

## The Hormone Puzzle

<i>Increase Risk of Breast Cancer</i>	<i>Protection Strategy</i>
<b>ESTROGEN</b>	
<p><b>Excessive Strong Estrogens</b> (Estradiol E1 and Estrone E2) due to:</p> <ul style="list-style-type: none"> <li>Lack of exercise</li> <li>High intake of meat</li> <li>High fat diet</li> <li>Obesity</li> <li>Constipation</li> <li>Early puberty, late menopause</li> <li>Birth control pill, hormone replacement therapy</li> <li>Light at night</li> </ul>	<p><b>Increase Estriol E3</b> (Weak estrogen) with:</p> <ul style="list-style-type: none"> <li>Cabbage, brassica family foods</li> <li>Indole-3-carbinol or DIM</li> <li>Sea vegetables</li> <li>Iodine</li> </ul> <p><b>Decrease Estradiol E1 and Estrone E2</b> by:</p> <ul style="list-style-type: none"> <li>Daily exercise</li> <li>Vegetarian, low fat diet</li> <li>Improve liver detoxification &amp; elimination</li> <li>Stall puberty</li> <li>Sleep in a dark room</li> </ul>
<p><b>Increased C4 and C16 Estrogens</b> linked to:</p> <ul style="list-style-type: none"> <li>Xenoestrogens, pesticides, especially lindane</li> <li>Dioxin, car exhaust, paint fumes</li> <li>Phenols, formaldehyde</li> <li>Mercury, lead, arsenic, thallium, tin</li> <li>Pharmaceutical drugs</li> <li>Intestinal toxins and harmful bacteria</li> <li>Sugar, a high fat diet, fried or rancid fats</li> <li>Inadequate protein</li> </ul>	<p><b>Make more C2 Estrogen, Less C4 and C16; Inactivate C4 Estrogen</b> with:</p> <ol style="list-style-type: none"> <li>1. <b>Promote formation of C2 estrogens:</b> <ul style="list-style-type: none"> <li>eat brassicas (cabbage, broccoli, Brussels sprouts, kale, cauliflower), indole-3-carbinol or DIM</li> <li>rosemary</li> <li>schizandra</li> <li>St. John's wort</li> </ul> </li> <li>2. <b>Assist Liver Detoxification:</b> <ul style="list-style-type: none"> <li>Amino Acids – methionine, cysteine, taurine</li> <li>MSM</li> <li>betaine</li> <li>Vitamins B6, B12, B2, folic acid, choline</li> <li>Minerals – magnesium, selenium, zinc</li> <li>Calcium-D-glucarate</li> <li>Milk thistle, curcumin, ellagic acid</li> </ul> </li> </ol>
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	<p>3. <b>Dietary</b> – low fat diet, EPA (fish oil), ground flax seeds, increased fibre, wheat bran, psyllium, probiotics, red clover, phytoestrogens - 8 to 10 servings of vegetables; 2 servings of fruit; 1 serving of complex carbohydrates (that means whole grains like brown rice, millet, quinoa, oats and whole wheat flours like spelt and kamut); 1 serving of protein (preferably nut and vegetable protein)</p> <p>4. <b>Normalize progesterone</b></p>
<p><b>Increased Production of Strong Estrogens</b> (Estradiol and Estrone) due to: Aromatase enzyme</p>	<p><b>Inhibit Aromatase</b> with: Chrysin (strong) Ground flaxseed (moderate) Genistein (soy) (weak) Zinc</p>
<p><b>Decreased SHBG</b> (Sex Hormone Binding Globulin) due to: High cortisol High insulin High IGF-1 High testosterone Low thyroid</p>	<p><b>Increase SHBG</b> with: Fiber Ground flaxseeds Red clover sprouts Low fat vegetarian diet Improve thyroid function Normalize cortisol, insulin, IGF-1, testosterone</p>
<p><b>Increased Number of Estrogen Receptors</b> due to: Pesticides Xenoestrogens Hormone replacement therapy High Body Mass index</p>	<p><b>Decrease Number of Estrogen Receptors</b> with: Melatonin</p>
<p><b>Xenoestrogens Attach to Estrogen Receptors</b> such as: Pesticides, PCBs, dioxin, PVC, phthalates, Bisphenol A, brominated fire retardants, cadmium, mercury, lead</p>	<p><b>Block Estrogen Receptors</b> with: Phytoestrogens: flax, soy, red clover, mung bean sprouts, pumpkin seeds Indole-3-carbinol or DIM Quercetin</p>

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<b>PROGESTERONE</b>	
<b>Decreased Progesterone</b> due to: Phthalates PCBs Herbicides Hexachlorobenzene High cortisol levels High insulin levels Excess refined sugars and carbohydrates Nutritional deficiencies	<b>Increase Progesterone</b> with: Vitamins B6 and E; selenium, zinc, boron Chaste tree berry, stoneseed Soy, ground flaxseed Improve liver, bowel and adrenal function Adequate melatonin levels Normalize insulin, avoid sugar Normalize thyroid, use zinc, seaweed, selenium to increase T3
<b>PROLACTIN</b>	
<b>High Prolactin</b> due to: Estrogen dominance Underactive thyroid Stress Suckling Sexual intercourse Medications	<b>Normalize Prolactin</b> with: Normalize low progesterone Normalize low thyroid Improve detoxification and elimination of estrogen Increase melatonin – sleep in a dark room Reduce stress/use relaxation
<b>TESTOSTERONE</b>	
<b>Elevated Testosterone</b> due to: High insulin levels Chronic stress Excess sugar and refined carbohydrates Polycystic ovary syndrome	<b>Normalize Testosterone</b> with: Flaxseed Chrysin Seaweed Iodine
<b>GROWTH HORMONE</b>	
<b>Increased Growth Hormone</b> due to: Dairy containing bovine growth hormone Colostrum products	<b>Normalize Growth Hormone</b> with: Avoid dairy or beef products containing bovine growth hormone

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<b>THYROID HORMONES</b>	
<b>Low Thyroid (Hypothyroid) Function</b> due to: Ionizing radiation: x-rays, nuclear power Lead, cadmium, mercury PCBs, pesticides, phthalates, dioxin Prescription drugs: tamoxifen, steroids, etc. Excess estrogen levels Low progesterone levels High or low cortisol levels	<b>Normalize Thyroid Function</b> with: Normalize progesterone Improve detoxification and elimination of estrogen Normalize cortisol Use tyrosine, iodine or kelp  <b>Increase Conversion of T4 to T3</b> with: Detoxify mercury, cadmium, lead, chemicals Tyrosine, cysteine, iodine Zinc, selenium, copper Vitamin B12 Flaxseed Oil
<b>High Thyroid (Hyperthyroid) Function</b> due to: Excess iodine Chronic stress/cortisol imbalance Radiation exposure Liver stagnation and heat	<b>Normalize Thyroid Function</b> with: Decrease stress Daily relaxation/meditation Motherwort, skullcap, bugleweed, lemon balm Magnesium, Vitamin B complex Avoid radiation
<b>INSULIN</b>	
<b>High Insulin Levels</b> due to : Excess sugar, soft drinks, alcohol, refined carbohydrates Animal fats Omega 6 fatty acids Obesity High blood sugar	<b>Normalize Insulin Levels</b> with: Protein with each meal Low glycemic carbohydrates, avoid sugar Increase fiber Daily exercise Maintain ideal weight Chromium, magnesium, niacin Alpha lipoic acid Flax or fish oil
<b>INSULIN-LIKE GROWTH FACTOR (IGF-1)</b>	
<b>Increased IGF-1</b> due to: Moderate alcohol consumption High insulin levels High growth hormone levels Bovine colostrum Low levels of binding protein	<b>Lower IGF-1</b> with: Vegetarian diet High levels of binding protein IGFBP-3 Chromium, alpha lipoic acid, omega 3 oils (flax or fish oil)
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<b>CORTISOL</b>	

<p><b>High Cortisol Levels</b> due to:</p> <p>Stress, overexertion, childhood abuse</p> <p><i>Result in:</i></p> <p>High blood glucose          High Insulin, Increased IGF-1          Fat deposition in torso/more estrogen in breasts          Depressed T-killer cells          Low progesterone          Increased testosterone          Decreased efficiency of thyroid hormone          Decreased melatonin production</p>	<p><b>Normalize Cortisol Levels</b> with:</p> <p>Meditation          Stress counseling          Relaxation          Associate with supportive people          Vitamin B complex, Vitamin C          Magnesium, zinc, MSM          Siberian ginseng, licorice root, borage, oats, schizandra, rhodiola, ashwaganda</p>
<p><b>MELATONIN</b></p>	
<p><b>Decreased Melatonin</b> due to:</p> <p>Sift work          Light at night          Insomnia          Chronic exposure to strong electromagnetic fields, above 2 mG          Alcohol, caffeine, nicotine, drugs          Cortisol imbalance</p>	<p><b>Increase Melatonin</b> using:</p> <p>Foods high in tryptophan          Vitamins B3, B6          Calcium, magnesium, zinc          Meditate before bed          Sleep in a dark room          20 minutes outside in natural light in a.m.          Exercise daily          Normalize cortisol</p>

Many thanks for this wonderful resource, adapted from:  
The Complete Natural Medicine Guide to Breast Cancer,  
 Sat Dharam Kaur, N.D., pp. 95-98.