

Search ...



States Challenge Specialty Certification Requirements



Will FDA Start Regulating Fitness Trackers?



Psoriasis Is a Real (Migraine) Headache



Breastmilk Biomarkers: A New Indicator of Health Status?

FREE ISSUES | LOGIN | SHOPPING ACCOUNT | SUBSCRIBE | ADVERTISE

HOME | LATEST ARTICLES | ARCHIVES | TOPICS | NEWS | BLOG | CME/EVENTS | ABOUT US

Home | Topics | Topics A-G | **Environomics** | Avoidance of Toxins Helps Couples Wishing to Conceive



Avoidance of Toxins Helps Couples Wishing to Conceive

Wednesday, 05 June 2013 16:56

By Lauren Brandstadter | Contributing Writer - Vol. 15, No. 2. Summer, 2013

All too often, couples struggling to conceive a child undergo expensive, complicated and unsuccessful fertility treatments. Careful assessment of environmental toxin loads and nutritional status of both partners, and judicious implementation of lifestyle change strategies could avert the need for these treatments in some cases.

Available statistics show that infertility is on the rise among men and women in the US. According to the Centers for Disease Control, the numbers of US women aged 15-44 who have "impaired fecundity" topped 6.7 million in 2010. Researchers at the National Institutes of Health, studying data from 7,600 women, estimate that as many as one in six couples seeking to have a child were unable to conceive after 1 year of contraception-free sex ([Thoma ME, et al. Fertility Sterility. 2013; 99\(5\): 1324-31](#)).

The trend is attributable to far more than later marriage and deferred childbearing. There are many factors in our environment, and in the products we use daily, that could be contributing to infertility.

Xenoestrogens, drug residues, pesticides, bioactive compounds in personal care products, and toxins in our environment are interfering with fertility levels. How does one peel back all the layers of information (and misinformation) about the myriad of toxins and their effects?

"Environment is definitely a factor in rising infertility rates", says Victoria Maizes, MD, Executive Director of the University of Arizona Center for Integrative Medicine, and author of *Be Fruitful, The Essential Guide To Maximizing Fertility and Giving Birth to a Healthy Child*. In her new book, she stresses the importance of minimizing toxin loads.

"Avoiding fruits and vegetables that have been sprayed with toxic pesticides, foods grown from GMO seeds, and packaged foods containing ingredients that originate from GMOs, and processed foods, should be at the top of the list of "do's" when trying to conceive," Dr. Maizes told *Holistic Primary Care*.

The organophosphates in pesticides have been shown to be endocrine disruptors. While there is not yet a definitive prospective study showing that exposure to pesticides causes infertility, the available science does provide cause for strong suspicion.

Roundup Risks

There's good reason to believe that glyphosate, the main compound in the widely used Roundup herbicide, is interfering with human reproductive function.

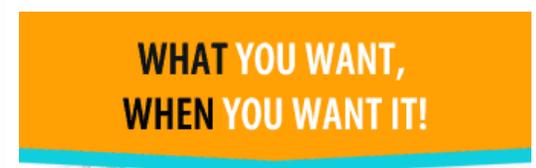
One study found that glyphosate is increasing the number of birth defects in vertebrates, contributing to stillbirths and miscarriages ([Paganelli A, et al. Chem Res Toxicol. 2010, 23\(10\): 1586-95](#)). The data suggest that glyphosate alters retinoic acid signaling in developing embryos.

"The direct effect of glyphosate on early mechanisms of morphogenesis in vertebrate embryos opens concerns about the clinical findings from human offspring in populations exposed to glyphosate-based herbicides in agricultural



Latest News

- [Don't Call Breastfeeding "Natural" says Peds Journal](#)
- [Former FDA Chief Faces Racketeering Lawsuit](#)
- [States Challenge Requirements for Physician Certification](#)
- [Vaxxed gets Axxed: Tough-Guy De Niro Caves on Controversial Vaccine Film](#)
- [Can Young Blood Reverse Aging?](#)



Subscribe for HPC **UPSHOTS**, our **free** eNewsletter.

[Signup Now](#)

fields,” the authors note.

Well over a decade ago, Canadian researchers published a study showing that exposure to this herbicide increased the risk of spontaneous abortion among female agricultural workers exposed to glyphosate (Arbuckle TE, et al. *Environ Health Perspect.* 2001; 109(8): 851-857). “For late abortions, preconception exposure to glyphosate...was associated with elevated risks. Postconception exposures were generally associated with late spontaneous abortions. Older maternal age (> 34 years of age) was the strongest risk factor for spontaneous abortions, and we observed several interactions between pesticides in the older age group.”

Investigators around the world have looked at possible mechanisms by which glyphosate interferes with reproductive function. Richard and colleagues at the University of Caen, France, showed that the compound is toxic to human placental cells at concentrations lower than those found with agricultural use. The toxic effect increases with duration of exposure and concentration (Richard S, et al. *Environ Health Perspect.* 2005 June; 113(6): 716-720)

In 2009, another group based in Caen looked at the toxicity of four glyphosate-based herbicides at dilutions corresponding to residue levels found in common foods. They found that the compounds could induce apoptosis and necrosis in human umbilical, embryonic, and placental cells (Benachour N, et al. *Chem. Res. Toxicol.*, 2009, 22 (1), pp 97-105).

Also in 2009, a team at Indiana University tracked agricultural residues in surface water, and found a strong correlation between elevated concentrations during the months of April to July, and higher risk of birth defects among women whose last menstrual periods were in the period from April to July (Winchester PD, et al. *Acta Paediatr.* 2009; 98(4): 664-91).

A New Threat?

Glyphosate is just one of 84,000 known toxins in our environment. Only a few thousand have been studied thoroughly with regard to their effect on human biology.

According to Dr. Maizes, it makes good sense for couples trying to conceive to minimize exposures as much as possible. “An organic diet is the best way to increase your ability to conceive. Eating organic grains, fruits, and vegetables, washing them with filtered water, and avoiding GMOs are very important factors in a person’s fertility.”

She contends that GMO foods are as dangerous as the pesticides that are sprayed on them. GMO foods have been shown to contribute to changes in the number and size of offspring in rats. They may also be contributing to the evolution of new animal and human pathogens.

Two years ago, Dr. Don Huber, emeritus professor of plant pathology at Purdue University, stated that he had discovered a previously unknown pathogenic microorganism associated with Roundup Ready GMO crops. The organism seemed to be linked to infertility and miscarriage among cattle, swine and horses. In an open letter to USDA Secretary Tom Vilsack, Dr. Huber described the organism as having, “an approximate size range equal to a medium-sized virus...able to reproduce and appears to be a micro-fungal like organism.”

Dr. Huber, a long-standing and outspoken critic of GMO technology, claims that the organism is found in much higher concentrations on Roundup Ready soybeans, corn and alfalfa, and that it is also linked to several plant diseases.

“For the past 40 years, I have been a scientist in the professional and military agencies that evaluate and prepare for natural and manmade biological threats, including germ warfare and disease outbreaks. Based on this experience, I believe the threat we are facing from this pathogen is unique and of a high-risk status. In layman’s terms, it should be treated as an emergency,” he wrote.

Several scientists at Purdue have challenged the “doomsday scenario” outlined by Dr. Huber. However, none has claimed that his discovery is fallacious. His work has yet to be replicated by other researchers, and the organism he believes he has found has not yet been further characterized. Predictably, the USDA has taken no action in response to his letter.

Avoid Processed Foods

Couples trying to conceive should eliminate—or at least minimize consumption of processed foods. This includes some foods that most people regard as “healthy.” Low-fat milk, for example, is very popular with reproductive-age women who believe it is a healthy alternative to full-fat milk.

Dr. Maizes says that’s highly questionable. “When the fat is removed from the



Get Premium Web Access

Subscribe Now



Don't miss our print publication.

Subscribe Now

milk, the product has less taste and a bluish hue. So the dairy company puts in powdered whey protein, which is technically milk, so they don't have to put it on the label (as an additive). The end result is a processed food - far from what the cow, and nature, intended."

She added that regular consumption of low-fat milk actually promotes weight gain in many people – not the other way around. "If you're going to drink milk, drink it whole, unprocessed, with all the nutrients intact. In some cases, dairy companies add sugar (to low-fat milk) for a better taste. The more processed sugar someone consumes, the lower the production of the sex hormone binding globulin, which influences the body's production and regulation of hormones."

In general, she advises patients to avoid "low-fat" foods: they are usually heavily processed, and no longer "whole" foods.

Dr. Amos Grunebaum, a gynecologist with over 30 years experience with high-risk pregnancies, had this to offer about environmental toxins. "Yes. There is now scientific evidence that environmental toxins such as pesticides and exogenous hormones are potentially interfering with fertility in the United States. Research shows that male and female reproductive health is especially susceptible to the impact of these chemicals."

He went on to say that reproductive toxicologists are constantly uncovering new evidence about how environmental toxins are contributing to suboptimal sperm health, reduced egg quality in women, menstrual disorders, pregnancy complications, low-birth weight and child development issues.

Minimizing Toxin Loads

"There is scientific evidence to support this claim that exposure to agents such as BPA affects fertility." The most dangerous compounds in plastics (BPA), pesticides (dioxins and organophosphates), and drug-residues are definitely endocrine disruptors.

Some can mimic the action of a certain hormone (such as estrogen) by binding to that hormone's receptor and activating the same response that would be triggered by the natural hormone. Others prevent hormonal action by binding to hormone receptors, thereby leaving no room for the real hormones. Still others bind to carrier proteins, thereby reducing the availability of these proteins to transport hormones like estrogen and testosterone through the blood stream to target tissues.

Some endocrine disruptors negatively impact hormone levels by either accelerating the breakdown of hormones or by deactivating the enzymes that facilitate their breakdown.

Dr. Grunebaum says avoiding canned foods, unless the can has a BPA-free liner, is a simple way to begin minimizing exposure to endocrine-disrupting compounds like phthalates and BPA. The website, www.treehugger.com has posted a guide to canned products rated for likelihood of containing BPA. Purchasing jellies, jams, sauces, and prepared vegetables in glass containers, whenever possible, is a safer alternative.

Other toxins affecting fertility are right in our homes. Chemicals in beauty and skin care products, shampoos and other hair care products, toothpastes, oral products, as well as deodorants, contain toxins that inhibit fertility. Dr. Grunebaum and Dr. Maizes both suggest using only non-toxic cleaning supplies. To learn more about potential toxins in common household products, visit <http://www.ewg.org/skindeep/>.

A Bit About Fish

For many reproductive-age women, the subject of fish consumption has become cause for confusion. On the one hand, they hear the message that ocean fish are a healthy, lean protein source rich in omega-3s. On the other, there are the frightening reports of mercury and other toxic metals found in some types of fish.

Dr. Maizes suggests that fish should not be eliminated from the diet of women wishing to conceive. Omega-3's found in wild caught salmon, herring and other oily fish help raise fertility levels, and also aid in averting or lessening postpartum depression after childbirth. Trout, though a fresh water fish, is also high in Omega-3s.

People should avoid wild fish that are known to have high levels of mercury, such as tuna, swordfish, mackerel and shark. The best fish to eat with the highest levels of Omega 3's are wild-caught salmon, trout, herring and anchovies – and no more than 2-3 servings a week of about 6 ounces per serving, says Dr. Maizes.

The key, she says, is "wild caught." Farm-raised fish are also eating processed foods – not algae—and this creates an imbalance in the ratios of omega-3 and omega-6's. She recommends against eating a lot of farmed fish, as they produce higher omega-6 levels, which are inflammatory.

While it is true that we need both types of omega fats, Americans in general tend to be imbalanced in the omega-6 direction. There's certainly no benefit in pushing this imbalance even further.

She noted that elevated omega-6 is a common finding among infertile men. Men with low sperm counts should also be taking Omega 3 oils, which are an important determinant for fertility ([Saferinejad MR, et al. Clin Nutr. 2010; 29\(1\): 100-5](#)).

Both Dr. Grunebaum and Dr. Maizes suggest incorporating detox programs into the care of couples trying to conceive. This is especially true if either or both partners are trying to lose weight. As people shed weight, they release toxins stored in the adipose tissue, and this can have a detrimental effect on the odds of conception.

The shedding of fat cells and release of toxins should be eliminated before conception occurs. It is important to ensure that calorie restriction is not too severe and that all nutrient requirements are met.

Trying to conceive can be very stressful, and any treatments that improve a couple's sense of wellbeing and increase the partners' energy levels should be encouraged. Women who are having difficulty conceiving might also inquire about other approaches such as acupuncture and acupressure, which can increase the body's ability to naturally balance energy and organ processes.

[^top](#)

Quicklinks

[Acupuncture & Oriental Med](#)
[Cancer Care](#)
[Cardiovascular Health](#)
[Chronic Disease](#)
[Cooking For Health](#)
[Digestive Health](#)
[Environomics](#)
[Functional Medicine](#)
[Greening Your Practice](#)
[Healthy Aging](#)
[Herbal Medicine](#)

[Homeopathy](#)
[Infectious Disease](#)
[Massage & Bodywork](#)
[Medical Spas](#)

[Men's Health](#)
[Naturopathic Perspective](#)
[News, Policy & Economics](#)
[Nutrition & Lifestyle](#)
[Pediatrics](#)
[Personal Care](#)
[Practice Development](#)

[Prevention Practice Pearls](#)
[Psyche, Some & Spirit](#)
[Reflections](#)
[Traditions](#)
[Upshots](#)
[Vitamins & Supplements](#)
[Women's Health](#)

[Free Issues](#)
[Issues Pdf](#)
[Login](#)
[Back Issues](#)
[Links](#)
[From The Editor](#)
[Advertise](#)
[Subscribe](#)
[Sponsors](#)
[Letters](#)
[Site Map](#)
[Privacy Policy](#)
[CME/Events](#)

The ideas, opinions, commentaries and viewpoints expressed on this website do not necessarily reflect those of its publisher. Ascending Media, LLC, will not assume liability for damages, injuries, losses, or claims of any kind arising from or related to the information presented on [Holisticprimarycare.net](#), including claims related to products or services described herein.

Copyright © 2016 Holistic Primary Care. All Rights Reserved.