Breast Wellness
Tools to Prevent and Heal from Breast Cancer

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WITH
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FUNCTIONAL MEDICINE

• Prevention
• Underlying Causes
• Science Based
• Biochemical Individuality
• Patient Centered (Not Disease Centered)
• Interconnections in our body
  – Inflammation and heart disease
  – Gut and immune system

ASKS WHY???
Not just cancer......
but cancers

Not just breast cancer.....
but breast cancers
Create A Healthy Terrain
Remove What Causes Imbalance
Replace What Is Needed For Balance
The Estrogen Connection
The Estrogen Connection

• As estrogen exposure increases so does our risk of breast cancer
  – Number of periods in your lifetime
  – BCPs >5 years or current use
  – HRT - 8.6% decrease in postmenopausal ER+ breast cancer since 2001
  – Endocrine Disrupters
Endocrine Disrupters -
Substances that mimic or disturb the activity or binding of our hormones

• Xenoestrogen - synthetic chemicals that act as endocrine disrupters
• Plastics -
  – BPA - Bisphenol A - #7
  – PVC - Polyvinyl chlorine - phthalates
• Pesticides
carcinogens and endocrine disruptors
WE'VE TAKEN THE Pesticide-Free PLEDGE
What can you do?

• Buy organic
  – Decreased pesticide exposure
  – Decreased growth hormone exposure
  • Decrease animal products in general
• Use glass whenever possible
• Do not heat or microwave plastic
• Switch to non plastic reusable water bottles
• Avoid pesticides on your lawn and garden
The Estrogen Connection

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  - Endocrine Disrupters
  - Weight - % body fat
An increase in the risk of cancer is one of the consequences of obesity. The increased release of cytokines from this tissue may play a role in the inflammatory state that is associated with obesity (and cancer). Bray, G. J. Nutr. 2002; 132: 3451S–3455S.
Adipose tissue makes the inflammatory markers **IL-6, VEGF and TNF**
More Adipose Tissue → More Aromatase → More Estrogen

Hormones → Estrogen → Estrogen → Estrogen → Estrogen
Decrease Aromatase

• Lower % body fat
  • Maintain healthy weight
  • Resistance exercise
• Decrease inflammation
  – Omega 3 fats
  – Avoid trans fats
  – Decrease saturated fat
  – Lower % body fat
    inflammation made in fat
  – Turmeric
Decrease Aromatase

- Fiber
- Lignans – Flax seed
- Soy
- Resveratrol
- Grape Seed Extract
- Green Tea
Improve Estrogen Metabolism

- Increase cruciferous vegetables
  I3C and DIM and Sulforaphane
- Fish oil
- Daily exercise
- Ground flax seed
- Healthy soy
The Concern Over Belly Fat
The Concern Over Belly Fat

Women with higher insulin levels have a higher risk of getting breast cancer.
Insulin Resistance

- Increased insulin
  - Increased metastasis
  - Increased recurrence
- Decreased survival
Blood Sugar Cycle and Insulin Levels

Insulin increases
As blood sugar increases

NORMAL

normal fasting sugar level
Insulin Resistance

Insulin increases
As blood sugar increases

normal fasting sugar level
Insulin Resistance

>125 = DIABETES

Insulin increases

As blood sugar increases
How do I know if I have Insulin Resistance?

- Weight gain around the belly
- Fatigue
- Feeling tired after a meal
- Harder time losing weight
- Cravings for foods
- Hot Flashes
- Energy Swings
- Low blood sugar
- Heart Disease
- Memory Loss
How does my doctor know if I have Insulin Resistance?

- Belly Fat – Waist / Hip ratio > 0.8 for women
- Elevated blood sugar
- Elevated Insulin levels
- Elevated blood pressure >140/90
- High triglycerides >150
- Low HDL (good cholesterol) <50 for women
- Elevated CRP
Causes of Belly Fat

- Weight gain
- Poor Diet
- Lack of exercise
- Stress
- Inadequate Sleep
- Dysbiosis
- Toxin
How Can I Improve Insulin Sensitivity?

- Increase **fiber** - 35 grams daily
- Protein - at each meal
- Regular Meals
- Increase omega 3 fats
- Eliminate Trans fats (partially hydrogenated fats)
- Nutrient dense foods
- 40 minutes of **exercise** daily
- Get 7-9 hours of **sleep** per night
- Manage stress
- Eliminate sources of inflammation in the body
- Another reason to avoid BPA
The Immune System and Inflammation
Initiation

Transformation

De-differentiation

Proliferation

Invasion

Angiogenesis

Metastasis

+ Damage To DNA in Cells

+ Resistance to Apoptosis

+ Induction of Angiogenesis
STOP Progression To Cancer

30-50% of healthy women aged 40-50 premalignant microscopic breast tumors on autopsy.

Some tumors may regress!
Unhealthy Fertilizer and Soil

- High levels of insulin
- High levels of sugar
- Unhealthy fats – high levels of trans fat
- High omega 6 / omega 3 ratio
- Insulin Like Growth Factor (IGF) in milk and meat
- High levels of inflammation
Healthy Fertilizer / Soil

- High intake of Phytonutrients
- Low levels of inflammation
- High omega 3 levels
- Green tea
- Beta glucans
Increase Inflammation = Increase Cancer

Signs of Inflammation
- Increased CRP
- Increased ESR
- Water retention
- Bloating
- Joint Pain
- Asthma
- Eczema
- Digestive Distress
- Abdominal weight gain...
Chronic Inflammation: A Common and Important Factor in the Pathogenesis of Neoplasia

Inflammation may induce, promote, or influence susceptibility to carcinogenesis by causing:
- DNA damage
- Inciting tissue reparative proliferative
- Creating a stromal “soil” that is enriched with cytokines and growth factors

Schottenfeld, D. *CA Cancer J Clin* 2006;56:69–83
Decrease Inflammation

- Avoid refined and processed foods
- Decrease % Body Fat
- Increase Omega 3 fats
- Decrease Omega 6 and saturated fats and eliminate trans fats
- Low glycemic impact diet
- Turmeric, resveratrol, ginger and green tea
- Decrease stress and increase sleep
- Trial of an elimination diet for some
THE BLOOD SUGAR SOLUTION

10-DAY DETOX DIET

Activate Your Body’s Natural Ability to Burn Fat and Lose Weight Fast

Mark Hyman, MD

Author of the #1 New York Times bestseller The Blood Sugar Solution
DETOXIFICATION
DETOXIFICATION

TOXINS

Environmental
Endocrine Disruptors
Pesticides / Herbicides
Cigarette smoke
Charbroiled Meats
  Heterocyclic aromatic amines
Alcohol
Produced In Own Body
- As alcohol intake increases so does our risk
- Linear Relationship
- For every 1 drink increase per day, a women’s risk of getting breast cancer increased by 12%
- >2 drinks per day = 3x increased risk
ALCOHOL - Why?

- Liver and detox impact
- Increase free estrogen
  - by decreasing SHBG
- Associated with other unhealthy lifestyles
- Decrease B vitamins
  - important for methylation
Strengthen Your Ability To Detoxify

• Fluids
• Fiber
• Protein
• Choose organic
• Eat cruciferous vegetables daily—broccoli, kale, collards, Brussel sprouts
• Garlic, cilantro, parsley, dandelion greens, chlorophyll
Improve Elimination of Toxins

• Have 1 to 2 bowel movements a day.
• Drink 6 to 8 glasses of water a day.
• Sweat regularly.
• Use exercise to help you sweat regularly.
• Use steam baths or saunas—infared saunas may be even more beneficial.
• Regular exercise, yoga, and lymphatic massage can improve lymph flow and help flush toxins out of your tissues into your circulation so they can be detoxified.
Gut Microbiota
Antibiotics and Breast Cancer

• 17 year period -
  – > 25 scripts -- 2 x increased risk
  – 1-25 scripts --- 1.5 x increased risk

• Immune system ?
• Damage to Gut
Heal The Gut

- Limit Antibiotic Use
- High Fiber Diet
- Decrease Red meat - <18 oz/wk (AICR)
- Probiotics
- Nutrients
- Remove inflammatory foods
- Calcium D Glucarate —
  — 1000mg twice daily
Optimal Diet for Breast Wellness
Phytonutrients – THINK COLOR!

Phytonutrients - plant metabolites that defend against microbes

– Increase host defense against DNA damaging molecules. Reduce oncogenic potential of carcinogens.

– Organic has more phytochemicals -- Stress

8-10 ½ cups per day
Phytonutrients – THINK COLOR!

- Chlorophyll – green vegetables
- Glucosinolates – cruciferous vegetables
- Xanthophyll – yellow carotenoid pigment
- Isoflavones – phytoestrogen
- Polyphenols – quercetin, lignan, flavonoids
- Flavonoids – Catechins, ECGC = epigallocatechin
- Carotenoids – yellow / orange
Glucosinolates

- Cruciferous vegetable - Give bitter taste
- Pro apoptotic activity
- Estrogen metabolism
Isoflavones

- Phytoestrogens
- Genistein
- Daidzein
- Soy
Among women with breast cancer, soy food consumption was significantly associated with decreased risk of death and recurrence. The inverse association was evident among women with either ER-positive or ER-negative breast cancer and was present in both users and non-users of tamoxifen. This study suggests that moderate soy food intake is safe and potentially beneficial for women with breast cancer.

Flavonoids

- Anthocyanidins = Berries (Red, blue and purple)
- ECGC – Epigallocatechin – green tea
- Flavonols = onion and kale
Antiangiogenic properties of natural polyphenols from red wine and green tea.

In vitro investigations have indicated that RWPCs (red wine polyphenolic components) and GTPs (green tea polyphenols) are able to inhibit several key events of the angiogenic process.

Top 10 Breast Wellness Foods

• Broccoli / Kale – daily
• Asian mushrooms
• Fatty Fish – sardines and salmon
• Ground flax seed
• Green tea - organic
• Pomegranate
• Beans and legumes
• Garlic and Onions
• Blueberries and other berries
• Seaweed – nori
Exercise and Breast Cancer

• 4 hrs per week = less risk

• 3-5 hours per week = improved survival for women who have had breast cancer

• Vigorous exercise + BMI < 25 – 20% decreased risk
Sleep
SLEEP DEPRIVATION

Cortisol and Insulin

NK cells and melatonin

Melatonin = Anticancer and antioxidant effects
Tips for Getting a Good Night Sleep

- Maintain a regular sleep schedule
- Establish a regular, relaxing bedtime routine
- Create a sleep-conducive environment
- Sleep on a comfortable mattress and pillows.
- Finish eating at least 2-3 hours before bedtime.
- Exercise regularly (at least three hours before bedtime)
- Avoid caffeine, nicotine and alcohol close to bedtime.
- Belly-breathing and visualization
- Turn off the TV, phone and computer 1 hour before bed.
Breast Wellness

Universe by Heidi Spear

Breast Wellness
STRESS!
STRESS – Increased Cortisol

- Increased insulin resistance and abdominal fat
- Increased IL-6 - inflammatory cytokine
  - Increased Inflammation = Increase Cancer Risk
- Lower NK (natural killer) cell activity
  - NK cells find and kill new cancer cells
  - Stronger a women’s NK cell activity is the higher rate of survival from breast cancer after 12 years
- Increased Social Support = Increased NK activity
Tumor rejection in rats after inescapable or escapable shock.

- Rats with cancer cells grafted to cause 50% to die
- 3 groups
- Shock and no control - 27% rejected tumor
- No electric shock - 54% rejected tumor
- Electric shock but had a lever to stop it
  - 63% rejected the tumor
I am grateful for…

List 3 Daily
Your Top 10...
Things to do for Breast Wellness

1. Choose Whole Foods
2. Get 3-5 hours of Exercise Per Week
3. Increase Fiber Intake to 35gm daily
4. Have Protein at Every Meal - include vegetarian options - beans, nuts as well as fish, lean poultry and eggs.
5. Maintain a Healthy Weight
Your Top 10...
Things to do for Breast Wellness

6. Get a Good Night Sleep
7. Choose Organic Foods
8. Limit Your Alcohol Intake
   <1 drink per day or < 5 per week
9. Avoid Excess Toxins
10. Practice a stress reduction technique daily
Learn More...

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