

Foods for Conception – How Nutrition Can Impact Fertility

By Lauren Weiss DC, CCN

Introduction by Laurence A. Jacobs, MD

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This is the third article in our series on Fitness & Fertility. The first article (Fertility Today Winter 2007) “Fitness Misconceptions, A Fitness Plan & A Big Important Fact to Improve Fertility” featured fitness misconceptions and a fitness plan utilizing the X2 Vest. The second article (Fertility Today Spring 2007) “Weight Loss and Conditioning Improve Fertility” outlined the negative impact of Insulin resistance and obesity on fertility. It also focused on the increased pregnancy complications. For women with PCOS and/or obesity, as little as a 5-10% weight loss can significantly increase pregnancy rates.

The current article by Lauren Weiss DC, CCN, Clinical Nutritionist at Pulling Down the Moon, (www.pullingdownthemoon.com) highlights the importance of proper nutrition, in addition to weight reduction and exercise, as part of the overall plan to improve pregnancy rates in obese women. ~ L. J.

Nutrition is an extremely important factor in our health. In fact, without a healthy diet, it is very likely that a man or woman will be nutritionally deficient in some manner. Without the proper nutrients, all of the body systems, including the reproductive system, will not work optimally. Although physical defects affecting fertility cannot be assisted by diet, research is showing that when ovulation – an endocrine issue – is a culprit, as it is in 25% of infertility cases, lifestyle can play a role in achieving pregnancy. This is because the endocrine system affects fertility, and what we eat plays a big role in the function of that system.

However, if we eat well, aren't we getting enough vitamins and minerals through our foods alone? The answer is no. Let's take a look at why your diet may be deficient.

So What Are We Eating?

The Standard American Diet: aka SAD

Unfortunately, the dietary habits of most Americans are very poor. It is high in animal fats, unhealthy saturated and hydrogenated fats, low in fiber, high in processed foods, and low in complex carbohydrates and plant-based foods. Next time you go grocery shopping, take a good look at your cart. How many of those foods are actually fresh fruits and vegetables, whole grains, and lean proteins? These are the foods that contain essential vitamins and minerals that are crucial for the body and reproduction.

Not All Foods Are Created Equal

The 1992 Earth Summit statistics indicate that the mineral content of the world's farm and range soil has decreased dramatically during the last 100 years. In fact, in North America alone an estimated 85% of minerals have been depleted from the soil. This is because the same crops are grown over and over again on the same soil. Nitrogen fertilizers and other chemicals blanch the soil and produce large crops with a low nutrient value.

Selenium and zinc are two minerals that could be a man's best friend. Higher intake is associated with higher sperm numbers, morphology and motility. Selenium, for example, comes from food sources such as nuts, meats, and seafood. However the amounts of the mineral are dependent on the selenium-rich soil that the animals feed off of.

Processing is another problem. Processed grains lose their hulls that contain important minerals and nutrients and cooking foods at high temperatures to preserve them destroys fragile enzymes and nutrients. Think about that deliciously healthy "processed" protein bar on the shelf. If you open it up three years from now, it will taste just as delicious as it does today. That's scary. If it doesn't break down on the shelf, it is not going to easily break down in your body, and therefore those nutrients will be unable to be utilized.

Post-Pill Recovery

Many women innocently go on a birth control pill thinking that when they are ready they simply go off and get pregnant. However, this is not necessarily the case. What many doctors and patients don't know is that the body is depleted of essential vitamins and minerals in order to break down this excess hormone. Studies show that B₁, B₂, B₃, B₆, B₁₂, folic acid, magnesium, vitamin C, Zinc and vitamin E levels are all known to decrease while on an oral contraceptive. These nutritional deficiencies may be responsible for problems with menstruation and ovulation when a woman stops taking the pill.

Overfed and Undernourished

When considering all the ways that nutrients could be sneaking out of your diet, it is easy to understand how we can eat lots of food and still not have enough. It is the quality of food, not quantity that is so important. However, what if we are eating too much?

A Weighty Issue

Studies have shown that overweight women are more likely to have ovulation problems that result in irregular or infrequent menstrual cycles and infertility. Obesity also increases the risk for ectopic pregnancies and miscarriage. With medical fertility treatment, success rates are lower in women who are overweight. This may be the result of a lower response rate to fertility medications and a higher percentage of immature eggs. In fact, some physicians now require medical clearance before performing ART procedures on any woman with a Body Mass Index (BMI) greater than 35.

Much of the adverse impact of weight on the menstrual cycle is a result of hormone imbalance. Although most of a woman's estrogen is manufactured in her ovaries, 30% is produced in fat cells by a process that transforms circulating adrenal male hormones into estrogen. Because a

normal hormonal balance is essential for the process of conception, it is not surprising that extreme weight levels, either high or low, can contribute to infertility. The good news is that studies show better nutrition and weight reduction through diet and exercise can produce considerable improvement in the outcome of treatment for fertility in obese women.

Sugar is Not That Sweet For Fertility

The hormone insulin, which is often elevated in the body of overweight women, can also act directly on the ovary. Insulin's primary role in the body is to allow the body to store excess blood sugar in fat cells. With overweight women, more insulin may be produced to regulate the higher blood sugar levels. Because insulin is chemically similar to the ovarian hormones, which help the eggs mature, the ovaries confuse the elevated insulin with their own growth factors and down-regulate the production of reproductive hormones. Therefore, eggs do not fully mature and ovulation is incomplete. For this reason, we tailor our "fertility diet" for overweight women to not only lose weight but normalize blood sugar as well.

Nutrition Tips for Fertility

Whether you are underweight, overweight, or simply could use a nutritional boost to optimize your chances of conception, nutrition should be an important part of your fertility journey. Have a consultation with a nutritionist who specializes in fertility and begin a fitness program tailored to those trying to conceive. There are many things that we do not have control over with our fertility. However, nutrition and fitness are not one of those things.



Laurence A. Jacobs, M.D. completed medical school and his residency in obstetrics and gynecology at Northwestern University, and then completed a two-year fellowship in reproductive endocrinology and infertility at the Mayo Clinic in Rochester, MN in 1988. Since 1995 he has been the Section Head: Division of Reproductive Endocrinology at Lutheran General Hospital, Park Ridge, IL. Dr. Jacobs authored numerous articles for journals and books, and has a monthly column called "Focus on Fertility" in the *Pioneer Press* newspapers. He has been honored as a 'top doctor' by Castle Connolly in all its editions of *America's Top Doctors* and *Chicago's Top Doctors* (2001-2007). *Ladies' Home Journal* chose him as one of America's 'top infertility doctors' in 2002. *Chicago Magazine* chose him as a 'top infertility doctor' in the Chicago area in 2004 and 2006.

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