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VITAMINS / SUPPLEMENTS

Fertility and Poly-Unsaturated Fatty Acids

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Starting or expanding one's family is a major milestone. It's something that more and more people seek out health care advice and support for. While not an expert in eastern medicine, I have co-treated patients with several acupuncturists and Doctors of Oriental Medicine, and the results have impressed me. I have found that for some patients, the appropriate use of fish oils can be a cornerstone of good reproductive health, both in men and women. A primary reason that supplemental omega-3 nutrition can be so effective is the powerful impact that the current Western diet has upon cell membrane health, specifically its essential fatty acids (EFA) content, which is an integral component to a balanced cell membrane.

In Westernized societies, the current ratio of omega-6 to omega-3 fatty acids is generally greater than 10:1 — some argue it is much higher. An appropriate ratio is closer to 4:1, or in some cases, even 1:1. This ratio of polyunsaturated fatty acids (PUFAs) is identified with multiple processes that are very important for a healthy, fertile couple. Prostaglandin production, transcription factors (which control gene expression and affect cellular concentrations of enzymes), and cell membrane properties are all affected by the balance of available omega-6 and omega-3 fatty acids.

The impact of healthy EFA balance in regard to fertility is not only important for women. Research has shown that semen quality is related to the types of dietary fat that a man consumes. Men consuming the highest levels of omega-3 polyunsaturated fatty acids have the highest quality. By maintaining healthy levels of omega-3 fats in the diet, and through supplementation, men can help preserve their hormonal health for as long as possible. Additional research has demonstrated similar results through the measurement of the omega-6 fatty acid arachidonic acid (AA), and the omega-3 fatty acids eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). Results showed that the most fertile men had the highest ratios of EPA+DHA to AA. Animal studies are consistent with these findings.

Regarding the impact in women, studies have demonstrated that women with the highest dietary intake of omega-3 fatty acids have prolonged, healthy reproductive function into advanced maternal age. The impact of omega-3 fatty acid intake, even in the short term, is associated with healthy oocyte quality. Studies with women undergoing in-vitro fertilization showed an association between successful pregnancies and a healthy balance between omega-6 and omega-3 fatty acids.

With the tremendous impact that EFA balance can have on the biochemistry associated with fertility, it is important to be able to identify a potential problem. To ascertain the specific levels of EFAs within the cell membrane, a couple types of laboratory assessments are readily available. This includes evaluation via measurement of EFA content in the red blood cells from either a whole blood sample, or a dried blood spot analysis — otherwise known as the Holman Omega-3 Test. Both are great options, but the blood spot testing can be done from your office, without the need for referral to a blood collection site, or the ability to perform a in-office blood draw.

When couples are working to start, or expand, their families, it is important to support their reproductive health. While many options can be pursued, the prudent use of omega-3 fish oil supplementation, and dietary changes to balance their EFA levels, can go far to support conception. Even without lab data, it is very safe to provide recommendations of up to two grams of EPA+DHA daily, with some studies reporting that far higher doses are well tolerated for long periods of time. Studies also show that omega-3s are safe when co-administered with many medications, and may even improve their effectiveness. The human body does need AA, as there are several important processes which it is responsible for, one being cholesterol metabolism. So, when using higher doses, one must remember that it's all about balance. If you do have laboratory data, it becomes very easy to determine dosing requirements. And, the test can be performed again, in many cases six months later, to determine the appropriate dose for the patient in order to ensure the best outcome.

With rising fertility challenges, it is important to understand how omega-3 fish oil can help support

healthy EFA balance. These powerful nutrients may be exactly what a couple needs to maintain their reproductive health when they are ready to expand their family.

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