

ESTROGEN METABOLISM:

- Refers to method by which the body breaks down liver and excretes estrogen bile
- Estrogen metabolism is different for all women
- Women with a history of endometriosis, uterine fibroids and heavy periods have difficulty with estrogen metabolism
- Estrogen metabolism depends on 3 factors: genetics, environment, diet and lifestyle.

There are 2 major pathways of estrogen metabolism and 1 minor pathway:

2 Hydroxy Estrone (2 OH Estrone) is:

good estrogen
does not stimulate cell growth
blocks action of stronger estrogen
decreased in obese woman

16 Hydroxyestrone (16 OH Estrone)

has significantly stronger estrogenic activity
studies show that it may be associated with breast cancer

4 Hydroxyestrone (4 OH Estrone)

may directly damage DNA
may lead to mutations
equine estrogens such as premarin increase metabolism into 4 OH estrone

Methods to Raise 2 OH Estrone:

- Moderate exercise
- Cruciferous veggies that are rich in phytochemicals: broccoli, brussel sprouts, kale, collard greens, cauliflower & watercress, turnips, horseradish, cilantro
- Soy incorporated into the diet: soymilk, edamame, tofu, non GMO and organic only
- Omega 3's: both fish and flax with lignans
- Vitamins B6, B12 and folate
- Indole 3 Carbinol 200-400 mg which metabolizes into DIM (di indole Methane) which revs up detoxification