

## April 2012 Newsletter



Dr. Hassell speaking on the subject of Breast Cancer and Insulin Resistance on April 4<sup>th</sup> for the Breast Cancer Journal Club.

### Insulin resistance and cancer

There are many areas of lifestyle choices which contribute to cancer risk, but the one area we are going to concentrate on here is a syndrome called *insulin resistance*.

Insulin is a hormone produced by the pancreas, and its main job is to encourage cells in the liver, muscle, and fat tissue to take up glucose (the main fuel that allows our body to operate) from the blood. "Insulin resistance" describes a condition whereby our metabolism requires more insulin than normal, and sometimes exceeding the insulin our pancreas can produce.

Insulin resistance is especially likely to develop in people who are too heavy, whose diets include too much carbohydrate (like bread, potatoes, rice, sweets, juices, and so on), and whose lives have too little physical activity. As insulin resistance worsens, blood sugars will tend to rise until there is eventually a diagnosis of type 2 diabetes.

The link between insulin levels and cancer has been examined a number of ways. In a large Danish study with almost 54,000 patients, overweight women with breast cancer were at a much higher risk of developing distant metastases or dying of their cancer.<sup>1</sup> Other studies have shown that those with higher blood sugar levels, higher blood insulin levels, or type 2 diabetes have higher cancer recurrence and risk of death.<sup>2 3 4</sup>

<sup>1</sup> Ewertz, M. et al. J Clin Oncol 2011;29:25-31

<sup>2</sup> Irwin, M. et al. J Clin Oncol 2010;29:47-53

### Warning signs to look for

Some of the common risk factors that can warn us of insulin resistance (also known as metabolic syndrome) include any combination of high blood pressure, low HDL cholesterol, high triglycerides, excessive weight around the middle, and above-normal blood sugars. "Ah," you say, "but I thought those were risk factors for heart disease, stroke and diabetes. What do they have to do with cancer?" Well, a lot, in fact. Those same heart disease risk factors suggest an increased cancer risk – or if you have cancer, will make it harder to treat successfully and more likely to spread.

Because excess weight increases the risk of insulin resistance, it's not surprising that it also increases the risk of many cancers, including postmenopausal breast cancer, prostate, colon, pancreatic, and kidney cancer. If that isn't bad enough, it also increases the likelihood of cancer recurrence, metastases, and death – probably partly through the elevation of insulin levels.

### Check your risk level

If you are concerned about cancer (and who isn't?), this questionnaire can help you identify your probability of insulin resistance. The more boxes you check, the greater your risk.

- Do you get less than 30 minutes or so of daily exercise?
- Is your waistline greater than 35 inches if you're a woman or 40 inches if you're a man?
- Is your blood pressure greater than 135/85, or are you being treated for high blood pressure?
- Are your fasting triglycerides above 150?
- Is your HDL (good cholesterol) below 50 if you're a woman or 40 if you're a man?
- Is your fasting blood sugar above 100, or are you being treated for high blood sugar?

(Read on for ideas on how to reduce your risk.)

<sup>3</sup> Parekh, N. et al. Cancer Causes Control. 2010;21:631-42

<sup>4</sup> Currie, C. et al. Diab Care 2012;35:299-304

## Resist insulin resistance and cancer

Most of us are probably willing to do whatever it takes to avoid cancer – or improve our outcomes if we already have cancer. However, it's not always clear as to the best choices we can make to improve our odds. What should we do (or not do) or eat (or not eat)? Here are some steps to reduce your risk.

### Steps to reduce your risk

- **Exercise daily.**<sup>5</sup> Set a goal of 30 minutes or more of daily exercise. Fresh air and natural light are also beneficial, so a brisk thirty-minute walk is a great idea. If your job requires a lot of sitting, make a point of moving around frequently.
- **Eat Mediterranean.**<sup>6</sup> The Mediterranean diet is associated with 40-60% less cancer. Choose food mainly from plant sources, with an emphasis on vegetables. Include healthy fats such as extra-virgin olive oil, raw nuts, seeds (sesame, sunflower, flax, and pumpkin seeds), avocado, and eggs. Eat oil-rich fish like salmon, tuna, and sardines a few times a week, or consider taking a fish or cod liver oil supplement. Include moderate amounts of poultry and red meat, and a small amount (no more than 5 ounces) of wine up to once a day.
- **Eat your pound of vegetables!**<sup>5</sup> Evidence supports at least one pound, cooked and raw, each day. Eat as wide a variety as you can – and whole, not juiced! Emphasize dark greens and anything in the cabbage family - like broccoli, kale, and bok choy – as well as onions, garlic, and mushrooms.
- **Go easy on the red meat.** The American Institute for Cancer Research suggests limiting red meat to less than 18 ounces per week.<sup>5</sup> The bright side of this recommendation is that you'll have more room on your plate for cancer-fighting vegetables. Lamb and grass fed meat is probably superior; wild things like venison and elk are probably better due to the type of fat they contain.
- **Eat beans and legumes most days.**<sup>7</sup> This includes lentils, split peas, and beans of all kinds (black, pinto, navy, white, red, soy, etc). As for soybean products, stick to traditional soy foods like edamame (fresh soybeans) and tofu.

- **Favor cultured dairy.** The evidence favors cultured dairy foods such as aged cheese and probiotic-rich *plain* yogurt and kefir (sweeten them with fresh fruit and honey) which contain live microorganisms that provide a health benefit.

#### ... but avoid these!

- **Sweet things** like desserts, juices (even pure fruit juices), and *all* sweet drinks, whether sweetened with real sugar or sugar substitutes.
- **Concentrated carbohydrates** like bread, ready-to-eat breakfast cereals, crackers, chips, pasta, potatoes, and corn.
- **Preserved (processed) meats**, such as lunchmeats, bacon, ham, hot dogs, and cured sausages. (Fresh uncured sausage meat is fine.)
- **Eating out!** Prepare most of your own food in your own kitchen, and pack your own lunch and snacks.

## New office hours! Closed Fridays

This month we are introducing new office hours, and will be closed on Fridays. Normal office hours are generally 9am to 4:30pm Monday – Thursday, and we are closed for lunch from noon to 1 pm. For urgent matters, Dr. Hassell can be paged at any time by calling our office.

## Speaking Events

**4/10/2012 – Grand Rounds:** Integrative Medicine: Providence St. Vincent Medical Center, Portland, Oregon. *Physician audience only.*

**4/27/2012 – How a Greek Grandmother Would Solve the Health Care Crisis: Which Diet and Lifestyle Choices Really Matter?** Providence Benedictine Hospitality Center, Mt. Angel, Oregon. *The lecture is free and open to all. RSVP to 503.845.6773.*

**5/1/2012 – Next Steps Against Cancer: Nutrition, Exercise and Natural Medicine to Reduce Risk, Enhance Survival, and Improve Quality of Life:** Providence St. Vincent Medical Center, Portland, Oregon. *The lecture is free and open to all. RSVP to 503.574.6595.*

**5/15/2012 – How a Greek Grandmother Would Solve the Health Care Crisis: Which Diet and Lifestyle Choices Really Matter?** Clackamas County Employee Services, Oregon City, Oregon. *For Clackamas County employees only.*

*“Prove all things; hold fast that which is good.”*

*1 Thessalonians. 5:21 (KJV)*

<sup>5</sup> AICR 2007

<sup>6</sup> Sofi, F. et al. Am J Clin Nutr 2010;92:1189-96

<sup>7</sup> Manios, Y. et al. Forum Nutr 2006;59:154-70