

Certified Fertility Counselor Course-Session 9- How to help fertility in both men and women through the use of foods and dietary changes

Lifestyle

Lifestyle choices have almost everything to do with fertility, and how your body reacts to foods, dietary changes, chemicals, and environmental factors. Unfortunately most are unaware of certain foods that can help fertility or even damage fertility. There are certain enzymes in foods that help break down food in the digestive system, causing hormones to work as they should.



Changing a lifestyle completely takes hard work and dedication, especially if the body is not used to eating and living a healthy lifestyle. It's common knowledge that what you eat and how you live affects the health of your heart, blood vessels, your eyesight, and the strength of your bones. It only makes sense that diet and health affect the ability to get pregnant and stay pregnant. Several studies in the Nurses' Health journal shows that what you eat, how active you are, and other lifestyle choices can go in your favor for reproductive health, especially if there is any trouble with fertility.

Unfortunately millions and millions of dollars have been spent developing and perfecting reproductive technologies, and most of the time no attention is paid to the connection between diet and fertility.

These nine simple lifestyle changes for women with ovulation related infertility are;

1. Avoid trans fats, those artery clogging fats found in commercial products or fast foods.
2. Use more unsaturated vegetable oils, such as olive oil or canola oil.
3. Eat more vegetable protein, like beans, nuts, and less animal protein.
4. Choose whole grains other than sources of carbohydrates that have lower, slower effects on blood sugar and insulin rather than highly refined carbohydrates that quickly boost blood sugar and insulin.
5. Take a raw food multivitamin that contains folic acid and other natural B vitamins.
6. Get plenty of iron from fruits, vegetables, beans and supplements but not from red meats.
7. Beverages, water is a great source, however coffee/tea/and alcohol are okay just in moderation (leave Sodas out).
8. Aim for a healthy weight and BMI. If overweight, just losing between 5 and 10 percent of your weight can jump start ovulation.
9. Get physically active, start a daily exercise plan. Don't overdo it, especially if you are lean- too much exercise can work against conceiving.

Healthy eating used to be so simple, it seems that if you ate- you were healthy and if you didn't, you weren't. Although now healthy eating is no longer straight forward, it isn't enough just to get the calories you need to power your body, give it energy, build it and repair it. But, because foods that supply these calories govern the health of your heart, influence whether or not you will develop cancer, or determine if you end up with osteoporosis, age-related memory loss, or a host of other chronic conditions, it makes you wonder which foods and nutrients are the best?

Everyone knows that carbohydrates provide fuel and energy for the body, but what are the right kinds? Those in whole fruits, vegetables, whole grains and beans, are excellent sources of carbohydrates and cutting back on highly refined and processed grains can reduce chances of having a heart attack or stroke, type 2 diabetes, and some forms of cancer. In a Nurses' Health Study, women who had never had a child and whose diets were poor in whole grains and other sources of good carbohydrates were 55 percent likely to have had trouble with ovulatory infertility than women whose diets included grains that were whole.

Breakdown of the Good and Bad

So what makes one food a better source of carbohydrates than another food choice? One important yardstick is how they affect blood sugar. The body turns bad carbs into blood sugar quickly. The pancreas responds by churning out a lot of insulin, which can drive down blood sugar so fast and so far that the body starts sending out hunger signals. If you reach for more easily digested carbohydrates, the cycle starts all over again. This blood sugar roller coaster can cause cells to become resistant to insulin's open up for sugar signal, forcing the pancreas to constantly make extra insulin. Over the long term, this can wear out the pancreas, leading to type 2 diabetes and result in weight gain.

Oatmeal, beans, vegetables, and other sources of good carbs give up their sugars more reluctantly making for slower gentler rises in blood sugar and insulin with lower peaks. This allows the body to go longer between meals without feeling hungry. Now here is where it goes with fertility, the amount of insulin in circulation influences the amount of sex hormone binding globulin, the protein that cloaks testosterone and estrogen in the blood stream. Because sex hormone binding globulin has a predilection for testosterone over estrogen, less of it in circulation translates into more free and thus active testosterone. Too much active testosterone however can hinder or even halt ovulation.

Fats, the good and bad

Your body needs fat and cholesterol too, but the right kinds. Fat provides energy and padding, cholesterol gives the body the raw materials it needs for cell membranes, the skin surrounding each cell that controls what gets in and what gets out. It is also used to build the sheath that surrounds and protects nerves, vitamin D, sex hormones, and families of important cell signaling molecules.

Too much of the wrong kind of fat and too much cholesterol in the diet can cause problems. The biggest worry is atherosclerosis, which is the narrowing and stiffening of blood vessels throughout the body. This problem which afflicts most Americans, occurs when LDL (bad) cholesterol accumulates in patches along the inside of artery walls.

Some fats are good for the body and some aren't. Monounsaturated and polyunsaturated fats are utterly good for you. Saturated fats in moderation are “okay”, but too much saturated fat isn't good for long term health. Trans fats pose a special hazard to long term health and fertility.

Mono- and Polyunsaturated fats have a host of healthful effects in the body. Eating them instead of saturated fats or rapidly digested carbohydrates like white rice, white bread, and potatoes is good for the heart and arteries. They lower LDL cholesterol without also lowering HDL (good) cholesterol, keep blood from clotting too readily inside arteries. Unsaturated fats are also important for healthy reproduction, by helping the body control blood sugar and calm inflammation, which can improve chances on getting pregnant.

One type of polyunsaturated fat that is beneficial is omega-3. Omega-3s are most abundant in fatty fish, walnuts and flax-seeds. The human body cannot make these fats from scratch, so it needs to come in food, to help provide building blocks for cells and hormones.

Good sources of monosaturated fats include olive, canola, and other liquid vegetable oils, nuts and seeds, avocados, and fatty cold water fish such as salmon or herring.

Ah, but what about Saturated fats? These aren't health builders like their unsaturated cousins. Instead they are closely connected with how much harmful LDL (bad) is in your bloodstream and lodges in the arteries. Limiting the intake of saturated fat is great, or even avoiding is better, for instance red meat and animal fats. Whole milk and full fat dairy products are prime sources of saturated fat. Normally these would be on the “once in a while” list, but if one is trying to get pregnant a daily serving or two of whole milk or other full fat dairy foods work against ovulatory infertility.

Trans fats are great for the food industry and horrible for the arteries. Most trans fat in our food comes from chemical plants rather than green plants. It's a by-product of converting liquid vegetable oil into a solid or semisolid by heating it and bubbling the hydrogen through it. In restaurant deep fryers it can be used over and over again without breaking down, and it's low cost.

The trans fat that ends up in partially hydrogenated oils actually boosts LDL (bad) cholesterol as much as saturated fat does. At the same time it also depresses protective HDL (good) cholesterol. Trans fat has unhealthy effects on triglycerides, the main form of fat in the bloodstream. It makes blood more likely to form clots inside arteries which can lead to heart attacks or stroke. It feeds off inflammation.

Trans fat can even have a negative effect in ovulation and conception. The more trans fat in the diet, the greater the chances of ovulatory infertility. There really isn't a safe level of daily trans fat intake. The latest Dietary Guidelines for Americans recommends getting no more than two grams per day, aiming really for zero a day is better.

Carbohydrates and their affect on fertility

The most common cause of infertility in women is PCOS (polycystic ovarian syndrome). Many women with PCOS have insulin resistance, a breakdown of cells' ability to respond to insulin. The resulting high levels of blood sugar and insulin underlie many of the hormonal disturbances of PCOS. They have also been implicated in the infertility that routinely accompanies PCOS.

But the problem of insulin resistance and high blood sugar isn't confined to women with this syndrome. A study in 1999 from Denmark showed that the combination can impair fertility in apparently healthy women as well. In the study, which included 165 couples planning to conceive, researchers looked at hemoglobin A also known as glycosylated hemoglobin, in the bloodstream. It is a measure of average blood sugar levels over the preceding three to four months. Women with high but still normal levels of hemoglobin A were only half as likely to conceive over the six month study as those with low normal levels.

Knowing that diet can strongly influence blood sugar and insulin, carbohydrate choices also influence fertility in average healthy women. This is why it's important to know which foods to eat and which foods to limit, and even which ones to stay away from when trying to conceive.

Taking a look at foods

For the men, specific nutrients can actually boost sperm count, benefit the shape and movement of sperm, and it can all be found in foods. Following the nutrients, let's take a look at which foods can help boost the boys.

Vitamin B has an important role in a process called methylation to DNA. This process ensures proper division of genetic material including sperm. A 2003 study found that Vitamin B deficiency reduced the speed of sperm by 20 to 40 percent and increased the number of abnormal sperm. Another study found that free radicals have damaging effects to the morphology and motility of sperm. In food Vitamin B can be found in Fish- clams, salmon, tuna, yogurt, and milk.

Folate like vitamin B plays an important role in DNA division. A 2001 study found that folate levels are correlated significantly with sperm density and total sperm count. The study showed that folate and zinc supplementation in men increased sperm count by 74 percent. In food, Folate can be found in black-eyed peas, cooked spinach, beans, wheat germ, orange juice, peas, cooked broccoli, avocados, and peanuts.

Vitamin C, antioxidants by way of reducing the damage free radicals cause to DNA and tissue has been found to benefit sperm count, motility and morphology. Vitamin C is thought to reduce DNA fragmentation or genetic damage to sperm cells known to compromise male fertility. Vitamin C can be found in a lot of foods, such as medium oranges, medium grapefruit, blueberries, strawberries, mangoes, papayas, cantaloupe, green papers, sweet potatoes, watermelons, and red peppers.

Vitamin E, a fat soluble antioxidant, vitamin E helps protect DNA from free radical damage. A 2005 study found that vitamin E in the diet is associated with both sperm count and motility. Vitamin E can be found in wheat germ oil, almonds, sunflower seeds, hazelnuts, peanuts, mangoes, broccoli, spinach and kiwis.

Beta-Carotene, like vitamin E is a potent fat soluble antioxidant that helps prevent damage to DNA. Eating beta-Carotene rich foods can give higher sperm concentration and better motility. Beta-Carotene can be found in sweet potatoes, carrots, cantaloupe, squash, apricots, pumpkins, and mangoes.

Zinc, an essential mineral found in just about every cell in the body and is contained within more than two hundred enzymes. Zinc supports normal growth and development during pregnancy, childhood, and adolescence. Studies have shown that zinc levels are lower in infertile men. Zinc can be found in foods such as oysters, baked beans, pecans, cashews, chickpeas, walnuts, chicken, and cheese.

Selenium, although this is a mineral rather than a nutrient, it's a component of antioxidant enzymes. Selenium helps to protect cells against the effects of free radicals produced during normal metabolism. Scientists have found that selenium plays an important role with glutathione in producing the correct architecture of sperm for fertility. Selenium can be found in foods such as Brazil nuts, tuna, turkey, chicken, noodles, oatmeal and cod.

Glutathione, which is a cellular antioxidant and detoxifying system. This system helps to prevent free radical damage as well as maintain the integrity of male and female sex cells, both important to fertility. Together with selenium, glutathione helps to develop the architecture of sperm. Glutathione can be found in avocados, tomatoes, strawberries, and watermelon.

Omega-3 fatty acids, specifically docosahexaenoic acid (DHA) is a major polyunsaturated fatty acid in human sperm. This PUFA is an important factor in preserving the integrity of DNA and also in how long sperm are motile. Omega-3's can be found in foods like flax seed, walnuts, salmon, tuna and other cold water fish.

Synergy of foods

Each fruit, vegetable, legume or grain like a team player in a symphony adds a nutritional element valuable to protecting health, and boosting fertility. Some people are under the assumption that the cost of bad diet can be offset by taking nutritional supplements- no this is not the case. Many phytonutrients have yet to be identified. In addition, other elements such as fiber and good fats aren't in supplements, so the body ends up fighting the battle against infertility with the wrong weapons. So how do all these foods work together to create synergy?

There are approximately 25,000 unique phytonutrients in hundreds of different types of plant foods. Through research, it is shown that by combining these foods the bioactive compounds work together "synergistically" to increase health benefits. So for example when oranges, apples, grapes, and blueberries were tested both alone and together, the antioxidant activity was 5 times lower for the individual fruit than that of the combined fruit "salad"

Although particular groups of fruits and vegetables have been found to be especially protective for balancing blood sugar such as legumes, research has concluded that achieving and preventing disease are best achieved by food synergy. While there are so many phytonutrients that play a role in fertility, they don't need to be memorized to get the benefits.

Starting with A-Z here is your Fertility Boosting Team

Balance blood sugar, achieve conception and healthy weight. These lists of foods will be broken down to how they can help fertility.

Apples- The quercetin found in the peel of apples helps reduce inflammatory cytokines and protect the insulin secreting cells of the pancreas. Apples also provide sugar balancing soluble fiber called pectin that helps reduce cholesterol.

Apricots- The yellow color of apricots is due to carotenoids that have been found to have an inverse relation to fasting serum insulin.

Artichokes- Provide large amount of fiber (6.5grams) and folate (61.2mcg)

Asparagus- Provides glutathione, an antioxidant compound that helps keep blood sugar stable and regulate blood pressure.

Avocados- Classified as a super food and beneficial for PCOS. These are a unique fruit and concentrated source of nutrients. Supply the heart healthy monounsaturated fat and vitamin B6, magnesium to bolster insulin function and glutathione for antioxidant protection.

Barely- Gluten grain but should be avoided for those with gluten sensitivity. Helps to balance blood sugar and fight free radicals with its tocotrienols (a form of vitamin E).

Beans- Great source of protein and a low GI food. Beans provide a bevy of phytonutrients to boost fertility, promote a healthy weight and protect the heart. Beans are filled with phytoestrogens, insoluble fiber, calcium, and folate.

Blueberries- Great source of antioxidants, provide anthocyanins that have a beneficial effects on fat cells and help reduce inflammatory cytokines.

Broccoli- Contains quercetin which is a flavonoid found to help reduce inflammatory cytokines and protect insulin secreting cells, plus baby boosting folate, vitamin C, and vitamin B.

Buckwheat- A great source of phytonutrients, also helps stabilize blood sugar and reduce inflammation.

Canola oil- Contains the lowest level of saturated fat of any other oil. Provides fertility friendly fat, including omega-3 fatty acids, which reduce inflammation, increase the flow of blood to the uterus, and boost brain power.

Cantaloupes- The orange color of the juicy melon provides carotenoids that act as antioxidants and benefit insulin function, plus vitamin C, folate, and vitamin B.

Carrots- Full of carotenoids, those antioxidant compounds that help keep insulin in check and protect the heart.

Cherries- A huge abundance of antioxidant flavonoids and anthocyanins that help to reduce the inflammatory cytokines that contribute to insulin resistance and PCOS.

Cranberries- Have an ability to reduce incidence of bladder infections. Contains inflammation reducing anthocyanins, and contain oxalic acid.

Eggplants- Contains anthocyanins to reduce inflammation, a great alternative to meat dishes.

Flaxseed- This tiny seed provides essential omega3 fatty acids to help stabilize blood sugar and helps promote fertility. It's best though to consume flax in ground form because whole seeds are difficult for the body to digest- therefore you won't reap the health benefits.

Garlic- Delivers blood sugar balancing, and inflammation reducing phytonutrients including quercetin, allicin, and sulfides. Garlic also can keep away the flu.

Ginger- Compounds in ginger called gingerols have been found to improve insulin sensitivity and is also an old remedy for nausea.

Grapefruit- Has been purported as a weight-loss aid. Providing heart-helping flavonoids and cholesterol-lowering pectin, grapefruits fall on the low end of the GI scale (which is great for those with PCOS to eat one each morning with breakfast as a superfood), making it a great choice to control weight and blood sugar levels.

Lemons- Abundance of vitamin C, free radical fighting vitamin C, and fall low on the GI scale as well.

Lentils- Phytoestrogens and fiber team up to make these high protein morsels perfect for reducing blood sugar and achieving healthy weight.

Mangoes- High in antioxidants including vitamins C and E, plus carotenoids to help keep insulin in check.

Nuts- More than 300 types of nuts actually exist, but most commonly are cashews, chestnuts, coconuts, hazelnuts, Brazil nuts, almonds, pecans, walnuts, pistachios, peanuts, macadamia, pine nuts and hickory nuts. All full of protein and minerals, packed with healthy fats, balancing blood sugar and increasing fertility.

Oats- Rich in protein and have an ability to reduce total and LDL cholesterol. Oats also contain tocotrienol, selenium, beta-glucan, and phytates to help keep blood sugar levels even.

Olive Oil- Heart healthy monounsaturated oil, rich in phenolic compounds and oleic acid which benefits the heart. The deeper the color, the more intense the phytonutrients.

Onions- Inflammation reducing and blood sugar balancing sulfur compound and quercetin.

Oranges- A low GI food, oranges provide flavonoids, carotenoids, glutathione, and folate which help reduce inflammation and boost fertility.

Peaches- Provides flavonoids, carotenoids, and vitamin C. Protects against free radicals and helps keep blood sugar even.

Peppers- Europeans in the 1600's used these to cure digestive issues and ulcers. However modern medicine has shown that peppers contain numerous compounds that have beneficial effects on the digestive system. Along with Vitamin C, folate, and magnesium, red peppers also give a great dose of lycopene.

Pomegranates- Recently a new study discovered that this fruit has been associated with improving the quality of eggs in women, as well as abundance and prosperity. Promoting fertility. These provide a great dose of fiber plus anthocyanins to help reduce inflammatory cytokines.

Pumpkin- A great source of carotenoids, and beneficial for boosting fertility.

Raspberries- Antioxidant rich berries provide flavonoids, folate, and vitamin C

Rice- Contains B vitamins, including B6 which helps to reduce levels of heart harming homocysteine, as well as magnesium and thiamin, important for insulin function. Those who suffer from luteal phase defects, this would be beneficial to eat throughout a menstrual cycle.

Soybeans- Because soy is the easiest bean to genetically modify, it's best to eat soy with caution. Natural soy beans provide phytoestrogens to keep blood sugar in check, and iron. A great source of protein and can help with ovulatory infertility.

Spinach- Contains carotenoids, folate, magnesium, iron, and calcium to support fertility. This green native leaf of Asia is one of the best fertility boosters.

Strawberries- Boost lycopene as one phytonutrient in their disease fighting arsenal. A great superfood to combine with other fruits to gain more benefits.

Tomatoes- Most known for their lycopene, these help protect the heart by reducing oxidation of LDL cholesterol. Cooking tomatoes helps to unlock lycopene, a fat soluble nutrient.

Wheat- Unfortunately wheat has been modified too much. Although if you find natural wheat, which is defined in the words "WHOLE GRAIN", whole grain products have not been refined or stripped of their nutritious germ bran layers- which helps stabilize blood sugar and fight inflammation.

Eating for Certain obstacles of fertility

There are certain obstacles that can affect ones fertility, often times it's a simple fix of the diet and lifestyle changes to help the particular obstacle. There are however some, like endometriosis that cannot be a simple fix, although there are certain foods that can help.

Candida, a natural occurring fungus (yeast infections). This contributes to infertility by housing antibodies that affect the ovary and by causing hormone imbalance and endometriosis. Garlic is effective against candida.

Endometriosis, a painful disease that affects 30% of infertile women. Women who have endometriosis should increase their consumption of kelp and wheat germ. Endometriosis has been linked to thyroid disorders and kelp is a great source to help. The vitamin E in wheat germ will help the healing of scar tissue caused by internal endometrial bleeding. It is also beneficial to indulge in antioxidants such as sweet potatoes, yams, apricots, cantaloupes, carrots, spinach, and broccoli.

Endometrium lining needs to be healthy, so to ensure this the diet must be adequate in vitamin A, and because vitamin E enhances the effect of vitamin A, and selenium works synergistically with vitamin E, all nutrients should be consumed. Eating more cruciferous vegetables, nuts, cantaloupe, asparagus, yams, spinach, and tomatoes, nuts, garlic, alfalfa, kelp, seeds. Bioflavonoids also promote healthy lining. Eating more citrus fruit and rinds can help.

Estrogen/Progesterone Balance is essential to ovulation, and conception. Too much estrogen can sometimes be regulated by a vigorous program of exercise. Obesity can also cause elevated estrogen levels. Dietary fiber in B6 vitamin rich foods (tofu, whole grains, kelp, walnuts, and wheat germ) can also reduce estrogen levels. Insufficient estrogen can be counteracted by increasing PABA, which stimulates the pituitary gland into increasing estrogen production.

Progesterone production can also be affected if prostaglandin impairs the functioning of the corpus luteum. Avoid arachidonic acid, found in animal fat. Eating yams in the first half of the menstrual cycle for some whom has had an insufficient progesterone production.

Hypothyroidism- Kelp has high iodine content and is one of the best for hypothyroidism. Many people ingest enough iodine in their diet through the consumption of iodized salt, however if a person avoids processed foods and does not salt foods, neither which contain added iodine, then kelp can fulfill this need. Those with hypothyroidism may want to limit or avoid foods that inhibit the absorption of iodine in the system. (Such as peanuts, pine nuts, cabbage, mustard and turnips). Almonds and wheat germ are also helpful against hypothyroidism, since they contain dietary sources of vitamin B2 (riboflavin) a deficiency linked to hypothyroidism. Avoid dried fruit, processed potatoes, shrimp and wine (those will destroy riboflavin).

Luteal Phase Defect can be helped by eating yams in the first part of the menstrual cycle, increasing the consumption of foods rich in vitamin B6, like tofu, kelp, whole grains, walnuts and wheat germ will help.

Elevated prolactin levels, can be caused by a prolactin-microadenoma, a small benign tumor in the pituitary gland. Other things that can rise prolactin levels are alcohol, large consumptions of protein, antidepressants, headache medicine, painkillers, hallucinogens, and aspartame. High levels will cause a short luteal phase, inhibit ovulation and cause infertility. Vitamin B6 (in whole grains, soybeans, kelp, whole grains, and wheat germ) protect against elevated serum prolactin levels.

For sperm counts, motility and morphology, it's best to stick with olive and sesame oil, cottonseed oil has been linked to a decrease in sperm production. Vitamin C is beneficial to both sperm count, motility, and morphology. As well as for men who have sperm clumping. Garlic, whole grains and nuts are also helpful.

The Change

The practical matter of actually obtaining the right foods is often the difference between whether or not we implement our nutritional goals. When nutritious ingredients have completely replaced refined foods in your home, it's easy to use them in the same meals you have always served. Once your home contains no junk food, you can snack healthfully on whatever you choose from the refrigerator.



Replacing light green vegetables with dark green is beneficial, instead of canned soups- replace with homemade soups, instead of white or “wheat” bread- replace with 100% whole grain bread. And instead of white potatoes, replace with sweet potatoes/acorn squash/butternut squash or turnips.

Supplements cannot compensate for a low-fiber, sugar laden or fatty diet. This is why it's important to keep a diet that is full of greens and fruits.

CERTIFIED FERTILITY COUNSELOR COURSE - SESSION 9 – QUESTION & ANSWERS

NAME: _____

ADDRESS: _____

PHONE: _____

FAX: _____

E-MAIL: _____

Please be sure to fill out the information above, complete the test and e-mail it back to us at myeggandme@amandabears.com. We will grade your question & answer session and will let you know if we have any questions or concerns.

1. How can changing a lifestyle help fertility?
2. Name ten simple lifestyle changes women can make for ovulatory related issues.
3. What does the body turn bad carbohydrates into?
4. What are mono-and polyunsaturated fats?
5. What are synergistic foods?
6. Name four foods that have Vitamin C, and four for Folate, and four for vitamin B.
7. Name 8 foods, and their benefits from the Fertility Boosting Team.
8. What foods can help the lining of the uterus?
9. Name foods that can help with endometriosis
10. What foods can help balance estrogen and progesterone?
11. There are _____ unique phytonutrients.
12. What five foods can help reduce inflammatory cytokines.
13. What foods are great for the low GI scale?
14. If you were to put together a Fertility smoothie, what would it consist of?