Breast Cancer- The Link To Insulin Resistance by Ivor Cummins

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Ivor Cummins (00:00) Hello and welcome to another Fat Emperor Podcast Short. And today we're gonna touch on the topic of cancer and risks for cancer. We all know that nutrition and lifestyle is pretty intimately connected to cancer risk in your environment. But I've a few interesting papers today to go a little deeper look at what some of the primary factors might be.

So I'm going to start off with this list of modern chronic diseases that you see here. But an interesting thing is that many of them are connected together, or at least the risk is associated with the iceberg that lies under the surface and the modern population. And this is hyperinsulinemia insulin resistance. So there are many causes for modern chronic disease, but insulin resistance on hyperinsulinemic stage are a very big part of the problem, not the whole problem. So we're going to look and we're going to see that we're all on the spectrum of insulin resistance and hyperinsulinemia.

Ivor Cummins (01:03) And on the very left you see there, we've got very insulin resistant people indeed. And they do not have to be overweight. They can be thin outside, fat inside with high insulin and glucose levels. And are just as much risk pretty much as someone who is very overweight who is insulin resistant.

So we go on now to talk a little about breast cancer risk and cancer in general. And this recent paper, 2015 was particularly interesting at the results that they got, and they looked at breast cancer risk and metabolically healthy but overweight postmenopausal women. And the team acknowledged that other positively or overweightness or obesity is an established risk factor for breast cancer and this would not be disputed by anyone really. And they also noted that recent data suggest that high insulin levels and insulin resistance are also quite intimately connected. So they wanted to test apparent obesity as a risk factor versus the high insulin that often goes with being obese.

02:07) And they also referred to the mechanisms by which insulin can connect to cancer risk across several cancers. And these are mitogenic or anti-apoptotic activity. And essentially this is either the promotion of cell growth or the discouragement of cell death when it's appropriate. So myself and Doctor Gerber do talk about the mechanisms relating to insulin cancer in a chapter in our book, *Eat Rich, Live Long*. But here we won't go into detail on those.

So we'd go on to the findings of the team. So we would expect that normal weight women versus very overweight or obese women that essentially the overweight or obese women would have a higher risk multiplier for breast cancer. So we can see here this person having double the risk, a two times multiplier on this graph and that would be the expected kind of result. But this team did much better than the usual looking at the correlation between obesity and breast cancer.

(03:16) What this team did was they split people out between normal weight and overweight or obese, but also they measured their fasting insulin and there are Homa Insulin Index using insulin and glucose and they separated them out by insulin resistance starters also. And by doing that, they found quite dramatic result because what they saw was that the insulin sensitive overweight people actually had the same or if anything, lower risk than insulin sensitive slim women. So there was no increase of risk with the obesity whatsoever.

They found that the insulin resistant overweight or obese women certainly had a two times multiplier for breast cancer risk in the study data. But the most interesting thing of all that they found in common to dawn was that the insulin resistant normal weight women had the same or even higher, you know, doubling of risk as the obese or overweight women.

(04:19) So basically in summary, they found that the connection between obesity and increased breast cancer link is almost all connected or due to higher insulin or being in that insulin resistance stage. So essentially it's not really the obesity at all. And of course this would be very useful if every a

woman knew this, that by monitoring insulin and glucose blood levels and by lowering your insulin, you know that you are more directly attacking what links to risk than just focusing on obesity.

So very interesting information and we see this also with GGT, the liver enzyme and risk for diabetes that once you correct for the GGT level at the blood level, then obesity no longer really links to type two diabetes. It's the GGT that matters on metabolic disturbance of insulin resistance. So we see it elsewhere also.

Now we look at one more study from way back 1993, migration patterns and breast cancer risk in Asian American women. And this team observed that breast cancer incidence rates have historically been four to seven times higher in the United States than in China or Japan.

(05:39) And the reasons they say remain elusive and I guess they still are elusive. So they looked in to see could they verify this and what they found was that when the people from China and Japan migrate to the U.S., that within a few generations, their risk goals from being five to seven times lower to actually reaching roughly what the people in America have. So there's some huge environmental factor going on.

In deeper analysis, they found that in total there was a six times greater risk for certain people, mainly based on how long they'd been in the States and how many generations had passed while they're were in the States and also urban versus rural kind of environments. But essentially that's a really massive risk multiplier. And their conclusions were that the exposure to western lifestyles and certain factors unknown really have a huge impact on the risk for breast cancer from these Asian women who move over to the States, but they didn't actually get to what the factors were.

(06:50) One more study from 1992 that did look closer at insulin resistance and breast cancer risk and this one looked at levels of C-peptide in the blood. And C-peptide is like measuring insulin but it's actually nearly a better measurement of insulin resistance on high end slum because it has a longer half life. It's released with the insulin from the pancreas. So they've called those at the start of the study, the team, that lifestyle has a major influence on the incidence of breast cancer, which again we would all accept. But they compared people with breast cancer versus without and they looked specifically as I mentioned at C-peptide and what they saw was independent of Bmi or body mass or obesity or weight to height ratio. There was a linear relationship, higher C-peptide, higher risk for breast cancer associated in the study. And in fact the upper 20% of C-peptide people, they have nearly three times the risk relatively of breast cancer than the lowest 20% of C-peptide.

(07:57) So again, this is a three times multiplier of risk, much, much bigger than for instance the risk for cancer from red meat, which is only a 1.1 times risk. But everyone knows about that one. But people perhaps don't realize that this one is much, much bigger.

The last study we'll do is bringing things up to the recent times, 2015 in Malaysia, and his team again looked at breast cancer cases versus controls. Pretty small numbers of people, though. And what they observed or they captured in the abstract was that breast cancer, particularly and many other cancers are rising quite fast in the East, you know, to catch up with the West.

So they looked in specifically at insulin and Homa IR, a great measure of insulin resistance to see what might the hazards be. And what they found was essentially a kind of bizarrely high 12 times odds ratio or risk multiplier for cancer in general if you are high in insulin resistance. And they found a three times multiplier if you had obesity or overweightness.

(09:12) But the insulin measures dominated again, like in the earlier studies we showed concluded that higher insulin levels is intimately linked to higher levels of cancer and requires more research and I'd certainly agree with them.

We finish up now at our slide we started with, and we have all these modern diseases and today we just took a quick look at cancer and particularly breast cancer. But the important messages that insulin

resistance hyperinsulinemia is not only very dramatically connected to cardiovascular disease and it's one of the primary causal chains involved in heart disease risk and heart attacks. But it also links to many other things including cancers. And while it is argued as to what diet may be best to avoid cancer and chronic disease, I think it's very safe to say that for avoiding cancer risk and general disease risk, it is a very good idea to keep an eye on your insulin and blood glucose levels and strive to lower them into the lowest 20% of the population where most of the healthier people will reside. And that would be a very good strategy.

(10:26) I'll also mention in closing that for cardiovascular disease specifically, but also for risk of all cause mortality, that the calcification scan of the heart is one of the best measures by far to actually find middle aged, middle risk people and pull out the ones who are at greatest risk, certainly of heart disease, but also have general chronic disease in the future. And then that will allow us to find the people who are at the greatest risk and we can take action, they can take action to save their own lives and greatly reduce our risk. So that's the CT scan of the heart, only $150, perhaps in the States, five minute scan. And it gives you a huge amount of information and will avert a lot of tragedies on early heart attacks if it was used more widely, which is what we intend to happen.

So thanks for listening and we'll catch you next time. Thanks for tuning in guys. If you're watching on Youtube, you can see my subscribe button in the middle of the screen, a free viewing of the Widowmaker movie on the far right, and myself and Doctor Gerber's book, *Eat Rich, Live Long* on the left. Otherwise, please do subscribe to the audio podcast.