# FIGHT NOW UPDATE

Eat & Live Proactively Against Breast Cancer
By Aaron Tabor, MD
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**FIGHT NOW BEFORE BREAST CANCER STRIKES.**
**PREVENTION IS THE BEST CURE.**

## Breast Cancer Benefits of Soy – Early Intake Appears Best

Soy and breast cancer – it's one of the most debated topics related to the impact of dietary habits on breast cancer. In spite of all the debate, current human research studies have been reporting that soy appears to be safe for breast cancer survivors and reduces breast cancer risk and the risk for breast cancer recurrence. In fact, one Johns Hopkins' breast cancer expert recently stated, "*I don't think that women necessarily need to be afraid of consuming soy products, but they shouldn't take the message that this is going to make a dramatic difference in the treatment of their breast cancer. Maybe it will in terms of prevention in the future but again, we need to do the more definitive studies to figure that out. Hopefully what we'll take away from it is that soy is not a bad thing for breast cancer*."

Many soy and breast cancer research studies have started looking at the potential benefits of soy for breast cancer in regards to specifics like the timing of soy consumption, effects of menopausal status, and breast cancer hormone receptor status. While the research is still in the early stages, each of the population-based studies that have looked at the timing of soy consumption in regards to breast cancer risk have reported that consumption of soy starting early in life appears to have the greatest benefit.

One study of over 3,000 Chinese women reported that increasing levels of dietary soyfood intake between ages 13 – 15 years was inversely linked with breast cancer risk later in life with the highest quarter of soyfood intake linked to a 49% reduction in breast cancer risk. The beneficial link between adolescent soyfood consumption and later breast cancer risk in this study was seen in both premenopausal and postmenopausal women. A smaller study of Asian-American women showed that breast cancer risk as an adult was reduced with higher dietary intakes of soy as a teen. Furthermore, this study reported that high soy consumption as both a teen and an adult provided greater protection (47% reduction in breast cancer risk) than low consumption at both times of life, while intermediate protection was provided by consuming high amounts as a teen and low amounts as an adult (33% reduction in breast cancer risk). This latter study suggests that lifetime soy

consumption starting during our teen years might offer the greatest breast cancer risk reduction benefits. In addition to these two initial studies, two more recent studies continue to confirm the possible benefits of adolescent soyfood consumption. A study of more than 6,000 Canadian women who responded to questions about their adolescent soyfood consumption habits as a teen reported that higher intakes of both soy isoflavones and lignans (common in flaxseed) were both associated with a reduction in breast cancer risk (29% reduction in the highest intake group). A second study of Asian-American women reported that breast cancer risk was reduced by about 60% with childhood soy intake, 20% by adolescent soy intake, and 24% by adult soy intake. While much more research is needed to confirm these studies and explore the mechanisms involved, these first few studies clearly suggest that regular soy consumption starting early in life appears to confer the greatest breast cancer protection benefits.

An ever-growing body of science suggests that regular dietary soy consumption, particularly starting early in life, as part of a healthy, well balanced diet, can be an important part of our fight against breast cancer. Future research studies will likely continue to explore this relationship in greater detail to determine how soy consumption provides breast cancer protection and whom might best benefit from regular dietary intake of soy.

# Weight Change During Chemotherapy Worsens Breast Cancer Prognosis

Numerous studies have made it clear that being overweight or obese is a major risk factor for breast cancer. It has also been reported that weight gain after developing breast cancer is linked to an increase in breast cancer recurrence and a decrease in breast cancer survival, though these results have been inconsistent to date. Unfortunately, many women gain weight during breast cancer therapy.

A new breast cancer research study examined the effect of weight change (loss or gain) during anthracycline-based chemotherapy on disease-free and overall survival in 111 women diagnosed with early stage breast cancer or locally advanced breast cancer. For this study, change in body weight was assessed by calculating the difference between body weight before chemotherapy was started and after chemotherapy was completed. The breast cancer patients were categorized as (1) experiencing weight change (greater than 5% weight loss or weight gain) or (2) having a stable weight and were then followed for about 20 years on average. The breast cancer researchers reported that:

- 69% breast cancer patients maintained a stable body weight, while 17% lost weight and 14% gained weight for a total of 31% that showed a weight change of more than 5%.
- Breast cancer patients with an initial healthy body weight (BMI less than 24) had substantially higher odds of overall survival and disease-free survival.

- Breast cancer patients who experienced a more than 5% weight change had more than a 2-fold increased risk for breast cancer recurrence and death.

This is an interesting and important new breast cancer study. Not only does this study confirm that being overweight increases one's risk for breast cancer, but this study suggests that maintaining a stable body weight during anthracycline-based chemotherapy is an important goal for which breast cancer patients should strive. While previous studies have been inconsistent when looked at overall in regards to how weight change during chemotherapy effects breast cancer outcomes, many of these studies have been done in overweight women treated with different chemotherapy drugs. In this study, over half of the breast cancer patients were at a healthy body weight suggesting that weight change during chemotherapy, regardless of starting body weight, might worsen breast cancer outcomes.

It is unfortunate that weight change was looked at only as a whole rather than also looking at the women who gained weight and the women who lost weight as separate groups. Previous research has suggested that weight loss can reduce markers of breast cancer risk, while being overweight increases breast cancer recurrence and decreases survival. The breast cancer researchers indicated that there were not enough breast cancer patients in this new study to analyze these groups separately. The specific effect of weight loss or weight gain during chemotherapy on breast cancer outcomes is uncertain at this time, but, hopefully, future studies will provide a clearer answer.

# Positron Emission Mammography Valuable For Breast Cancer Detection

Magnetic resonance imaging (MRI) has become an important part of breast cancer screening, particularly in women at high risk for breast cancer. This is because MRI has been shown to be highly sensitive at detecting breast lesions, which has resulted in improved rates of breast cancer survival. The drawback with MRI is that it has been reported to have a fairly high rate of false positive tests, which can lead to unnecessary breast biopsies.

Positron emission mammography (PEM) is a relatively new breast cancer screening technology where a glucose-based tracer is used to detect breast cancer cells at a stage where they are often not detectable by other methods like mammography or ultrasound. Since breast cancer cells have a high metabolic activity, they take up this tracer in higher amounts than surrounding cells and can then be easily visualized with a positron emission scanner.

A new breast cancer study compared PEM to MRI in 388 women newly diagnosed with breast cancer. The breast cancer patients underwent both MRI and PEM in a randomized order and the performance of the two methods was compared. During the breast cancer

screenings, 82 additional cancers were detected. A comparison of the performance of these two breast cancer screening methods showed:

- 34% of these additional breast cancers (28 of 82) were detected by both PEM and MRI when used as separate screening tests. Another 26% were detected by MRI alone, 17% by PEM alone, and 8.5% by mammography plus ultrasound.
- When integrating PEM and MRI screening methods, 74% of these new breast cancers were detected in comparison to 60% detection using MRI alone.
- When examining the other 306 breast cancer patients, PEM correctly diagnosed breast cancer in 91% of the cases compared to 86% correctly diagnosed with MRI.
- PEM more accurately detected cancerous breast tumors (66%) compared to MRI (53%).
- Of the 56 women requiring mastectomy, 71% were identified with MRI, while only 36% were identified with PEM.

The results of this study comparing the effectiveness of PEM and MRI suggest that PEM can be an important, viable breast cancer screening tool for many women. While PEM and MRI breast cancer screening detected the incidence of breast cancer at a similar rate with MRI being slightly better, combining the two methods appeared to improve breast cancer detection over either method used alone. Additionally, PEM showed a greater ability to accurately predict whether a breast tumor was benign or cancerous. This is an important finding because it could lead to a reduction in the number of unnecessary breast biopsies done every year. Since PEM appears to offer comparable results to MRI overall, PEM offers a viable alternative to women who cannot tolerate or are not eligible for MRI breast cancer screenings. Used in combination, PEM and MRI appear to offer both a greater ability to detect breast cancer and a more accurate way to determine if a breast lesion is cancerous or not. This could result in an improvement in overall outcomes.

**ABOUT DR. TABOR**

Dr. Aaron Tabor, MD is the author of *FIGHT NOW.*

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After graduating from The Johns Hopkins School of Medicine, Dr. Tabor devoted his career to helping people live a life they love through medical research. Over 1 million women have already trusted Dr. Tabor for better nutrition and health education. His *prevention through nutrition* research projects with leading hospitals include cancer, weight loss, younger-looking skin, hair, and nails, glycemic-index, cholesterol, pain, and hormonal health. Dr. Tabor educates other doctors about diet and lifestyle research as the Diet & Alternative Medicine Section Editor for *The Journal of Medicine*. He has authored numerous books, papers, and patents in the fields of medicine and nutrition. His recent co-edited book *Nutritional Cosmetics: Beauty from Within* (Elsevier) is the first medical textbook on "inside-out makeover" science—foods and supplements to make you look younger from the inside out. L'Oréal, Nestlé, and others contributed to this cutting-edge work. Dr. Tabor is Founder of Gene Facelift, a Johns Hopkins' biotech spin-off developing anti-aging and anti-wrinkle gene therapy drugs. Gene Facelift's drug technology is designed to replace damaged skin DNA in order to heal wrinkles and reverse the aging process.

**Please contact me with your questions and comments: DrTabor@fightBCnow.com**