



Female Fertility Supplements

Who? Fertility supplements may be indicated for the following reasons: patients with diminished ovarian reserve, recurrent miscarriage, or previous failed therapy. Your physician will recommend whether you utilize supplements (and which ones) based on your history.

Explanation: Antioxidants reduce oxidative stress (reactive oxygen species or “free radicals”). Antioxidants theoretically may help to improve the ovarian environment and hence egg quality.

1. **DHA (omega 3 Fatty Acids)**- 1000mg once a day. DHA and essential fatty acids help to reduce inflammation and promote overall health. DHA is also essential in the development of the fetal heart and brain.
2. **Coenzyme Q 10:** 400mg twice a day. CoQ10 (ubiquinone or ubiquinol) is found in every cell (“ubiquitous”) and is involved in energy production in the mitochondria. CoQ10 also acts as an antioxidant to reduce free radicals. CoQ10 may assist in division of chromosomes during meiosis, and preliminary evidence suggests this may help to reduce aneuploidy (chromosomally abnormal eggs/embryos). Randomized controlled trials are ongoing.
3. **Melatonin: 3-6mg PO daily.**
4. **Vitamin C 500mg daily** and **Vitamin E 400IU daily** are powerful antioxidants that help reduce reactive oxygen species.
5. **Vitamin D-** see separate information sheet for recommended Vit D doses depending on your baseline level. Vit D receptors exist in the endometrium and are believed to play a role in embryo implantation.

Dietary sources of omega 3 fatty acids include: flaxseeds and flaxseed oil, salmon or fish oil, chia seeds, cod liver oil, grass fed beef, edamame, walnuts, soybeans, kidney beans, and enriched eggs.



Dietary sources of antioxidants include kidney beans, pinto beans, blueberries, cranberries, artichoke, blackberries, prunes, raspberries, strawberries, Red Delicious, Granny and Gala apples, pecans, cherries, plums, and dried black beans.

Who? Patients with **PCOS**:

Inositols: Purchased online as Pregnitide, Ovasitol, or MyoInositol- 2g or 2000mg taken twice daily. Inositols are sugars that act as a second messenger for the insulin receptor and may help patients with insulin resistance. Inositols may help improve ovulation and pregnancy rate in patients with PCOS.

How long should I take supplements?

Recommended duration of supplementation: minimum of 10-12 weeks (the life cycle of a developing egg).

What about other supplements or herbal products I have been told to take by other providers?

Although often marketed as "natural," this doesn't mean that herbal products are always safe.

Consider these important issues about fertility herbs and supplements:

- **They have limited Food and Drug Administration regulation.** Herbal and nutritional supplements are subjected to limited regulation by the Food and Drug Administration and are only now starting to be held to higher purity and quality standards.
- **They have a potential for drug interaction.** Conventional hormone and drug treatments for infertility are complex regimens. It's not known how herbs or supplements may interact with such treatments.
- **They may have side effects.** Herbal and nutritional supplements may have side effects, especially when taken in larger doses. For example, too much vitamin C can cause significant gastrointestinal problems, and high doses of vitamins may be toxic rather than therapeutic.



References:

1. Rudick, et al. Influence of Vitamin D Levels on IVF outcomes in donor-recipient cycles. *Fertility Sterility* 2014 101:2; 447-452.
2. Raffone, et al. Insulin sensitizer agents alone and in co-treatment with r-FSH for ovulation induction in PCOS. *Gynecol Endocrinology* 2010 26:4; 275-80.
3. Bentov Y and Casper RF. The aging oocyte-can mitochondrial function be improved? *Fertility Sterility* 2013 99 (1); 18-22.
4. Bentov Y, et al. Coenzyme Q10 supplementation and oocyte aneuploidy in women undergoing IVF-ICSI treatment. *Clin Med Reprod Health* 2014 8:31-6.
5. Buhling KJ and Grajecki D. The effect of micronutrient supplements on female fertility. *Curr Opin Obstet Gynecol* 2013 25 (3); 173-80.