



Product/Health FAQs

Soy and Cancer

We are not rodents folks and therefore all the soy research showing it's bad for humans especially as it relates to breast cancer is bogus food politics if you ask me. Asians who consume soy don't get breast cancer...unless they move to America and start consuming DAIRY – here is an article from American Cancer Society

<http://www.cancer.org/cancer/news/expertvoices/post/2012/08/02/the-bottom-line-on-soy-and-breast-cancer-risk.aspx> Having said that, it is still good to avoid GMO soy and concentrated soy powders. Juice Plus Complete uses proprietary, low-processed, water washed non-GMO soy and tofu along with other plant sources of protein, mixed in with fruit and veggie powders, complex carbohydrates to make it a more balanced approach to achieving optimal nutrition.

There is growing evidence that soy consumption reduces risk of hormone-related cancers such as breast, ovarian and prostate as soy phytoestrogens act as SERMs (competitive inhibitors of estrogen)

Prostate Health and Soy

- a. A recent analysis of eight studies concluded that regular consumption of soy foods was associated with a 30 percent lower risk of prostate cancer (International Journal of Cancer, November 20, 2005)
- b. Review by Dr. Andrew Weil (top ten reducers of prostate cancer – many of which you can get daily through JP capsules, Complete shakes and Complete bars
<http://www.stayinformed.info/health/prostatecancer.htm>



Breast Health and Soy

The reason it isn't blatantly clear to us that eating soybeans and other beans legumes and vegetables helps prevent breast cancer is because breast cancer is big business. Phytoestrogens (plant-estrogens) in beans, legumes and vegetables are preventative foods because some phytoestrogens act as SERMS or selective estrogen receptor modulators. SERMs block the effects of estrogen in the breast and other tissue - SERMs work by sitting in the estrogen receptors in breast cells. If a SERM is in the estrogen receptor, there is no room for estrogen and it can't attach to the cell. If estrogen isn't attached to a breast cell, the cell doesn't receive estrogen's signals to grow and multiply. Simple. Except that this is also the sales pitch for major SERM pharmaceuticals that unfortunately also come with side effects. Native plant SERMs are much safer. Soy is a major source of phytoestrogens. Asians who consume soy and less animal products including dairy have a much lower risk of breast cancer.

<http://www.cancer.org/cancer/news/expertvoices/post/2012/08/02/the-bottom-line-on-soy-and-breast-cancer-risk>.

http://www.breastcancer.org/tips/nutrition/reduce_risk/foods/soy

<http://jnci.oxfordjournals.org/content/95/12/906.long>

- a. In their 2010 review, Hilakivi-Clarke et al. sum up the evidence on soy and breast cancer:

Results reviewed here suggest that women consuming moderate amounts of soy throughout their life have lower breast cancer risk than women who do not consume soy; however, this protective effect may originate from soy intake early in life. We also review the literature regarding potential risks genistein poses for breast cancer survivors. Findings obtained in 2 recent human studies show that a moderate consumption of diet containing this isoflavone does not increase the risk of breast cancer recurrence in Western women, and Asian breast cancer survivors exhibit better prognosis if they continue consuming a soy diet.



<http://www.ncbi.nlm.nih.gov/pubmed/20980638>

b. Another report speculates “that breast cancer protection in Asian women consuming a traditional soy-containing diet is derived from early exposure to soybean products containing genistein. We believe that early events are essential for the benefits of cancer protection.”

<http://ajcn.nutrition.org/content/71/6/1705s.abstract>

c. A landmark article in JAMA stated that “Among women with breast cancer, soy food consumption was significantly associated with decreased risk of death and recurrence.”

JAMA. 2009;302(22):2437-2443. doi:10.1001/jama.2009.1783.

<http://jama.jamanetwork.com/article.aspx?articleid=185034>



Ovarian Health and Soy

A 2010 review by Wendy N. Jefferson of the Laboratory of Reproductive and Developmental Toxicology, National Institute of Environmental Health Sciences, summarized the literature on soy and ovarian function:

For the most part, the studies conducted to date suggest that a diet containing lower levels of soy, e.g. 1–2 servings of soy/d, as part of a well-balanced diet should not pose harmful effects on the function of the ovary as it relates to ovulation. These levels are similar to that found in a traditional Asian diet (10–25 mg/day isoflavones) and even up to 50 mg/day isoflavones has little impact on serum circulating levels of hormones involved in reproduction. Although the levels of phytoestrogens typically found in soy foods pose minimal risk in the adult female, the female reproductive system is dependent on hormones for proper function and phytoestrogens at very high levels can interfere with this process.

<http://www.ncbi.nlm.nih.gov/pubmed/20980642>

Additionally, a 2009 meta-analysis of five retrospective and two prospective studies found that participants with a higher soy intake (roughly one serving per day) had a reduced risk for endometrial cancer and breast cancer, when compared with lower soy intakes.

<http://www.ncbi.nlm.nih.gov/pubmed/20380569>



Dairy link to cancer:

I recommend two excellent best-selling books by Prof. T. Colin Campbell, 'the father of nutritional biochemistry' are *The China Study* and *Whole*. These books describe decades of research linking cancer with the consumption of casein (the predominant protein in dairy), and animal food consumption in general. The New York Times calls the China Study "the Grand Prix of Epidemiology"

[-http://www.nytimes.com/1990/05/08/science/huge-study-of-diet-indicts-fat-and-meat.html](http://www.nytimes.com/1990/05/08/science/huge-study-of-diet-indicts-fat-and-meat.html).

[-http://well.blogs.nytimes.com/2011/01/07/nutrition-advice-from-the-china-study/?_php=true&_type=blogs&r=0](http://well.blogs.nytimes.com/2011/01/07/nutrition-advice-from-the-china-study/?_php=true&_type=blogs&r=0)

<http://nutritionstudies.org/no-whey-man-ill-pass-on-protein-powder/>

Also here is a quick list of papers on the topic.

- [1]. Rohrmann S, Platz EA, Kavanaugh CJ, et al. Meat and dairy consumption and subsequent risk of prostate cancer in a US cohort study. *Cancer Causes Control* 2007; 18: 41-50.
- [2]. Mitrou PN, Albanes D, Weinstein SJ, et al. A prospective study of dietary calcium, dairy products and prostate cancer risk (Finland). *Int J Cancer* 2007; 120: 2466-73
- [3]. Willett WC. Nutrition and cancer. *Salud Publica Mex* 1997; 39: 298-309.
- [4]. Chan JM, Stampfer MJ, Ma J, et al. Dairy products, calcium, and prostate cancer risk in the Physicians' Health Study. *Am J Clin Nutr* 2001; 74: 549-54
- [5]. Tseng M, Breslow RA, Graubard BI, Ziegler RG. Dairy, calcium, and vitamin D intakes and prostate cancer risk in the National Health and Nutrition Examination Epidemiologic Follow-up Study cohort. *Am J Clin Nutr* 2005; 81: 1147-54
- [6]. Veierod MB, Laake P, Thelle DS. Dietary fat intake and risk of prostate cancer: a prospective study of 25,708 Norwegian men. *Int J Cancer* 1997; 73: 634-8.
- [7]. Grant WB. An ecologic study of dietary links to prostate cancer. *Altern Med Rev* 1999; 4: 162-9.
- [8]. Kushi LH, Mink PJ, Folsom AR, et al. Prospective study of diet and ovarian cancer. *Am J Epidemiol* 1999; 149: 21-31.



[9]. Fairfield KM, Hunter DJ, Colditz GA, et al. A prospective study of dietary lactose and ovarian cancer. *Int J Cancer* 2004; 110: 271-7

[10]. Schwartz GG, Hulka BS. Is vitamin D deficiency a risk factor for prostate cancer? (Hypothesis). *Anticancer Res* 1990; 10: 1307-11.

[11]. Miller A, Stanton C, Murphy J, Devery R. Conjugated linoleic acid (CLA)-enriched milk fat inhibits growth and modulates CLA-responsive biomarkers in MCF-7 and SW480 human cancer cell lines. *Br J Nutr* 2003; 90: 877-85.

[12]. O'Shea M, Devery R, Lawless F, et al. Milk fat conjugated linoleic acid (CLA) inhibits growth of human mammary MCF-7 cancer cells. *Anticancer Res* 2000; 20: 3591-601.

[13]. Larsson SC, Bergkvist L, Wolk A. High-fat dairy food and conjugated linoleic acid intakes in relation to colorectal cancer incidence in the Swedish Mammography Cohort. *Am J Clin Nutr* 2005; 82: 894-900.



Hormone balance with plant foods (soybeans and other beans and legumes, vegetables) – here is a summary on Phytoestrogens by Karen Jensen, ND

Phytoestrogens are hormone-like compounds found in all plants. They balance our hormones, support our immune systems, and prevent or ease the symptoms of menopause and osteoporosis.

Today's number one health concern for women is hormones. In light of recent evidence stacking the deck against hormone replacement therapy, women are looking for alternatives. This is evident in my practice, where female patients often ask me about the benefits of phytoestrogens, hormone-like compounds found in all plants in one form or another. They are one-fiftieth to one-twenty-thousandth weaker than the body's steroidal estrogens, which are made by the ovaries.

How do phytoestrogens work? They contain active chemical constituents such as isoflavones, coumestans and lignans, which work as hormone balancers; phytoestrogens both exert mild estrogenic effects themselves and compete with more potent steroidal and environmental estrogens (xenoestrogens) for "receptor binding sites" on cells. Imagine these receptor binding sites as parking spots reserved for hormones. Once "parked," the hormone can exert its effect on the cell. If the body's steroidal estrogen levels are low, phytoestrogens fill those parking spots and gently mimic the role played by steroidal estrogens. If the levels of steroidal or environmental estrogens in the body are too high, phytoestrogens block their access to estrogen receptor sites, substituting their own milder estrogenic activity for the excessively strong estrogenic effects created by overabundant steroidal or environmental estrogens.

In addition to their hormone-balancing activities, phytoestrogen compounds provide many other health-promoting benefits. Recent studies have documented that soy foods, which contain phytoestrogenic isoflavones, are antibacterial, antiviral, antifungal, antioxidant and anti-inflammatory. They also provide immune system support, prevent platelet aggregation (blood clotting), prevent or ease menopausal symptoms and both prevent and treat osteoporosis.

The American Heart Association states, "there is increasing evidence that the consumption of soy protein in place of animal protein lowers blood cholesterol levels and may provide other cardiovascular benefits" (*Circulation* 2000; 102: 2555). Further, the American Cancer Society



recently revealed that breast cancer kills three times as many American women as Japanese women, and that colon and prostate cancer in Japan is significantly lower than in North America (*National Dairy Council Nutrition Service Quarterly Review*, Winter 1998; 21-23). It has been suggested that environmental factors, especially the diet, play an important role. The intake of phytoestrogens in Japan, for example, is 30 times greater than in North America.

Dietary Strategy

There are many ways women can take advantage of the benefits of phytoestrogens. You can begin by eating more foods rich in these plant compounds. Something to keep in mind is that the absorption of phytoestrogens depends on a healthy gut. The gut must contain enough healthy bacteria capable of converting phyto-estrogens into their active forms: once absorbed, phytoestrogens are transported to the liver and most are removed from circulation. Some, however, enter the bloodstream and eventually bind to estrogen-receptor sites to exert their balancing effect as required. As you've probably already guessed, imbalances in intestinal microbes, such as yeasts and fungi, can interfere with the absorption process; in this case, I would recommend taking probiotic supplements (acidophilus or bifidus) to help rebuild healthy gut bacteria.

The Goods on Soy

Soy products have become the most popular source of phyto-estrogens in North America. Thousands of soy-based products are available in the marketplace. It should be noted, however, that the Asian diet typically contains fermented soy products. Naturally fermented soy comes in foods such as miso and tempeh or whole-bean fermented soy powders. Since phytoestrogens can exert mild estrogenic effects in higher doses, many researchers feel this is why women in cultures consuming predominantly plant-based diets rarely experience hot flashes and other menopause-related symptoms. And given that many of the world's cultures have been eating fermented soy bean products for thousands of years without ill effect, we can gather that using soy products to address menopausal symptoms is far safer than taking synthetic hormone replacement.

In pilot studies conducted by Dr. J. Eden and colleagues at the Royal Hospital for Women in New



South Wales, Australia, it was found that when women were given 160 mg of isoflavones (found in soy) daily for three months, a significant reduction in several menopausal symptoms, especially hot flashes, occurred. Further studies have shown smaller decreases in menopausal symptoms with a daily consumption of 40 mg of isoflavones. Research by McMichael-Phillips et al. found that 60 grams of soy protein providing 45 mg of isoflavones had estrogenic effects.



Soy and thyroid

In their 2006 review article, Messina and Redmond write:

The preponderance of evidence from clinical trials involving healthy adult men and women indicates that neither soy protein nor isoflavones adversely affect thyroid function. As noted the adverse effects reported by one Japanese study [Ishizuki Thyroid Clinic] are biologically implausible and contrast with the results of 13 other trials. Thus, despite their ability to [inhibit thyroid peroxidase] in vitro and in vivo in rodents, **isoflavones do not appear to cause thyroid hormone abnormalities in euthyroid individuals [people with genetically normal thyroid function]**. <http://www.ncbi.nlm.nih.gov/pubmed/16571087>

We know many people with thyroid issues who have benefited from Juice Plus Complete in their diet.

“I was reluctantly taking a low dose thyroid replacement for symptomatic Hashimoto's Thyroiditis. I felt this was only treating a symptom and not addressing the cause and I was suspecting toxins affecting my thyroid function. After 6 weeks on the Transform 30 program drinking 2 Complete shakes a day and continuing with the 3 JP+ blends, removing coffee I felt so much more energy that I didn't feel the need to continue taking my thyroid compound. Blood test 10 days later confirmed that my thyroid function was now normal and I no longer had the antibody indicative of the immune response causing Hashimoto's thyroiditis. I love the Complete smoothies and occasionally have more than 2 a day.”

– Sue Frederickson



Gas – so you’ve been on Transform30 and you have a little gas do ya? What would you rather have a little gas (healthy human function) or colon cancer? Read this NPR article:

Not long ago, we heard about a catchy for a cookbook: "Fart-free food for everybody."

In theory, these recipes would be helpful for some people — and those in their vicinity.

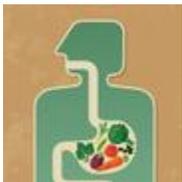
But being a bit gassy may actually be a small price to pay for a lot of benefits to our health.

We know that air often comes after eating nutrient-packed vegetables, such as cabbage, kale and broccoli. And researchers have found that fiber-rich foods, like beans and lentils, boost the levels of beneficial gut bacteria after only a few days, as we in December.

So all this got us wondering: Could passing gas, in some instances, be a sign that our gut microbes are busy keeping us healthy?



Absolutely, says , a gastroenterologist at the Mayo Clinic in Rochester, Minn.



"Eating foods that cause gas is the only way for the microbes in the gut to get nutrients," he says. "If we didn't feed them carbohydrates, it would be harder for them to live in our gut."

And we need to keep these colon-dwelling critters content, Kashyap says. When they gobble up food — and create gas — they also make molecules that boost the immune system, protect the lining of the intestine and prevent infections.



"A healthy individual can have up to 18 flatulences per day and be perfectly normal," he adds.

Gas gets into the digestive tract primarily through : Swallowing air (which we all do when we eat and chew gum) and your microbiome. That's the collection of organisms in the GI tract that scientists and doctors are currently all fired up about. (Check our colleague Rob Stein's recent on it.)

That microbiome includes hundreds of different bacteria. But there are also organisms from another kingdom shacking up with them: the .



All these microbes are gas-making fools. They eat up unused food in your large intestine, like fiber and other carbohydrates we don't digest, and churn out a bunch of gases as waste.

But that's not all they make. They also produce a slew of molecules (called short chain fatty acids) that may promote the growth of other beneficial bacteria and archaea.

And the more fiber you feed these friendly inhabitants, the more types of species appear, studies have found. This bump in microbial diversity has been linked to a .

"Undigested carbohydrates allow the whole ecosystem to thrive and flourish," Kashyap says.

Most gas made by the microbiome is odorless. It's simply carbon dioxide, hydrogen or methane. But sometimes a little sulfur slips in there.

"That's when it gets smelly," Kashyap says.

But here's the hitch: Many of the smelly sulfur compounds in vegetables have healthful properties.

Take for instance, the broccoli, mustard and cabbage family. These vegetables are packed with a sulfur compound, called sulforaphane, that is strongly associated with a reduced risk of cancer.



Another possible benefit of a little smelly gas? It may reduce the total volume of air in the gut, Kashyap says.

Why? Because bacteria and archaea make the sulfur gas from other gases in the gut, like hydrogen.

"Bacteria that make sulfide gas are really important," Kashyap says. "They can cause smelliness, but they can reduce the total amount of gas flow."

Of course, having too much of anything can be bad. If gas and bloating start interfering with your quality of life, Kashyap recommends seeing a doctor.

But don't immediately blame your diet, Kashyap says.

In many cases, people who complain about too much gas actually don't generate more than others, he says. Instead, they perceive the passing more intensely. Or they pass it.

"Yes, a more fiber-rich diet will produce more gas," Kashyap adds. "But completely eliminating fiber from the diet should not be the first option. You don't want to starve your microbes."

So go ahead. Enjoy those lentils. Chow down on the cabbage. Then if you stink a little, think of it as a thank you gesture from your microbiome.

http://www.npr.org/blogs/thesalt/2014/04/28/306544406/got-gas-it-could-mean-you-ve-got-healthy-gut-microbes?utm_source=facebook.com&utm_medium=social&utm_campaign=npr&utm_term=nprnews&utm_content=20140428



Pregnancy and Breastfeeding

Eating for Two

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Introduction:

Dear Expectant Mothers:

Congratulations, and welcome to the most amazing journey of your life.

When sperm meets egg, a miraculous series of biochemical events begins. The DNA of the chromosomes of the original cell divides only 50 times but results in approximately 100 trillion cells, a number that is greater than all the stars in the milky-way galaxy. Furthermore, it is estimated that each of these cells has over 6 trillion biochemical reactions per second, and each cell also knows what all the other cells are doing thru the body's own infinite intelligence. So it is with great humility that I as a scientist attempt to convey any advice on the topic. As the mother of two incredibly healthy children, I am proud that I did the best I could to take care of myself, to give my kids the very best shot in life given what I understood at the time. Watching my girls grow has been incredibly fulfilling. Yet looking back, I sometimes wonder, "Could I have made better choices given what I know and what is available to me now?" Sure. And so it is with great care and humility that I share what I know today with expecting mothers and have updated this document with the latest information available.

A pregnant mother is usually concerned with what she eats while nurturing her unborn child. The good news is that it's not that complicated: the rules for good health during pregnancy and breast-feeding are the same as the rules for good health during the rest of your life – it's just more important to make the right choices as they will influence the baby's health for the rest of his or her life. Mainly, you should eat a large variety of vegetables, fruits and whole grains (more than 90% of your caloric intake), get plenty of appropriate exercise, drink lots of water, and get adequate rest. And unlike common advice "now you are eating for two," I must advise that it is not necessarily good to gain more than 25 pounds at full term. This can be accomplished by not gorging on high fat foods such as ice cream and pizza. These foods add weight, but not nutrition to you and your baby. At the same time, this is not a good time to diet or restrict your eating either, unless you feel nausea and your body is telling you not to eat.

I want you to consider all those 6 trillion biochemical reactions that occur in each cell of our body every second. This is not to be taken for granted. That is without proper nutrition, not all those miraculous reactions will always take place as they should to provide optimal health for you and



your baby. When the body gets adequate nutrition, it expresses its' full complement of active enzymes that make all those trillions of reactions occur. That is with nutrition, all enzyme making factories are open for business. Otherwise, the body struggles just to maintain a viable pregnancy, making a limited number of critical enzymes, and the luxuries of additional enzymes needed for optimal health go by the wayside.

For instance, if a mother is adequately nourished with plenty of fruit and vegetable nutrition, and happens to experience some stress, even though she is bound to make stress hormones such as cortisol, in a healthy placenta, that cortisol will get broken down by an enzyme before it reaches the baby. But if the mother is not getting adequate nutrition, she will not express that enzyme because she lacks “the luxury of optimal health” and the cortisol will reach the baby and then the baby will be predisposed to stress for the rest of their life.

What nutrients exactly help to avoid this? We don't know yet. So don't take any chances, give yourself the full spectrum of nutrients from all the rainbow colors found in the 25 different fruits, veggies and berries it takes to make Juice Plus+®. This is why I consider Juice Plus+®, with over two dozen, independent, peer-reviewed, university studies to be the Mercedes Benz of prenatal nutrition. It also has helped many people conceive babies.

Most doctors, especially those who have not heard of Juice Plus+®, recommend a prenatal. I wrote this to help doctors, other health care professionals and expecting mothers to understand why it is important to look at whole food supplementation and the hidden dangers of prenats. Most of all, I wish you the best, as you journey into motherhood!

Mitra Ray, PhD



Evaluating Prenatal Supplements

Understanding the difference between *folic acid* in prenatal supplements and naturally occurring *folate* in whole foods

Naturally occurring folate, which is a water-soluble B vitamin (as found in leafy greens and in Juice Plus+®), is an important part of a healthy diet. Folate deficiency has been linked to osteoporosis, Alzheimer's and other forms of dementia, heart attack, stroke, ulcers, macrocytic anemia, and other illnesses. Additionally, folate is critical for fetal development, and as such is especially important for pregnant women. Folate aids in neural tube development, and can prevent severe birth defects of the spinal cord and brain.

Clearly, it's important to get adequate amounts of folate in the diet; but folic acid, which is the supplement form found in many fortified foods, and in multi-vitamins and prenatal vitamins, is an entirely different beast. Simply put, it is not a good idea to supplement with folic acid:

1. A Norwegian study published last month found that heart-disease patients whose diets included folic acid fortification and supplementation were 43% more likely to die of cancer.¹
2. Another study found that while whole-food folate consumption was not associated with any increased risks, folic acid supplementation increased breast cancer risk by 32%.²
3. Equally alarming is the study that found that folic acid supplementation by pregnant women increases the risk of childhood asthma by 26%.³
4. Still other studies have linked folic acid supplementation to prostate and colorectal cancers.

^{4,5}

¹ Ebbing M et al. Cancer Incidence and Mortality After Treatment With Folic Acid and Vitamin B12. *JAMA*. 2009;302(19):2119-2126.

² Kim, Young-In. Does a High Folate Intake Increase the Risk of Breast Cancer? *Nutritional Reviews*. 2006; (1): 468-475

³ Whitrow MJ. Effect of Supplemental Folic Acid in Pregnancy on Childhood Asthma: A Prospective Birth Cohort Study. *Am J Epidemiol*. 2009 Oct 30.

⁴ Figueiredo, JC et al. *Journal National Cancer Institute*. 2009; 101 (6):432-5.

⁵ Stolzenberg-Solomon, RZ et al. Folate intake, alcohol use, and postmenopausal breast cancer risk in the Prostate, Lung, Colorectal, and Ovarian Cancer Screening Trial *Am J Clin Nutr* 2006;83:895-904.



Juice Plus+® and Perinatal Complications

While we know that folate is important to prevent neural tube deformations, there are still many other complications that may arise during pregnancy, such as preeclampsia, low birth weight and respiratory distress syndrome in newborns. We know that a healthy baby depends on good circulation in the placenta, especially to avoid problems such as preeclampsia which is when the mother experiences high blood pressure and the baby has to be delivered pre-term, often with respiratory distress syndrome because of undeveloped lungs.

Dr. Doug Odom, an OB/GYN who is both a medical professor and a private practice physician, has presented research at numerous medical conferences on the topic of pregnancy outcome. His research is further evidence that Juice Plus+® is the Mercedes Benz of prenatal supplements.

Juice Plus+® and Perinatal Complications

These findings were presented at the Nutraceuticals and Medicine autumn conference of the American Nutraceutical Association, October 11, 2003, Nashville, TN

Objective: To assess the effect of antioxidant supplementation on premature labor, preterm birth, preeclampsia, birth weight, and fetal growth.

Hypothesis:

- 6 – 25% pregnancies result in preeclampsia
- Placenta highly vascular
- 3rd trimester: rapid growth and possible higher antioxidant needed
- Mechanism unknown: studies suggest high free-radical activity and endothelium dysfunction

Cited Research Studies: Relationship Between Oxidative Stress and Pregnancy Outcome

1. "Basic research during the past two decades has led to increased awareness of the role of lipid peroxidation in various physiologic and pathophysiologic processes. A number of reports indicate that preeclampsia is associated with elevated blood levels of lipid peroxidation products"



Hubel CA et al. Lipid peroxidation in pregnancy: new perspectives on preeclampsia. *American Journal of Obstetrics and Gynecology* 1989

2. “An imbalance between thromboxane [A1, A2 constrictor] and prostacyclin [dilator] and between lipid peroxides and antioxidant activity is implicated in pathologic states such as preeclampsia.

Wang YP et. al. Maternal levels of prostacyclin, thromboxane, vitamin E, and lipid peroxides throughout normal pregnancy. *American Journal of Obstetrics and Gynecology* 1991

Summary of Results

	Group 1 n=178 Control	Group 2 n=179 Juice Plus+®
Preterm Delivery	4%	0%
Preeclampsia	21%	0%
Low Birth Weight <2500 g	12%	1%
Admissions into Neonatal ICU	21%	0%
Respiratory Distress Syndrome	8%	0%
Caesarean Delivery	66%	47%

Conclusion

These findings suggest that an inexpensive nutritional solution (Juice Plus®) may be available to effectively address common and costly obstetric complications.

Additional studies have found that Juice Plus® contains plenty of bioavailable and functional folate. In at least two studies we see that folate is bioavailable and reduces homocysteine.

Samaan. *J Nutrition*. 2003;133:2188-93. (Australian study – healthy, active population)

- Double blind, randomized, prospective, placebo controlled, crossover
- Started in normal range, still saw 8.4% decrease in homocysteine in 30 days



Panunzio. Nutr. Research. 2003;23:1221-1228. (Italian Study – more smokers, less healthy diet)

- Crossover study for three months
- Started with an elevated homocysteine and saw a decrease of homocysteine by 33%

Both populations had homocysteine < 8 μM after taking Juice Plus®

Folate content in Juice Plus®

Orchard Blend 140 μg

Garden Blend 280 μg

Vineyard Blend 360 μg

Total 640 μg

Besides the fact that prenats typically have isolated folic acid which is linked to cancer as stated above, this isolated form is also not effective for prevention of preeclampsia when compared to folate in whole food supplementation.

Note: that the label of Juice Plus® says folic acid, but this term is used on labels to mean both folate and folic acid available in any supplement product. What is important is not the label and government recommendations which are often misguided. What is important is the whole food nutrition available in the fruit, vegetable and berry powder blends as made by Mother Nature.

A recent study out of Canada, reported in the January, 2008 issue of the *American Journal of Obstetrics and Gynecology* showed that **folic acid (as an isolated supplement)** at doses of 1 mg or higher given in the second trimester of pregnancy is associated with a reduced risk of preeclampsia. Preeclampsia developed in 2.17% of patients taking folate and in 5.04% of those not taking supplements – **a reduction of <3% in Preeclampsia using isolated folic acid.**



Compare the power of whole foods where the still yet undiscovered mystery of over 25,000 phytonutrients working together: Dr. Odom works with a particularly susceptible, low-income patient-base where normally they see about a 20% or higher percentage of preeclamsia and still, in the study cited above, there was a drop from 21% to 0% - a reduction of 21% in preeclamsia using Juice Plus+® (with naturally occurring folate).

So you can feel safe that you are doing the best for you and your child by choosing Juice Plus+® as your prenatal of choice. Anecdotally speaking, nurses, doctors and new parents are reporting that Juice Plus+® babies are having notably high APGAR scores. What is that? It is a score based on reactions of the baby a few minutes after birth:

	Sign	0 Points	1 Point	2 Points
A	Activity (Muscle Tone)	Absent	Arms and legs flexed with little movement	Active Movement
P	Heart Rate (Pulse)	No Pulse	<100 beats per min	>100 beats per min
G	Grimace (Reflex Irritability)	No response to stimulation	Facial movement only (grimace) after stimulation	Sneeze, cough, pulls away
A	Appearance (Skin Color)	Blue-gray or pale all over	Normal, except for extremities	Whole body is normal
R	Respiration	No Breathing	Irregular and/or slow	Crying, which is good

Some extra advice for pregnancy and breast-feeding

Having had two healthy pregnancies, I speak from first-hand experience. I have also had many friends with healthy “Juice Plus+® babies”. Nutrition is so important for a healthy, happy baby, not to mention a healthy, happy mother. It is crucial to consume adequate quantities of nutrients from fresh fruits and veggies, essential fats, and water.



Here is the regimen that I recommend during pregnancy and breast-feeding. Don't be overwhelmed. It took a long time for me to adopt this diet and to achieve this level of nutritional intake daily. Start slowly and don't feel guilty about what you can't do.

1. Juice Plus+® capsules, all three blends, are a must and so easy to do compared to the other suggestions below. Take one orchard, one garden and one vineyard in the am, and one of each again in the pm. The vineyard blend was not available when I was pregnant but I wish it had been. Pregnancy is a highly vascular process and the vineyard blend will further enhance the results seen with just the fruits and veggies blends.
2. I took no pre-natal vitamins. That part was easy.
3. Drink a minimum of 2 liters of water a day
4. Use 1/3 cup of ground up flax seeds (also known as linseeds in EU; brown or gold) daily, either in your morning in a smoothie. You can also use chia seeds, pumpkin seeds or walnuts. I used to recommend fish oils, but they can go rancid so easily on the shelf and in your body. The best way to ensure enough omega-3 fatty acids is from a whole food plant-based source, such as freshly ground flax seeds in the presence of lots of liquid to be bioavailable. So flax seed bread or muffins aren't really helping you much. You can buy them pre-ground (called flax meal if they're already ground) in the refrigerated section of a health food store, or buy organic flax seeds and grind them up daily or even weekly, as long as they are stored in an air-tight, dark container in the fridge. If you are travelling and don't have access to a blender, you can soak flax seeds overnight in water and drink it down in the morning or put it on your whole-grain cereal.
5. You can make 2 shakes a day, one with just JP Complete and coconut water or plant-based milk shaken up, or even just water. Here is another blender recipe for at least 4-5 days of the week using the following easy recipe:
 - 1 serving of Juice Plus+® Complete
 - 1/3 cup of organic flax seeds ground up
 - 2-3 servings of fruit (1/2 cup blueberries, pineapple with core, etc.)
 - Add either reverse osmosis filtered water, coconut water juices, or non-dairy milks (e.g. low fat/no added sugar or flavors - oat milk, soy milk, almond milk, hemp milk) to desired consistency
 - 3-4 leaves of kale or other leafy greens



Mix thoroughly in a good blender, food processor, or Vita-mixer (you don't need to pre-grind flax seeds if you have a Vitamixer)

Another alternative is to use all the above ingredients except the greens, and mix into muesli or other whole grain cereals for breakfast.

6. Eat at least 5 fruits and 5 vegetables a day, preferably raw. Salads are the easiest way to do this. In fact I highly recommend that over 90% of your calories come from plants. Did you know that most green vegetables have more protein, more bio-available iron, calcium and other minerals than steak or dairy? Did you know that there is no such thing as lean meat (chicken, fish, eggs, red meat, dairy, etc all have too much fat and cholesterol)? If you want to grow a healthy baby and not gain excess body weight in the process, stick to lots of fruits, veggies and whole grains such as quinoa, brown rice, red rice, millet, oats. Try not to use oils in your cooking or even in your salad such as olive oil. Try sautéing your onions, mushrooms, etc in water or low sodium vegetable stock. It works.
7. Be sure to get your sunshine (direct on your arms and legs for 20 minutes whenever you can) which is the best way for the body to make Vitamin D. Recent studies with vitamin D (which is a misnomer from the old days as it is really a hormone and not a vitamin) show that women should be concerned with their vitamin D levels before, during and after pregnancy. Vitamin D deficiency in pregnancy can cause permanent injuries to fetal brains. Get your 25(OH)D levels checked every 3 months, especially if you live in areas with little sunshine, to see if you need additional D3 supplementation. You may need to take 10,000 – 15,000 IUs a day unless you are in the sun daily!
8. Some doctors advice people who are on a strict plant-based diet to take 5 micrograms of B12 during pregnancy – this may be a good precaution, unless you are eating lots of organic carrot, beets and tubers and allowing a little dirt to get into your system.
9. Walk briskly 3-5 times a week for 30-60 minutes.
10. Do pre-natal yoga 3-5 times a week. I prefer Kundalini style during pregnancy and Hatha yoga for recovery.



Feeding children:

I have had two very healthy natural childbirths. I introduced capsules into my daughters' diets once they started solid food by sprinkling a part of a capsule into their meals (1/3 capsule per 10 lbs. of body weight). Teaching them to drink water is an ongoing activity, and a very important one. Staying hydrated once they stop drinking breast-milk as their main source on nutrition is an issue.

Breastfeeding is the best option for the first two years. Most pediatricians are not well trained in nutrition, and don't always have the healthiest advice when it comes to feeding babies and young children. Many women are discouraged early on because breastfeeding can be difficult to establish. They may encounter challenges along the way, and are then encouraged by their pediatrician (or well-meaning friends and family) to stop breastfeeding and introduce soy or dairy-based formula. If you are having a difficult time establishing a milk supply, getting your baby to adequately latch, or with any pain or discomfort, consult sources such as Le Leche League (<http://www.llli.org/>) before giving up on breastfeeding. There are local chapters with leaders who are well-trained and eager to help.

Goat milk may be a last resort option in the first two years if breast feeding is impossible due to another impending pregnancy while breastfeeding. After the first two years, the baby can make their own cholesterol and there should be no need for any milk or animal products in their diet. The mother never needs dietary cholesterol during pregnancy or breastfeeding, so there is never a need for the mother to eat animal products.

The most important thing you can do for your kids is to not give them refined foods or animal products. Avoid sodas, cookies, crackers, processed foods such as macaroni and cheese products or hotdogs and lunch meats. This will also eliminate food colors and flavor enhancers. Also avoid all products with hydrogenated oil. Introduce them early to a plant-based diet. A child's biggest exposure to antibiotics, dangerous microbes, animal fat, cancer-causing animal protein, and artery-clogging saturated fat and cholesterol is animal products. Even if it is hard for you to change, give your kids a head start in life. Good eating habits are so important to establish early as it changes taste preferences for life. Soy and children – no harm with soy formula

http://www.cdc.gov/biomonitoring/Phytoestrogens_BiomonitoringSummary.html





Books and other resources

Even though these aren't on pregnancy, they are about optimal nutrition, which is ideally what we want to practice during pregnancy:

- *Do You Have the Guts to Be Beautiful?* by Mitra Ray, Ph.D. and Jennifer Daniels, M.D.
- *The China Study* by T. Colin Campbell
- *Forks Over Knives* the movie and accompanying book of recipes.
- *Eat to Live* (and other books and DVDs) by Dr. Joel Furman
- *Prevent and Reverse Heart Disease* by Dr. Caldwell B. Esselstyn, Jr.
- www.nealbarnard.org Dr. Neal Bernard (President of Physicians Committee for Responsible Medicine). He also has loads of books and DVDs
- www.drjohnmcdougal.com Dr. John McDougall has loads of great books, DVDs and excellent free e-newsletter.
- www.RAVEdiet.com Book and DVD are pretty straight to the point. Book has loads of recipes.



Sample Menus and Meal Suggestions

(there are more in the T30 customer guide)

Breakfast ideas

- Green Drink as described in my book *Do You Have the Guts to Be Beautiful?*
- Fruit bowl
- Whole grain cereal (avoid gluten/wheat)- try with a variety of fruit/berries, Juice Plus+® Complete, and plant-based milk (oat milk, rice milk, almond milk, soy milk) and ground up flax seeds
- Herbal tea

Lunch ideas

- Veggie sandwich on whole meal bread (e.g. avocado, tomato, cucumber, hummus, leafy greens)
- Falafel, hummus and veggies
- Last night's leftover dinner

Dinner ideas

- Steamed or baked veggies
- Large salad with one pot leftovers from previous dinners as dressing
- One pot dishes: throw together some beans, whole grains, and your favorite spices and water; cook until grains and beans are done, and throw in cut up veggies for last 5 min.

Possible grains: quinoa, millet, brown rice, or any other rice that is not white rice preferably



Possible veggies to chop up: eggplant/aubergine, zucchini/courgette, mushrooms, beans, carrots, celery, sweet potato, beets, corn, peas, etc.

Beans: Can buy dry beans and soak overnight



IBS, colitis, digestive issues



Athlete/Body Builders



Diabetes