



**MammAlive™**

HEALTHY BREAST SOLUTIONS

**MammAlive™ Foundation presents**

## **How to Reduce Breast Density to Decrease Breast Cancer Risk**

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Increased breast density, as detected through mammography, is a strong known risk factor for breast cancer.<sup>i</sup> Breast tissue is composed of fat, epithelial and stromal tissue. Fat is radiolucent and appears dark on a mammogram, while epithelium and stroma are radiodense and appear light. When more epithelial and stromal tissue is present, breast density is greater.<sup>ii</sup>

The risk of breast cancer is four to five times greater in women who have increased density in more than 75% of their breast tissue, than in women with little or no density in the breast. One third of all breast cancers are found in women who have increased breast density in over 50% of their breast tissue.<sup>iii</sup>

Women can be primed to have increased breast density because of genetic factors, exposure to higher estrogen levels in utero, dietary and lifestyle habits, menstrual and reproductive factors, and hormonal signatures. Breast tissue develops primarily during puberty and is altered during pregnancy, breastfeeding and menopause.<sup>iv v vi</sup>

Breast density can be decreased with dietary, nutritional and lifestyle interventions, thus potentially lessening the global burden of breast cancer. In my naturopathic practice I regularly see a decrease in breast density as measured using mammograms or MRIs when women follow some or all of the guidelines listed below.

### **Causes of Increased Breast Density**

There are genetic, neonatal, reproductive, hormonal, lifestyle, dietary and nutritional factors that can increase breast density.

#### **Genetic Factors that Increase Breast Density**

- breast density is highly heritable, with inherited factors accounting for 63% of cases<sup>vii</sup>

#### **Neonatal Factors that Increase Breast Density Later in Life**

- higher birth weight (>4000 grams or 8 lb, 13 oz ) is correlated with premenopausal breast cancer, in comparison to lower birth weight (<2500 grams or 5 lb, 8 oz)<sup>viii</sup>

#### **Hormonal Factors that Increase Breast Density**

- increased estradiol<sup>ix x</sup>, estrone<sup>xi</sup>, IGF-1<sup>xii xiii</sup>, prolactin<sup>xiv</sup>
- use of hormone replacement therapy<sup>xv xvi</sup>
- increased weight gain in adulthood<sup>xvii</sup>

#### **Menstrual and Reproductive Factors that Increase Breast Density**

- earlier age at onset of menstruation (<11 yrs old)<sup>xviii</sup>
- shorter menstrual cycle length (< 25 days)
- later age at menopause (>53 years)
- premenopausal women have increased density compared to postmenopausal women<sup>xix</sup>

#### **Dietary Factors that Increase Breast Density**

- increased red meat consumption, particularly in adolescence<sup>xx</sup>

- alcohol consumption<sup>xxi xxii</sup>
- saturated fats (meat, butter, ice cream)<sup>xxiii</sup>
- high glycemic load, from simple sugars and refined carbohydrates<sup>xxiv</sup>

**Ways to Reduce Breast Density:**

**Menstrual and Reproductive Factors that Decrease Breast Density and Cancer Risk**

- have a child before age 24<sup>xxv</sup>
- have three or more children<sup>xxvi xxvii xxviii</sup>

**Dietary Recommendations that May Decrease Breast Density:**

**What to Decrease or Avoid in Your Diet:**

- Decrease or eliminate red meat, transition towards a plant-based diet
- Decrease saturated fat (meat, butter, ice cream, fatty cheese)
- Decrease sugar, refined carbohydrates and high glycemic carbohydrates
- Avoid alcohol or limit to less than 3 alcoholic beverages per week
- Eliminate caffeine

**Consume Daily:**

- increase fiber to 45 mg/day<sup>xxix</sup> - use chia, flax, legumes, psyllium, rice bran, wheat bran if tolerated
- use 2 or more Tbsp freshly ground flaxseed<sup>xxx</sup>
- eat 1-2 cups of legumes<sup>xxxi</sup> daily (bean soup, bean dip, bean and grain casserole)
- eat 6 servings of vegetables daily (2 cups salad, 2 cups steamed vegetables)
- eat vegetables containing carotenoids<sup>xxxii</sup> (carrots, squash, sweet potato)
- eat 2 Tbsp or 3000 mg of linolenic acid from flax and/or fish oil<sup>xxxiii xxxiv</sup>. Pour flaxseed oil over rice, pasta, baked potato; add to salad dressing, use in smoothies. Never heat it. Keep refrigerated.
- use 1 Tbsp olive oil<sup>xxxv</sup> daily in salad dressing
- use ½ cup organic tofu or 1 glass soymilk<sup>xxxvi</sup> daily, or both. Avoid if allergic.
- drink green tea<sup>xxxvii</sup> or take a green tea supplement

**Nutritional Factors that May Decrease Breast Density**

- vitamin D >1750 IU/day<sup>xxxviii xxxix</sup> - we recommend 3000 IU or more
- calcium >700 mg/day<sup>xl</sup> - we recommend it be taken with magnesium glycinate

**Other Nutritional Supplements that May Help to Prevent Breast Cancer**

- |                                                 |                                  |
|-------------------------------------------------|----------------------------------|
| • inositol and alpha lipoic acid <sup>xli</sup> | • B complex <sup>li</sup>        |
| • curcumin <sup>xlii</sup>                      | • magnesium <sup>lii</sup>       |
| • rosemary <sup>xliii xliv xlv</sup>            | • kelp <sup>liii</sup>           |
| • N-acetyl cysteine <sup>xlvi</sup>             | • indole-3-carbinol              |
| • Coenzyme Q10 <sup>xlvii</sup>                 | • tocotrienols <sup>liv lv</sup> |
| • Green tea extract                             |                                  |
| • Grape seed extract <sup>xlviii xlix l</sup>   |                                  |

**Lifestyle Factors that May Help to Prevent Breast Cancer:**

- Exercise 40 minutes a day
- Avoid weight gain during adulthood and after menopause
- Avoid hormone replacement therapy
- Avoid plastics containing bisphenol-A and phthalates, especially during pregnancy
- Use organically grown food as often as possible

For more information and guidance on breast cancer prevention and/or recovery, see [www.mammalive.net](http://www.mammalive.net). Sign up for our Healthy Breast Foundations program online or in person, or receive guidance from our Healthy Breast Educators and Practitioners. Call 519 372-9212 for more information.

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