost half

NOTE Confidence: 0.848810372142857

00:04:50.725 --> 00:04:52.753 had a hemoglobin A1C of greater

NOTE Confidence: 0.848810372142857

00:04:52.827 --> 00:04:55.172 than 10 indicating chronic severe

NOTE Confidence: 0.848810372142857

00:04:55.172 --> 00:04:57.517 hyperglycemia during that time period.

NOTE Confidence: 0.848810372142857

00:04:57.520 --> 00:05:00.400 And unfortunately that has led to

NOTE Confidence: 0.848810372142857

00:05:00.400 --> 00:05:01.840 many microvascular complications.

NOTE Confidence: 0.848810372142857

00:05:01.840 --> 00:05:04.078 So these are numbers of complications

NOTE Confidence: 0.848810372142857

00:05:04.078 --> 00:05:05.892 amongst the participants at a

NOTE Confidence: 0.848810372142857

00:05:05.892 --> 00:05:07.864 mean age of only 26 years.

NOTE Confidence: 0.848810372142857

00:05:07.864 --> 00:05:10.200 So it's a very severe disease and you

NOTE Confidence: 0.848810372142857

00:05:10.264 --> 00:05:12.434 know seeing this data and now knowing

NOTE Confidence: 0.848810372142857

00:05:12.434 --> 00:05:14.874 that in type one diabetes we are

NOTE Confidence: 0.848810372142857

00:05:14.874 --> 00:05:17.034 seeing the medical problem of obesity,

NOTE Confidence: 0.848810372142857

00:05:17.040 --> 00:05:19.476 we are seeing higher insulin needs,

NOTE Confidence: 0.848810372142857

00:05:19.480 --> 00:05:22.028 but we really don't know anything about

NOTE Confidence: 0.848810372142857

00:05:22.028 --> 00:05:24.299 how this adiposity will change the

NOTE Confidence: 0.848810372142857

00:05:24.299 --> 00:05:26.519 disease process in type one diabetes.

NOTE Confidence: 0.848810372142857

00:05:26.520 --> 00:05:28.438 And so for the purposes of today,

NOTE Confidence: 0.848810372142857

00:05:28.440 --> 00:05:29.763 we will focus the rest of the

NOTE Confidence: 0.848810372142857

00:05:29.763 --> 00:05:30.760 talk on on obesity,

NOTE Confidence: 0.848810372142857

00:05:30.760 --> 00:05:32.400 complicating type one diabetes.

NOTE Confidence: 0.857952874545455

00:05:37.480 --> 00:05:41.000 So while I think some of the earlier

NOTE Confidence: 0.857952874545455

00:05:41.000 --> 00:05:43.560 slides showed you from I think Doctor

NOTE Confidence: 0.857952874545455

00:05:43.560 --> 00:05:45.127 Horvath's talk about insulin that

NOTE Confidence: 0.857952874545455

00:05:45.127 --> 00:05:46.609 individuals really used to not be

NOTE Confidence: 0.857952874545455

00:05:46.609 --> 00:05:48.595 able to gain weight when they were

NOTE Confidence: 0.857952874545455

00:05:48.595 --> 00:05:50.080 diagnosed with type one diabetes.

NOTE Confidence: 0.857952874545455

00:05:50.080 --> 00:05:52.150 But now we're seeing a completely

NOTE Confidence: 0.857952874545455

00:05:52.150 --> 00:05:54.200 different change to the landscape.

NOTE Confidence: 0.857952874545455

00:05:54.200 --> 00:05:56.544 So here we have data from the type

NOTE Confidence: 0.857952874545455

00:05:56.544 --> 00:05:58.758 one Diabetes Exchange Clinic registry,

NOTE Confidence: 0.857952874545455

00:05:58.760 --> 00:06:00.272 which we participated in,

NOTE Confidence: 0.857952874545455

00:06:00.272 --> 00:06:01.784 of over 20,000 individuals

NOTE Confidence: 0.857952874545455

00:06:01.784 --> 00:06:03.400 with type one diabetes.

NOTE Confidence: 0.857952874545455

00:06:03.400 --> 00:06:06.248 And here we can see by age on

NOTE Confidence: 0.857952874545455

00:06:06.248 --> 00:06:09.208 the X axis and on the Y axis,

NOTE Confidence: 0.857952874545455

00:06:09.208 --> 00:06:11.632 the percent of individuals within body mass

NOTE Confidence: 0.857952874545455

00:06:11.632 --> 00:06:14.159 index in the overweight or obesity range.

NOTE Confidence: 0.857952874545455

00:06:14.160 --> 00:06:14.904 And they were.

NOTE Confidence: 0.857952874545455

00:06:14.904 --> 00:06:16.392 This data was collected at two

NOTE Confidence: 0.857952874545455

00:06:16.392 --> 00:06:17.756 time points and you could see

NOTE Confidence: 0.857952874545455

00:06:17.756 --> 00:06:19.520 that in the six to 18 year olds,

NOTE Confidence: 0.857952874545455

00:06:19.520 --> 00:06:21.522 at least a third of these young

NOTE Confidence: 0.857952874545455

00:06:21.522 --> 00:06:23.109 people with type one diabetes

NOTE Confidence: 0.857952874545455

00:06:23.109 --> 00:06:25.119 had an elevated body mass index,

NOTE Confidence: 0.857952874545455

00:06:25.120 --> 00:06:27.982 nearly half of the 18 to 26 year olds

NOTE Confidence: 0.857952874545455

00:06:27.982 --> 00:06:30.718 and 2/3 of those age 26 and above.

NOTE Confidence: 0.857952874545455

00:06:30.720 --> 00:06:33.597 So certainly this is a big problem

NOTE Confidence: 0.857952874545455

00:06:33.600 --> 00:06:35.623 and we know also that management of

NOTE Confidence: 0.857952874545455

00:06:35.623 --> 00:06:37.163 type one diabetes in adolescence

NOTE Confidence: 0.857952874545455

00:06:37.163 --> 00:06:38.399 is a big challenge.

NOTE Confidence: 0.857952874545455

00:06:38.400 --> 00:06:41.256 One of the reasons for that was

NOTE Confidence: 0.857952874545455

00:06:41.256 --> 00:06:42.788 previously elucidated by doctors

NOTE Confidence: 0.857952874545455

00:06:42.788 --> 00:06:44.912 Timberlane and Sherwin here using some

NOTE Confidence: 0.857952874545455

00:06:44.912 --> 00:06:47.516 of the Sentinel studies and they did

NOTE Confidence: 0.857952874545455

00:06:47.520 --> 00:06:49.120 insulin stimulated clamp techniques.

NOTE Confidence: 0.857952874545455

00:06:49.120 --> 00:06:52.044 And so here we could see that

NOTE Confidence: 0.857952874545455

00:06:52.044 --> 00:06:53.880 the adolescents with diabetes,

NOTE Confidence: 0.857952874545455

00:06:53.880 --> 00:06:55.854 with type one diabetes are in

NOTE Confidence: 0.857952874545455

00:06:55.854 --> 00:06:57.960 the bars here on the right.

NOTE Confidence: 0.857952874545455

00:06:57.960 --> 00:07:01.117 Those without diabetes are on the left.

NOTE Confidence: 0.857952874545455

00:07:01.120 --> 00:07:03.170 And we can see based on this X axis of

NOTE Confidence: 0.857952874545455

00:07:03.228 --> 00:07:05.172 glucose infusion rate that those with

NOTE Confidence: 0.857952874545455

00:07:05.172 --> 00:07:07.310 type one diabetes were more insulin

NOTE Confidence: 0.857952874545455

00:07:07.310 --> 00:07:09.275 resistant than the control population.

NOTE Confidence: 0.857952874545455

00:07:09.280 --> 00:07:11.320 And in particular those in the

NOTE Confidence: 0.857952874545455

00:07:11.320 --> 00:07:13.539 slashed lines that were in puberty

NOTE Confidence: 0.857952874545455

00:07:13.539 --> 00:07:15.519 had the worst insulin resistance,

NOTE Confidence: 0.857952874545455

00:07:15.520 --> 00:07:15.790 right.

NOTE Confidence: 0.857952874545455

00:07:15.790 --> 00:07:17.680 So now we're managing in these young

NOTE Confidence: 0.857952874545455

00:07:17.680 --> 00:07:19.406 people often times the insulin resistance

NOTE Confidence: 0.857952874545455

00:07:19.406 --> 00:07:21.600 in general related to type one diabetes,

NOTE Confidence: 0.857952874545455

00:07:21.600 --> 00:07:23.044 insulin resistance of puberty,

NOTE Confidence: 0.857952874545455

00:07:23.044 --> 00:07:25.720 and we're throwing obesity on top of that.

NOTE Confidence: 0.857952874545455

00:07:25.720 --> 00:07:28.198 And so we asked the question,

NOTE Confidence: 0.857952874545455

00:07:28.200 --> 00:07:30.552 how does adiposity impact insulin resistance

NOTE Confidence: 0.857952874545455

00:07:30.552 --> 00:07:32.919 in adolescence with type one diabetes?

NOTE Confidence: 0.857952874545455

00:07:32.920 --> 00:07:35.937 And I was awarded AK 23 grant

NOTE Confidence: 0.857952874545455

00:07:35.937 --> 00:07:38.066 to address 2 main questions.

NOTE Confidence: 0.857952874545455

00:07:38.066 --> 00:07:40.176 So how does adiposity impact

NOTE Confidence: 0.857952874545455

00:07:40.176 --> 00:07:42.480 the hepatic insulin resistance?

NOTE Confidence: 0.857952874545455

00:07:42.480 --> 00:07:45.357 Hepatic because we're very focused on that.

NOTE Confidence: 0.857952874545455

00:07:45.360 --> 00:07:48.184 And type one diabetes because to

NOTE Confidence: 0.857952874545455

00:07:48.184 --> 00:07:50.680 suppress hepatic glucose production,

NOTE Confidence: 0.857952874545455

00:07:50.680 --> 00:07:52.180 you actually have to over insulinize

NOTE Confidence: 0.857952874545455

00:07:52.180 --> 00:07:52.680 the periphery.

NOTE Confidence: 0.857952874545455

00:07:52.680 --> 00:07:54.731 But I can't get too much into

NOTE Confidence: 0.857952874545455

00:07:54.731 --> 00:07:56.094 that today and we're doing,

NOTE Confidence: 0.857952874545455

00:07:56.094 --> 00:07:57.900 we did that with the two step

NOTE Confidence: 0.857952874545455

00:07:57.956 --> 00:07:59.300 euglycemic hyperinsulinemic clamp

NOTE Confidence: 0.857952874545455

00:07:59.300 --> 00:08:01.540 technique with stable isotope infusion

NOTE Confidence: 0.857952874545455

00:08:01.540 --> 00:08:03.895 and our hypothesis there was that

NOTE Confidence: 0.857952874545455

00:08:03.895 --> 00:08:05.640 with elevated body mass index,

NOTE Confidence: 0.857952874545455

00:08:05.640 --> 00:08:08.448 insulin would be less effective at

NOTE Confidence: 0.857952874545455

00:08:08.448 --> 00:08:10.320 suppressing hepatic glucose production.

NOTE Confidence: 0.857952874545455

00:08:10.320 --> 00:08:12.198 The other aim was to examine

NOTE Confidence: 0.857952874545455

00:08:12.198 --> 00:08:14.024 how hepatic fat impacts insulin

NOTE Confidence: 0.857952874545455

00:08:14.024 --> 00:08:15.560 resistance in adolescence.

NOTE Confidence: 0.857952874545455

00:08:15.560 --> 00:08:17.636 And we expected that those with

NOTE Confidence: 0.857952874545455

00:08:17.636 --> 00:08:19.902 a higher body mass index would

NOTE Confidence: 0.857952874545455

00:08:19.902 --> 00:08:23.011 have higher hepatic fat and we did

NOTE Confidence: 0.857952874545455

00:08:23.011 --> 00:08:24.999 that by measuring abdominal.

NOTE Confidence: 0.857952874545455

00:08:25.000 --> 00:08:27.664 We did abdominal MRI to look

NOTE Confidence: 0.857952874545455

00:08:27.664 --> 00:08:29.440 at hepatic fat fraction.

NOTE Confidence: 0.857952874545455

00:08:29.440 --> 00:08:31.550 So here is the characteristics

NOTE Confidence: 0.857952874545455

00:08:31.550 --> 00:08:33.238 of the cohort studied.

NOTE Confidence: 0.857952874545455

00:08:33.240 --> 00:08:35.837 So age 2 is 12 to 16.

NOTE Confidence: 0.857952874545455

00:08:35.840 --> 00:08:37.190 You could see they were

NOTE Confidence: 0.857952874545455

00:08:37.190 --> 00:08:38.540 divided into lean BMI and

NOTE Confidence: 0.861078359285714

00:08:38.599 --> 00:08:40.199 overweight slash obesity BMI.

NOTE Confidence: 0.861078359285714

00:08:40.200 --> 00:08:43.525 And it's important to note that in

NOTE Confidence: 0.861078359285714

00:08:43.525 --> 00:08:45.688 Pediatrics the 85th to 94 point

NOTE Confidence: 0.861078359285714

00:08:45.688 --> 00:08:47.964 9th percentile for age and sex is

NOTE Confidence: 0.861078359285714

00:08:47.964 --> 00:08:49.924 considered overweight BMI and 95th

NOTE Confidence: 0.861078359285714

00:08:49.924 --> 00:08:54.320 and above is considered obesity, BMI.

NOTE Confidence: 0.861078359285714

00:08:54.320 --> 00:08:57.770 We can see that the hepatic fat

NOTE Confidence: 0.861078359285714

00:08:57.770 --> 00:08:59.600 fraction was actually nice and low,

NOTE Confidence: 0.861078359285714

00:08:59.600 --> 00:09:01.520 so one point O nine in the lean

NOTE Confidence: 0.861078359285714

00:09:01.520 --> 00:09:03.008 and 1.98 in the overweight.

NOTE Confidence: 0.861078359285714

00:09:03.008 --> 00:09:05.546 Obesity, the cut off for metabolic associated

NOTE Confidence: 0.861078359285714

00:09:05.546 --> 00:09:07.797 steatotic liver disease is 5 or 5 1/2%.

NOTE Confidence: 0.861078359285714

00:09:07.800 --> 00:09:11.240 So none of the cohort had hepatic steatosis,

NOTE Confidence: 0.861078359285714

00:09:11.240 --> 00:09:14.702 which was in a very reassuring

NOTE Confidence: 0.861078359285714

00:09:14.702 --> 00:09:17.332 finding looking at some of the clamp

NOTE Confidence: 0.861078359285714

00:09:17.332 --> 00:09:19.186 findings in which you know you raise

NOTE Confidence: 0.861078359285714

00:09:19.186 --> 00:09:20.558 the insulin infusion to suppress

NOTE Confidence: 0.861078359285714

00:09:20.558 --> 00:09:21.818 endogenous glucose production and

NOTE Confidence: 0.861078359285714

00:09:21.818 --> 00:09:23.840 you see how well that happens.

NOTE Confidence: 0.861078359285714

00:09:23.840 --> 00:09:26.210 And that's a measure of hepatic

NOTE Confidence: 0.861078359285714

00:09:26.210 --> 00:09:27.000 insulin resistance.

NOTE Confidence: 0.861078359285714

00:09:27.000 --> 00:09:28.981 And so that we're looking at that

NOTE Confidence: 0.861078359285714

00:09:28.981 --> 00:09:31.164 suppression here on the Y axis and what we

NOTE Confidence: 0.861078359285714

00:09:31.164 --> 00:09:33.517 could see that in relation to BMI percentile,

NOTE Confidence: 0.861078359285714

00:09:33.520 --> 00:09:36.320 again the measure that we use in Pediatrics

NOTE Confidence: 0.861078359285714

00:09:36.320 --> 00:09:38.120 there was not any clear relationship.

NOTE Confidence: 0.861078359285714

00:09:38.120 --> 00:09:40.640 And here in orange we have the lean purple,

NOTE Confidence: 0.861078359285714

00:09:40.640 --> 00:09:43.008 the obesity and blue,

NOTE Confidence: 0.861078359285714

00:09:43.008 --> 00:09:44.200 the OR sorry purple,

NOTE Confidence: 0.861078359285714

00:09:44.200 --> 00:09:45.000 the overweight and blue,

NOTE Confidence: 0.861078359285714

00:09:45.000 --> 00:09:47.387 the obesity BMI cut offs and then

NOTE Confidence: 0.861078359285714

00:09:47.387 --> 00:09:49.878 looking at body fat percent as well.

NOTE Confidence: 0.861078359285714

00:09:49.880 --> 00:09:51.875 There really was not any clear relationship.

NOTE Confidence: 0.861078359285714

00:09:51.880 --> 00:09:54.070 So we looked further at potential

NOTE Confidence: 0.861078359285714

00:09:54.070 --> 00:09:56.202 other measures of adiposity that might

NOTE Confidence: 0.861078359285714

00:09:56.202 --> 00:09:58.337 provide more guidance and we use the

NOTE Confidence: 0.861078359285714

00:09:58.337 --> 00:10:00.954 VAT over the VAT set which is a measure

NOTE Confidence: 0.861078359285714

00:10:00.954 --> 00:10:03.192 of visceral adiposity as the visceral

NOTE Confidence: 0.861078359285714

00:10:03.192 --> 00:10:05.282 adipose tissue divided by visceral

NOTE Confidence: 0.861078359285714

00:10:05.282 --> 00:10:07.632 plus subcutaneous adipose tissue and

NOTE Confidence: 0.861078359285714

00:10:07.632 --> 00:10:09.957 that's obtained on abdominal MRI.

NOTE Confidence: 0.861078359285714

00:10:09.960 --> 00:10:12.344 And there we were able to see that

NOTE Confidence: 0.861078359285714

00:10:12.344 --> 00:10:13.747 as visceral adiposity increased

NOTE Confidence: 0.861078359285714

00:10:13.747 --> 00:10:15.597 there on the X axis,

NOTE Confidence: 0.861078359285714

00:10:15.600 --> 00:10:17.550 there was a rise in hepatic

NOTE Confidence: 0.861078359285714

00:10:17.550 --> 00:10:18.200 glucose production.

NOTE Confidence: 0.861078359285714

00:10:18.200 --> 00:10:20.545 So it may be that visceral adiposity

NOTE Confidence: 0.861078359285714

00:10:20.545 --> 00:10:22.826 is something that we can be looking at

NOTE Confidence: 0.861078359285714

00:10:22.826 --> 00:10:25.197 in type one diabetes in young people.

NOTE Confidence: 0.861078359285714

00:10:25.200 --> 00:10:27.736 So here we have some of the metabolic

NOTE Confidence: 0.861078359285714

00:10:27.736 --> 00:10:29.897 factors that we're studying related

NOTE Confidence: 0.861078359285714

00:10:29.897 --> 00:10:31.355 to cardiovascular risk.

NOTE Confidence: 0.861078359285714

00:10:31.360 --> 00:10:32.860 These empty ones just represent

NOTE Confidence: 0.861078359285714

00:10:32.860 --> 00:10:34.360 that there are many more.

NOTE Confidence: 0.861078359285714

00:10:34.360 --> 00:10:35.758 We cannot study all of them.

NOTE Confidence: 0.861078359285714

00:10:35.760 --> 00:10:38.357 So we had to limit it down.

NOTE Confidence: 0.861078359285714

00:10:38.360 --> 00:10:40.754 And why are we so interested in

NOTE Confidence: 0.861078359285714

00:10:40.754 --> 00:10:42.871 these factors and their potential

NOTE Confidence: 0.861078359285714

00:10:42.871 --> 00:10:44.915 role in cardiovascular risk.

NOTE Confidence: 0.861078359285714

00:10:44.920 --> 00:10:47.279 So we know that death from cardiovascular

NOTE Confidence: 0.861078359285714

00:10:47.279 --> 00:10:49.389 disease is the main cause of

NOTE Confidence: 0.861078359285714

00:10:49.389 --> 00:10:51.119 mortality and type one diabetes.

NOTE Confidence: 0.861078359285714

00:10:51.120 --> 00:10:53.605 This is data from the Swedish National

NOTE Confidence: 0.861078359285714

00:10:53.605 --> 00:10:55.320 Diabetes Register and you can see on

NOTE Confidence: 0.861078359285714

00:10:55.320 --> 00:10:57.885 the X axis from 1998 to 2013 and on

NOTE Confidence: 0.861078359285714

00:10:57.885 --> 00:11:00.280 the Y death from cardiovascular disease.

NOTE Confidence: 0.861078359285714

00:11:00.280 --> 00:11:01.900 The blue represents the individuals

NOTE Confidence: 0.861078359285714

00:11:01.900 --> 00:11:03.904 with type one diabetes and while

NOTE Confidence: 0.861078359285714

00:11:03.904 --> 00:11:05.519 that curve is declining nicely,

NOTE Confidence: 0.861078359285714

00:11:05.520 --> 00:11:08.432 it is well above that of the matched

NOTE Confidence: 0.861078359285714

00:11:08.432 --> 00:11:10.240 controls and here it is by age.

NOTE Confidence: 0.861078359285714

00:11:10.240 --> 00:11:12.956 So the group that was diagnosed

NOTE Confidence: 0.861078359285714

00:11:12.956 --> 00:11:14.840 with diabetes at less than age 10,

NOTE Confidence: 0.861078359285714

00:11:14.840 --> 00:11:17.216 here in the bottom of the the X axis,

NOTE Confidence: 0.861078359285714

00:11:17.216 --> 00:11:17.680 you know,

NOTE Confidence: 0.861078359285714

00:11:17.680 --> 00:11:19.880 they had the smallest expected

NOTE Confidence: 0.861078359285714

00:11:19.880 --> 00:11:20.760 median survival.

NOTE Confidence: 0.861078359285714

00:11:20.760 --> 00:11:23.520 And in fact for individuals

NOTE Confidence: 0.861078359285714

00:11:23.520 --> 00:11:26.280 diagnosed less than age 10,

NOTE Confidence: 0.861078359285714

00:11:26.280 --> 00:11:28.590 the expected life lost would be about

NOTE Confidence: 0.861078359285714

00:11:28.590 --> 00:11:31.436 18 years for women and 14 years for men.

NOTE Confidence: 0.861078359285714

00:11:31.440 --> 00:11:32.562 So you know,

NOTE Confidence: 0.861078359285714

00:11:32.562 --> 00:11:33.684 combining this information

NOTE Confidence: 0.861078359285714

00:11:33.684 --> 00:11:35.180 with knowing that obesity

NOTE Confidence: 0.949127479473684

00:11:35.246 --> 00:11:37.322 then is also a risk factor

NOTE Confidence: 0.949127479473684

00:11:37.322 --> 00:11:38.360 for cardiovascular disease.

NOTE Confidence: 0.949127479473684

00:11:38.360 --> 00:11:40.792 You know, we really want to understand how

NOTE Confidence: 0.949127479473684

00:11:40.792 --> 00:11:43.117 to improve health in these young people.

NOTE Confidence: 0.949127479473684

00:11:43.120 --> 00:11:44.872 And so we do know one of the

NOTE Confidence: 0.949127479473684

00:11:44.872 --> 00:11:46.266 tools that can help, right,

NOTE Confidence: 0.949127479473684

00:11:46.266 --> 00:11:48.196 the GLP one agonist medications,

NOTE Confidence: 0.949127479473684

00:11:48.200 --> 00:11:49.955 we know that those improved

NOTE Confidence: 0.949127479473684

00:11:49.955 --> 00:11:51.359 cardiovascular outcomes in adults

NOTE Confidence: 0.949127479473684

00:11:51.359 --> 00:11:53.516 with type 2 diabetes and with obesity.

NOTE Confidence: 0.949127479473684

00:11:53.520 --> 00:11:55.564 So our current work is kind of

NOTE Confidence: 0.949127479473684

00:11:55.564 --> 00:11:57.644 looking at whether you know if we

NOTE Confidence: 0.949127479473684

00:11:57.644 --> 00:11:59.360 treat the disease of obesity with

NOTE Confidence: 0.949127479473684

00:11:59.421 --> 00:12:01.275 GLP one agonists in these young

NOTE Confidence: 0.949127479473684

00:12:01.275 --> 00:12:03.177 people with type one diabetes,

NOTE Confidence: 0.949127479473684

00:12:03.177 --> 00:12:05.805 will it impact drivers

NOTE Confidence: 0.949127479473684

00:12:05.805 --> 00:12:08.720 of cardiovascular risk?

NOTE Confidence: 0.949127479473684

00:12:08.720 --> 00:12:11.320 And so to study this,

NOTE Confidence: 0.949127479473684

00:12:11.320 --> 00:12:13.696 I was awarded an RO one along

NOTE Confidence: 0.949127479473684

00:12:13.696 --> 00:12:15.200 with my wonderful colleagues,

NOTE Confidence: 0.949127479473684

00:12:15.200 --> 00:12:17.560 some of who are in the room today

NOTE Confidence: 0.949127479473684

00:12:17.560 --> 00:12:18.800 and we're asking the question,

NOTE Confidence: 0.949127479473684

00:12:18.800 --> 00:12:21.494 can GLP one agonist obesity treatment

NOTE Confidence: 0.949127479473684

00:12:21.494 --> 00:12:23.290 improve modifiable drivers of

NOTE Confidence: 0.949127479473684

00:12:23.366 --> 00:12:25.446 cardiometabolic risk in young adults

NOTE Confidence: 0.949127479473684

00:12:25.446 --> 00:12:28.200 with obesity and type one diabetes?

NOTE Confidence: 0.949127479473684

00:12:28.200 --> 00:12:30.720 And so we are doing Physiology

NOTE Confidence: 0.949127479473684

00:12:30.720 --> 00:12:32.400 based studies for this.

NOTE Confidence: 0.949127479473684

00:12:32.400 --> 00:12:34.596 The primary outcomes are all Physiology

NOTE Confidence: 0.949127479473684

00:12:34.596 --> 00:12:36.815 and we are studying young adults

NOTE Confidence: 0.949127479473684

00:12:36.815 --> 00:12:38.867 because the reviewers were not keen

NOTE Confidence: 0.949127479473684

00:12:38.867 --> 00:12:41.520 on the adolescent population to plan

NOTE Confidence: 0.949127479473684

00:12:41.520 --> 00:12:43.320 to study them in future iterations.

NOTE Confidence: 0.949127479473684

00:12:43.320 --> 00:12:45.235 And somagletite is FDA approved

NOTE Confidence: 0.949127479473684

00:12:45.235 --> 00:12:47.150 for treating the disease of

NOTE Confidence: 0.949127479473684

00:12:47.216 --> 00:12:48.836 obesity in age 12 and up.

NOTE Confidence: 0.949127479473684

00:12:48.840 --> 00:12:50.765 So one of the things we wanted

NOTE Confidence: 0.949127479473684

00:12:50.765 --> 00:12:52.960 to see was could there be

NOTE Confidence: 0.949127479473684

00:12:52.960 --> 00:12:54.600 improvements in visceral adiposity?

NOTE Confidence: 0.949127479473684

00:12:54.600 --> 00:12:57.596 So we hypothesized that compared to placebo,

NOTE Confidence: 0.949127479473684

00:12:57.600 --> 00:12:59.375 GLP one agonist treatment of

NOTE Confidence: 0.949127479473684

00:12:59.375 --> 00:13:01.150 obesity will promote loss of

NOTE Confidence: 0.949127479473684

00:13:01.219 --> 00:13:02.663 visceral adipose tissue measured

NOTE Confidence: 0.949127479473684

00:13:02.663 --> 00:13:05.399 by using the VAT over the VAT set.

NOTE Confidence: 0.949127479473684

00:13:05.400 --> 00:13:06.840 We want it to look at

NOTE Confidence: 0.949127479473684

00:13:06.840 --> 00:13:07.560 hepatic insulin resistance.

NOTE Confidence: 0.949127479473684

00:13:07.560 --> 00:13:09.450 So we want to see whether

NOTE Confidence: 0.949127479473684

00:13:09.450 --> 00:13:10.395 compared to placebo,

NOTE Confidence: 0.949127479473684

00:13:10.400 --> 00:13:11.984 whether treatment with GLP

NOTE Confidence: 0.949127479473684

00:13:11.984 --> 00:13:13.964 one agonist for obesity will

NOTE Confidence: 0.949127479473684

00:13:13.964 --> 00:13:15.638 reduce hepatic acetyl COA,

NOTE Confidence: 0.949127479473684

00:13:15.640 --> 00:13:18.279 which is a key driver of gluconeogenesis.

NOTE Confidence: 0.949127479473684

00:13:18.280 --> 00:13:22.280 And we're using a marker to measure that.

NOTE Confidence: 0.949127479473684

00:13:22.280 --> 00:13:23.939 And we also wanted to see you

NOTE Confidence: 0.949127479473684

00:13:23.939 --> 00:13:26.685 know what it would do in terms of

NOTE Confidence: 0.949127479473684

00:13:26.685 --> 00:13:27.475 atherogenic lipoproteinemia.

NOTE Confidence: 0.949127479473684

00:13:27.480 --> 00:13:29.706 And so we hypothesized that compared

NOTE Confidence: 0.949127479473684

00:13:29.706 --> 00:13:31.659 to placebo those receiving obesity

NOTE Confidence: 0.949127479473684

00:13:31.659 --> 00:13:33.263 treatment with smegletide will

NOTE Confidence: 0.949127479473684

00:13:33.263 --> 00:13:35.268 have a greater improvement in

NOTE Confidence: 0.949127479473684

00:13:35.332 --> 00:13:37.279 their postprandial triglycerides.

NOTE Confidence: 0.950557556666667

00:13:40.040 --> 00:13:42.836 So here is our study design

NOTE Confidence: 0.950557556666667

00:13:42.840 --> 00:13:43.944 at baseline participants.

NOTE Confidence: 0.950557556666667

00:13:43.944 --> 00:13:45.784 This is for the randomized

NOTE Confidence: 0.950557556666667

00:13:45.784 --> 00:13:47.000 controlled trial portion.

NOTE Confidence: 0.950557556666667

00:13:47.000 --> 00:13:48.920 We have two, two parts of the study.

NOTE Confidence: 0.950557556666667

00:13:48.920 --> 00:13:51.608 So a baseline participants are doing the

NOTE Confidence: 0.950557556666667

00:13:51.608 --> 00:13:53.930 two step euglycemic hyperinsulinemic clamp

NOTE Confidence: 0.950557556666667

00:13:53.930 --> 00:13:56.675 technique with stable isotope tracers

NOTE Confidence: 0.950557556666667

00:13:56.680 --> 00:13:58.756 as a measure of insulin resistance.

NOTE Confidence: 0.950557556666667

00:13:58.760 --> 00:14:01.434 They are doing abdominal MRI as well,

NOTE Confidence: 0.950557556666667

00:14:01.440 --> 00:14:03.065 so we're looking at abdominal

NOTE Confidence: 0.950557556666667

00:14:03.065 --> 00:14:03.715 adipose distribution,

NOTE Confidence: 0.950557556666667

00:14:03.720 --> 00:14:05.508 but we will also have measures

NOTE Confidence: 0.950557556666667

00:14:05.508 --> 00:14:07.285 of hepatic fat fraction in case

NOTE Confidence: 0.950557556666667

00:14:07.285 --> 00:14:09.340 that does become something we find

NOTE Confidence: 0.950557556666667

00:14:09.340 --> 00:14:11.440 in this slightly older cohort.

NOTE Confidence: 0.950557556666667

00:14:11.440 --> 00:14:14.640 They are having a high fat mixed meal

NOTE Confidence: 0.950557556666667

00:14:14.640 --> 00:14:16.960 tolerance test to look for atherogenic

NOTE Confidence: 0.950557556666667

00:14:16.960 --> 00:14:19.240 lipoproteins and see how that changes

NOTE Confidence: 0.950557556666667

00:14:19.304 --> 00:14:21.355 over the time period of the test.

NOTE Confidence: 0.950557556666667

00:14:21.360 --> 00:14:24.552 And this shake that they are

NOTE Confidence: 0.950557556666667

00:14:24.552 --> 00:14:26.680 drinking apparently is delicious.

NOTE Confidence: 0.950557556666667

00:14:26.680 --> 00:14:28.108 They're making everybody jealous.

NOTE Confidence: 0.950557556666667

00:14:28.108 --> 00:14:30.880 And then this they're doing a DEXA scan,

NOTE Confidence: 0.950557556666667

00:14:30.880 --> 00:14:31.123 right.

NOTE Confidence: 0.950557556666667

00:14:31.123 --> 00:14:33.067 So we really want to get the full

NOTE Confidence: 0.950557556666667

00:14:33.067 --> 00:14:35.252 body composition to see, you know,

NOTE Confidence: 0.950557556666667

00:14:35.252 --> 00:14:37.464 how that might impact these measures.

NOTE Confidence: 0.950557556666667

00:14:37.464 --> 00:14:39.833 And so we can do that with a with

NOTE Confidence: 0.950557556666667

00:14:39.833 --> 00:14:41.842 a DEXA scan rather than just the

NOTE Confidence: 0.950557556666667

00:14:41.842 --> 00:14:44.368 abdomen with the MRI and let's see.

NOTE Confidence: 0.950557556666667

00:14:44.368 --> 00:14:46.352 So after they complete

NOTE Confidence: 0.950557556666667

00:14:46.352 --> 00:14:47.840 these baseline studies,

NOTE Confidence: 0.950557556666667

00:14:47.840 --> 00:14:49.945 participants are being randomized 2

NOTE Confidence: 0.950557556666667

00:14:49.945 --> 00:14:53.694 to one ratio to 52 weeks of double

NOTE Confidence: 0.950557556666667

00:14:53.694 --> 00:14:56.304 blinded treatment with either some

NOTE Confidence: 0.950557556666667

00:14:56.304 --> 00:14:58.518 maglitide weekly titrated up to

NOTE Confidence: 0.950557556666667

00:14:58.520 --> 00:15:02.216 2.44kg or or as high as tolerated

NOTE Confidence: 0.950557556666667

00:15:02.216 --> 00:15:04.959 or they're randomized to placebo.

NOTE Confidence: 0.950557556666667

00:15:04.960 --> 00:15:06.880 And then at 12 months while on treatment,

NOTE Confidence: 0.950557556666667

00:15:06.880 --> 00:15:09.055 we are repeating these initial

NOTE Confidence: 0.950557556666667

00:15:09.055 --> 00:15:11.230 baseline studies and looking to

NOTE Confidence: 0.950557556666667

00:15:11.309 --> 00:15:13.760 see you know the the differences

NOTE Confidence: 0.950557556666667

00:15:13.760 --> 00:15:16.435 between the placebo and the the

NOTE Confidence: 0.950557556666667

00:15:16.435 --> 00:15:19.045 treatment group in terms of of

NOTE Confidence: 0.950557556666667

00:15:19.045 --> 00:15:21.912 how how these measures changed.

NOTE Confidence: 0.950557556666667

00:15:21.912 --> 00:15:23.160 So so far,

NOTE Confidence: 0.950557556666667

00:15:23.160 --> 00:15:25.720 we have enrolled 5 participants in the study.

NOTE Confidence: 0.950557556666667

00:15:25.720 --> 00:15:27.946 We just got awarded this grant in

NOTE Confidence: 0.950557556666667

00:15:27.946 --> 00:15:30.214 September where I have a goal of 69

NOTE Confidence: 0.950557556666667

00:15:30.214 --> 00:15:32.141 and we look forward to sharing the

NOTE Confidence: 0.950557556666667

00:15:32.141 --> 00:15:34.276 results with you in a few years.

NOTE Confidence: 0.950557556666667

00:15:34.280 --> 00:15:36.560 So our path forward from here,

NOTE Confidence: 0.950557556666667

00:15:36.560 --> 00:15:38.996 we are really looking to remedy the

NOTE Confidence: 0.950557556666667

00:15:38.996 --> 00:15:41.026 positive of research in obesity

NOTE Confidence: 0.950557556666667

00:15:41.026 --> 00:15:42.998 and type one diabetes.

NOTE Confidence: 0.950557556666667

00:15:43.000 --> 00:15:45.200 They're the the medication studies

NOTE Confidence: 0.950557556666667

00:15:45.200 --> 00:15:46.960 In terms of GLP,

NOTE Confidence: 0.950557556666667

00:15:46.960 --> 00:15:48.955 one agonists are very focused on glycemia.

NOTE Confidence: 0.950557556666667

00:15:48.960 --> 00:15:50.760 But you know as we're hearing

NOTE Confidence: 0.950557556666667

00:15:50.760 --> 00:15:51.846 more about today,

NOTE Confidence: 0.950557556666667

00:15:51.846 --> 00:15:54.380 there are so many other potential ways

NOTE Confidence: 0.950557556666667

00:15:54.447 --> 00:15:56.835 that these medications may be helpful

NOTE Confidence: 0.950557556666667

00:15:56.840 --> 00:15:59.395 in people with diabetes and with obesity.

NOTE Confidence: 0.950557556666667

00:15:59.400 --> 00:16:00.680 And we are doing Physiology,

NOTE Confidence: 0.950557556666667

00:16:00.680 --> 00:16:02.210 Physiology based studies of these

NOTE Confidence: 0.950557556666667

00:16:02.210 --> 00:16:03.740 anti obesity medications because we

NOTE Confidence: 0.950557556666667

00:16:03.789 --> 00:16:05.199 really do want to understand what

NOTE Confidence: 0.950557556666667

00:16:05.199 --> 00:16:06.719 what are the pieces that change,

NOTE Confidence: 0.950557556666667

00:16:06.720 --> 00:16:08.205 where are these medications acting

NOTE Confidence: 0.950557556666667

00:16:08.205 --> 00:16:10.562 and how can we use these as a

NOTE Confidence: 0.950557556666667

00:16:10.562 --> 00:16:12.176 probe to understand more and move

NOTE Confidence: 0.950557556666667

00:16:12.176 --> 00:16:14.350 the field forward and and answer

NOTE Confidence: 0.950557556666667

00:16:14.350 --> 00:16:16.200 some of these knowledge gaps.

NOTE Confidence: 0.950557556666667

00:16:16.200 --> 00:16:18.034 And additionally I want to point out

NOTE Confidence: 0.950557556666667

00:16:18.034 --> 00:16:20.160 that we have a creative study design.

NOTE Confidence: 0.950557556666667

00:16:20.160 --> 00:16:21.516 I I often struggle when we're

NOTE Confidence: 0.950557556666667

00:16:21.516 --> 00:16:22.194 doing clinical trials.

NOTE Confidence: 0.950557556666667

00:16:22.200 --> 00:16:24.328 I'm like we could be getting so

NOTE Confidence: 0.950557556666667

00:16:24.328 --> 00:16:25.879 much more information that can

NOTE Confidence: 0.950557556666667

00:16:25.879 --> 00:16:27.601 help us develop other studies and

NOTE Confidence: 0.950557556666667

00:16:27.601 --> 00:16:29.558 and and move the field forward.

NOTE Confidence: 0.950557556666667

00:16:29.560 --> 00:16:31.912 So we will be obtaining clinical data

NOTE Confidence: 0.950557556666667

00:16:31.912 --> 00:16:34.519 that is secondary and exploratory outcomes,

NOTE Confidence: 0.950557556666667

00:16:34.520 --> 00:16:36.494 but it can help us to understand

NOTE Confidence: 0.950557556666667

00:16:36.494 --> 00:16:37.880 what next steps to take.

NOTE Confidence: 0.950557556666667

00:16:37.880 --> 00:16:41.394 So with that I will thank our

NOTE Confidence: 0.922891775454545

00:16:41.400 --> 00:16:42.926 research team. It takes a lot of

NOTE Confidence: 0.922891775454545

00:16:42.926 --> 00:16:44.825 people to do this, this human work,

NOTE Confidence: 0.922891775454545

00:16:44.825 --> 00:16:46.400 my mentorship team that has

NOTE Confidence: 0.922891775454545

00:16:46.400 --> 00:16:48.482 helped me over the years as well

NOTE Confidence: 0.922891775454545

00:16:48.482 --> 00:16:49.920 as our funders. And thank you.

NOTE Confidence: 0.7909633

00:16:56.640 --> 00:16:58.160 Wonderful, thank you Doctor Van

NOTE Confidence: 0.7909633

00:16:58.160 --> 00:17:00.800 name questions from the audience.

NOTE Confidence: 0.786285068888889

00:17:05.160 --> 00:17:06.384 Yeah this is great.

NOTE Confidence: 0.786285068888889

00:17:06.384 --> 00:17:08.745 I was I was wondering for for the

NOTE Confidence: 0.786285068888889

00:17:08.745 --> 00:17:10.395 from the studies that Kevin Harrell

NOTE Confidence: 0.786285068888889

00:17:10.395 --> 00:17:12.830 has done here with with anti CD3

NOTE Confidence: 0.786285068888889

00:17:12.830 --> 00:17:15.080 depletion and type one diabetes,

NOTE Confidence: 0.786285068888889

00:17:15.080 --> 00:17:16.211 those individuals obviously

NOTE Confidence: 0.786285068888889

00:17:16.211 --> 00:17:17.719 do not lose weight.

NOTE Confidence: 0.786285068888889

00:17:17.720 --> 00:17:20.800 I wonder whether a synergizing

NOTE Confidence: 0.786285068888889

00:17:20.800 --> 00:17:24.480 semaglottide in those individuals

NOTE Confidence: 0.786285068888889

00:17:24.480 --> 00:17:26.478 controls the the disease in a

NOTE Confidence: 0.786285068888889

00:17:26.478 --> 00:17:28.680 better fashion or or or delays

NOTE Confidence: 0.786285068888889

00:17:28.680 --> 00:17:30.280 the progression even more.

NOTE Confidence: 0.91065423

00:17:30.880 --> 00:17:32.248 Possibly there's a case report out

NOTE Confidence: 0.91065423

00:17:32.248 --> 00:17:33.919 on that where it appears to work,

NOTE Confidence: 0.91065423

00:17:33.920 --> 00:17:36.184 but we have not seen that in any

NOTE Confidence: 0.91065423

00:17:36.184 --> 00:17:38.240 sort of robust study design.

NOTE Confidence: 0.91065423

00:17:38.240 --> 00:17:40.640 Think also important we'll be seeing

NOTE Confidence: 0.91065423

00:17:40.640 --> 00:17:43.146 how some of the other medications that

NOTE Confidence: 0.91065423

00:17:43.146 --> 00:17:45.380 Anya had mentioned like the Amylin

NOTE Confidence: 0.91065423

00:17:45.380 --> 00:17:47.564 analogs combined with GLP ones or

NOTE Confidence: 0.91065423

00:17:47.564 --> 00:17:49.829 Glucagon combined with GLP ones might

NOTE Confidence: 0.91065423

00:17:49.829 --> 00:17:51.551 impact just based on some of the other

NOTE Confidence: 0.91065423

00:17:51.551 --> 00:17:52.799 Physiology we didn't talk about today.

NOTE Confidence: 0.822480423333333

00:17:59.390 --> 00:18:00.150 Thanks, Michelle,

NOTE Confidence: 0.822480423333333

00:18:00.150 --> 00:18:02.522 that was really nice one question.

NOTE Confidence: 0.822480423333333

00:18:02.522 --> 00:18:05.102 Is there any data in people,

NOTE Confidence: 0.822480423333333

00:18:05.102 --> 00:18:07.706 or or at least theoretically are

NOTE Confidence: 0.822480423333333

00:18:07.706 --> 00:18:10.700 are the pathways of wanting to eat

NOTE Confidence: 0.822480423333333

00:18:10.700 --> 00:18:12.920 when you're hypoglycemic versus the

NOTE Confidence: 0.822480423333333

00:18:12.999 --> 00:18:15.450 pathways that are hit by the drugs?

NOTE Confidence: 0.822480423333333

00:18:15.450 --> 00:18:17.275 Do they commingle at all?

NOTE Confidence: 0.822480423333333

00:18:17.280 --> 00:18:20.190 Is there an increased risk of

NOTE Confidence: 0.822480423333333

00:18:20.190 --> 00:18:22.336 hypoglycemia if you're trying to have

NOTE Confidence: 0.822480423333333

00:18:22.336 --> 00:18:24.100 tight control and also have people

NOTE Confidence: 0.822480423333333

00:18:24.156 --> 00:18:25.760 lose weight at the same time? As

NOTE Confidence: 0.910330812857143

00:18:26.720 --> 00:18:27.552 far as the pathways,

NOTE Confidence: 0.910330812857143

00:18:27.552 --> 00:18:29.917 I I do not have an answer for that one,

NOTE Confidence: 0.910330812857143

00:18:29.920 --> 00:18:31.636 but certainly there,

NOTE Confidence: 0.910330812857143

00:18:31.636 --> 00:18:35.068 you know the original studies of

NOTE Confidence: 0.910330812857143

00:18:35.068 --> 00:18:36.332 loraglitide looked specifically

NOTE Confidence: 0.910330812857143

00:18:36.332 --> 00:18:38.408 at glycemia and there was not

NOTE Confidence: 0.910330812857143

00:18:38.408 --> 00:18:40.040 enough of an improvement.

NOTE Confidence: 0.910330812857143

00:18:40.040 --> 00:18:42.302 There was the risk of hypoglycemia

NOTE Confidence: 0.910330812857143

00:18:42.302 --> 00:18:43.990 and also the side effects that

NOTE Confidence: 0.910330812857143

00:18:43.990 --> 00:18:45.038 come with these medications.

NOTE Confidence: 0.910330812857143

00:18:45.040 --> 00:18:47.520 So that's part of why we're thinking about,

NOTE Confidence: 0.910330812857143

00:18:47.520 --> 00:18:50.431 well, what about besides glycemia and

NOTE Confidence: 0.910330812857143

00:18:50.431 --> 00:18:52.599 we've also learned more how to use these

NOTE Confidence: 0.910330812857143

00:18:52.599 --> 00:18:54.517 medications in people with type one diabetes,

NOTE Confidence: 0.910330812857143

00:18:54.520 --> 00:18:56.200 how much to decrease the insulin.

NOTE Confidence: 0.910330812857143

00:18:56.200 --> 00:18:58.315 We have more opportunities in

NOTE Confidence: 0.910330812857143

00:18:58.315 --> 00:19:00.430 terms safety monitoring with use

NOTE Confidence: 0.910330812857143

00:19:00.505 --> 00:19:02.757 of continuous glucose monitoring.

NOTE Confidence: 0.910330812857143

00:19:02.760 --> 00:19:04.410 So certainly we are always

NOTE Confidence: 0.910330812857143

00:19:04.410 --> 00:19:05.400 thinking about hypoglycemia,

NOTE Confidence: 0.910330812857143

00:19:05.400 --> 00:19:06.876 but we have participants on the

NOTE Confidence: 0.910330812857143

00:19:06.876 --> 00:19:08.863 lookout for that and we are proactively

NOTE Confidence: 0.910330812857143

00:19:08.863 --> 00:19:10.448 lowering doses and following them

NOTE Confidence: 0.910330812857143

00:19:10.448 --> 00:19:12.500 very carefully at the time of dose

NOTE Confidence: 0.910330812857143

00:19:12.500 --> 00:19:13.592 escalations for the Simagmatite.

NOTE Confidence: 0.89111686

00:19:17.440 --> 00:19:18.840 Wonderful. Other questions,

NOTE Confidence: 0.89111686

00:19:18.840 --> 00:19:19.878 Yes, Doctor Kimmy,

NOTE Confidence: 0.807983597272727

00:19:25.400 --> 00:19:26.102 great presentation.

NOTE Confidence: 0.807983597272727

00:19:26.102 --> 00:19:29.715 So we know GLP One works on the brain, right?

NOTE Confidence: 0.807983597272727

00:19:29.715 --> 00:19:32.235 But it also works on the beta cell.

NOTE Confidence: 0.807983597272727

00:19:32.240 --> 00:19:35.438 Do you have any sense of of how

NOTE Confidence: 0.807983597272727

00:19:35.438 --> 00:19:37.034 there's a difference between

NOTE Confidence: 0.807983597272727

00:19:37.034 --> 00:19:39.066 subjects with obesity but without

NOTE Confidence: 0.807983597272727

00:19:39.066 --> 00:19:40.916 beta cells and beta cells,

NOTE Confidence: 0.807983597272727

00:19:40.920 --> 00:19:42.918 if they have a different response?

NOTE Confidence: 0.807983597272727

00:19:42.920 --> 00:19:44.816 That is, how much can we

NOTE Confidence: 0.807983597272727

00:19:44.816 --> 00:19:46.353 attribute the response to the

NOTE Confidence: 0.807983597272727

00:19:46.353 --> 00:19:47.718 brain alone versus the eyelid?

NOTE Confidence: 0.874489486428571

00:19:48.480 --> 00:19:49.775 Because at this point, I don't think

NOTE Confidence: 0.874489486428571

00:19:49.775 --> 00:19:51.277 we have an answer for that either,

NOTE Confidence: 0.874489486428571

00:19:51.280 --> 00:19:53.000 but we should work on that, right.

NOTE Confidence: 0.967528561

00:19:54.600 --> 00:19:56.448 And that's why we're here today

NOTE Confidence: 0.967528561

00:19:56.448 --> 00:19:57.680 for collaboration and networking.

NOTE Confidence: 0.967528561

00:19:57.680 --> 00:19:59.198 So wonderful. Thank you so much,

NOTE Confidence: 0.967528561

00:19:59.200 --> 00:20:01.755 Doctor Van Dame for a wonderful talk

NOTE Confidence: 0.967528561

00:20:01.760 --> 00:20:03.594 and we're going to keep moving along.