00:00:00.000 --> 00:00:02.600 Support for Yale Cancer Answers

00:00:02.600 --> 00:00:05.200 comes from AstraZeneca, providing

 $00:00:05.285 \rightarrow 00:00:07.429$  important treatment options for

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 $00:00:07.429 \rightarrow 00:00:10.645$  various types and stages of cancer.

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 $00:00:10.650 \longrightarrow 00:00:14.110$  More information at astrazeneca-us.com.

NOTE Confidence: 0.926669299602509

00:00:14.110 --> 00:00:15.558 Welcome to Yale Cancer

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00:00:15.558 - 00:00:17.006 Answers with your host,

 $00:00:17.010 \longrightarrow 00:00:18.830$  Doctor Anees Chagpar.

 $00{:}00{:}18.830 \dashrightarrow 00{:}00{:}20.765$  Yale Cancer Answers features the

 $00:00:20.765 \rightarrow 00:00:23.146$  latest information on cancer care by

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00:00:23.146 --> 00:00:24.670 welcoming oncologists and specialists

NOTE Confidence: 0.926669299602509

 $00:00:24.670 \longrightarrow 00:00:27.227$  who are on the forefront of the

NOTE Confidence: 0.926669299602509

00:00:27.227 --> 00:00:28.985 battle to fight cancer. This week,

 $00:00:28.990 \rightarrow 00:00:30.805$  it's a conversation about obesity

 $00{:}00{:}30.805 \dashrightarrow 00{:}00{:}32.620$  and cancer with Doctor Ania

00:00:32.620 --> 00:00:33.742 Jastreboff. Doctor Jastreboff

 $00:00:33.742 \longrightarrow 00:00:35.612$  is an assistant professor

NOTE Confidence: 0.926669299602509

 $00{:}00{:}35{.}612 \dashrightarrow 00{:}00{:}37{.}456$  of medicine in endocrinology and

NOTE Confidence: 0.926669299602509

00:00:37.456 --> 00:00:39.878 metabolism at Yale School of Medicine,

 $00:00:39.880 \longrightarrow 00:00:42.058$  where Doctor Chagpar is

00:00:42.058 --> 00:00:43.510 professor of surgical oncology.

00:00:44.130 --> 00:00:46.426 We all know a

00:00:46.426 --> 00:00:49.139 little bit about obesity.  $00:00:49.140 \longrightarrow 00:00:51.254$  We know it's an epidemic in this  $00:00:51.254 \rightarrow 00:00:53.105$  country and you actually spend 00:00:53.105 --> 00:00:54.865 your days studying obesity.  $00:00:54.870 \longrightarrow 00:00:57.418$  Tell us a little bit about what 00:00:57.418 --> 00:00:59.878 exactly you study and how you got  $00:00:59.880 \longrightarrow 00:01:01.176$  interested in that. 00:01:01.176 --> 00:01:02.796 I'm an obesity medicine  $00:01:02.796 \rightarrow 00:01:04.538$  physician trained in endocrinology  $00:01:04.540 \longrightarrow 00:01:06.460$  here at Yale, and I see  $00:01:06.460 \rightarrow 00:01:08.233$  patients for obesity and help  $00:01:08.233 \rightarrow 00:01:09.909$  care for them specifically  $00:01:09.910 \longrightarrow 00:01:11.298$  using anti-obesity medications. 00:01:11.298 --> 00:01:13.380 I also conduct studies in  $00:01:13.440 \longrightarrow 00:01:14.920$  patients who have obesity  $00:01:14.920 \longrightarrow 00:01:17.237$  to try and figure out what some  $00:01:17.237 \longrightarrow 00:01:19.510$  of the causes of obesity may be  $00:01:19.510 \longrightarrow 00:01:21.478$  and how we can help them.  $00:01:21.480 \longrightarrow 00:01:23.120$  Let's talk about that. 00:01:23.120 --> 00:01:24.101 First of all,  $00:01:24.101 \longrightarrow 00:01:26.063$  how big a problem is obesity? 00:01:26.070 --> 00:01:27.710 I mean, everybody talks about 00:01:29.350 --> 00:01:30.658 how it's an epidemic,  $00:01:30.660 \rightarrow 00:01:32.628$  everybody is getting bigger.  $00:01:32.630 \rightarrow 00:01:33.862$  Is that really true? 00:01:33.862 - > 00:01:36.470 The rates of obesity in the United 00:01:36.470 --> 00:01:38.534 States are very high right now.  $00:01:38.540 \rightarrow 00:01:40.829$  If you look at our whole population,  $00:01:40.830 \longrightarrow 00:01:42.142 2/3$  of Americans either  $00:01:42.142 \rightarrow 00:01:43.454$  have obesity or are overweight.  $00:01:43.460 \longrightarrow 00:01:45.819$  So we're talking about about 200 million 00:01:45.820 --> 00:01:47.700 individuals in the United States 00:01:47.700 --> 00:01:49.204 of the American population,  $00:01:49.210 \longrightarrow 00:01:51.484$  for example, 46% would qualify to 00:01:51.484 --> 00:01:53.435 take an anti-obesity medication  $00:01:53.435 \longrightarrow 00:01:55.626$  and of those only 2% actually  $00:01:55.626 \rightarrow 00:01:57.506$  are treated with a medication.  $00:01:57.510 \rightarrow 00:01:59.395$  We're going to get  $00:01:59.395 \longrightarrow 00:02:01.280$  back to the treatment of  $00:02:01.280 \longrightarrow 00:02:03.542$  obesity. But first I want  $00:02:03.542 \rightarrow 00:02:05.050$  to understand the definition.  $00:02:05.050 \rightarrow 00:02:07.472$  So you said there's a bunch  $00:02:07.472 \longrightarrow 00:02:10.008$  of people who are obese and then  $00:02:10.008 \rightarrow 00:02:12.132$  there are a bunch of people  $00:02:12.209 \rightarrow 00:02:14.469$  who are overweight, what's  $00:02:14.470 \rightarrow 00:02:16.370$  the definition here?  $00:02:16.370 \rightarrow 00:02:18.351$  Patients with obesity, and we tend to  $00:02:18.351 \rightarrow 00:02:20.764$  say it that way rather than defining  $00:02:20.764 \rightarrow 00:02:22.634$  the individual by their disease,  $00:02:22.640 \rightarrow 00:02:24.290$  so in general,  $00:02:24.290 \rightarrow 00:02:25.610$  we don't say patients,  $00:02:25.610 \rightarrow 00:02:27.590$  we say patients who have diabetes,  $00:02:27.590 \rightarrow 00:02:29.900$  not diabetic patients and in the same way,  $00:02:29.900 \longrightarrow 00:02:32.210$  although it's easy to  $00:02:32.210 \rightarrow 00:02:34.520$  define the individual by their disease,  $00:02:34.520 \longrightarrow 00:02:36.500$  we don't want to do that. 00:02:36.500 - 00:02:38.480 So we don't say obese individuals, NOTE Confidence: 0.943657159805298  $00:02:38.480 \longrightarrow 00:02:40.130$  we say individuals with obesity.  $00:02:40.130 \rightarrow 00:02:41.780$  And what does that mean?  $00:02:41.780 \rightarrow 00:02:43.500$  An individual with obesity  $00:02:43.500 \rightarrow 00:02:45.596$  would have a body mass index

 $00:02:45.596 \rightarrow 00:02:47.738$  of greater than or equal to 30. 00:02:47.740 --> 00:02:50.813 An individual who is overweight  $00:02:50.813 \rightarrow 00:02:53.433$  would have a body mass index  $00:02:53.433 \rightarrow 00:02:56.228$  of 20 of greater than or equal to 25.  $00:02:56.230 \longrightarrow 00:02:57.698$  And what exactly is  $00:02:57.700 \rightarrow 00:02:59.180$  this body mass index?  $00:03:03.240 \longrightarrow 00:03:05.820$  So body mass index is actually a  $00:03:05.820 \rightarrow 00:03:08.040$  measure that came out of Epidata. 00:03:08.040 --> 00:03:09.512 It looks at populations,  $00:03:09.512 \rightarrow 00:03:11.630$  it's an easy way, for example,  $00:03:11.630 \rightarrow 00:03:15.535$  for us to get an idea of how  $00:03:15.535 \rightarrow 00:03:18.067$  many people have obesity or are overweight.  $00{:}03{:}18{.}070 \dashrightarrow 00{:}03{:}21{.}078$  So it is a measure that takes into  $00:03:21.078 \rightarrow 00:03:24.156$  account both your height and your weight.  $00:03:24.160 \longrightarrow 00:03:26.715$  So if you look at the units 00:03:26.715 --> 00:03:29.029 kilograms divided by meters squared,  $00:03:29.030 \rightarrow 00:03:31.280$  you're basically weighing the  $00:03:31.280 \rightarrow 00:03:33.976$  individual as well as asking what  $00:03:33.976 \rightarrow 00:03:36.190$  their height is to figure out 00:03:36.190 - 00:03:38.520 on average what their body mass  $00:03:38.520 \longrightarrow 00:03:40.818$  index is and so basically  $00:03:40.818 \rightarrow 00:03:42.834$  in terms of health outcomes,  $00:03:42.834 \longrightarrow 00:03:44.458$  people have looked at  $00:03:44.460 \rightarrow 00:03:46.896$  what are the healthiest body mass  $00:03:46.900 \rightarrow 00:03:47.785$  indexes? 00:03:47.785 --> 00:03:50.340 If you have a higher body mass index,  $00:03:50.340 \longrightarrow 00:03:52.146$  do you have an increased risk for  $00:03:52.146 \rightarrow 00:03:53.380$  certain obesity related diseases?  $00:03:54.000 \rightarrow 00:03:55.953$  And for the people who are  $00:03:55.953 \rightarrow 00:03:57.409$  out there listening and going, 00:03:57.410 --> 00:03:59.955 first of all, what the heck is NHANES,

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00:03:59.955 --> 00:04:02.430 and I'm going to let you get back to that
00:04:02.500 \rightarrow 00:04:04.900 but but this whole idea of looking at
00:04:04.900 \rightarrow 00:04:07.142 your weight over your height so we kind
00:04:07.142 \rightarrow 00:04:09.052 of get it right like taller people
00:04:09.052 \rightarrow 00:04:11.040 should be a little bit heavier,
00:04:11.040 \rightarrow 00:04:12.450 they are taller
00:04:12.450 \rightarrow 00:04:14.185 and shorter people might be a
00:04:14.185 \longrightarrow 00:04:15.575 little bit light lighter because,
00:04:15.580 \longrightarrow 00:04:16.716 well, they are shorter.
00:04:16.716 --> 00:04:18.420 But to put it into context,
00:04:18.420 \longrightarrow 00:04:19.840 if you're thinking about,
00:04:19.840 --> 00:04:22.059 I don't know how many kilograms I
00:04:22.059 \rightarrow 00:04:24.669 am and how many meters I am.
00:04:24.670 \rightarrow 00:04:26.956 There are calculators on line absolutely,
00:04:26.960 --> 00:04:30.396 so can you just Google BMI Calculator?
00:04:30.400 \longrightarrow 00:04:32.312 All of these calculators will
00:04:32.312 \longrightarrow 00:04:33.840 pop up, absolutely.
00:04:33.840 \rightarrow 00:04:37.500 I will tell you that I have friends who have
00:04:37.500 \rightarrow 00:04:41.098 done this who do fit into the obese category.
00:04:41.100 \longrightarrow 00:04:44.529 And they are like I am not obese.
00:04:44.530 \longrightarrow 00:04:47.586 I mean, I might be a little bit
00:04:47.586 \longrightarrow 00:04:49.496 pleasantly plump, but
00:04:49.496 \longrightarrow 00:04:51.406 is this a real thing?
00:04:51.410 \longrightarrow 00:04:54.126 So you were about to tell us
00:04:54.126 \longrightarrow 00:04:55.680 that these categories are
00:04:55.680 \rightarrow 00:04:57.276 actually associated with actual
00:04:57.276 \longrightarrow 00:04:59.670 health outcomes.
00:04:59.670 --> 00:05:02.729 It's not like we're labeling
00:05:02.729 \rightarrow 00:05:05.689 people to label them,
00:05:05.690 \longrightarrow 00:05:07.909 and that has
00:05:07.909 \rightarrow 00:05:09.450 a particular health outcome.
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00:05:09.450 \longrightarrow 00:05:11.160 Is that right?
00:05:11.160 \rightarrow 00:05:11.502 That's correct,
00:05:11.502 \rightarrow 00:05:13.559 and it's a really great point
00:05:13.560 \rightarrow 00:05:15.947 that you bring up, because for example,
00:05:15.950 \longrightarrow 00:05:17.834 if someone is a bodybuilder and
00:05:17.834 \rightarrow 00:05:20.268 they have a lot of muscle while
00:05:20.268 --> 00:05:22.108 muscle weighs more than fat,
00:05:22.110 - > 00:05:24.238 so their body mass index might be
00:05:24.238 \rightarrow 00:05:26.357 higher and they might not necessarily
00:05:26.357 \rightarrow 00:05:28.257 have an unhealthy BMI,
00:05:28.260 \rightarrow 00:05:30.306 so it's not a perfect measure,
00:05:30.310 \longrightarrow 00:05:32.020 but in the general public,
00:05:32.020 --> 00:05:34.756 most patients, if they have a higher BMI,
00:05:34.760 \rightarrow 00:05:35.903 that doesn't mean
00:05:35.903 \rightarrow 00:05:38.570 that they have a much higher muscle
00:05:38.646 \rightarrow 00:05:40.872 mass as compared to body fat mass
00:05:40.872 - 00:05:43.378 and then to answer your question,
00:05:43.380 \rightarrow 00:05:44.784 obesity is a disease,
00:05:44.784 \rightarrow 00:05:47.662 so we use these cut offs in general
00:05:47.662 \rightarrow 00:05:50.070 to help us define who is at
00:05:50.070 \rightarrow 00:05:52.480 higher risk for certain diseases.
00:05:52.480 --> 00:05:53.996 Just like you said,
00:05:53.996 \rightarrow 00:05:55.891 because they have the chronic
00:05:55.891 --> 00:05:57.024 disease of obesity.
00:05:57.024 \rightarrow 00:05:58.920 So let's talk about that.
00:05:58.920 \rightarrow 00:06:01.974 What are these medical conditions
00:06:01.974 \rightarrow 00:06:04.903 that obesity is a precursor to
00:06:04.903 --> 00:06:08.111 or is a risk factor for?
00:06:08.120 --> 00:06:11.344 Because some of
00:06:11.344 \rightarrow 00:06:14.897 us have been there.
00:06:14.900 --> 00:06:18.085 You think,
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00:06:18.090 --> 00:06:21.590 well I was born pudgy.
00:06:24.390 --> 00:06:26.991 It is not my fault and
00:06:26.991 \rightarrow 00:06:29.977 there are certain conditions that if you
00:06:29.977 --> 00:06:32.790 continue on that trajectory as I once did,
00:06:32.790 \longrightarrow 00:06:35.940 it really does put you at risk.
00:06:35.940 \rightarrow 00:06:38.052 So let's talk about what does
00:06:38.052 \rightarrow 00:06:40.490 obesity put you at risk for?
00:06:40.490 --> 00:06:43.290 You brought up a good point actually,
00:06:43.290 --> 00:06:46.077 because you said it's not my fault, and
00:06:46.077 --> 00:06:47.762 it's actually nobody's fault if
00:06:47.762 \rightarrow 00:06:49.630 they have overweight or obesity.
00:06:49.630 \rightarrow 00:06:51.718 It is not a lifestyle choice.
00:06:51.720 \longrightarrow 00:06:54.224 So 2/3 of Americans did not wake up
00:06:54.224 --> 00:06:56.437 one morning and decide, I'm going
00:06:56.437 \rightarrow 00:06:58.327 to have overweight or obesity,
00:06:58.330 \longrightarrow 00:07:00.412 or I'm going to be overweight
00:07:00.412 \longrightarrow 00:07:01.453 or have obesity,
00:07:01.460 \rightarrow 00:07:03.340 so it's really understanding that
00:07:03.340 \rightarrow 00:07:05.891 there's a physiology that drives us to
00:07:05.891 \rightarrow 00:07:07.727 eat certain amounts and certain foods.
00{:}07{:}07{.}730 \dashrightarrow 00{:}07{:}09{.}806 So it's hormones and fat tissue.
00:07:09.810 \rightarrow 00:07:11.748 They release certain factors that then
00:07:11.748 \longrightarrow 00:07:14.339 affect the brain that affect eating behavior.
00:07:14.340 --> 00:07:16.428 And that's exactly what I study
00:07:16.428 \rightarrow 00:07:17.472 in my science.
00:07:17.480 --> 00:07:19.130 I actually investigate neural
00:07:19.130 --> 00:07:20.450 mechanisms or brain mechanisms
00:07:20.450 \rightarrow 00:07:21.989 of overweight and obesity,
00:07:21.990 \rightarrow 00:07:24.406 and so it's a great point that you
00:07:24.406 \rightarrow 00:07:26.685 bring up because it's nobody's fault
00:07:26.685 - 00:07:29.487 that they have the disease of obesity
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00:07:29.487 --> 00:07:32.394 and it's our job to try and figure out
00:07:32.400 \rightarrow 00:07:35.176 how to help those patients in terms of
00:07:35.176 \rightarrow 00:07:37.257 what obesity increases your risk for.
00:07:37.257 \rightarrow 00:07:38.992 There's well over 200
00:07:38.992 --> 00:07:40.033 obesity related diseases,
00:07:40.040 \rightarrow 00:07:42.322 so some of the common ones that
00:07:42.322 \longrightarrow 00:07:44.491 you might think about are things
00:07:44.491 --> 00:07:46.735 like Type 2 diabetes or heart
00:07:46.735 - 00:07:48.709 disease and what we're here to
00:07:48.710 \rightarrow 00:07:50.705 potentially discuss today are
00:07:50.705 \rightarrow 00:07:52.700 also certain types of cancers,
00:07:52.700 \rightarrow 00:07:55.088 so we can't say that obesity causes this
00:07:55.088 \rightarrow 00:07:56.282 percent of cancer, but
00:07:56.290 \longrightarrow 00:07:59.494 we do know that
NOTE Confidence: 0.918119609355927
00:07:59.494 \rightarrow 00:08:02.279 obesity increases your risk for certain
00:08:02.280 \longrightarrow 00:08:05.070 types of cancers.
00:08:05.870 \longrightarrow 00:08:08.264 So the cancers that may be
00:08:08.264 \rightarrow 00:08:09.860 associated with increased risk
00:08:09.860 --> 00:08:12.248 if you have obesity are post
00:08:12.248 \longrightarrow 00:08:13.442 menopausal breast cancer,
00:08:13.450 \rightarrow 00:08:15.042 oesophageal and gastric cancer,
00:08:15.042 \rightarrow 00:08:16.634 pancreatic and colorectal cancer,
00:08:16.640 \rightarrow 00:08:17.858 and kidney cancer.
00:08:19.080 \rightarrow 00:08:21.768 And also endometrial cancer so there's
00:08:21.768 \rightarrow 00:08:24.488 certain types of cancers that we know
00:08:24.490 \longrightarrow 00:08:26.686 are associated with obesity and
00:08:26.686 \rightarrow 00:08:29.614 when you think about 2/3
00:08:29.614 \rightarrow 00:08:31.924 of the American population being
00:08:31.924 --> 00:08:35.290 overweight or having obesity,
00:08:35.290 \rightarrow 00:08:37.930 now all of these people have
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00:08:38.003 --> 00:08:39.943 risk factors for developing
00:08:39.943 \rightarrow 00:08:42.550 one of the myriad of cancers.
00:08:44.430 --> 00:08:45.934 Post menopausal breast cancer,
00:08:45.934 \rightarrow 00:08:48.202 for example, is pretty darn common.
00:08:48.202 \rightarrow 00:08:50.462 That's right and so as
00:08:50.462 \longrightarrow 00:08:51.966 we think about that,
00:08:51.970 \longrightarrow 00:08:54.595 a lot of people think,
00:08:54.595 \longrightarrow 00:08:57.250 not only is it not my fault,
00:08:57.250 \rightarrow 00:08:59.749 but there's really very little I can
00:08:59.749 \rightarrow 00:09:02.530 do about it because let's face it,
00:09:02.530 \rightarrow 00:09:04.042 it is bloody difficult,
00:09:04.042 \rightarrow 00:09:05.554 especially to lose weight.
00:09:05.560 --> 00:09:07.317 Yes, absolutely.
00:09:07.317 \rightarrow 00:09:10.796 How exactly do we lower that risk?
NOTE Confidence: 0.935803592205048
00:09:10.800 \longrightarrow 00:09:12.785 How exactly do we confront
00:09:12.785 --> 00:09:14.770 this as you put it,
00:09:14.770 --> 00:09:16.358 a chronic condition called
00:09:16.358 \rightarrow 00:09:17.549 overweight or obesity?
00:09:17.550 \rightarrow 00:09:19.530 I's another great point
00:09:19.530 \rightarrow 00:09:22.490 that you bring up and actually we don't
00:09:22.490 \longrightarrow 00:09:25.124 have the evidence yet to say that
00:09:25.124 --> 00:09:27.870 if you have obesity or overweight,
00:09:27.870 \rightarrow 00:09:30.649 that losing weight will decrease your risk.
00:09:30.650 \rightarrow 00:09:33.458 What we have at this point is knowing
00:09:33.458 \rightarrow 00:09:36.385 that if your normal weight for certain
00:09:36.385 - > 00:09:39.000 types of cancers you may have a
00:09:39.000 \longrightarrow 00:09:41.886 lower risk, but that doesn't
00:09:41.886 \longrightarrow 00:09:45.101 mean that we shouldn't try to have
00:09:45.101 --> 00:09:47.894 a lower BMI or to treat obesity.
00:09:47.900 --> 00:09:50.130 An as you pointed out,
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- 00:09:50.130 --> 00:09:52.800 it's very difficult to lose weight,
- $00:09:52.800 \longrightarrow 00:09:55.440$  and it's more difficult
- $00:09:55.440 \longrightarrow 00:09:57.690$  to maintain that weight loss,
- $00:09:57.690 \rightarrow 00:10:01.695$  so there are different ways that we do this,
- 00:10:01.700 --> 00:10:03.920 and both start with changing diet,
- 00:10:03.920 --> 00:10:05.700 physical activity, and also,
- 00:10:05.700 --> 00:10:07.480 as I mentioned earlier,
- $00:10:07.480 \longrightarrow 00:10:09.092$  with anti-obesity medications.
- NOTE Confidence: 0.930720269680023
- $00:10:09.092 \rightarrow 00:10:11.510$  There are FDA approved anti-
- 00:10:11.586 --> 00:10:12.910 obesity medications
- $00{:}10{:}12{.}910 \dashrightarrow 00{:}10{:}16{.}168$  that we can use to help people lose weight,
- $00{:}10{:}16{.}170 \dashrightarrow 00{:}10{:}18{.}634$  and that's what I do in my
- $00:10:18.634 \rightarrow 00:10:20.150$  clinical practice at Yale.
- $00:10:20.150 \longrightarrow 00:10:21.910$  There are also other interventions
- $00:10:21.910 \longrightarrow 00:10:24.090$  such as bariatric surgery and there
- $00:10:24.090 \longrightarrow 00:10:26.238$  is some evidence that having bariatric
- 00:10:26.238 --> 00:10:28.464 surgery may decrease your risk for
- $00{:}10{:}28.464 \dashrightarrow 00{:}10{:}30.289$  certain obesity related cancers.
- $00:10:30.290 \longrightarrow 00:10:31.730$  So because that was
- $00{:}10{:}31{.}730 \dashrightarrow 00{:}10{:}34{.}626$  one of the things that I was going
- NOTE Confidence: 0.941755294799805
- $00:10:34.630 \longrightarrow 00:10:37.754$  to bring up is that if you say that
- 00:10:37.754 --> 00:10:40.717 you know obesity is a risk factor
- $00:10:40.717 \rightarrow 00:10:42.745$  for developing certain cancers,
- $00:10:42.750 \longrightarrow 00:10:44.538$  but we don't know that losing
- 00:10:44.538 00:10:46.850 weight is going to reduce that risk,
- $00{:}10{:}46.850 \dashrightarrow 00{:}10{:}49.048$  then people are like, you know what
- $00:10:49.050 \rightarrow 00:10:51.255$  it's too damn tough to lose weight,
- $00:10:51.260 \longrightarrow 00:10:52.830$  I'm not going to bother.
- 00:10:52.830 --> 00:10:54.090 But if bariatric surgery

00:10:54.090 --> 00:10:55.665 actually does reduce your risk,  $00:10:55.670 \rightarrow 00:10:57.374$  one would think that maybe one  $00:10:57.374 \longrightarrow 00:10:59.285$  of the mechanisms for that is  $00:10:59.285 \rightarrow 00:11:00.709$  that bariatric surgery actually  $00:11:00.710 \longrightarrow 00:11:02.280$  helps you to lose weight.  $00:11:02.280 \longrightarrow 00:11:04.268$  And so exactly what  $00:11:04.268 \rightarrow 00:11:05.750$  you're saying and inferring  $00:11:05.750 \rightarrow 00:11:07.320$  and that's been the thought.  $00:11:07.320 \longrightarrow 00:11:09.786$  The idea is that we need data now to  $00:11:09.786 \rightarrow 00:11:11.901$  support that and other ways of treating 00:11:11.901 --> 00:11:13.676 obesity may help reduce risk.  $00:11:13.680 \longrightarrow 00:11:15.444$  And that's one of the things NOTE Confidence: 0.93593555688858 00:11:15.444 --> 00:11:17.736 I'm interested in, is to look at  $00:11:17.736 \rightarrow 00:11:19.481$  specifically if helping people lose  $00:11:19.481 \rightarrow 00:11:21.358$  weight with anti obesity medications  $00:11:21.358 \rightarrow 00:11:23.596$  if that will help decrease their 00:11:23.596 --> 00:11:24.996 risk for developing cancer.  $00:11:24.996 \rightarrow 00:11:27.390$  And this could be in people who  $00:11:27.459 \rightarrow 00:11:29.169$  have overweight or obesity and  $00:11:29.169 \rightarrow 00:11:31.519$  they have had cancer in their past. 00:11:31.520 --> 00:11:34.000 Or it could be in patients who have  $00:11:34.000 \rightarrow 00:11:36.320$  a higher risk for having cancer,  $00:11:36.320 \rightarrow 00:11:38.210$  for example because of their genetics  $00:11:38.210 \longrightarrow 00:11:40.429$  or because of a family history.  $00:11:40.430 \longrightarrow 00:11:42.698$  To see if we can help prevent  $00:11:42.698 \rightarrow 00:11:44.210$  the development of cancer.  $00:11:44.430 \longrightarrow 00:11:47.778$  For a long time I was NOTE Confidence: 0.929587423801422 00:11:47.778 --> 00:11:50.190 praying for some sort of pill,  $00{:}11{:}50{.}190 \dashrightarrow 00{:}11{:}52{.}815$  a magic bullet pill that would help

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00:11:52.815 \rightarrow 00:11:55.569 me to lose weight and now you're
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00:11:55.570 \rightarrow 00:11:58.434 telling me that such a pill exists?
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 $00:11:58.434 \rightarrow 00:12:02.087$  I would say there are no magic pills.

 $00:12:02.090 \rightarrow 00:12:05.170$  But we do have medications to treat obesity.

 $00:12:05.170 \longrightarrow 00:12:07.666$  So there are five that are approved by

 $00:12:07.666 \rightarrow 00:12:10.537$  the FDA for long-term obesity treatment,

 $00:12:10.540 \longrightarrow 00:12:12.880$  and there's one that is FDA

 $00:12:12.880 \longrightarrow 00:12:14.440$  approved for shorter term.

 $00:12:14.440 \longrightarrow 00:12:15.940$  If you think about it,

 $00:12:15.940 \longrightarrow 00:12:17.440$  obesity is a chronic disease.

 $00:12:17.440 \longrightarrow 00:12:20.140$  For example,

 $00{:}12{:}20{.}140 \dashrightarrow 00{:}12{:}21{.}874$  If some body has high blood pressure

 $00{:}12{:}21.874 \dashrightarrow 00{:}12{:}24.003$  and you treat them with a medicine

 $00:12:24.003 \longrightarrow 00:12:25.533$  to lower their blood pressure

 $00:12:25.540 \longrightarrow 00:12:27.340$  what would happen if

 $00:12:27.340 \longrightarrow 00:12:28.540$  their blood pressure improves?

 $00:12:28.540 \longrightarrow 00:12:30.340$  What happens if you take that

 $00:12:30.340 \longrightarrow 00:12:31.540$  blood pressure medicine away?

 $00:12:31.540 \longrightarrow 00:12:33.217$  Their blood pressure goes up, exactly.

 $00{:}12{:}33{.}217 \dashrightarrow 00{:}12{:}35{.}415$  So if you treat someone with a chronic

 $00{:}12{:}35{.}415 \dashrightarrow 00{:}12{:}37{.}365$  disease of obesity with an anti

 $00:12:37.365 \rightarrow 00:12:39.338$  obesity medicine and they lose weight,

 $00{:}12{:}39{.}340 \dashrightarrow 00{:}12{:}41{.}740$  what happens if you take that medicine away,

00:12:41.740 --> 00:12:42.944 they get obese again.

 $00{:}12{:}42{.}944 \dashrightarrow 00{:}12{:}44{.}449$  They gain back the weight, and so the idea is that these medicines,

 $00:12:47.470 \longrightarrow 00:12:48.766$  when you take them,

 $00:12:48.766 \longrightarrow 00:12:50.710$  you have to take them lifelong

00:12:50.781 --> 00:12:52.776 until we come up with a better

 $00{:}12{:}52{.}776 \dashrightarrow 00{:}12{:}54{.}870$  solution or a better medication.

 $00{:}12{:}54.870 \dashrightarrow 00{:}12{:}57.550$  Most patients, if they would like to lose,

 $00:12:57.550 \longrightarrow 00:12:59.230$  you know 5 to 10%,  $00:12:59.230 \longrightarrow 00:13:01.589$  one medicine might do 5 to 10%NOTE Confidence: 0.929587423801422  $00:13:01.590 \rightarrow 00:13:03.270$  of their total body weight, and 00:13:03.270 -> 00:13:05.854 one medicine may be able to help them  $00:13:05.854 \rightarrow 00:13:08.638$  if they want to lose more than that.  $00:13:08.640 \rightarrow 00:13:10.656$  Usually it's more than one medication.  $00:13:10.660 \rightarrow 00:13:12.669$  Let's talk about these medications  $00:13:12.670 \rightarrow 00:13:14.445$  because I'm quite certain that NOTE Confidence: 0.934933722019196  $00:13:14.445 \rightarrow 00:13:16.220$  you've probably peaked the interest 00:13:16.220 --> 00:13:18.468 of a lot of our listeners who are  $00:13:18.468 \longrightarrow 00:13:20.468$  thinking that for years  $00:13:20.468 \rightarrow 00:13:22.490$  they've been told that the way  $00:13:22.490 \rightarrow 00:13:24.534$  to lose weight is diet and exercise.  $00:13:24.540 \rightarrow 00:13:26.268$  And adopting healthy behaviors. 00:13:26.270 --> 00:13:27.700 And now you're saying, well,  $00:13:27.700 \rightarrow 00:13:30.211$  you know what you can take a pill every  $00:13:30.211 \rightarrow 00:13:32.579$  day for like the rest of your life,  $00:13:32.580 \rightarrow 00:13:34.876$  but that can help you to lose weight. 00:13:34.880 --> 00:13:36.302 I know that that's going  $00:13:36.302 \longrightarrow 00:13:38.030$  to be a longer conversation  $00:13:38.030 \rightarrow 00:13:39.906$  so first we're going to take a  $00:13:39.906 \longrightarrow 00:13:41.759$  short break for a medical minute.  $00:13:41.760 \rightarrow 00:13:43.846$  Please stay tuned to learn more about  $00:13:43.846 \rightarrow 00:13:45.490$  obesity and cancer with my guest 00:13:45.490 --> 00:13:47.506 doctor Ania Jastreboff. 00:13:47.506 --> 00:13:49.268 Support for Yale Cancer Answers comes from AstraZeneca,  $00:13:49.270 \rightarrow 00:13:51.680$  a biopharmaceutical business with  $00:13:51.680 \rightarrow 00:13:54.727$  a deep rooted heritage in oncology

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00:13:54.727 \rightarrow 00:13:57.492 and a commitment to developing
00:13:57.492 \rightarrow 00:13:59.704 cancer medicines for patients.
00:13:59.710 --> 00:14:03.090 Learn more at astrazeneca-us.com.
00:14:03.090 \rightarrow 00:14:06.037 This is a medical minute about genetic
00:14:06.037 \rightarrow 00:14:08.599 testing which can be useful for
00:14:08.599 \rightarrow 00:14:11.035 people with certain types of cancer
00:14:11.035 \longrightarrow 00:14:13.778 that seem to run in their families.
00:14:13.780 \rightarrow 00:14:16.300 Patients that are considered at risk
00:14:16.300 \rightarrow 00:14:18.791 should receive genetic counseling and testing so
00:14:18.791 \rightarrow 00:14:21.011 informed medical decisions can be based
00:14:21.011 \rightarrow 00:14:23.639 on their own personal risk assessment.
00:14:23.640 \rightarrow 00:14:25.460 Resources for genetic counseling and
00:14:25.460 \rightarrow 00:14:27.280 testing are available at federally
00:14:27.336 --> 00:14:29.388 designated comprehensive cancer centers.
00:14:29.390 --> 00:14:31.034 Interdisciplinary teams include geneticists,
00:14:31.034 --> 00:14:32.292 genetic counselors, physicians,
00:14:32.292 \rightarrow 00:14:33.156 and nurses
00:14:33.156 \rightarrow 00:14:36.180 who work together to provide risk assessment
00:14:36.180 \rightarrow 00:14:38.820 and steps to prevent the development
00:14:38.820 \longrightarrow 00:14:39.700 of cancer.
00:14:39.700 --> 00:14:41.460 More information is available
00:14:41.460 --> 00:14:42.340 at yalecancercenter.org.
00:14:42.340 --> 00:14:45.808 You're listening to Connecticut public radio.
00:14:45.810 \longrightarrow 00:14:46.190 Welcome
00:14:46.190 --> 00:14:48.080 back to Yale Cancer Answers.
00:14:48.080 \rightarrow 00:14:50.754 This is doctor Anees Chagpar
00:14:50.754 \rightarrow 00:14:53.077 and I'm joined tonight by my
00:14:53.077 --> 00:14:55.632 guest doctor Ania Jastreboff.
00:14:55.640 --> 00:14:57.992 We're talking about obesity and cancer
00:14:57.992 \rightarrow 00:14:59.976 and everybody knows that obesity
00:14:59.976 \rightarrow 00:15:02.058 is an epidemic in this country.
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00:15:02.060 \rightarrow 00:15:04.580 2/3 of people in this country are
00:15:04.580 \rightarrow 00:15:06.475 either overweight or have obesity
00:15:06.475 \rightarrow 00:15:08.713 and we know that being overweight
00:15:08.713 \rightarrow 00:15:11.075 or having obesity is an increased
00:15:11.075 \rightarrow 00:15:13.005 risk factor for developing a
00:15:13.005 \rightarrow 00:15:14.912 whole slew of different cancers.
00:15:14.912 \rightarrow 00:15:16.802 Not to mention heart disease,
00:15:16.810 --> 00:15:17.959 diabetes, vascular problems,
00:15:17.959 --> 00:15:19.108 strokes, heart attacks.
00:15:19.110 \longrightarrow 00:15:22.374 The list goes on and on, and all of us
00:15:22.374 \rightarrow 00:15:24.330 every year make New Year's resolutions,
00:15:24.330 \rightarrow 00:15:26.930 me included, that I'm going to lose weight.
00:15:26.930 \rightarrow 00:15:29.044 I always thought that the only way
00:15:29.044 \rightarrow 00:15:31.497 to do that was diet and exercise,
00:15:31.500 \rightarrow 00:15:32.152 eat healthy,
00:15:32.152 \rightarrow 00:15:34.108 those kinds of things,
00:15:34.110 \longrightarrow 00:15:36.273 but our guest today
00:15:36.273 \rightarrow 00:15:38.615 is telling us that there are
00:15:38.615 \rightarrow 00:15:40.300 some medications that can help.
00:15:40.300 \rightarrow 00:15:42.208 Ania, tell us about these
00:15:42.208 \rightarrow 00:15:43.890 medications that you talked about.
00:15:43.890 \rightarrow 00:15:46.498 You said that there are five that are
00:15:46.498 \rightarrow 00:15:49.100 FDA approved, most of them for chronic use,
00:15:49.100 \rightarrow 00:15:50.740 one some for shorter term use.
00:15:50.740 \longrightarrow 00:15:52.540 Tell us more about them.
00:15:52.540 \longrightarrow 00:15:53.614 What are they?
00:15:53.614 \rightarrow 00:15:55.046 How are they prescribed?
00:15:55.050 \rightarrow 00:15:56.840 What are the side effects?
00:15:56.840 \rightarrow 00:15:58.640 Who's eligible to use them?
00:15:58.640 --> 00:16:01.862 If I want to lose 5 or 10 pounds,
00:16:01.870 \longrightarrow 00:16:02.230 can I take one?
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00:16:02.230 \longrightarrow 00:16:05.456 First the indication for
00:16:05.456 \rightarrow 00:16:07.962 use of these medications should be discussed
00:16:07.970 \longrightarrow 00:16:11.106 In general the indication
00:16:11.106 \rightarrow 00:16:14.738 would be a body mass index of greater than or
00:16:14.738 --> 00:16:18.093 equal to 30 or a body mass index of greater
00:16:18.093 \rightarrow 00:16:21.288 than or equal to 27 with a comorbidity, so
00:16:21.290 \rightarrow 00:16:24.195 I would say with the obesity
00:16:24.195 \rightarrow 00:16:26.686 related disease, those would be
00:16:26.686 --> 00:16:28.756 something like Type 2 diabetes,
00:16:28.760 \rightarrow 00:16:30.840 hypertension or high blood pressure,
00:16:30.840 \rightarrow 00:16:32.910 high cholesterol, obstructive sleep apnea.
00:16:32.910 \rightarrow 00:16:35.400 Those would be obesity related diseases,
00:16:35.400 \rightarrow 00:16:37.990 so you could have a slightly lower
00:16:37.990 \rightarrow 00:16:40.800 BMI and still take these medicines.
00:16:40.800 \rightarrow 00:16:42.460 The medicines are relatively
00:16:42.460 --> 00:16:44.950 newer, some of them,
00:16:44.950 \rightarrow 00:16:47.440 but they're comprised of older medications.
00:16:47.440 --> 00:16:48.667 So for example,
00:16:48.667 \rightarrow 00:16:52.000 two of the medicines were approved in 2012,
00:16:52.000 \rightarrow 00:16:53.140 and two in 2014.
00:16:53.140 \longrightarrow 00:16:55.368 So that's why a lot of people
00:16:55.368 \rightarrow 00:16:57.558 are learning about them now.
00:16:57.560 \rightarrow 00:17:00.899 One of them is called CONTRAVE.
00:17:00.900 --> 00:17:02.765 It's a combination of Naltrexone/Bupropion
00:17:05.350 \longrightarrow 00:17:07.504 Naltrexone is used for
NOTE Confidence: 0.927379429340363
00:17:07.504 \rightarrow 00:17:10.053 people who may abuse alcohol or
NOTE Confidence: 0.927379429340363
00:17:10.053 \rightarrow 00:17:12.475 are addicted to opiates and it stops
00:17:12.544 \rightarrow 00:17:14.902 that action whereas Bupropion
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 $00{:}17{:}14{.}902 \dashrightarrow 00{:}17{:}17{.}222$  is both an antidepressant as well

 $00:17:17.222 \rightarrow 00:17:18.706$  as a smoking cessation medication.  $00:17:18.710 \longrightarrow 00:17:21.454$  So the idea is that they both potentially  $00:17:21.454 \rightarrow 00:17:23.934$  work on cravings and so those two  $00:17:23.934 \rightarrow 00:17:26.500$  were put together into a medication.  $00:17:26.500 \rightarrow 00:17:29.516$  Another one is a combination of Phentermine 00:17:29.520 --> 00:17:32.152 and Topiramate and Topiramate NOTE Confidence: 0.927379429340363  $00:17:32.152 \rightarrow 00:17:34.419$  is used for seizures and migraines. 00:17:34.420 --> 00:17:37.269 Phentramin has been used since the 1950s,  $00:17:37.270 \rightarrow 00:17:40.393$  if not before and was approved by the FDA  $00:17:40.393 \rightarrow 00:17:44.209$  for weight and for obesity treatment.  $00:17:44.210 \longrightarrow 00:17:46.418$  And those two were put together  $00:17:46.418 \longrightarrow 00:17:49.732$  to also be used as an anti-obesity  $00:17:49.732 \rightarrow 00:17:52.366$  medication and that's called Qsvmia,  $00:17:54.410 \rightarrow 00:17:56.298$  and another medication called Liraglutide  $00:17:56.298 \rightarrow 00:17:59.130$  is actually a hormone that  $00:17:59.201 \rightarrow 00:18:00.586$  is made in your gut. 00:18:00.590 --> 00:18:03.938 It's called GL P1 and it is naturally made  $00:18:03.938 \rightarrow 00:18:07.286$  in our body and increases when we eat,  $00:18:07.290 \rightarrow 00:18:10.202$  and we know that individuals who have  $00{:}18{:}10.202 \dashrightarrow 00{:}18{:}12.800$  obesity or overweight make less of this,  $00:18:12.800 \rightarrow 00:18:15.472$  and so we give it back to them  $00:18:15.472 \rightarrow 00:18:18.319$  and it helps people feel full.  $00:18:18.320 \rightarrow 00:18:20.966$  There are receptors in the brain for  $00:18:20.966 \rightarrow 00:18:23.785$  GOP and most of these medications  $00:18:23.785 \longrightarrow 00:18:26.593$  work in the brain and  $00:18:26.593 \rightarrow 00:18:28.558$  liraglutide is approved for weight. 00:18:28.560 --> 00:18:30.600 It's also approved  $00:18:30.600 \rightarrow 00:18:32.490$  as an anti-obesity medication,  $00:18:32.490 \rightarrow 00:18:34.758$  it's also approved for diabetes treatment, NOTE Confidence: 0.927379429340363

 $00:18:34.760 \rightarrow 00:18:37.420$  so those are three of the medications  $00:18:37.420 \longrightarrow 00:18:40.050$  and there are a couple of others. NOTE Confidence: 0.927379429340363  $00:18:40.050 \rightarrow 00:18:42.318$  So Orlistat has been on the  $00:18:42.318 \rightarrow 00:18:43.830$  market since the 1990s.  $00:18:43.830 \rightarrow 00:18:46.504$  It's actually over the counter as All  $00:18:46.504 \rightarrow 00:18:48.369$  and prescription strength as Xenical,  $00:18:48.370 \rightarrow 00:18:50.614$  and that is a medicine that  $00:18:50.614 \rightarrow 00:18:52.899$  helps you absorb 1/3 less fat. 00:18:52.900 --> 00:18:54.826 A lot of people don't necessarily  $00:18:54.826 \rightarrow 00:18:57.504$  like it because it can give you 00:18:57.504 --> 00:18:59.709 gastrointestinal side effects like diarrhea,  $00:18:59.710 \longrightarrow 00:19:02.026$  but that is also a medication  $00:19:02.030 \rightarrow 00:19:05.360$  that is used and has been used for obesity  $00:19:05.360 \rightarrow 00:19:07.797$  treatment and then another medication,  $00:19:07.800 \longrightarrow 00:19:10.390$  the fifth one that is approved for 00:19:10.390 --> 00:19:12.823 long-term use is called Belviq and  $00:19:12.823 \rightarrow 00:19:15.307$  the generic name is lorcaserin  $00:19:15.307 \rightarrow 00:19:17.978$  and that medicine works on serotonin  $00:19:17.978 \rightarrow 00:19:20.158$  receptors in the brain again  $00:19:20.160 \longrightarrow 00:19:22.890$  to help with things like craving  $00:19:22.890 \rightarrow 00:19:25.138$  and potentially helping us in  $00:19:25.138 \rightarrow 00:19:27.567$  terms of its action in the brain. 00:19:27.570 --> 00:19:30.754 Now if you were to ask me specifically  $00:19:30.754 \rightarrow 00:19:33.669$  how each of these medicines work,  $00:19:33.670 \rightarrow 00:19:36.190$  the answer is we don't quite know,  $00:19:36.190 \rightarrow 00:19:37.905$  and that's because we're still 00:19:37.905 --> 00:19:39.620 trying to work out exactly what  $00:19:39.678 \rightarrow 00:19:41.588$  causes and contributes to obesity.  $00:19:41.590 \rightarrow 00:19:43.972$  And then there is a short-term  $00:19:43.972 \rightarrow 00:19:46.259$  medication which I mentioned which is

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00:19:46.259 \rightarrow 00:19:48.787 phentermine and that can be used alone.
00:19:48.790 --> 00:19:49.150 Technically,
00:19:49.150 --> 00:19:51.670 it's only FDA approved for short-term use,
00:19:51.670 \longrightarrow 00:19:53.878 but it is a medication that
00:19:53.878 \rightarrow 00:19:55.990 people do use long term as
00:19:55.990 \rightarrow 00:19:58.936 well. So all of these drugs
00:19:58.940 \longrightarrow 00:20:00.400 all have different
00:20:00.400 --> 00:20:01.867 mechanisms of action, right?
00:20:01.867 --> 00:20:04.436 Some of them make you feel fuller.
00:20:04.440 \rightarrow 00:20:07.376 Some of them prevent you from absorbing fat.
00:20:07.380 \longrightarrow 00:20:09.582 Some of them work on your
00:20:09.582 \rightarrow 00:20:11.050 brain and serotonin receptors.
00:20:11.050 - 00:20:13.530 Some of them prevent cravings.
00:20:13.530 \rightarrow 00:20:14.700 Are they al lefficacious?
00:20:16.260 \rightarrow 00:20:17.820 Do they all work?
00:20:17.820 \longrightarrow 00:20:18.990 So that is
00:20:18.990 \longrightarrow 00:20:20.880 a wonderful question. The answer
00:20:20.880 \longrightarrow 00:20:23.670 is they don't all work in everyone.
00:20:23.670 \rightarrow 00:20:26.559 So the question is, how do we pair the
00:20:26.559 \rightarrow 00:20:29.516 right medications with the right patient?
00:20:29.520 \longrightarrow 00:20:32.194 And at this point there's no way
00:20:32.194 --> 00:20:35.379 of knowing that if I give you or
00:20:35.379 --> 00:20:37.329 any patient a certain medication
00:20:37.417 \longrightarrow 00:20:40.049 that they will lose weight on it.
00:20:40.050 --> 00:20:41.618 And at this point,
00:20:41.618 \rightarrow 00:20:44.800 because obesity medicine is a very new field,
00:20:44.800 \rightarrow 00:20:46.324 we're still learning basically
00:20:46.324 \rightarrow 00:20:48.610 right now we try and assess
00:20:48.610 --> 00:20:51.277 if you had cravings,
NOTE Confidence: 0.927376687526703
00:20:51.280 --> 00:20:53.560 I might tend towards one medicine,
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 $00:20:53.560 \rightarrow 00:20:55.465$  or if it's larger portions 00:20:55.465 --> 00:20:57.370 and you've never quite felt full,  $00:20:57.370 \rightarrow 00:20:59.656$  I would use a different medication. 00:20:59.660 - 00:21:02.220 But there's no way for me to know  $00:21:02.220 \longrightarrow 00:21:04.673$  for sure that you'll respond to  $00:21:04.673 \rightarrow 00:21:07.277$  that medication and down the road  $00:21:07.280 \longrightarrow 00:21:09.566$  the goal would be, for example,  $00:21:09.570 \rightarrow 00:21:12.118$  to have data both from knowing what  $00:21:12.118 \rightarrow 00:21:14.518$  your obstacles or barriers might be,  $00:21:14.520 \rightarrow 00:21:16.830$  as well as potentially genetic information.  $00:21:16.830 \rightarrow 00:21:19.147$  So taking a blood test and potentially NOTE Confidence: 0.927376687526703  $00:21:19.147 \rightarrow 00:21:21.054$  knowing which medicine might work better  $00:21:21.054 \rightarrow 00:21:23.230$  for you, we're not quite there yet.  $00:21:23.230 \rightarrow 00:21:26.750$  And so we have to work with what we have.  $00:21:26.750 \longrightarrow 00:21:29.310$  At this point we try a medicine  $00:21:29.310 \longrightarrow 00:21:31.462$  to see if a person loses  $00:21:31.462 \rightarrow 00:21:33.470$  weight over approximately 3 months,  $00:21:33.470 \rightarrow 00:21:35.354$  give or take, and obviously monitor  $00{:}21{:}35{.}354 \dashrightarrow 00{:}21{:}37{.}628$  for side effects and things like that. 00:21:37.630 --> 00:21:39.230 And then if it's working,  $00:21:39.230 \rightarrow 00:21:40.190$  we continue it. 00:21:40.190 --> 00:21:41.150 If it's not,  $00:21:41.150 \rightarrow 00:21:43.390$  then we change it for another medicine  $00:21:43.390 \rightarrow 00:21:46.910$  or if it's working a bit but not a whole lot,  $00:21:47.590 \longrightarrow 00:21:48.610$  we add on another medicine  $00:21:48.610 \longrightarrow 00:21:48.940$  so 00:21:48.940 --> 00:21:50.308 you mentioned side effects,  $00:21:50.308 \rightarrow 00:21:52.640$  which was another question that I had, 00:21:52.640 --> 00:21:53.660 because you know,

00:21:53.660 --> 00:21:56.670 every time you look at any kind of pill,

00:21:56.670 --> 00:21:59.302 I mean, you can take a Tylenol, right?  $00:21:59.302 \longrightarrow 00:22:01.558$  And if you read the label of all 00:22:01.558 - 00:22:03.729 of the potential side effects,  $00:22:03.730 \rightarrow 00:22:05.410$  it can get really harrowing.  $00:22:05.410 \longrightarrow 00:22:07.444$  So what are the side effects  $00:22:07.444 \rightarrow 00:22:09.100$  of these drugs?  $00:22:09.100 \rightarrow 00:22:10.740$  Is that something that people  $00:22:10.740 \longrightarrow 00:22:13.140$  really need to keep in mind before  $00:22:13.140 \longrightarrow 00:22:15.150$  they start taking one of them? 00:22:15.150 --> 00:22:17.166 Sure, so exactly as you said,  $00:22:17.170 \rightarrow 00:22:19.210$  every medicine has potential side effects.  $00:22:19.210 \rightarrow 00:22:21.238$  There's not one general side effect  $00:22:21.238 \rightarrow 00:22:23.749$  that all of these medications have.  $00:22:23.750 \rightarrow 00:22:26.012$  What I would say is that  $00:22:26.012 \rightarrow 00:22:27.143$  gastrointestinal side effects,  $00:22:27.150 \rightarrow 00:22:29.364$  so something like nausea or potentially  $00:22:29.364 \rightarrow 00:22:32.060$  vomiting are the most common side effects. 00:22:32.060 --> 00:22:34.706 Overall, if I had to pick one,  $00:22:34.710 \rightarrow 00:22:36.625$  these medications can have 00:22:36.625 --> 00:22:38.157 different side effects depending  $00:22:38.157 \longrightarrow 00:22:39.997$  on which one you're taking.  $00:22:40.000 \rightarrow 00:22:42.646$  They all work in the brain, NOTE Confidence: 0.930775821208954  $00:22:42.650 \longrightarrow 00:22:45.289$  so some of them can affect mood,  $00:22:45.290 \rightarrow 00:22:47.558$  so that's another potential side effect. 00:22:47.560 --> 00:22:49.080 Having increased or improved  $00:22:49.080 \rightarrow 00:22:50.600 \mod \text{ or potentially having}$ 00:22:50.600 --> 00:22:52.140 decreased or or sadder mood,  $00:22:52.140 \rightarrow 00:22:53.982$  so those are things that we  $00:22:53.982 \rightarrow 00:22:55.210$  monitor for very carefully.  $00:22:55.210 \rightarrow 00:22:56.740$  We also monitor things like

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00:22:56.740 \longrightarrow 00:22:57.964 blood pressure and pulse,
00:22:57.970 - 00:22:59.788 because some of them can affect
00:22:59.788 \rightarrow 00:23:01.350 those vital signs as well,
00:23:01.350 \longrightarrow 00:23:03.054 and the most important thing in
00:23:03.054 \rightarrow 00:23:05.859 all of this is that we want to keep
00:23:05.859 \rightarrow 00:23:07.464 our patients safe while helping
00:23:07.529 \rightarrow 00:23:09.629 them to get to a healthier weight.
00:23:09.630 \longrightarrow 00:23:10.250 So when
00:23:10.250 -> 00:23:12.698 you say we want to keep them safe,
00:23:12.700 \rightarrow 00:23:15.010 what do you mean? Are some of the
00:23:15.073 \rightarrow 00:23:17.617 side effects really problematic and harmful?
00:23:17.620 \rightarrow 00:23:18.547 Well, for example,
00:23:18.547 --> 00:23:20.710 if you have high blood pressure
00:23:20.710 \rightarrow 00:23:22.621 I wouldn't choose a medicine that could
00:23:22.621 \rightarrow 00:23:24.129 potentially increase your blood pressure.
00:23:24.130 \longrightarrow 00:23:25.708 I would make sure that your
00:23:25.708 --> 00:23:27.130 blood pressure is controlled and
00:23:27.130 - 00:23:28.406 choose a different medication.
00:23:28.410 \longrightarrow 00:23:30.307 While we were doing that and then
00:23:30.307 - 00:23:32.061 potentially add that one on once
00:23:32.061 \rightarrow 00:23:33.536 your blood pressure was controlled.
00:23:34.100 \rightarrow 00:23:36.280 So this all sounds really,
00:23:36.280 \rightarrow 00:23:38.160 really wonderful.
00:23:38.160 --> 00:23:40.510 It sounds like it's something
00:23:40.510 \longrightarrow 00:23:42.796 that we now should not have
00:23:42.800 \longrightarrow 00:23:45.385 2/3 of Americans suffering with
00:23:45.385 \longrightarrow 00:23:47.453 these conditions because for
00:23:47.453 \rightarrow 00:23:50.305 a long time we used to always
00:23:50.305 \rightarrow 00:23:52.810 say if only there was a pill.
00:23:52.810 \rightarrow 00:23:56.716 Well now it sounds like there there's a pill,
00:23:56.720 \rightarrow 00:23:59.330 so why don't people take it?
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00:23:59.330 \longrightarrow 00:24:00.200 So that's
00:24:00.200 \longrightarrow 00:24:01.484 a great question.
00:24:01.484 --> 00:24:04.990 I think again there's no magic pill.
00:24:04.990 --> 00:24:06.856 And if you think about these
00:24:06.856 --> 00:24:07.789 anti obesity medications,
00:24:07.790 \rightarrow 00:24:10.589 if the weight loss for each one on average,
00:24:10.590 --> 00:24:12.450 let's say is 5 to 10\%
00:24:12.450 \rightarrow 00:24:14.943 if you respond to it, which means that
00:24:14.943 \rightarrow 00:24:16.809 some people don't lose any weight.
00:24:16.810 \rightarrow 00:24:18.670 Some people lose 5 to 10\%
00:24:18.670 \rightarrow 00:24:20.230 of their total body weight,
00:24:20.230 \rightarrow 00:24:21.780 and some people lose more.
00:24:21.780 \longrightarrow 00:24:23.650 Some people can lose 20% of
00:24:23.650 \rightarrow 00:24:24.890 their total body weight.
00:24:24.890 --> 00:24:26.450 But again, with multiple medicines,
00:24:26.450 \longrightarrow 00:24:28.898 there's a few factors that kind of
00:24:28.898 \rightarrow 00:24:31.426 are a barrier to using these medications.
00:24:31.430 \rightarrow 00:24:34.220 One is that obesity medicine is a new field.
00:24:34.220 \rightarrow 00:24:36.596 None of us when we were going through
00:24:36.596 - 00:24:38.050 medical school learned about
00:24:38.050 \longrightarrow 00:24:40.745 obesity and how to treat it,
00:24:40.745 -> 00:24:42.470 these medicines weren't around.
00:24:42.470 --> 00:24:43.694 And so again,
00:24:43.694 \rightarrow 00:24:46.550 these are new and we're learning about
00:24:46.637 \rightarrow 00:24:49.304 them and how we can treat obesity.
00:24:49.310 \rightarrow 00:24:52.117 Another really big barrier
00:24:52.120 \rightarrow 00:24:53.676 besides education and understanding
00:24:53.676 \rightarrow 00:24:56.010 that there are ways of treating
00:24:56.072 \rightarrow 00:24:57.350 is insurance coverage.
00:24:57.350 \rightarrow 00:24:58.445 So for example,
00:24:58.445 --> 00:25:00.635 Medicaid and Medicare do not cover
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00:25:00.635 \rightarrow 00:25:03.376 any of these anti obesity medications.
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 $00:25:03.380 \longrightarrow 00:25:04.430$  The brand ones.

 $00:25:04.430 \longrightarrow 00:25:06.530$  So basically what we try and

 $00:25:06.530 \longrightarrow 00:25:09.039$  do is potentially use generics.

00:25:09.040 --> 00:25:09.754 But again,

 $00:25:09.754 \rightarrow 00:25:12.253$  Medicaid and Medicare do not cover these,

 $00:25:12.260 \longrightarrow 00:25:14.570$  and there aren't generics for all of

 $00:25:14.570 \rightarrow 00:25:16.919$  these in terms of private insurers,

 $00:25:16.920 \longrightarrow 00:25:18.705$  there's a percentage that do

00:25:18.705 -> 00:25:19.776 cover these medications,

 $00:25:19.780 \longrightarrow 00:25:22.636$  but there is a percentage that do not,

 $00:25:22.640 \longrightarrow 00:25:24.430$  and if they cover one,

 $00:25:24.430 \longrightarrow 00:25:26.220$  they may not cover others.

NOTE Confidence: 0.931647181510925

00:25:26.220 --> 00:25:27.294 So, for example,

 $00:25:27.294 \rightarrow 00:25:29.800$  if I give you medicine A and

 $00{:}25{:}29{.}800 \dashrightarrow 00{:}25{:}32{.}664$  you happen to not respond to that one,

 $00:25:32.670 \rightarrow 00:25:35.169$  they may not cover the other ones.

 $00:25:35.170 \longrightarrow 00:25:37.438$  So one of the big barriers is

00:25:37.438 --> 00:25:39.110 lack of insurance coverage,

 $00:25:39.110 \longrightarrow 00:25:41.616$  and I think that is a very,

 $00:25:41.620 \longrightarrow 00:25:42.688$  very significant barrier.

 $00{:}25{:}43.000 \dashrightarrow 00{:}25{:}46.050$  So when you see patients

 $00{:}25{:}46.050 \dashrightarrow 00{:}25{:}49.100$  who are overweight or obese,

00:25:49.100 --> 00:25:51.484 I mean, do you go straight to a

 $00{:}25{:}51{.}484 \dashrightarrow 00{:}25{:}53{.}778$  medication or is it that these are

 $00{:}25{:}53{.}778 \dashrightarrow 00{:}25{:}55{.}869$  really people who have tried to

 $00:25:55.869 \rightarrow 00:25:57.859$  lose weight in conventional ways?

 $00:25:57.860 \longrightarrow 00:25:58.871$  They've tried diet.

00:25:58.871 - 00:26:00.219 They have tried exercise.

 $00:26:00.220 \longrightarrow 00:26:02.236$  Or is it that

- $00:26:02.240 \rightarrow 00:26:04.599$  because on the on the other hand,
- 00:26:04.600 --> 00:26:06.290 you could think, well,
- 00:26:06.290 --> 00:26:08.306 I don't really need to workout,
- 00:26:08.310 --> 00:26:08.982 right?
- $00:26:08.982 \longrightarrow 00:26:12.020$  Watch what I eat and we've had
- $00:26:12.020 \longrightarrow 00:26:13.720$  nutritionists and dietitians
- $00:26:13.720 \longrightarrow 00:26:16.129$  on this show who talk about eating
- $00:26:16.129 \longrightarrow 00:26:17.749$  a healthy plant based diet.
- $00:26:17.750 \longrightarrow 00:26:19.342$  People could say,
- $00:26:19.342 \longrightarrow 00:26:20.536$  forget about that.
- 00:26:20.540 --> 00:26:22.652 I can eat chocolate cake and
- $00{:}26{:}22.652 \dashrightarrow 00{:}26{:}24.332$  pizza and
- $00:26:24.332 \longrightarrow 00:26:26.780$  I'll take my pill and I will still
- $00:26:26.853 \longrightarrow 00:26:29.223$  lose weight. How does that
- $00:26:29.223 \longrightarrow 00:26:31.247$  work that dichotomy between
- $00{:}26{:}31{.}247 \dashrightarrow 00{:}26{:}33{.}491$  what I'll call the conventional
- $00:26:33.491 \rightarrow 00:26:35.322$  standard way of losing weight,
- 00:26:35.322 --> 00:26:37.779 diet and exercise versus taking a pill.
- 00:26:37.780 --> 00:26:40.244 I mean can you take a pill
- $00:26:40.244 \longrightarrow 00:26:41.300$  without worrying about
- $00:26:41.300 \longrightarrow 00:26:42.356$  the other part?
- $00:26:42.356 \rightarrow 00:26:44.820$  It's a very complicated question.
- $00{:}26{:}44.820 \dashrightarrow 00{:}26{:}47.375$  I would say that the majority of
- $00{:}26{:}47.375 \dashrightarrow 00{:}26{:}50.149$  patients who come to see me have worked
- $00:26:50.150 \longrightarrow 00:26:51.962$  really hard to try to
- $00{:}26{:}51{.}962 \dashrightarrow 00{:}26{:}54{.}005$  lose weight or even maintain their
- $00:26:54.005 \rightarrow 00:26:56.315$  weight and not gain anymore weight.
- $00:26:56.320 \longrightarrow 00:26:58.342$  I don't think I've seen any
- $00:26:58.342 \rightarrow 00:27:00.439$  patient who has really not tried.
- $00:27:00.440 \longrightarrow 00:27:01.812$  And again,
- 00:27:01.812 --> 00:27:03.527 I specialize in obesity medicine,

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00:27:03.530 \longrightarrow 00:27:05.924 so by the time they see me,
00:27:05.930 \rightarrow 00:27:07.302 they've really tried everything.
00:27:07.302 \rightarrow 00:27:08.612 These medicines,
00:27:08.612 \rightarrow 00:27:11.100 the way that we think that they work
00:27:11.176 \rightarrow 00:27:13.815 is they help to change your physiology.
00:27:13.820 --> 00:27:14.840 So, for example,
00:27:14.840 \rightarrow 00:27:17.220 you may not have the same craving
00:27:17.295 --> 00:27:19.855 for sugar or for potato chips or ice
00:27:19.855 --> 00:27:22.336 cream that you may have had before
00:27:22.336 \rightarrow 00:27:24.453 and we don't understand that yet.
NOTE Confidence: 0.935168862342834
00:27:24.453 \rightarrow 00:27:26.511 But they may potentially help in
00{:}27{:}26.511 \dashrightarrow 00{:}27{:}28.158 changing your physiology so you
00:27:28.158 \rightarrow 00:27:29.543 can make the healthier choices
00:27:29.543 \rightarrow 00:27:31.491 that were so difficult
00:27:31.491 \rightarrow 00:27:33.256 to make in the beginning,
00:27:33.260 --> 00:27:34.181 but to sustain,
00:27:34.181 \longrightarrow 00:27:36.772 and so really what we think is that
00:27:36.772 \rightarrow 00:27:39.010 these medicines are helping to change
00:27:39.010 \rightarrow 00:27:41.325 the set point of where your body
00:27:41.325 \rightarrow 00:27:43.922 wants to be in terms of its fat mass.
00:27:43.922 --> 00:27:44.226 Now,
00:27:44.226 --> 00:27:46.504 if you're doing a diet and exercise
00:27:46.504 --> 00:27:48.778 or I call it micro environment
00:27:48.778 --> 00:27:51.092 change because I don't want to put
00:27:51.092 \rightarrow 00:27:53.084 any of the blame on the patient,
00:27:53.084 \rightarrow 00:27:54.380 it's not their fault.
00:27:54.380 --> 00:27:56.030 But if you're changing things
00:27:56.030 \rightarrow 00:27:57.350 in your micro environment.
00:27:57.350 \rightarrow 00:27:59.486 Again, are you changing your Physiology?
00:27:59.490 \rightarrow 00:28:01.975 So if you're changing what you're eating,
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 $00:28:01.980 \rightarrow 00:28:04.828$  so say you start eating all whole foods,  $00:28:04.830 \longrightarrow 00:28:05.895$  lots of vegetables, 00:28:05.895 --> 00:28:07.670 cutting out highly processed foods,  $00:28:07.670 \longrightarrow 00:28:09.644$  cutting out any foods that have  $00:28:09.644 \rightarrow 00:28:11.590$  ingredients that you can't pronounce,  $00:28:11.590 \rightarrow 00:28:13.485$  then are you changing your 00:28:13.485 --> 00:28:15.380 Physiology and will it long-term  $00:28:15.452 \rightarrow 00:28:17.636$  be easier for you to sustain that?  $00:28:17.640 \rightarrow 00:28:20.488$  We don't know the answer to that yet.  $00:28:20.490 \rightarrow 00:28:22.961$  What we do know is that potentially  $00:28:22.961 \rightarrow 00:28:24.756$  these medicines change your Physiology  $00:28:24.756 \rightarrow 00:28:27.436$  and maybe you can sustain some of those  $00:28:27.499 \rightarrow 00:28:29.509$  changes that you couldn't before. 00:28:29.510 --> 00:28:31.220 In terms of physical activity,  $00:28:31.220 \rightarrow 00:28:33.188$  there are so many benefits for 00:28:33.188 --> 00:28:34.980 physical activity for cancer,  $00:28:34.980 \rightarrow 00:28:36.348$  that is something that, 00:28:36.348 --> 00:28:37.716 in terms of prevention,  $00:28:37.720 \longrightarrow 00:28:39.430$  has really been looked at.  $00:28:39.430 \longrightarrow 00:28:41.663$  An an is still being looked at 00:28:41.663 --> 00:28:43.190 and potentially very helpful,  $00:28:43.190 \longrightarrow 00:28:45.242$  but in terms of physical activity  $00:28:45.242 \rightarrow 00:28:46.610$  as patients lose weight,  $00:28:46.610 \longrightarrow 00:28:49.004$  they tend to be able to be  $00:28:49.004 \rightarrow 00:28:50.030$  more physically active. 00:28:50.030 --> 00:28:51.398 They're more comfortable and  $00:28:51.398 \rightarrow 00:28:53.108$  they're able to do more. 00:28:53.110 --> 00:28:54.094 So in essence,  $00:28:54.094 \rightarrow 00:28:56.062$  I think that using these medications  $00:28:56.062 \rightarrow 00:28:57.859$  can help our patients make  $00:28:57.859 \rightarrow 00:28:59.614$  these changes that we've been

$00:28:59.620 \longrightarrow 00:29:01.560$ working with them on long-term.
00:29:01.560> 00:29:03.936 Dr. Ania Jastreboff is an
00:29:03.936> 00:29:05.520 assistant professor of Medicine
$00{:}29{:}05{.}580 \dashrightarrow 00{:}29{:}07{.}068$ in endocrinology and metabolism
00:29:07.068> 00:29:09.300 at the Yale School of Medicine.
$00:29:09.300 \longrightarrow 00:29:10.852$ If you have questions,
00:29:10.852> 00:29:12.404 the address is canceranswers@yale.edu
$00{:}29{:}12.404 \dashrightarrow 00{:}29{:}14.547$ and past editions of the program
00:29:14.547> 00:29:16.503 are available in audio and written
$00{:}29{:}16.566 \dashrightarrow 00{:}29{:}18.198$ form at Yale cancercenter.org.
00:29:18.200> 00:29:21.040 We hope you'll join us next week to
00:29:21.040> 00:29:23.811 learn more about the fight against
00:29:23.811> 00:29:26.775 cancer here on Connecticut Public Radio.