Cancer Awareness – Types of Estrogen

I believe most women have heard about the female hormone, ***estrogen***, but what most women do not know is that your body has more than one type of estrogen. Then there are also estrogen metabolites, or the way the body uses and breaks down estrogen. Knowing the different types of estrogen and the key players in cancer brings awareness to women that not all estrogens are bad and estrogen is actually very important for brain, heart, and bone health especially as we age.

The types of estrogen and the estrogen metabolites become extremely important when someone is worried about their risks of female cancers such as breast, ovarian, or uterine. And yes, I purposefully left out cervical cancer, because the most common cause of cervical cancer is from the HPV or human papilloma virus. We will save that discussion for another day.

Every female has 3 types of estrogen: estrone (E1), estradiol (E2), and estriol (E3) and each plays a different role in the female body. Estradiol (E2) is the most abundant during the reproductive years, is produced by the ovaries, and is responsible for building the uterine lining. Estradiol is considered the “purest” or best of the three estrogens, and it is believed it delivers the messages to the cell receptors in the body. Estradiol plays important roles in bone, brain, digestive, and heart health.

Estriol (E3) is the “gentler” estrogen, and it is believed to send out the anti-cancer signals; estriol is predominantly high during pregnancy. Estriol has anti-inflammatory properties and often women with autoimmune disorders have periods of remission during pregnancy due to the dominance of estriol.

Then there is the other ugly sister, Estrone (E1). Estrone is believed to have the nastier side and is a pro cancer forming estrogen. Estrone is present throughout life, but after menopause, estrone is more dominant. Estrone is known to be protective for the heart and brain as well so even if it’s considered one of the bad sisters of the three, we still need it in the right balance.

It is important for you to know your estrogen levels if you are examining your risks of female cancers. If you are currently taking any kind of hormones such as birth control pills or other methods, bioidentical, or replacement hormones of any kind, these will affect your lab values. For a true basline evaluation, you would most likely have to have labs drawn after you stop taking these for several weeks to months. Estrogen levels can be examined in bloodwork or saliva testing and estrogen metabolites are often examined in the urine.

Estrogens are important for health throughout the lifespan in women and even in men. Men have a little bit of estrogen just as women have a little bit of testosterone. Again, balance is the key to staying healthy. Estrogen is a wonderful hormone necessary for brain, gut, and heart health. The key is having the right balance. Talk to your healthcare provider about finding the right balance for you.