

Breast Cancer **FACTS**, **MYTHS**, and **CHOICES**

January 2011 Issue 3



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Breast cancer:
Windows of Susceptibility
NIH grant 1U01ES019480

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PINK RIBBON GIRLS

OUR MISSION

TO PREVENT the occurrence of BCa through **RESEARCH** and **EDUCATION**

TO ENCOURAGE and **SUPPORT** BCa survivors, friends and families.

Third trimester maternal depression and epigenetics.

*This online free access journal, **EPIGENETICS**, had an interesting peer review article which suggested that late gestational maternal depression/anxious mood can lead to epigenetic alterations in offspring. This was reported as methylation of the human glucocorticoid receptor gene [NR3C1] and was tested by measuring increased salivary cortisol stress responses at three months. **WHAT DOES THIS imply?***

Whom of us was not anxious in the last trimester? What does this mean for offspring? How do we protect our unborn children?

*We live in an age of boundless information and technology. All of it has the potential to be disturbing, and while **TRUTH** and **INFORMATION** give us freedom, its also important to make sure that we incorporate into daily life, and pregnant life, those beneficial ingredients which offset some of the demands of our society. These include the obvious, but often forgotten, time honored traditions:*

- 1)zen, meditation, yoga, prayer, relaxation, breathing deeply and reflecting, -- in the vernacular.... "stop and smell the roses".*
- 2) eat the fruits of the season, and of our labor, -- and reflect on the adage--"we are what we eat."*



RESEARCH PARTNERS

QUESTION:

Why do we study a particular time window while researching breast cancer susceptibility?

ANSWER:

Both historical and contemporary studies suggested that changes in nutrition at specific stages of pregnancy can produce very different outcomes for the offspring (Symonds et al, *Reprod Fertil Dev*, 2007). Different organs grow during time frames during development and have critical and precise "windows" where certain events of the mother may impact the child's DNA more or less permanently, setting patterns for the rest of that child's life. These changes appear to depend not only on the "time" period in which the mother's diet is in effect, but also on the "type" of diet (Hanley et al, *British Journal of Nutrition*, 2010). "Type" and "time", then, are both important.

FACTS: To give this research pertinence, consider this: breast cancer incidence is 2.5 to 4 times higher for women living in the U.S. than for women living in Asian countries. Many studies have shown that breast cancer rates increase over two to three generations in women migrating from Asia to the U.S. Breast cancer in Asian women then matches that in U.S. Caucasians. So what changes? Breast cancer risk among Asians is 80% higher after a decade of living in the U.S., than in Asian women living in Asia (Hilakivi-Clarke L, *Breast Cancer Research and Treatment*, 1997).

SOLUTIONS: Hind-sight is always wonderful, and so here one finds oneself with the information about how we influenced our children, but without recourse to change the past and without any approach to the future. A brief internet survey of the scientific literature touches on the fact that there are many individuals, research laboratories and pharmaceutical companies who recognize the seriousness of epigenetic changes to the DNA and the occurrence of cancer -- whether they are methylation of DNA base pairs or methylation of DNA associated proteins. There are currently studies on what drugs, factors, dietary supplements and behavior changes can reverse the epigenetic signatures we all have. (Rabiya S. Tuma. *Epigenetic Therapies Move Into New Territory, but How Exactly Do They Work?*. *J Natl Cancer Inst* (2009) 101 (19): 1300-1301).

COMMUNITY PARTNERS

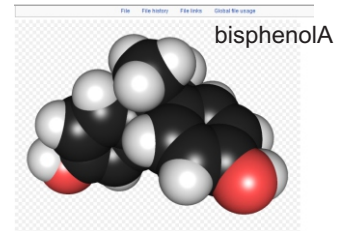
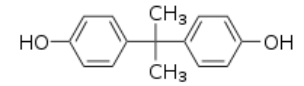
A forum for information and support



Totally awesome image of a stick-and-ball model of DNA with the pink ribbon backbone. Our own LOGO has pink ribbon as the backbone to the DNA and the base pairs are found between. Check out the article by Elizabeth Whittington in this issue

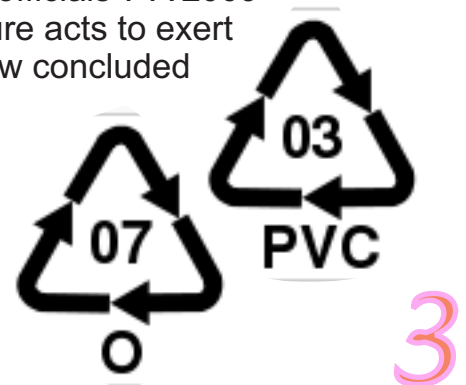
which talks about the cellular basics which "drive treatments" for breast cancer. The buzz word is "molecular profiling" which in theory will allow for more accurate predictions and better therapies, but must be verified.

In their same issue is a information on a link to a new resource from the National Comprehensive Cancer Network a non-profit alliance of 21 cancer centers, which provides formation in "plain English" on treatments and individual treatment options. ***NCCN Guidelines: Breast cancer.***



Obesogens I googled this word after seeing an article from the BostonChannel about BPA (bisphenolA) increasing tendencies to obesity. "Obesogens" brought up 4,500 google hits but it appeared that the majority were NOT scientific articles. I went to Wikipedia to get a summary,,, some plastics with the recycle designation 07 and 03 may contain / release BPA.

A 2008 review concluded that obesity may be increased as a function of BPA exposure, which "merits concern among scientists and public health officials". A 2009 review of available studies has concluded that "perinatal BPA exposure acts to exert persistent effects on body weight and adiposity". Another 2009 review concluded that "Eliminating exposures to BPA and improving nutrition during development offers the potential for reducing obesity and associated diseases". Other reviews have come with similar conclusions [THANKS WIKIPEDIA!!]



Slides for presentation, Jan 2011

FACT:

UCSF researcher finds that 99% of pregnant women in their study harbor some environmental toxins

MYTH:

Environment in the USA is made safe by the FDA and the EPA

QUESTION

Some toxic chemicals have been banned! Are there new chemicals to watch out for?

CHOICES

Yes...others wait on the horizon..so the best defense is a naturally wholesome diet! and being alert

Slides for presentation, Jan 2011

FACT:

Stress increases heart rate and blood pressure

MYTH:

I cannot delete anything from my hectic schedule.

QUESTION

...should I relieve my stress by eating?

CHOICES

Exercise is a better way to reduce stress than eating comfort foods.

COMMUNITY PARTNERS

JANUARY'S RECIPE

**There is a reason
that winter fruits
are full
of vitamin C
and antioxidants**

Simple Winter Fruit Salad
Serves 8

Ingredients:

4 oranges (any kind), peeled, white pith removed, sectioned

3 grapefruits (pink or white), peeled, white pith removed, sectioned

1 pineapple, peeled, quartered, cored, sliced

2 star fruit, sliced

1 pomegranate, cut in half and seeds removed



Directions:

Combine all fruit in a large bowl and gently toss. Top with yogurt (check the level of fat and sugar on the nutrition label) or even whipped cream if desired.

<http://www.sheknows.com/food-and-recipes/articles/807258/winter-fruit-salads>

We all recognize that the winter months tend to make us crave comfort food, those sweets, and fried foods. Nature did intend for us to provide for winter famine, but in reality I confess I have never experienced famine, but still feel the need (LOL). These foods taste good, and may be quite high in refined sugar and fat calories, while containing few nutrients. Eat comfort foods in great moderation. Snack on winter fruits instead of cookies. Clementines, grapefruit, pomegranates, cranberries (ok, cranberries need to be sweetened a little with apples and oranges). This provides great vitamin C to boost your immune system, and this will help your body to fight off seasonal colds and flu. (MM)

FOLLOWUP

**The more you..celebrate
your life--the more in life
there is to celebrate.**

..Oprah Winfrey brainyquote.com

COMMUNITY PARTNERS

**A forum for information and support
Breast cancer ribbon stained glass pattern:
“Moms with breast cancer”**

