Are Low-Carbohydrate Diets Healthy for Women? How Do Carbs Affect Fertility and Pregnancy?

Women are the gatekeepers of the next generation. Their bodies handle dietary changes differently than men. For example, women tend to be more sensitive to the stresses of their environment as a way to ensure that a baby isn't brought into an environment that it cannot live in.

This is why it is important for women to pay attention to their menstrual cycles, especially when they make lifestyle changes like eating less or exercising more. If the changes a woman makes are too stressful for her body, then menses are likely to shut down. When this happens, the body is focusing on self-preservation rather than diverting resources to maintain fertility. Maintaining fertility and making a baby are extremely energetically expensive for women, and raising children in a stress-filled, food-scarce environment is going to be too risky for the life of the mother and her child.

Much of the research, however, doesn't consider the differences between men and women, especially the effects that dietary changes have on the menstrual cycle, pregnancy, and child rearing. One specific diet that is gaining attention from many health practitioners and researchers is the low-carbohydrate diet. This diet requires you to limit or eliminate all high carbohydrate foods like grains, legumes, fruits, breads, sweets, pastas, and starchy vegetables from the diet. The goal is to stay below 130 grams of carbohydrates per day to shift the body into fat, burning more fat for fuel and reap all of the benefits that come with it, but does this apply to women as well?

The Most Common Causes of Stress that are Under Your Control

We already know that excess stress will cause fertility issues, but where does the stress come from? Stress can come from the environment, the food you eat, the thoughts you think, your relationships, and the things you do, but in this article, we will focus on a few common stressors that we have control over:

- excess exercise
- chronic emotional stress
- not eating enough calories
- restricting carbs

Each one of these factors can cause an unnecessary amount of stress that tells the brain that the environment is not safe to reproduce in. Reproductive function is then shut down, and the menstrual cycle becomes irregular or may even stop completely.

Becoming Regular Again

In American society, it can be difficult to feel at peace with yourself. Emotional triggers are lurking around every corner and the overly-simplistic health advice to exercise more and eat less has led many down a path of hormonal problems and other health issues. This is the unfortunate state of reality for many women, but it doesn’t mean that you can’t be healthy and happy regardless of what comes your way.

The path to taking back your health starts by listening to your body. An irregular or “heavy” menstrual cycle should be taken as a sign that something is off, and if your cycle stops

completely, it is time to take note of what has changed in your life that could causing the stress instead of looking for ill-advised health advice.

Here are some simple ways to mitigate the stressors that may be causing fertility issues:

- Make sure you are eating enough so that you are full for at least 3 hours after the meal
- Exercise in a way that energizes you rather than destroys you
- Use meditation, breathing techniques, and cognitive behavioral therapy to relieve emotional stress
- Try stress-relieving herbal remedies

These suggestions, however, do not address one of the most sneaky causes of fertility issues in women – carbohydrate restriction.

The Menstrual Cycle on a Low-Carbohydrate Diet

Low blood sugar – which can be caused by the restriction of carbohydrates – will create a stress response in the body, and women tend to be much more sensitive to these shortages of energy. This is because women's fertility depends on thyroid function and thyroid function relies on insulin (a blood sugar-lowering hormone) and glycogen (the storage form of sugar that is found in muscles and the liver).

On a low-carbohydrate diet, our insulin and glycogen levels will decline, which will slow down our thyroid hormone production. Impaired thyroid function will cause the hormones that start and maintain the menstrual cycle to decrease as well. If carbohydrates are restricted and thyroid function is poor, it can lead to amenorrhea, which is the term for when a

woman has no menstrual cycle for 3 or more months.

Low-carbohydrate diets also cause lower leptin levels. Leptin is a hormone produced by fat cells that regulates appetite in men and women. Studies that were done on women, however, suggest that low levels of leptin can also cause irregular menstruation.

How often low-carbohydrate diets actually cause menstrual problems is unclear. One study, in particular, had 20 teenage girls eat a ketogenic diet (the lowest of low-carbohydrate diets) for 6 months. During this study, 45% of the girls experienced menstrual problems and 6 of them experienced amenorrhea. This suggests that menstrual irregularities may not be so irregular for women on a low-carbohydrate diet.

If your diet is causing menstrual cycle irregularities then it is best to increase carbohydrate intake until the menstrual cycle is back to normal. Experts suggest that women should consume around 75 to 150 grams of carbohydrates per day – an amount that may still be low enough to get all of the benefits of a low-carbohydrate diet.

What About Low-Carbohydrate Diets During Pregnancy?

After understanding how important carbohydrates are in keeping a woman’s menstrual cycle normal, it is reasonable to think that restricting carbohydrates during pregnancy will cause issues as well. Studies suggest that this theory is true.

One study concluded that a low-carbohydrate, high-protein diet during late pregnancy may program the child to have higher than normal levels of cortisol throughout his or her life. This can lead to a greater incidence of depression, disease, and obesity. Another important finding from this study is that

meat consumption consisting of around one pound of red meat per day during pregnancy can also cause health issues for the child. Other studies that were done on pregnant mice found that the ketogenic diet created many organ irregularities like a smaller brain and larger heart. It is uncertain if this effect will carry over to humans, but it is probably best not to try and find out.

Although the literature is scarce when it comes to the effects of low-carbohydrate diets on pregnancy, it is a good idea for pregnant women to increase their carbohydrate intake during pregnancy. The Institute of Medicine recommends a minimum of 175 grams of carbohydrates per day during pregnancy.

The Take-Away for Women

In general, stress causes menstrual cycle irregularities, which is a sign of infertility. Emotional stress, over-exercising, calorie restriction, and carbohydrate restriction are the common causes of menstrual cycle irregularities that we have the most control over. Eating meals that leave you feeling full and fulfilled for hours, exercising in ways that leave you feeling energized, and mitigating stress with meditation, breathing, cognitive behavioral therapy, and adaptogenic herbs should get your menstrual cycle back on track. If these suggestions don’t work, however, you may find the cure in increasing your carbohydrates. (This not an excuse to eat more processed junk food.)

If carbohydrate consumption is too low then it will cause hormonal changes that lead to menstrual cycle irregularities. This is why it is important for women to eat enough carbohydrates to ensure a normal menstrual cycle (75 to 150 grams of carbohydrate per day). A pregnant woman and her child may benefit from a slightly higher carbohydrate intake than normal. A minimum carbohydrate consumption of 175 grams per day is suggested for healthy child development during

pregnancy.

But before closing this article and grabbing the nearest starchy snack, it is important to know where you should get your carbohydrates from. If you source your carbohydrates from processed foods like candy, cookies, and potato chips, then you will cause even more stress to your body in another way that will lead to health problems other than infertility. It is important to get your carbohydrates from high-quality whole food sources. For example, your main source of carbohydrates should be from starchy vegetables like sweet potatoes, peas, or squash and (soaked and sprouted) legumes like black beans and lentils. Fruit is also a good source of carbohydrates, but it is best to limit fruit consumption.

This article is meant to serve as a guideline that can point you in the right direction if you are confused. Some women will be able to eat a ketogenic diet without problems, while others can’t go below 15o grams of grams of carbohydrates without having issues with their thyroid gland and menstrual cycle. In general, you will be healthy, fertile, and lose weight if you increase your intake of non-starchy vegetables and herbs, decrease your consumption of high carbohydrate and low fiber foods like fruit juices and sweets, and mitigate other forms of stress by using meditation and breathing techniques.

Recommended Reading:

- *Galactagogues Foods, Herbs, and other Ways to Increase Breast Milk Production*
- *New Study Suggests Women Could, and Maybe Should, Eat While In Labor*
- *Shaken Baby Syndrome – Child Abuse or Vaccine Injury?*
- *Considering Home Birth*
- *SIDS and SUID*

Sources:

- *Do Very Low-Carb Diets Mess Up Some Women's Hormones?* – Authority Nutrition
- *Effects of a ketogenic diet during pregnancy on embryonic growth in the mouse – NCBI*
- Dietary Reference Intakes: Macronutrients– National Academies
- Maternal consumption of a high-meat, low-carbohydrate diet in late pregnancy: relation to adult cortisol concentrations in the offspring – NCBI
- Is a Low-Carb Diet Ruining Your Health? – Chris Kresser
- Roles of ghrelin and leptin in the control of reproductive function. – NCBI
- Functional hypothalamic amenorrhea and its influence on women's health – NCBI
- Hypercortisolemia and Depression – Research Gate
- Effects of Physiological Hypercortisolemia on the Regulation of Lipolysis in Subcutaneous Adipose Tissue – JCEM
- Hypercortisolemia and Infection – Infectious Disease Clinics
- *What causes amenorrhea?* – NIH