The background features a series of overlapping, wavy lines in shades of green, blue, and yellow, creating a sense of depth and movement. A bright, glowing light source is positioned in the upper center, casting a warm, orange-yellow glow across the scene. The overall effect is ethereal and futuristic.

Enhancing Fertility - Specific recommendations on nutrient supplementation for women & men

By Dr. Marc Sklar

My name is Marc Sklar, I'm the founder of the Reproductive Wellness Clinic in San Diego California. I have extensive experience and expertise in treating and resolving the causes of infertility and recurrent pregnancy loss with classical Acupuncture and Chinese Medicines.

Doctor of Acupuncture and Chinese Medicine, Board Certified Herbalist and Oriental Medicine Practitioner, and President of the American Board of Oriental Reproductive Medicine (ABORM), I approach my patients with an open mind, compassion and a medically integrative perspective.

Since completing my master's degree, I've studied with many prominent figures in the field of Oriental Medicine, as well as the Western medical world at large. I work closely with my mentor, local fertility specialist Donna Keefe, I have been trained and certified in the treatment of infertility and women's health, also trained at the Harvard Medical School, Mind/Body Medical Institute under Dr. Herbert Benson, M.D. and Peg Baim, M.S., N.P., where I became certified in Mind/Body Medicine.



Marc Sklar
THE FERTILITY EXPERT

Today, we're going to cover:

- **Common issues seen with female patients & how to address them**
 - Nutrient specific recommendations - *Inositol, CoQ10, Melatonin, Omega-3's, Antioxidants and more*
 - Cervical mucus, nutrients and lubricants
- **Common issues with Male patients & how to address them**
 - L-Carnitine
 - Fish Oils
 - Probiotics

Common issues seen with female patients & how to address

- Supporting egg quality
- Cycle regulatory
 - importance of predicting ovulation and timing intercourse to optimize chances of conception
- Healthy Hormone balance
 - Supports the balance of key hormones - Insulin & Testosterone
 - hormone imbalances can impact ovulation regularity
- Vaginal Dryness
 - impacts fertility/chances of conceiving, i.e. need plentiful fertile quality cervical mucus for a protective environment for sperm, plus vaginal dryness makes intercourse uncomfortable, can be caused by medications

Nutrient specific recommendations – WHY?

- As clinicians we are always looking for ways to support our patients – to give them an advantage.
- You may have heard that using certain nutrients are important for Egg and Sperm Health.
- But... have you looked at the research?

Key Nutrients for Female Fertility

- Myo & D-chiro inositol
- Folate (methylfolate vs folic acid)
- Melatonin
- CoQ10
- Antioxidants
- B vitamins
- n-acetyl cysteine
- Omega (EFA)

Inositol

Myo

Insulin sensitizing agent; helps reduce insulin resistance in women; improves egg quality; even mild elevations in blood sugar and insulin negatively impact fertility in all TTC women.

D-chiro

Improves insulin sensitivity, ovulation, and serum androgen levels; 40:1 ratio of myo-inositol to d-chiro inositol.

CoQ10

CoQ10 (ubiquinone)

Antioxidant; helps with cellular energy production; support healthy ovarian reserve; reduces effects of reproductive aging

CoQ10

- Impaired mitochondrial performance created by suboptimal CoQ10 availability can drive age associated oocyte deficits.
 - *Ben-Meir, A., et al. Coenzyme Q10 restores oocyte mitochondrial function and fertility during reproductive aging. Aging Cell. 2015; 14(5): 887-895.*

Melatonin

- Often recommended for sleep, but well-studied for fertility
- Melatonin for women supports *intra-follicular melatonin concentrations, reduces intra-follicular oxidative damage, and elevates fertilization*
- Melatonin protects oocytes from free radical damage as it is a powerful antioxidant.

Melatonin

The combination of Myo, melatonin, and folic acid appears to be especially helpful for egg quality. Several studies have shown this.

- Tamura, et. al. Melatonin as a free radical scavenger in the ovarian follicle. Endocrine Journal 2013; 60(1): 1-13.
- Tamura H, et al. J Pineal Res 2008; 44(3): 280-7
- Eryilmaz OG et al. J Assist Reprod Genet – 01-SEP-2011; 28(9): 815-20

Antioxidants

Antioxidant supplementation may be effective in controlling the production of ROS (reactive oxygen species) and continues to be explored as a potential strategy to support reproductive function and fertility.

Agarwal A, et al. The effects of oxidative stress on female reproduction: a review. Reproductive Biology and Endocrinology 2012, 10:49

In fact, a recent published study showed benefits of adding antioxidants in IVF culture medium (Gardner, 2020), and at least one study on oral supplementation is on-going (FH PRO for Women)

Which Antioxidants?

Grape Seed Extract
(standardized to 85%
polyphenols)

Antioxidant; effective against
fat-soluble and water-soluble free
radicals

Trans-resveratrol (from
Polygonum cuspidatum
root extract)

Protects cells from oxidative damage;
protects mitochondrial function;
enhances telomerase activity; animal
studies show potential ability to
favorably impact both egg quality and
quantity

NAC & Glutathione

N-acetyl-cysteine

Antioxidant; precursor to glutathione, and because oral glutathione is not metabolized well in small intestine, NAC is more likely to raise GSH levels; Glutathione supports healthy detoxification including excessive hormone production; NAC supports ovulation

Alpha Lipoic Acid

Alpha Lipoic Acid

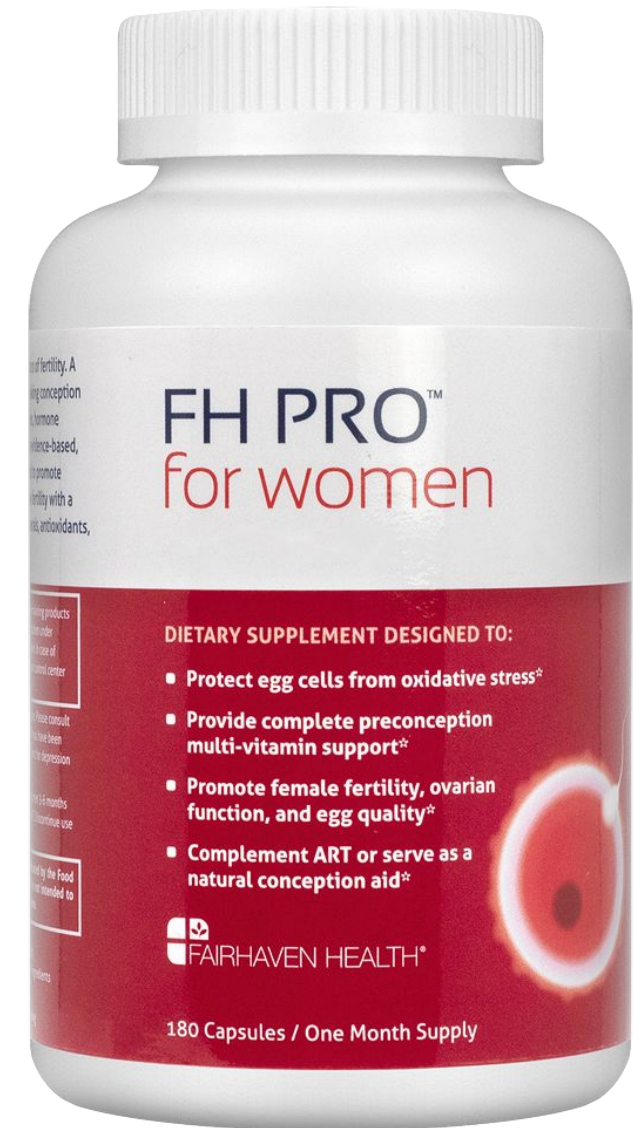
Acts as a water-soluble and fat-soluble antioxidant. Lab studies show it can support egg maturation and embryo viability.

How should you approach incorporating these nutrients?

- Specific ingredient vs. Multi-ingredient supplement approach
 - Cost
 - Convenience
 - Baseline nutritional support is optimal

FH PRO for Women

- They don't hide their dosages in proprietary blends so you know exactly what your patients will be receiving.
- Full multivitamin along with the ingredients targeted specifically at reproductive health.
- I know there's a lot of fertility supplements out there now, I'd just encourage you to read the supplement fact panels and find what works best for you.
- Most well-studied ingredients at dosages supported by the literature. Remember that study about melatonin, myo-inositol, and folic acid (folate) - that combo is the cornerstone of this product and includes 2,000 mg of myo-inositol



Cervical Mucus & Vaginal Dryness

- We need to have a healthy and safe vaginal environment to make the journey for the sperm as easy and safe as possible.
- What are the main issues and why?
 - Vaginal dryness
 - Cervical mucus
 - Hormone Testing

Nutrients for Cervical Mucus

- *N-acetyl-cysteine* - Studies find it softens cervical mucus, making it easier for the sperm to get to the egg

([Cell J](#). 2017 Apr-Jun; 19(1): 11–17. Published online 2016 Dec 21. doi: [10.22074/cellj.2016.4872](#)) (<https://pubmed.ncbi.nlm.nih.gov/17364286/>)

- *EPO*
- *L-arginine*
- *Chinese Herbs*

What about Lubricants?

- Cleared as a fertility friendly lubricant – as a medical device, class 2 medical device
- Does not impact Sperm Parameters
- No parabens or toxins
- No coating oils, I prefer water-based lubricants
- PH balanced to match fertile mucus

BabyDance Fertility Lubricant

- I like the BabyDance as it doesn't contain parabens, glycerol or any coating oils plus they offer a couple different formats that makes it easier for patients to use.



Common issues with male patients

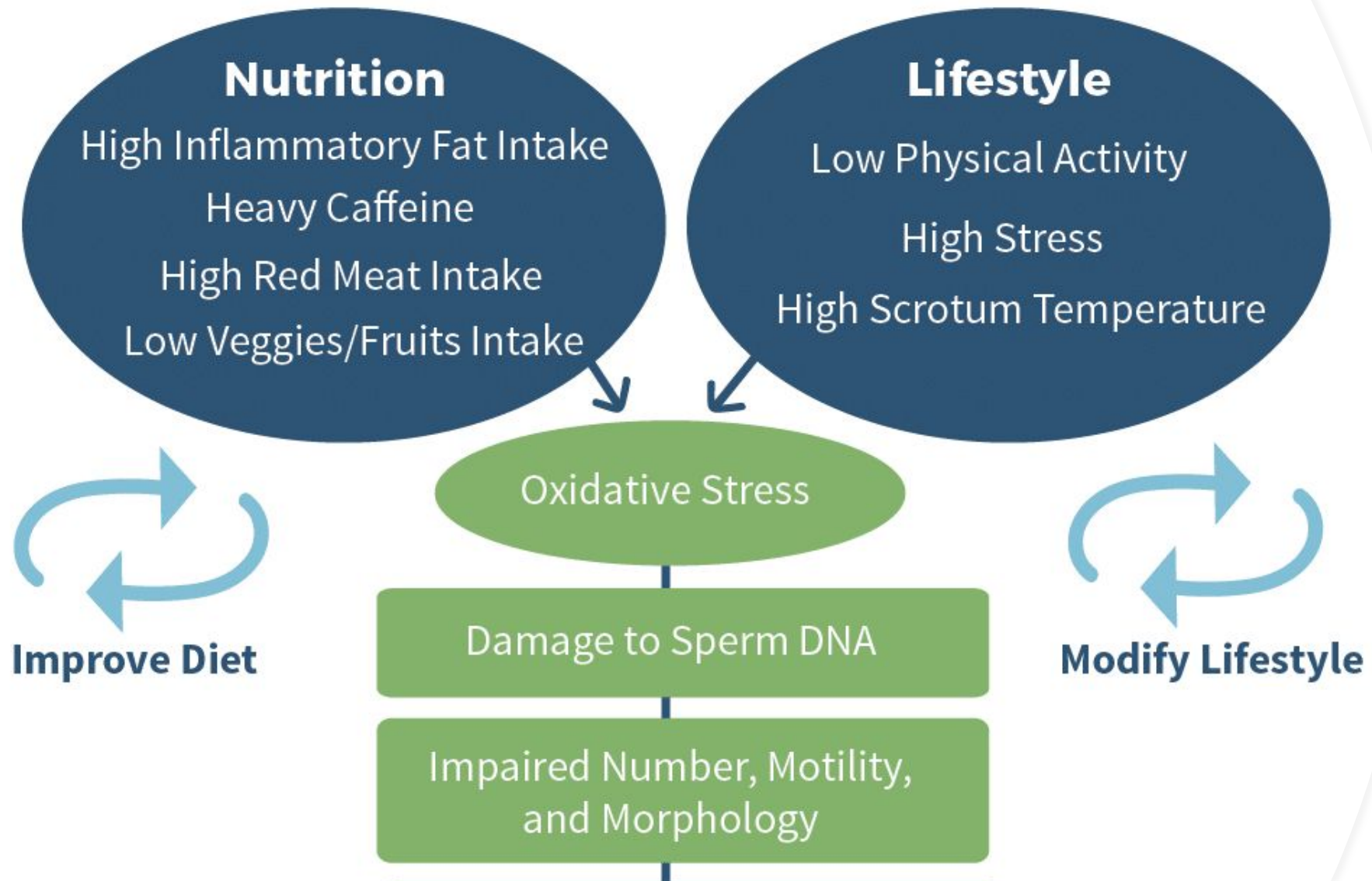
- Sperm health (parameters such as count decline with age, impact of environmental toxins, etc.)
 - Environmental causes (phthalates, bisphenol A, pesticides, endocrine disruptors)
 - Occupational exposure (e.g. air pollutants)
 - Lifestyle factors (sedentary lifestyle, obesity, cell-phone use, stress, alcohol use, smoking, unhealthy diet)
- Oxidative stress has a negative impact on sperm health parameters, including sperm count, motility and DNA integrity.

Common issues with male patients

- Lifestyle changes recommended
 - Exercise
 - Diet
 - Temperature

There has been a significant decline among men from North America, Europe and Australia during 1973–2011, with a 50–60% decline among men unselected by fertility, with no evidence of a 'leveling off' in recent years. These findings strongly suggest a significant decline in male reproductive health.

(Levine et al., Human Reproduction Update, pp. 1–14, 2017)



Antioxidants – well studied and with good results

- Antioxidants play an important role in **protecting semen from ROS** and can improve basic sperm parameters (Count, Motility and Morphology)

Imamovic Kumalic S and Pinter B. Review of clinical trials on effects of oral antioxidants on basic semen and other parameters in idiopathic oligoasthenoteratozoospermia. Biomed Res Int 2014; 2014:426951.

- Results suggest that antioxidant treatment improves sperm quality not only in terms of key seminal parameters and basal DNA damage, but also helps to maintain **DNA integrity**.

Abad C, et al. Effects of oral antioxidant treatment upon the dynamics of human sperm DNA fragmentation and subpopulations of sperm with highly degraded DNA. Andrologia 2013 Jun;45(3):211-6.

Antioxidants

N-Acetyl L-Cysteine

Preventing cells from free radical damage

Grape Seed Extract (standardized to 85% polyphenols)

Powerful antioxidant; rejuvenation effect of other antioxidants

Lycopene

Antioxidant; supporting sperm quality, including count and viability

CoQ10

- The exogenous administration of CoQ10 increases both ubiquinone and ubiquinol levels in semen
Balercia G, et al. Coenzyme Q10 and male infertility. J Endocrinol Invest 2009 Jul;32(7):626-32.
- Antioxidant that protects sperm cells; studies show the more CoQ10 available in seminal fluids, the higher sperm count.

Carnitine and Arginine

L-Carnitine Tartrate

Vitamin-like compound that helps transport fatty acids into mitochondria where they can be burned for energy; helps sperm cells create energy needed for motility; seems to prevent cell death (apoptosis), although mechanism unclear – could act as an antioxidant; increases semen volume and motility

L-Arginine HCl

Amino acid necessary for sperm production; precursor for nitric oxide, which required for sperm motility and erectile function

Key Basic Nutrients

- Baseline nutritional support is essential (i.e. taking a daily multivitamin) in addition to targeted fertility ingredients/antioxidants

- **Folate, zinc, and vitamin E** can support healthy sperm concentration and motility.

Nadiarzadeh A, et al. The association between dietary antioxidant intake and semen quality in infertile men. Med J Islam Repub Iran. 2013 Nov; 27(4): 204–209.

- Poor zinc nutrition may be an important risk factor for low quality of sperm

Colagar AH, et al. Zinc levels in seminal plasma are associated with sperm quality in fertile and infertile men. [Nutr Res](#). 2009 Feb;29(2):82-8. doi: 10.1016/j.nutres.2008.11.007.

Why I recommend FH PRO for Men

- It has the specific ingredients I like at proper dosages
- Reputable company
- Easy to work with
- First learned of them thru some recent clinical studies on their male product



Semen Parameters	Before Treatment	Percent Change After
Sperm Count (10 ⁶ / ml)	22.23	38% ↑
Progressive Motility (%)	4.00	102% ↑
Normal Morphology (%)	2.86	39% ↑
DNA Fragmentation (%)	38.63	17% ↓
Oxidation Reduction Potential (mv/10 ⁶ / ml)	10.26	40% ↓

In a prospective clinical trial, 148 men took FH PRO for Men for 90 days. Statistically significant improvements were seen in all sperm parameters.

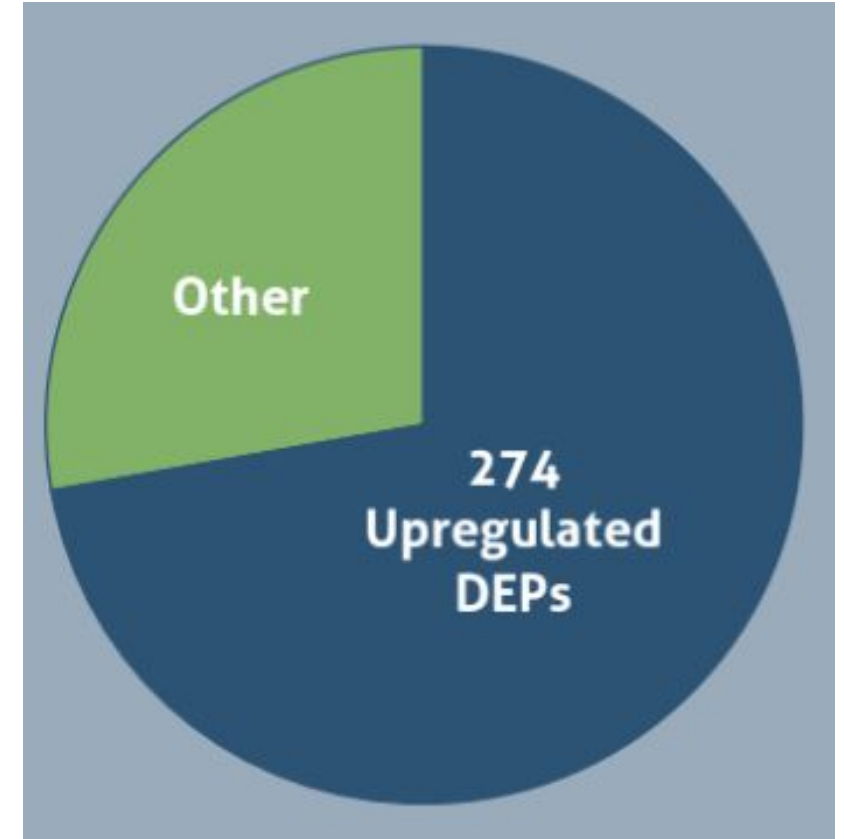
Arafa M, Agarwal A, Majzoub A, Khalafalla K, Alsaid S, Elbardisi H. *Efficacy of Antioxidant Supplementation on Conventional and Advanced Sperm Function Tests in Patients*. Fertility and Sterility, Vol. 112, No. 3, Supplement, September 2019, e362.

Groundbreaking study conducted at the Cleveland Clinic

- Researchers sought to evaluate the impact of antioxidant supplements on the sperm proteome of men with suboptimal sperm health.
- In this prospective study, men were given FH PRO from Men, a combination antioxidant dietary supplement, for 180 days.
- The results showed that supplementation with FH PRO for Men resulted in increased expression of sperm proteins (274 DEPs) associated with spermatogenesis, maturation of sperm, sperm-binding function, and fertilization process, suggesting a possible explanation for the well-established benefits of antioxidant supplementation on sperm health.

Agarwal A, Selvam, M, Samanta L, Vij S, Parekh N, Sabenagh E, Tadros N, Arafa M, and Sharma R. *Effect of Antioxidant Supplementation on the Sperm Proteome*. Antioxidants 2019, 8, 488.

Supplementation Resulted in Upregulation of Proteins Associated with Sperm Health





A Great Resource for Products

- Science-based formulations
- Responsive, helpful, focused on fertility products since 2003
- Worry free, ISO-certified, products made in U.S.-based GMP facilities
- Large assortment of quality products from company I can trust makes referring/ordering easier

Most products available via Fullscript, search 'Fairhaven' or 'Fertility'



Fertility Supplements & Standalone Ingredients



Pregnancy Tests & Ovulation Prediction



Fertility Lubricants & Isotonic Gels for Vaginal Health