

PCOS Diet

Polyunsaturated Fatty Acids (PUFAs):

Polyunsaturated fatty acids (PUFAs) may reduce inflammation, which may improve reproductive outcomes. Essential PUFAs are fatty acids that are not synthesized by the body and must be obtained from the diet. These include linoleic acid (LA), an omega-6 fatty acid, and α -linoleic acid (ALA), an omega-3 fatty acid. Long-chain omega-3 fatty acids, including eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), have anti-inflammatory effects, and there are data to support that dietary supplementation of these fatty acids reduce the risk of cardiovascular disease. A study demonstrated that among overweight and obese women undergoing IVF, women with higher intake of omega-6 PUFAs and linoleic acid had greater pregnancy rates.

Carbohydrates:

Women with higher total carbohydrate intake and a higher dietary glycemic load are at an increased risk of ovulatory infertility. Diets with a lower glycemic index are associated with lower serum concentrations of inflammatory markers. It is recommended to increase whole grain intake and avoid refined carbohydrates. Examples of whole grain foods include steel cut oats, brown rice, and quinoa. A study of women undergoing IVF showed that higher pretreatment whole grain intake is associated with a higher live birth rate.

Fats:

A higher intake of trans fats is associated with an increased risk of ovulatory infertility. Hydrogenated oils are a type of trans fats, so it is best to eliminate those from the diet as well. Dietary consumption of trans fat is associated with insulin resistance and a pro-inflammatory state.

On the contrary, omega-3 fatty acid intake is associated with a lower risk of coronary heart disease, another condition associated with chronic inflammation. Long-chain omega-3 supplementation improves metabolic and hormonal profiles in women with PCOS.

Proteins:

Replacing animal protein with protein from vegetable sources is associated with a lower risk of ovulatory infertility. Beef and chicken are a source of high levels of arachidonic acid, which is a pro-inflammatory fatty acid. Women who eat beef and chicken should be advised to replace it at times with fatty fish like salmon because it is a good source of protein and contains potentially beneficial omega-3 fatty acids.

Micronutrients:

Data show that higher dietary folate intake is associated with higher fertilization rates and lower cycle failure before embryo transfer in women undergoing IVF. It is recommended to take at least 800 mcg daily. It has been shown that women with higher serum concentrations of folate and vitamin B12 are more likely to have a live birth rate after IVF than women with lower serum levels of these micronutrients.

Exercise:

In the setting of obesity, data demonstrates that any form of exercise is beneficial for patients with PCOS.

Source:

Riley, J. K. & Jungheim, E. S., (2016). Is there a role for diet in ameliorating the reproductive sequelae associated with chronic low-grade inflammation in polycystic ovary syndrome and obesity? *Fertility and Sterility*, 106(3), 520-525.