

Whole Health Guide
to
Preconception Care



Supplement Disclaimer

For all supplements mentioned in this document:
These statements have not been evaluated by the FDA.
These products are not intended to diagnose, treat, cure,
or prevent any disease.

Medical Disclaimer

This guide is for educational purposes only and is not
intended to diagnose, treat, or prescribe.
All material provided does not substitute medical,
psychological, or nutritional advice and/or services.
The company does not accept responsibility for any
action taken based on the contents of this document.

Copyright 2024 by Symphony Natural Health. All rights reserved.
No part of this publication may be reproduced or redistributed in any manner
without permission in writing.

Last updated on April 9, 2024

About the Author

Jan Roberts has provided information and inspiration for prospective Moms and Dads for over forty years. She is the author of six best-selling books and e-books and three mini e-books. Her early works achieved official 'ever-green' status and have been translated into Dutch, Spanish, and Italian. She has made hundreds of presentations to health professionals and prospective parents around the world and has written for both medical journals and popular media.

Jan believes that preconception health is the most important, yet least discussed area of health, as current childbearing generations getting healthy to improve the health of the next generation not only improves the health of those groups but also future generations to come.

But it doesn't stop with conception - Jan is also a staunch advocate of the healthiest possible choices during pregnancy and breastfeeding, as well as the nurturing conscious parenting practices that also foster a child's emotional health, build self-esteem, and promote the well-being of the whole family.

Jan has two sons, who were the inspiration for her work, two grandsons, and a granddaughter. She sees firsthand the benefits of preconception care across generations! She lives in the beautiful Blue Mountains, west of Sydney, Australia.

Read more from Jan in her books, e-books, and mini e-books:



Empowerment & Knowledge

Critical Information about Preconception Care

Many experts regard the four months immediately before conception as the most critical stage in the reproductive process as sperm take up to 116 days to form and ova (egg cells) are particularly susceptible to damage for 100 days before ovulation.

Did you know that the health of parents before conception has been shown to have a positive impact on a healthy pregnancy as well as the short and long-term health of children? (1,2)

For many women there has been a long-held belief that conception is when they need to start to be “healthy”, however, the four months leading up to conception should in fact be considered as the real first trimester.

Current statistics (with slight variations dependent on the source) confirm why actively preparing for conception has never been more important than it is today.

- 1 in 6 people globally are infertile (3).
- 1 miscarriage occurs every 44 minutes globally (23 million miscarriages each year) (4).
- 10% of babies are born prematurely (5).
- 1 baby in 15 is low birthweight (6).
- 1 baby in 33 is born in the United States with a congenital abnormality, which accounts for 20% of all infant deaths (7).
- In the United States, 32% of babies were delivered by Caesarean (C-section) (8), yet the ideal acceptable rate is no more than 10-15%, according to the World Health Organization (WHO) (9).

However, research shows that preconception care can greatly improve the outcomes of fertility, successful pregnancy and birth, as well as the health of the child (1,2,10). But it is important to highlight that in some cases parents-to-be may need more time than four months to address underlying concerns around hormone imbalance, toxicity, genetics, and more. It is never too early to prepare!

The History of Preconception Care

Providing optimal conditions for pregnancy well before the mother-to-be is pregnant has many well-established historical precedents. The ancient Greeks and Romans knew that alcohol taken before and around the time of conception was damaging to the fetus and they banned the drinking of alcohol by young women and newlyweds. Many tribal societies fed special diets to young women (and men) of childbearing age (11).

While preparing for pregnancy has ancient and traditional roots, more recent understandings around animal husbandry, racehorse and animal breeding, as well as research into human fertility and epigenetics that has brought to light additional scientific evidence around the important role both men and women play in the future health of their child for us today.

Dr. Weston Price

Dr. Weston Price, an American physician (who has been called ‘the Isaac Newton of Nutrition’), was one of those very early researchers. His observations, conducted in the 1930s, showed that native peoples who ate their traditional unrefined diet had robust physical and mental health. It didn’t matter whether the diet was one rich in dairy products (unpasteurized milk, butter, cream, and cheese), as favored in Swiss villages; fish with oats made into porridge or oatcakes as eaten along the Scottish coast; game animals together with grains, tubers, vegetables, and fruit as consumed by hunter-gatherers in Canada, America, Australia, and Africa; or seafood eaten by the indigenous Polynesians (12).

The foods that allowed people of every race to be healthy were whole natural foods--meat with its fat, organ meats, whole milk products, fish, insects, whole grains, tubers, vegetables, and fruit. Many traditional communities also enhanced the vitamin content of grains and tubers and made minerals more available by soaking, fermenting, sprouting, and sour leavening.

When a community switched to a refined Western diet with an emphasis on foods containing sugar, white flour, and chemically altered vegetable oils, there was marked physical and mental deterioration, as well as a decrease in the efficiency of the birthing process. Findings like these only become apparent in large-scale observational studies across many years. Weston Price’s book, “Nutrition and Physical Degeneration: A Comparison of Primitive and Modern Diets and Their Effects” (12) contains striking photographs of handsome, healthy native populations and illustrates unforgettably the physical deterioration that occurs when human groups abandon nourishing traditional diets in favor of modern convenience foods.

Most importantly the work of Weston Price strongly informed the work of a world leading preconception care research and education group – Foresight.

The History of Preconception Care

Foresight Association

Established in 1979, Foresight has been instrumental in our evolving understanding of how diet and nutrition, exercise and movement, lifestyle and environment, and much more can impact fertility and the health of babies both short and long-term (13). Some of their more well-known research includes:

- Low zinc status in women trying to conceive
- Toxic/heavy metal exposure, including pesticides and its impact on fertility and health of the baby
- Smoking
- Alcohol use
- **Negative impact on fertility of oral contraceptive/ exogenous hormone use**
- Genitourinary infections

However, Foresight also identified how natural family planning methods, integrative medicine and supplements can dramatically improve reproductive outcomes. Several studies conducted by Foresight detailed how impactful these changes can be (13).

The first of those studies was published in the Journal of Nutritional & Environmental Medicine in 1995 and followed 367 couples over two years. In this study women's ages ranged from 22-45 years and men from 25-59 years. Importantly 37% of women in this study had tried unsuccessfully to conceive for between 1-10 years, 38% had experienced a miscarriage, 3% had a stillbirth, and 2% had malformation indicating that this population group had even worse reproductive outcomes than normal (15). You will see that the results below detailing the first study were so exceptional (with many 0%) that they expanded the second study to 1061 couples to try and get more statistical levels.

- Miscarriages, perinatal deaths, or malformations - 0% and 3.5% compared to the population average of 25%
- No babies were admitted to intensive care
- Malformation rate - 0% and 0.47% as compared to the population average of 6%
- Stillbirth rate - 0% and 0.38% as compared to the population average of 1.37%
- Conception rate - 89% and 81% respectively
- Average gestational age: 38.5 weeks
- Earliest gestational age: 36 weeks
- Average weight: 7 lbs. 2 ounces for females, 7 lbs. 4 ounces for males

This study also suggests a more than doubled conception success rate for IVF following preconception care for both partners (13).

The History of Preconception Care

More currently

It's more than 40 years since the findings of Weston Price and the early work of the Foresight Association.

The Center for Disease Control, the Office on Women's Health, the American College of Obstetricians and Gynecologists, the World Health Organization, and other organizations have guidelines and recommendations for preconception care. The goal is to improve neonatal and birth outcomes by addressing the health of the parents-to-be before they try to conceive. It is well-recognized and accepted that the time preceding conception is critical for the health and development of the child (14).

Center for Disease Control

A press release from the Center for Disease Control (CDC) on April 20, 2006, provided recommendations for preconception care. This included (10):

- Controlling medical conditions such as hypertension, diabetes, and eating disorders
- Avoid smoking and alcohol
- Include folic acid supplementation
- Review medications that can impact the fetus
- Family planning to avoid unwanted/unplanned pregnancy
- Avoid toxic substances at home and work

Preconception care for a minimum of 4 months before trying to conceive

As previously mentioned, sperm take up to 116 days to form and ova (egg cells) are particularly susceptible to damage for 100 days before ovulation. Therefore, both partners should be as healthy as possible for at least four months before conception.

With both partners equally involved, this preparation can provide your future child with physical and mental health advantages that will last their entire lifetime. Preconception care can provide the best possible chance of:

- Optimal fertility
- Full-term pregnancy
- Short, straightforward labor
- Successful breastfeeding
- Health bonding
- And a beautiful, bright, happy, healthy baby who will enjoy a lifetime of better health!

Hormones

Key Communicators In The Body

How does the body communicate within?

All information in the body is received through two types of messengers — neurotransmitters and hormones. Neurotransmitters tend to come from proteins and help cells communicate through the nervous system. Hormones are usually fat-soluble and communicate cell to cell or from one cell through the bloodstream to another cell. These two messengers control nearly every aspect of the body's function.

What does “hormone balance” really mean?

You might have heard the phrase “hormone balance” since it is so commonly used. However, it is not typically defined. Sometimes, different practitioners will address it in different ways, and not always as the whole system. When there is hormone balance, there is streamlined communication through the endocrine system, or the glands in the body that produce hormones. The endocrine system is a feedback system, which means that there is communication within each of the glands that can turn on and turn off the signal.

For example, if there is something stressful in the environment, the brain registers this threat (usually through the emotional part of the brain called the amygdala). The hypothalamus and pituitary gland receive this signal and send out a series of hormones to communicate with other parts of the endocrine system, like the thyroid gland (in the neck) and the adrenal glands (two triangular glands that each “sit” on top of the kidneys). The thyroid and adrenal glands get the signal to produce different hormones, like thyroid hormone (from the thyroid gland) and cortisol (from the adrenal glands). These hormones are needed by the body to help to better metabolize fuel to deal with the stressor.

After these hormones are released and then used by the body to help with metabolism, they eventually signal back to the hypothalamus and pituitary gland to “turn off” their signals. Healthy hormone balance would mean that the hypothalamus and pituitary turn off the signal, and then the body finds its way back to its baseline, non-stressed state. This is called a feedback loop. The body is in good communication with these different glands are all giving and receiving the proper signals.

There can be cases where this communication through the hypothalamus, pituitary gland, thyroid gland, adrenal gland, and, in the case of the female body, the ovaries or in the male body, the testes (these are the reproductive glands) are not in harmony.

Here are some instances where there could be an endocrine system out of balance:

- The glands are not functioning properly, perhaps due to genetics, stress, toxins from the environment, lack of nutrients, or inflammation. As a result, the glands are not able to send a signal. They may also not be able to receive the signal.
- The glands are overproducing a signal because there is no feedback from the gland that it has been received. In these cases, the communication or feedback loop has been broken. It's like a phone that just keeps ringing and ringing, but no one is answering it. It just makes a lot of noise and is disruptive.
- The glands are not picking up the signal from the body to respond. In this case, the initial signal to respond has gone quiet, so the body may become inflamed, or disease may settle in because there was no response to what was threatening to the body

Therefore, “hormone balance” is when there is a signal to turn on the body’s response and then turns off the body’s response. When there is a lack of being able to turn on or turn off the body’s response, there is “hormone imbalance.”

THE WAY TO FEEL AT “HOME” IN YOUR BODY: FOUR STEPS TO HORMONE BALANCE

To get your body’s communication on track and have seamless signals and ready responses from the endocrine system, we need to look to four different processes, which are all happening simultaneously in your body. When these four aspects are taken care of, you feel more calm, even, able to perform, fully functional in your body — in other words, you feel more “at home” in your body.



If you can remember the H.O.M.E. acronym, you’ll easily recall how to get back into hormone balance.

Harmonization

Think of your endocrine system, which is made of several glands, like the pituitary gland, thyroid gland, adrenal glands, pancreas, and ovaries, all as part of an inner orchestra. They are all making the “music” within, communicating signals back and forth, turning on and turning off during the perfect beat and rhythm. Before an orchestra gets started with their performance, the conductor ensures that each instrument is properly tuned. If just one instrument is out of tune, it can make the entire symphony sound like noise rather than beautiful music. You can usually pick out which instrument(s) is(are) out of sync.

Similarly, we need to “tune” our inner endocrine glands. If they are worn out because of stress, low in functioning because they don’t have nutrients, or perhaps burdened with toxins that you’ve taken in (particularly the case with the thyroid gland!), then they won’t be harmonized or tuned in to the overall whole of the endocrine system. They may be squeaky or off in notes.

Harmonization occurs in several ways. We need to take care of our bodies, our endocrine “instruments” through a healthy diet, the right amount and type of physical activity for our bodies, reduce stress inputs or deal with stress through mind-body practices, and lower our exposure to toxins in the environment. When we get rid of the interference and get our endocrine system in good working condition, we are ready for better communication to take place.

In this guide, we will help you to get ideas to make this shift. Sometimes you may need to work with a healthcare professional to guide you in making these changes “stick”. It takes time, attention, and focus to tune your endocrine system to keep it in quality condition. However, it’s well worth it, because if you don’t address the overall health of the endocrine system on a regular basis, the symphony inside will be cacophony or noise.

Optimization

With a well-oiled instrument, or a well-functioning endocrine gland, you are ready to optimize its communication. Since hormones are made from fats and neurotransmitters are made from proteins, you need to ensure that you have a constant supply of healthy fats and quality protein from the diet to fuel your endocrine system. Think of a car. You can have a beautiful, brand-new car, which has well-functioning parts, like the engine, but it may not have gasoline in the tank. It may not have oil in the engine to run optimally.

Through nutrients in the proper balance and ratios for your body, you can optimize your endocrine “engine”. When it comes to macronutrients, fats and proteins are key. Non-starchy carbohydrates that are high in fiber, like cruciferous vegetables (e.g., broccoli, kale, cauliflower) and leafy greens can give you the staying power and energy you need. Often, people need energy, so they select foods that are high in starch and sugar, like potato chips or other snacks, breads, and pastas. These foods may give energy initially, but they ultimately take energy away, robbing you of your vital currency to fuel your hormones (and neurotransmitters).

Let’s say that you are eating healthy amounts of fats, proteins, and even non-starchy carbohydrates, but you are still feeling low in energy and your hormones are not balanced. You might need to look deeper into micronutrients, or vitamins and minerals. These nutrients are often required as helpers in making hormones. You can have the raw material of the fat, but you need vitamins like vitamin C, the team of B vitamins, and minerals like magnesium, zinc, and iron, to make the hormones. It’s like an assembly line. If you miss one part of the production of hormones, it doesn’t get made or it isn’t functional. Therefore, micronutrients complement macronutrients in the process of optimizing your body’s production of hormones.

In this guide, we provide you with an outline of foods that will optimize your endocrine system, including the macronutrients (protein, fat, carbohydrates) and micronutrients (foods that contain the spectrum of vitamins, minerals, and phytonutrients, or plant compounds that can act as antioxidants).

Metabolism

You've got your harmonized orchestra, all the players are adequately nourished and fed, and now they need to make their music! Metabolism is the music that carries through the endocrine system. It is the body processing hormones, which means making them, moving them from one place to another through the blood and lymph, and then arriving at the cell so it can function in the cell. Usually, this means that the hormone keys into a receptor and then there is like a relay race inside the cell, with more communication through proteins. Often, those messages will make their way to the genes, causing the genes to make some protein. Those proteins can work inside the cell or get carried outside of the cell to some other place.

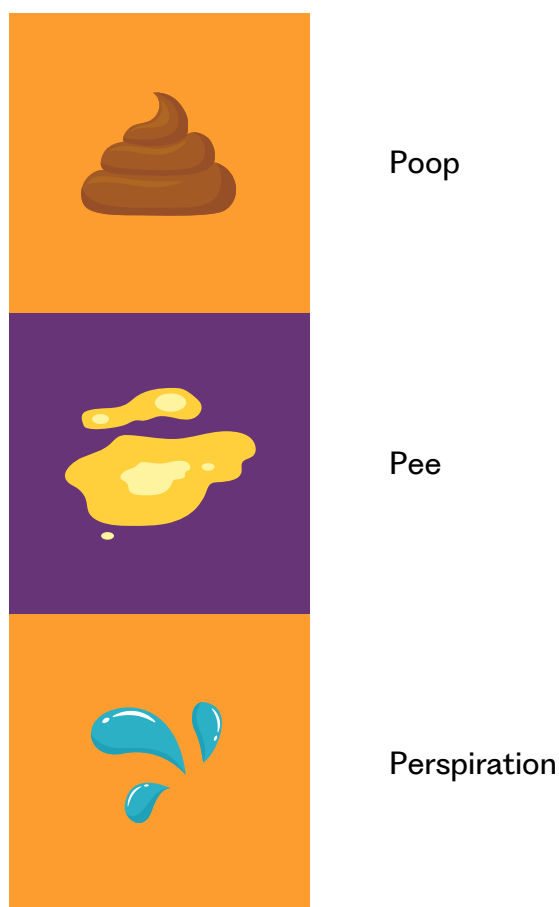
Therefore, the "music" of hormones is heard throughout our bodies. That communication is "heard" even by the DNA, causing more communication and signals. You might think of this process as an overall dance of one hormone affecting another and ultimately the entire body is moving to this rhythm of hormones.

Once that hormone has done its job of singing its tune at the cell, it can then travel to the liver. The liver can package it up in a way to get it ready to be eliminated from the body. This process of "metabolic transformation" of hormones is sometimes referred to as detoxification. Detoxification requires essential nutrients to work well. Without the necessary nutrients, you can get used-up hormones that are now different in structure that can be damaging to the body. That's why it's equally important to not just make the hormones, but to properly metabolize them, eventually packaging them up to be eliminated as waste.

In this guide, we provide you with some foods and lifestyle strategies to help with making this multi-part "dance" of metabolism even more streamlined, with receiving, amplifying, and eventually quieting the dance.

Elimination

If metabolism happens properly, now we are ready for the hormone “finish line”. We eliminate hormones in many ways: through poop, pee, and perspiration (the 3Ps!) . That’s why it’s so important to be having regular bowel movements (1-2 per day on average), urinating throughout the day, checking the color of the urine to be sure it’s not too light or dark, and even engaging in enough physical activity so you can sweat out those metabolized hormones, as well as toxins!



In this guide, all the food and lifestyle strategies are designed to get you to the end with healthy elimination.

Hormones & Preconception Care

Balanced hormones are essential for conception and a healthy pregnancy and birth. Everything from optimal fertility to successful bonding and breastfeeding depends on that balance.

However, hormone balance in women continues to decline and has become harder and harder to maintain. Different lifestyles and our environment are becoming increasingly toxic – from heavy metals, to pesticide, as well as metabolic disruptors, also called endocrine disruptors or xenobiotic hormones, which can appear in many forms from plastics to chemicals in personal care items.

One of the major causes of hormone disruption is the use of synthetic hormones for birth control. Modern diets deliver a less-than-optimal supply of essential trace elements and an inappropriate balance of essential fatty and amino acids. This is compounded by most individuals being under constant stress, which is high on the list of factors that adversely affect hormone balance.



Let's consider select hormones and their roles in reproduction (11):

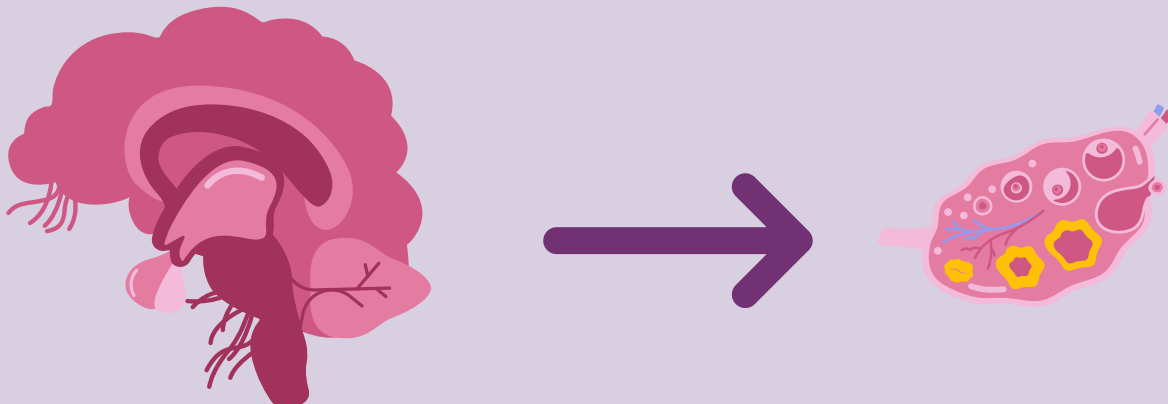
Pituitary hormones

The pituitary gland is the controlling and initiating gland (in both women and men), sending messages via hormones to the gonads (ovaries or testicles), which then manufacture their own hormones (to send messages back to the pituitary). This cycle of hormonal activity prepares the body for conception. The pituitary hormones are unfamiliar to many but are an integral part of the reproductive cycle.

Prolactin: This is the hormone that stimulates lactation after childbirth. If your prolactin level is high at other times, it can prevent ovulation from taking place (as happens during breastfeeding) and may lead to amenorrhea (lack of menstruation). In males, increased levels of prolactin may decrease libido and decrease sperm production. Elevated levels are commonly a result of some abnormality of the pituitary gland. Stress can also be a factor through its effect on the hypothalamus, which usually suppresses prolactin production.

Follicle stimulating hormone (FSH): It is released by the pituitary in response to a signal from the hypothalamus. The hypothalamus is part of the brain that controls many bodily functions, including the periodic timing of the menstrual cycle. The hypothalamus and pituitary are both responsive to increased levels of light, so it is no accident that menstrual cycles are generally (lunar) monthly. When FSH reaches the ovary, it stimulates the release of the hormone estrogen and causes the follicles to ripen several eggs in preparation for ovulation. FSH is needed, along with testosterone, to maintain normal sperm count and function.

Luteinizing hormone (LH): It is co-secreted with FSH. In men, LH stimulates the production of testosterone. In women, LH regulates the length of the menstrual cycle, impacts ovulation, and the implantation of the egg in the uterus. It is responsible for the release of progesterone and is responsive to estrogen levels, either increasing or decreasing in production based on estrogen levels. For example, an "LH surge" occurs at ovulation when estrogen is also at its highest. In fact, ovulation test kits measure LH levels to help determine the best time to try to get pregnant.



Reproductive hormones

The hormones classified as reproductive hormones are often more well-known. These hormones are responsible for pregnancy, menstruation, sperm production, libido, and more. These hormones are primarily made in the ovaries and testes.

Estrogen describes a group of hormones (estrone, estradiol, and estriol) responsible for developing female characteristics. While the ovaries are the main production site, estrogen is also made in fat tissue and the adrenal glands. During the menstrual cycle, estrogen causes:

- The cervix to soften and rise and its opening to widen, thus facilitating the entry of sperm.
- The mucus produced in the cervical crypts to change in quantity and quality and becomes fertile, thus ensuring the survival and transport of the sperm.
- The endometrium (lining of the uterus) to thicken and prepares to receive the fertilized egg (if there is one).
- The pituitary gland to release a sudden surge of LH to stimulate ovulation.

Progesterone is secreted by the corpus luteum (the crater left after the follicle has released the egg) following ovulation. It is responsible for preparing the body for pregnancy following ovulation. Upon conception, progesterone remains elevated through childbirth. Progesterone causes:

- The body's basal temperature to rise to aid in ovulation.
- The cervix to lower, harden and close.
- The lining of the uterus to thicken even more so that within 5 to 7 days, it is ready for the egg.
- The ovary to cease releasing eggs.

Testosterone is the primary sex hormone for men that is responsible for the development of male characteristics. It is also present in women, in much lesser amounts, and is largely responsible for sex drive (libido) in both males and females. Testosterone is critical for sperm health while also playing a role in maintaining bone and muscle mass and energy. It can be raised in some disease states (notably polycystic ovarian syndrome) and is normally converted by the ovaries to estrogen.

Thyroid hormones

The thyroid gland also has an important influence on hormone production. Thyroid hormones are vital for the proper function of the female reproductive system since they modulate the metabolism and development of ovarian, uterine, and placental tissues. Both under and overactive thyroid glands (known as hypothyroidism and hyperthyroidism, respectively) can be problematic for reproduction.

How to Track Hormones

One of the best ways to understand your hormones is to measure them.

There are a variety of ways you can assess the dynamic flux of hormones on a monthly basis:



1. **Order labs:** Work with your health practitioner to have them order labs (e.g., hormone status, nutritional panels) that will measure all of the relevant markers related to preconception care.
2. **Track symptoms:** Monitor your symptoms during the month using a journal or even a smart phone to log the duration and intensity of your menstrual bleeding, physical activity, diet and symptoms. Share these findings with your health team, so that they can help you understand any patterns.
3. **Use a fertility monitor:** Use an at-home fertility monitor like Mira to track hormones specific to fertility and keep you up-to-date on your most fertile days.

More on Mira

Mira—the world’s mini hormone lab

Mira is the only at-home fertility monitor on the market using quantitative technology.

- Tracks LH, E3G (a urinary metabolite of estrogen), PdG (a urinary metabolite of progesterone), and FSH
- Identifies your 6 most fertile days
- Predicts & confirms your ovulation
- Translates your hormones into numbers



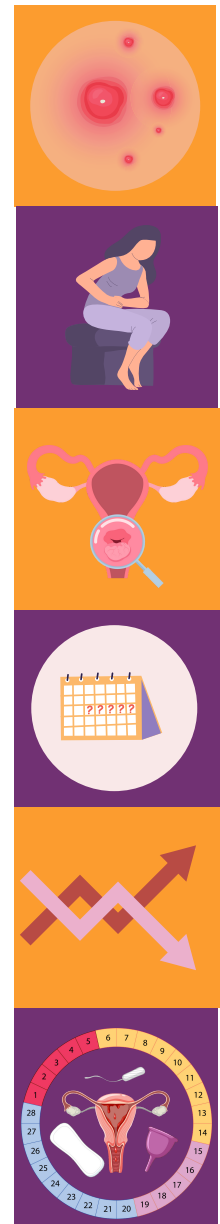


Common Signs and Symptoms linked to Hormone Imbalance (11)

In Women

Some of the symptoms of hormone imbalance are now so common that some women might consider them just 'par for the course.' However, the following symptoms have the potential to compromise reproductive health:

- Irregular periods: A menstrual cycle shorter than 27 days or longer than 31.
- Irregular ovulation: Occasional or frequent cycles that are an-ovular (with no ovulation) or cycles that have a pre-ovulatory phase longer than 17 days or a post-ovulatory phase less than 12 days.
- Amenorrhea: Total lack of menstruation.
- Premenstrual Syndrome: Including sore, swollen, or lumpy breasts, fluid retention and bloating, food cravings, fatigue, digestive upsets, headaches, aches and pains, and premenstrual tension (PMT).
- Dysmenorrhea: Painful periods that include cramping and are possibly accompanied by nausea or vomiting.
- Menorrhagia: Dysfunctional menstrual bleeding, which is heavy or too frequent.
- Inadequate cervical mucus: Little or no fertile (wet) mucus present mid-cycle (at or before ovulation).
- Recurrent vaginal thrush: Accompanied by vaginal itching, burning, and (possibly) discharge.





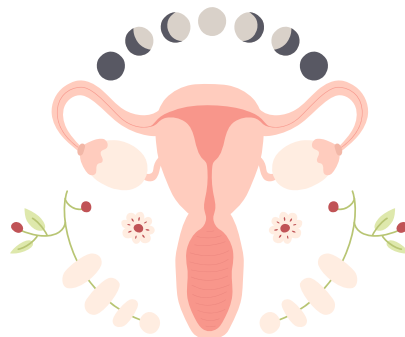
The following conditions have the potential to compromise reproductive health:

- Endometriosis
- Pelvic Inflammatory Disease (PID)
- Genito-urinary infections (GUIs), including sexually transmitted diseases (STDs)
- Blocked fallopian tubes
- Ovarian cysts
- Polycystic ovarian syndrome (PCOS)
- Fibroids
- Cervical dysplasia (abnormal pap smear)
- Thyroid dysfunction
- Pituitary dysfunction

If you're suffering from any of the symptoms or conditions listed above, healthy, hormonal balance needs to be restored before you make any attempt to conceive.

For healthy conception, pregnancy, and breastfeeding experience, the goal is that women:

- Ovulate in every (or most) cycles.
- Have a pre-ovulatory phase of not more than 17 days.
- Have a post-ovulatory phase of not less than 12 days.
- Experience a menstrual cycle that is, for the most part, free of PMS.





What about prospective dads?

A lot of focus tends to be placed on women for preconception care, but babies have fathers too! Male infertility is defined as the inability to make a fertile female pregnant within one year of unprotected intercourse and accounts for 20% of infertility cases (15).

If you are planning to conceive a child soon, having a semen analysis performed can be beneficial to assess the viability of the sperm. This test is not surgically intrusive or painful and has no possible side effects, unlike the tests that need to be carried out to assess female fertility.

A semen analysis informs you of the following:

- Sperm count
- Sperm motility (how well they move) and if they move in the right direction (progressive motility)
- Sperm morphology (whether or not they are deformed).
- Semen volume, viscosity, and pH levels are appropriate (i.e., not too acidic).

However, it will not tell you whether your sperm contains too many toxins or insufficient nutrients to form a healthy embryo.

Although, medically speaking, a sample may be considered viable, there may be indications that the conception resulting from these sperm will be less than optimally healthy. This is why preconception care is so critical. Hormone imbalance, toxicity, and nutrient status are not measured in a semen analysis. Still, poor motility or a multitude of abnormally shaped sperm will give an indication that these factors are of concern and need particular attention.

While not all these symptoms impact reproduction, they can be an indication of low testosterone levels, which can impact reproductive outcomes.

- Low libido
- Poor erections
- Low sperm count
- Enlarged male breast tissue
- Loss of body hair/facial hair
- Loss of lean body mass (muscle mass)
- Fatigue
- Depressed mood

How to Support Hormone Balance Naturally

Instead of introducing hormones into the body to manipulate and control hormone levels, there are other options that address the root cause of hormone imbalance. Hormone balancing begins at the brain in the hypothalamus, cascading down through the pituitary, thyroid, adrenal glands, and eventually the gonads (ovaries and testes).

This signaling then circles back to the hypothalamus, creating a continuous feedback loop for ongoing communication between those organs. This process is referred to as the hypothalamus-pituitary-thyroid-adrenal-gonadal (HPTAG) axis (Image 1).

Depending on your needs, this may result in an increase or decrease in hormone production. However, many factors can cause this communication system not to work as efficiently as it should and therefore, additional support for the HPTAG axis can provide health benefits.

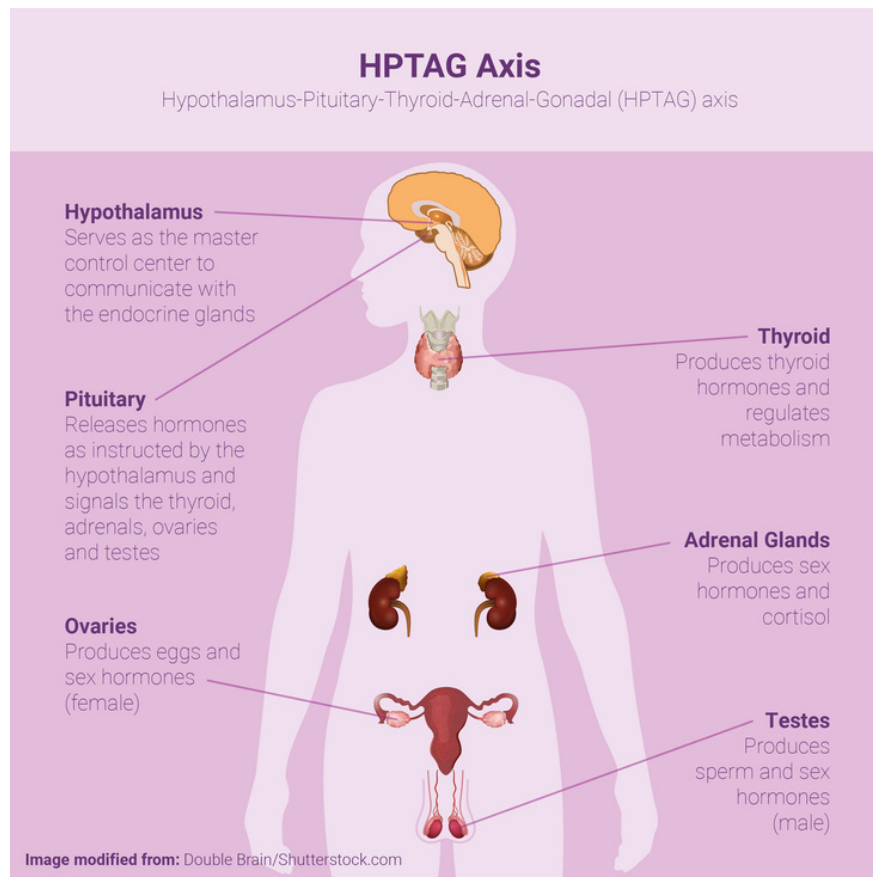


Image 1. HPTAG Axis

The Hypothalamus-Pituitary-Thyroid-Adrenal-Gonadal (HPTAG) axis is how your body communicates hormonal messages inside through the endocrine system. The hypothalamus works with the pituitary gland to serve as a master control center to the other endocrine organs such as the thyroid, adrenal glands, ovaries, and testes.

Clinical research on a supplement called Femmenessence is the first to ever demonstrate statistically significant effects on hormones in women of all ages. Instead of introducing hormones into the body, Femmenessence nourishes the HPTAG axis to support the body's own hormone production which can result in the increase or decrease of individual hormones, depending on what the body needs.

Femmenessence is made from an herb called maca, however, what many people are not aware of is that there are up to 17 different phenotypes of maca that can be different colors, have varying DNA, different nutritional profiles, and, most importantly, can have different physiological effects on the body, meaning some are more beneficial for men than women and vice versa (16). For example, there is one phenotype that is optimal for sperm concentration, count, motility, and men's fertility, while there is another that is ideal for menstrual health and women's fertility. The differences are so dramatic, that if women use the type for men's fertility and have conditions such as PCOS it can actually make those conditions worse! So, using the right type is profoundly important.



In addition, the concentration and bioavailability of the ingredient were critical to eliciting a statistically significant improvement in multiple hormones (16).

However, supporting the HPTAG axis is not the only aspect of supporting the body's hormone balance. Metabolism, detoxification, and elimination are also vital and require specific herbal and nutritional support, personalized dietary recommendations, and an exercise program to provide the ideal support for preconception care.

There are many options to consider when selecting the best supplements for your needs. We encourage you to speak to your healthcare providers to determine what will provide you with the best support.

How you manage your diet, exercise, stress, and other lifestyle factors may impact your hormone health and fertility outcomes.

This guide is designed to provide you with general recommendations to assist in each of these areas.

Diet & Nutrition

There are many options to choose from when considering a dietary plan. For example, the Mediterranean diet is one of the most extensively studied food plans for a wide array of health conditions. One study suggests it can improve sperm health and result in better pregnancy outcomes (17), while another study reports its positive impact on female fertility, likely due to the positive impact on metabolic changes such as weight management and glucose and insulin regulation (18).

There isn't one dietary pattern that all women and men should follow.

The best food plan is one you can comply with and should be personalized to your likes and lifestyle!

Even though one's diet needs to be personalized, here are some general nutrition guidelines that can provide benefits for preconception care.

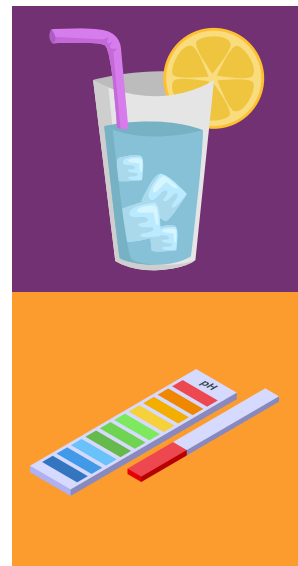
Drink Water

Proper hydration aids in delivering nutrients, regulates body temperature, improves mood and concentration, increases/maintains energy, lubricates joints, and supports healthy detoxification. It is also critical to support regular bowel movements, urination, and sweating — our three routes of eliminating waste from our bodies. Water intake may need to be adjusted based on physical activity and sauna use, to name a few.

Do you find water boring?

Add fruits like oranges, lemons, limes, and grapefruit, herbs like mint, cilantro, and rosemary, or vegetables like cucumbers. Get creative and combine some of these fruits, herbs, and vegetables, such as cucumber & mint or grapefruit & rosemary.

Additionally, if you drink water but still feel dehydrated, you may consider mineralizing your water using Sole (a super-saturated Himalayan crystal salt solution). One study demonstrated that mineralized water increased hydration indicators by 10% and was effective in stabilizing pH (19).



Eat organic whenever possible

The evolution of the food chain, degradation of the soil on which produce is grown, pesticides that prevent the uptake of minerals, herbicides that destroy the microorganisms in the soil, fertilizers that are devoid of trace elements, genetic modification, food additives, preservatives, cold storage, extended transport and handling and cooking methods that destroy nutrients are among the many factors that make the activity of optimally nourishing your body more of a lottery than a certainty.

A review of multiple studies show that organic varieties of fruits and vegetables provide significantly greater levels of vitamin C, iron, magnesium, and phosphorus than non-organic varieties of the same foods. While being higher in these nutrients, they are also significantly lower in nitrates and pesticide residues (20).

The Environmental Working Group's "Dirty Dozen/Clean Fifteen" guides, which are updated annually, can help prioritize your options.



Eat colorful, anti-inflammatory foods that are low glycemic in impact.

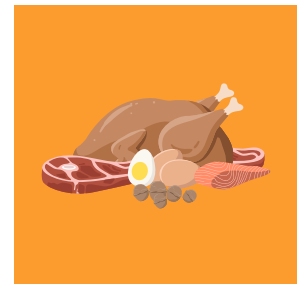
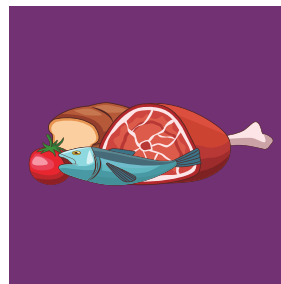
Dietary Protein

Protein requirements during preconception are not defined. However, adequate protein intake, about 25% of caloric intake, during the preconception period improves birth weight and can improve pregnancy outcomes (21).

Variations in the recommended amounts of protein during pregnancy are present in our scientific literature. The current Recommended Dietary Allowance (RDA) for the first trimester of pregnancy is 0.8 g/kg body weight daily and 1.1 g/kg body weight daily in the second and third trimesters (21). However, one study found that 1.22 g/kg (early gestation) and 1.53 g/kg body weight (later gestation) may be more reflective of pregnancy needs (22). Low protein intake during early pregnancy has been associated with an increased risk for child developmental delay (23).

Include lean proteins:

- Wild-caught fish (sardines, salmon, tuna)
- Grass-fed poultry (chicken, turkey)
- Grass-fed meat (beef, bison, buffalo, lamb)
- Organic beans and legumes
- Pasture-raised eggs
- Plant-based proteins (tofu, tempeh)



Vegetables

“Eat the Rainbow”- eat 1 serving of each color of the rainbow daily



Non-starchy

Choose 1-2 servings of the cruciferous family of vegetables- broccoli, kale, cabbage, cauliflower, radishes, Brussels sprouts

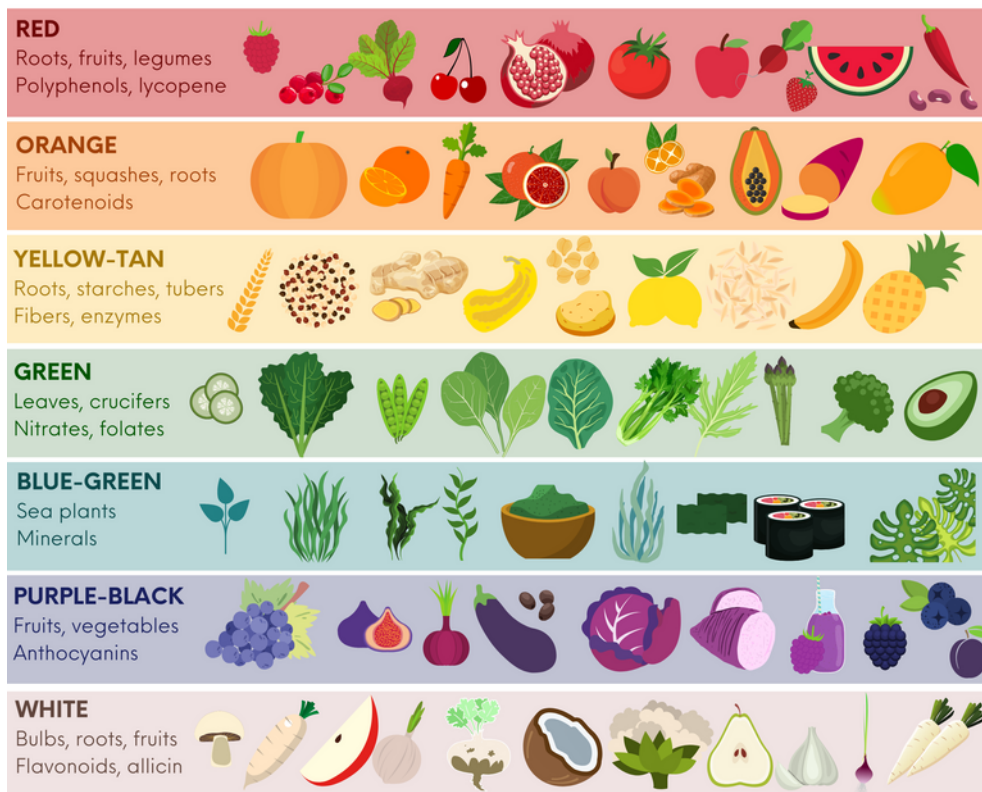
Choose green leafy vegetables daily (lettuces, spinach, bok choy)

Pick from a variety of other vegetables to make up the rainbow! (carrots, peppers, tomatoes, cucumbers, celery, jicama, mushrooms, etc.)

- Starchy (limit to 1 serving per day)
- Potatoes (all colors)
- Root vegetables (parsnips, rutabaga)
- Squash (butternut, acorn)

EAT THE RAINBOW

Based on **The Rainbow Diet**
book by our Chief Science
Officer, Dr. Deanna Minich



Learn More:

[The Rainbow Diet: A Guidebook to the Science and Art of Colorful Foods for Healthy Homones](#)

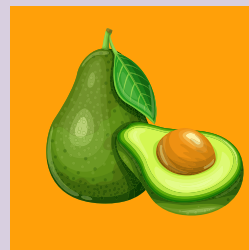
Low-glycemic fruits - 1-2 servings per day:

- Apples
- Berries (all)
- Cherries
- Lemons
- Limes
- Oranges
- Peaches
- Pears
- Plums



Healthy fats and oils - daily requirements vary

- Oils: extra virgin olive oil (EVOO), flaxseed, pumpkin seed, sesame, avocado
- Avocados
- Clarified butter/ghee
- Olives



Nuts and seeds — daily requirements vary

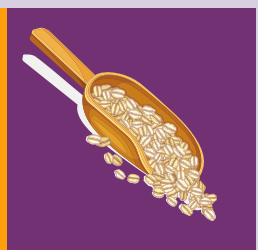
- All nuts and seeds, including nut butters (almond, cashew)
- For flaxseed, ensure it is stored in a dark container to protect it from oxygen and light, as both reduce healthy nutrients.



Whole grains* - 1-2 servings per day

- Rice (brown, basmati, jasmine)
- Oats
- Millet
- Buckwheat
- Barley

*Choose gluten-free options when applicable

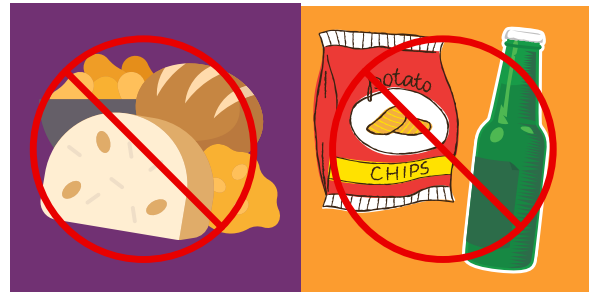


REDUCE OR AVOID:

- Possible or known food triggers such as:
 - Animal dairy (milk, cheese, yogurt)
 - Corn
 - Gluten (e.g., barley, rye, wheat, spelt)
 - Peanuts

Note: Work with your healthcare provider to determine whether you have any food allergies, intolerances, or sensitivities through laboratory testing or elimination from the diet.

- Processed/refined carbohydrates
 - Chips
 - Crackers
 - Breads (especially white bread)
 - Fruit juice
 - Pancakes and waffles
 - Pastas
 - Ready-to-eat cereals
 - Soft drinks
 - White sugar and other refined sweeteners
 - White flour



- Artificial sweeteners (Equal, Sweet-N-Low, Splenda)
- Grilled foods
 - Advanced glycated end products (AGEs) are toxic compounds from high-heat cooking, such as grilled or fried foods.
- Alcohol
 - Multiple organizations and agencies recommend the avoidance of alcohol during preconception care.

A note about glycemic impact

Foods that rapidly increase blood sugar are known to have a high glycemic index. This spike can vary person to person, and newer research suggests it may also depend on the gut microbiome. Including protein, fiber, or fat can help to reduce the glycemic impact of a meal containing starches and sugars.

Also, eating foods in a particular order, starting with vegetables first, proteins and fats second, and starches and sugars last can reduce the glycemic response.

1

Vegetables

2

Proteins & Fats

3

Sugars & Starches

Restore the health of your microbiome

Only in the last twenty or so years have scientists begun to understand the critical importance of the human microbiome. The microbiome is the collection of all microbes (bacteria, fungi, viruses, and their genes) that live within our bodies. It's astounding that there are about 10 times more microorganism cells in the gastrointestinal (GI) tract alone than the entire number of human cells in the body and it contains about 100 times the amount of genetic information (24). While the microbiome comprises the organisms on your skin, in your mouth, and other orifices, the bacterial population in your GI tract is an important focus for preconception care.

'Important' isn't strong enough to describe all the things for which this colony of microorganisms in the GI tract is responsible for. Those factors include integrity of the GI lining, vitamin synthesis and nutrient absorption, immune function, energy metabolism (weight management), neurotransmitter formation, and hormone production.

Ensuring your GI tract is populated with the healthiest possible organisms is a fundamental step in your preconception program. Restoring GI health begins with the food you consume daily.

Consider adding probiotic and prebiotic-rich foods into your daily diet. Probiotics are the beneficial bacteria in the digestive tract, and prebiotics are fiber-rich foods that feed probiotics. Higher fiber foods also support bowel movements by eliminating excess hormones and toxins, providing many needed nutrients.

Select probiotic-rich foods

- Aged cheese
- Cottage cheese
- Fermented vegetables
- Kefir
- Kimchi
- Kombucha
- Miso
- Pickled vegetables
- Plain yogurt
- Sauerkraut



Select prebiotic-rich foods

- Asparagus
- Garlic
- Green bananas
- Jerusalem artichokes
- Legumes
- Onions
- Whole grains (aim for gluten-free)



Seek assistance from a trained professional for assistance with creating a nutrition plan and probiotic support that will work for your health concerns and lifestyle.

With their support, you can also address your relationship with food, which is often stressful and must be redefined for long-lasting change.

INCREASE YOUR INTAKE OF KEY NUTRIENTS

You might wonder why you need supplements if you implement the dietary guidelines above.

Apart from ensuring optimally healthy eggs and sperm, consider that from conception to the end of the first trimester, the mass of the developing embryo increases over 2 ½ million times. This rapid phase of growth requires levels of nutrients that are many times higher than those required during the non-pregnant state. Development also proceeds according to a very strict timetable. For example, the neural tube closes on day 28 or 29 after conception, often well before the mother even knows she is pregnant. If insufficient folic acid is present at that time, neural tube defects may result (25). Studies suggest that preconception supplementation of multiple micronutrients (via a multivitamin/mineral)

- beneficially impact fertility, including a shorter time to pregnancy and increased chance of becoming pregnant (26)
- reduce the risk of pregnancy complications, including pre-eclampsia (27,28)

Additionally, during pregnancy, the need for some nutrients may increase several-fold. Requirements for nutrients such as folate, the whole vitamin B-complex, vitamin C, zinc, calcium, and magnesium increase by 30-100 percent during pregnancy, yet food requirements only increase by a modest 15-20 percent.

Stated simply, dietary change alone is not enough to get the required nutrition to modify the biochemistry to have a healthy conception, pregnancy, and baby. This is reinforced by the common recommendation for women to take a prenatal vitamin. Single nutrients are never recommended since all the vitamins and trace elements work together and taking a single nutrient may lead to a deficiency in another.

There is a long list of nutrients and their particular role in reproduction (you can read my books if you want that list) (11,29-31). Here are a select few of those that often receive too little (or sometimes too much) attention



INCREASE YOUR INTAKE OF KEY NUTRIENTS



Zinc

Depleted soil, food refining, stress, alcohol, and caffeine are just some of the culprits that make zinc deficiency one of the most widespread deficiencies in the Western world. Zinc levels may also be very low after the use of hormonal contraception. Zinc is involved in every aspect of reproduction, from optimal fertility (of both parents) to a baby that is easy to settle. Of particular interest for the birthing woman is that optimal zinc levels can support strong and efficient uterine contractions. If a woman is zinc deficient, there will be gaps in her uterine membrane, leading to inefficient contractions and prolonged labor.

Restoring zinc status can take a little time and both parents-to-be should achieve adequate status and maintain that for at least four months before you start trying to conceive.

The zinc taste test is one way to assess zinc status (32,33). The zinc taste test itself is extremely simple and involves taking 1 teaspoon (5 ml) of zinc sulfate solution into your mouth. You can buy this solution from integrative practitioners or your local pharmacy.

- If you promptly experience a strong, unpleasant taste, your zinc status is likely adequate, but you may still need to maintain it with supplementation.
- If you experience a dry, furry, or delayed taste sensation, your zinc status is likely marginal.
- If you experience no taste at all, you are likely zinc deficient.

In both latter instances you would benefit from supplementing with a liquid zinc product. You can use the same product you used for the taste test or a more concentrated form that contains the necessary co-factors for optimal zinc absorption.

The dose required to optimize levels of this vital trace element can be 20–60 mg (elemental zinc), taken at night on an empty stomach.

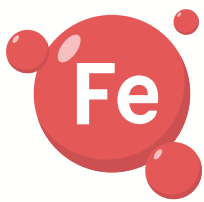
Of note, too much calcium (which is also often routinely prescribed during pregnancy) is a culprit in reducing the uptake of zinc (which is rarely prescribed along with calcium, although zinc is probably more important). Further, calcium can only be utilized properly in the presence of an adequate (and proportional) supply of magnesium and vitamin D.

INCREASE YOUR INTAKE OF KEY NUTRIENTS



B Complex

A single B vitamin should never be taken on its own but always in conjunction with the full spectrum of Bs since they are all linked in function. Dosing with one alone may lead to a greater need for one (or more) of the others, thereby creating a deficiency. B vitamins never occur alone in nature. Be aware that folic acid is part of the B-complex group. While it is almost routinely prescribed for women before conception (to prevent neural tube defects) and during pregnancy, it should always be taken with its fellow B vitamins. Speaking of folate, since increasing numbers of individuals (those with the MTHFR genetic mutation) cannot metabolize folic acid, choose a supplement in which folate is provided as MTHF - the biologically active form of folate.



Iron

Inorganic iron supplements, which are often prescribed for anemia of pregnancy (and often in combination with folic acid), compete with zinc for uptake and metabolism. Since zinc is probably the most important trace element for pregnant women, iron supplementation should contain an organic compound (such as iron chelate). It should only be given in combination with a full range of essential trace elements, fatty acids, and vitamins.



Vitamin C

Vitamin C is a powerful antioxidant that protects against the toxicity of heavy metals, pesticides, and other environmental pollutants while also protecting against the activity of mutagens, which affect the chromosomes in sperm and ova. Vitamin C is necessary for hormone production, for the metabolism of essential fatty acids, and must be present for the proper absorption of iron. It is vital for the maintenance of your body's immune function and the production of collagen. It promotes skin, tissue, and bone integrity and protects them from invasion by foreign organisms.

INCREASE YOUR INTAKE OF KEY NUTRIENTS



Omega-3 fatty acids

Unlike most of your baby's organs, which have largely formed by the end of the first trimester, with growth being the main feature of the second and third trimesters, your baby's brain continues to develop throughout the whole pregnancy and for the first three years of life. This development, especially the fine-tuning, depends on a good supply of the essential fatty acids, omega-3 and omega-6.

All the omega-3 and omega-6 fatty acids accumulated by the fetus must ultimately be derived from the mother by placental transfer. The typical American diet is high in omega-6 fatty acids. In contrast, the intake of omega-3 fatty acids is suboptimal. The richest dietary sources of omega-3 fatty acids are from marine sources, fish oil supplements, and, to a lesser extent, selected vegetable oils. Most individuals in the United States do not consume these omega-3-rich foods on a regular basis.

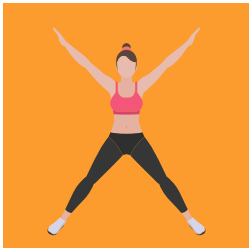
There is considerable uptake and demand for these nutrients in the last six weeks of pregnancy. The best supplement to provide you with these nutrients before conception, during your pregnancy and as you approach birth (and during the breastfeeding period) is one containing docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA). It is recommended to take 500 mg two to three times daily (especially if your diet contains little deep-sea fish).

Make sure to buy a reputable brand of this essential fatty acid combination since some fish oils may be contaminated with toxins such as PCBs (polychlorinated biphenyls), DDT (dichloro-diphenyl-trichloroethane), dioxin, and mercury. Multivitamin and mineral supplements don't usually contain essential fatty acids, so you need to include these nutrients in a separate product.

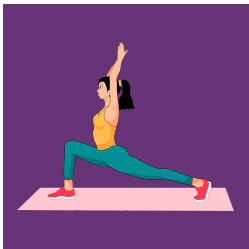
Exercise & Movement

Preconception exercise should include a combination of aerobic and resistance training alongside stretching. Yoga or Pilates are both great options since they support muscle building as well as flexibility. Once you are pregnant, there are specific exercises that will support an active birth.

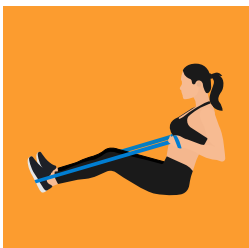
A wearable device that tracks steps taken can provide real incentive, especially if you and your partner are on this mission to get fit together. Progress to more adventurous and more vigorous exercise as your muscles (and your mind) become accustomed to the extra activity. It's also a fact that women who exercise before and during pregnancy experience a better pregnancy and birth, faster recovery, and are less likely to suffer postnatal depression.



Aerobic activity - Provides many benefits to the body, including improving cardiovascular health, supporting the immune system, boosting mood, helping with sleep, and the list goes on.



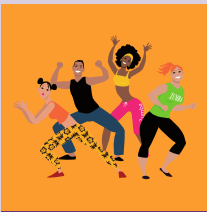
Stretching, Yoga, and Pilates - These activities can be completed during preconception care as well as throughout pregnancy. They aid in reducing stress and can help improve circulation and energy flow to the uterus and ovaries.



Resistance training (RT) - Resistance training includes light weights, resistance bands, machine equipment, and plyometric activities.

Remember: any movement is good movement! Movement of any kind reduces stress, improves metabolism, namely blood sugar management, and improves hormone balance. It doesn't take much -- a simple walk after eating can reduce blood sugar.

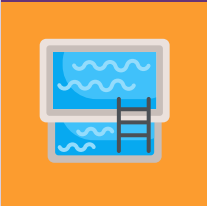
SOME TIPS TO HELP YOU MOVE MORE:



Do what you enjoy! For some, it may mean the gym and hitting the elliptical and weights. For others, it can be the pool, and still others, the dance floor. Find a combination of activities that you enjoy.



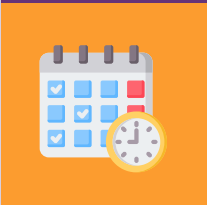
Add some resistance activities — consider squats, lunges, push-ups, resistance bands and/or light weights to give your large muscle groups some additional attention.



The pool is a great place to combine aerobics with the natural resistance the water provides.



Find a buddy or group to work out with or to participate in classes or activities. Think about things like a hiking group, dance class, yoga, pilates class, soccer team, golf, tennis, or others.



Schedule a time with yourself for exercise...and then keep your appointment! Hire a personal trainer to keep you accountable. Is there a gym on the way to/from work to make it easier to stick with?

Seek assistance from a trained professional for assistance with creating the ideal exercise routine. With their support, you can ensure exercise meets your likes, time schedule, and addresses any health or joint concerns (i.e., weak back or knees).

Stress Management

Chronic stress, whether emotional or physical, is known to affect hormone balance.

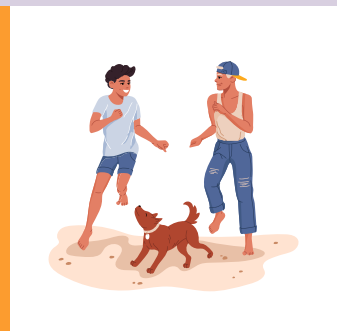
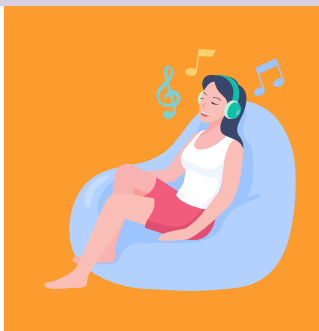
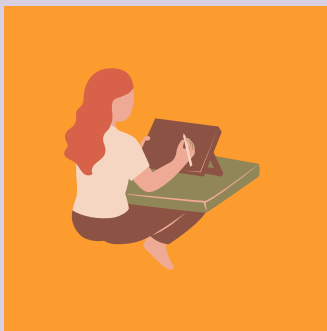
The increased release of cortisol from the adrenal glands when under stress worsens insulin response in the body and interferes with the normal function of thyroid hormone, testosterone, estrogen, and progesterone (34).

A large study found that yoga and mindfulness-based practices reduce cortisol, blood pressure, and blood sugar, among other markers (35).

You can work to reduce stress and its effects by:

- Coloring, journaling, or completing puzzles
- Doodling or drawing
- Engaging in meditation, guided imagery, prayer, or breathwork
- Getting a massage
- Listening to soothing music
- Playing with pets
- Practicing yoga
- Reading a fiction book
- Sipping on some tea and relaxing.
- Soaking in a bath with bath salts and calming essential oils, like lavender.
- Taking intentional “pauses”. This can be a time for doing something creative or just simply ‘being.’
- Walking in nature (“forest bathing”)
- Watching a comedy

Like exercise, find something you enjoy doing and make time for it.



Stress Management

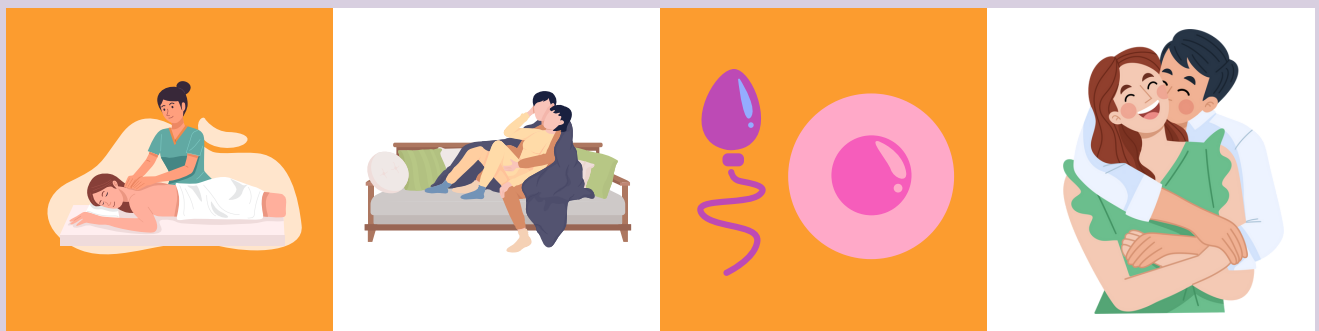
Cultivate intimacy and connection through intercourse and touch

Sex is good for you and while that might seem self-evident, it is important that your sex life doesn't fall into a black hole of neglect or that it doesn't become a chore when you're trying to achieve a pregnancy.

Oxytocin is the hormone that makes the uterus contract during labor, stimulates the letdown reflex during breastfeeding, and is also released at orgasm. Oxytocin is present in both sexes, promoting calm, connection, bonding, love, and intimacy. It is commonly called the "cuddle hormone." It directly counteracts the flight or fight response, reducing stress levels and promoting growth hormone production, which is essential for overall health and healing.

Apart from being a very effective oxytocin producer, great sex is also a mighty effective stress reducer! Regular, satisfying sex makes for healthier, fresher sperm too! Orgasms increase the blood flow to the reproductive organs, helping them to function better. While his orgasm is essential, conception can happen without hers. However, her orgasm may increase the chance of conception. Some research shows the contractions that accompany the female orgasm may help carry sperm further into the cervix.

Nurturing touch (no need for a professional massage) and engaging with pets are also excellent oxytocin stimulants. Because it's a peptide hormone, an adequate amount of quality protein must also be consumed daily to support this hormone's production (see above).



Lifestyle & Environment

Modifying lifestyle factors may also be helpful for hormonal balance.

Support quality sleep

If you're having trouble with your sleep, there are plenty of reasons. Over the years, societies have extended their day with electric light. Most people sleep in a light-infused limbo with text messages and emails coming and going, while a variety of light-emitting devices – laptops, computers, TVs, alarm clocks, phone chargers, and more constantly glow and wink through the hours that nature designed to be experienced in complete darkness.

Ensure you practice good sleep hygiene and get evaluated for sleep apnea if appropriate.

Aim for 7–9 hours of sleep nightly by establishing a regular bedtime, turning off electronics/screens at least 1 hour before bed, and calming yourself with some stress management techniques listed above.

When indicated, you may benefit from calming herbs such as chamomile, lavender, valerian, or lemon balm (36,37). Further, L-theanine, found in green tea, can help promote relaxation and sleep (38).



Check with your healthcare provider before starting any sleep support supplements, as there may be some contraindications. Additionally, “more is not always better” when using some supplement options mentioned above; therefore, guidance should be provided on choosing the correct dose.

Lifestyle & Environment

One of the most known supplements to support sleep is melatonin. Minich et al (39) provided this information in a comprehensive review paper on melatonin:

A review of the available literature by obstetric researchers found that because pregnancy has increased oxygen demands on the body and, thus, more free radical damage, melatonin supplementation may be a critical consideration for both complicated and normal pregnancies, counter to the traditional stance of avoiding it during pregnancy. According to some research, the use of melatonin supplementation during pregnancy, which has been found safe in both mother and fetus according to some research, could prove to help limit complications during critical periods before and shortly after delivery. A study suggested that preeclampsia does not have a seasonal variation, although it was observed that reduced melatonin levels were associated with the development of preeclampsia. Therefore, it has been suggested that melatonin may help support a successful pregnancy.

Pregnancy is a critical time for fetal programming of hypertension. As an antioxidant therapy, melatonin may help prevent hypertension in the offspring of patients with a family history of hypertension. It has been hypothesized that oxidative stress negatively impacts fertility. Since melatonin is a strong scavenger of oxidative factors, it could improve both male and female fertility and sperm and oocyte quality, resulting in increased fertilization. Melatonin shows promise for advanced age infertility and improving IVF outcomes.

Further, one paper showed that a phytemelatonin supplement (melatonin from plants) was up to 700% more effective than synthetic melatonin, which is the most common supplementation form on the market (40).

Herbatonin 0.3 mg is a plant melatonin that is a potential addition to your supplement protocol.

Lifestyle & Environment

Eliminate the use of cigarettes, alcohol, and social drugs

Sperm are very susceptible to damage! Taking up to four months to form, they are adversely affected by a host of dietary, lifestyle, and environmental factors. Alcohol, cigarettes, social drugs (including cannabis), exposure to chemicals and heavy metals, heat, tight underpants, and nutritional deficits have all been demonstrated to compromise sperm health.

While the maturing eggs are better protected than sperm (which are quite exposed in the testes), eggs are particularly susceptible to damage in the four months before conception. The same avoidance advice applies to prospective Moms (and applies equally throughout pregnancy and the breastfeeding period).



Avoid pharmaceutical drugs wherever possible* (This includes all hormonal birth control)

Despite widespread use and the belief that artificial hormones provide the most reliable method of birth control, orthodox medicine pays scant attention to the nutritional derangement and other side effects that accompany their use. For example, if used right up to the time of conception, the developing embryo is potentially exposed to a zinc-deficient environment. As stated previously, zinc is regarded as the most important trace element for a woman about to become pregnant!

Natural methods of contraception are better for you and your baby. The adverse effects of hormonal birth control on any pregnancy started too soon after its use can be considerable. Charting the cycle involves observing changes in cervical mucus, taking basal temperature, and knowing the woman's personal menstrual cycle length. Today, many apps and devices are available to assist in charting these markers and assessing ovulation.

*Do not discontinue any medications without speaking to your prescribing healthcare provider.

Lifestyle & Environment

Get regular unprotected sun exposure

While all the vitamins and trace elements have a crucial role in reproduction, ensuring vitamin D status is particularly important given the likelihood of deficiency in Western society. Low vitamin D levels have been linked to low ovulation rates and are also linked to pre-eclampsia and preterm birth. Maternal vitamin D deficiency has been associated with increased rates of asthma, allergies, schizophrenia, and other conditions (41,42).

Vitamin D, while it is consumed in the diet, can be synthesized through the skin when exposed to the sunshine. Sunshine prescription:

- 10 -15 minutes of sun exposure per day between 10:00 am and 2:00 pm
- Expose 40% of skin area
- Ensure it's a clear day without pollution

If sun exposure isn't possible, use oral supplements of vitamin D3, dosing this based on your current lab values.

Use clean, green, toxicity-free skin, personal, & domestic care products

The Environmental Working Group (EWG) Survey found that people are exposed to 126 chemical ingredients through the use of personal products alone. On average, women use 13 products daily (up from 12 in 2004), and men use 11 products daily (up from 6 in 2004) (43). The good news is that the number of chemicals people are exposed to has decreased in this 20-year period, likely due to the awareness and availability of chemical-free options.

Since toxins and chemicals impact fertility and contribute to infertility (44), it is best to choose non-toxic personal care products in the months leading up to conception (and continuing after that.) The EWG provides a guide for safer personal products at www.ewg.org/skindeep

Likewise, the EWG provides a list of verified cleaning products that are safe for use. Salt, sodium bicarbonate, and borax were good enough for Grandma and they haven't lost their ability to clean; they've just lost their popularity. Try microfiber cloths for cleaning.

Lifestyle & Environment

Reduce exposure to electromagnetic radiation

Exposure to electromagnetic fields carries health risks. Sadly, the fact that electromagnetic pollution is unseen makes it even more insidious – it’s particularly a health risk for fetuses and the developing brains of children.

Radiation from cell phones and Wi-Fi has been linked to decreased brain motor function, social and emotional issues, and inability to concentrate or focus on long-term tasks. Declining sperm count and sub-optimal fertility are other by-products of the current sea of EMR in which we all swim, courtesy of modems, cell and cordless phones, smart whiteboards, antenna, bluetooth earpieces, baby monitors, other ‘smart’ devices, and much more.

What should you do, given that exposure is inevitable?

Protective measures include antioxidant nutrients, ongoing detoxification support, and avoiding exposure to those devices that are within your control. That means keep your cell phone out of pockets and laptops and tablets out of laps! Turn off your modem at night, and eliminate all electronic devices from your bedroom, aiming for at least 8 hours free from EMR. Researched protective devices are also available.

Walk barefoot on grass or sand

Grounding yourself to the earth, sometimes called earthing, has real health benefits. Simply put, it puts you in direct contact with the earth’s health-boosting energy. Interestingly, it’s an activity that every living thing does instinctively, yet most of us probably walk barefoot on the earth infrequently. The benefits are subtle but real.



HERE ARE SOME TIPS FOR REDUCING YOUR TOXIN LOAD, SUPPORTING HORMONE BALANCE & PRECONCEPTION CARE

- Buy bisphenol A (BPA)-free water bottles and containers (good choice). An even better choice would be to use glass whenever possible.
- Minimize the use of food in cans when possible to reduce intake of aluminum and bisphenol liners.
- Toss Teflon and other non-stick cookware and replace them with cast iron, stainless steel, and glassware.
- Drink tea from a reusable mug, especially when on the go.
- Avoid microwaving food in plastic containers or coverings.
- Avoid fragrances whenever possible (e.g., perfumes, scented products like candles, etc.).
- Following an anti-inflammatory, high-antioxidant food plan with adequate protein, as described in this guide, will provide foods that support the elimination of toxins from the body.
- Some specific foods and supplements may provide additional support, such as milk thistle, dandelion greens, spirulina, and alfalfa (45,45). pH Quintessence is a 40:1 concentrated organic alfalfa that can support detoxification and hormone clearance for improved hormone balance. with your healthcare provider which ones would be best for you.

Try our hormone balance, detoxification, fertility and preconception pack for him and her:

WWW.SYMPHONYNATURALHEALTH.COM/PRECONCEPTION

Conclusion

Many dietary and lifestyle factors may help support preconception care. Our goal is to help you improve hormonal health through diet and lifestyle choices and using supplementation as needed. Working with a health professional who can customize a plan to meet your individualized needs is best.

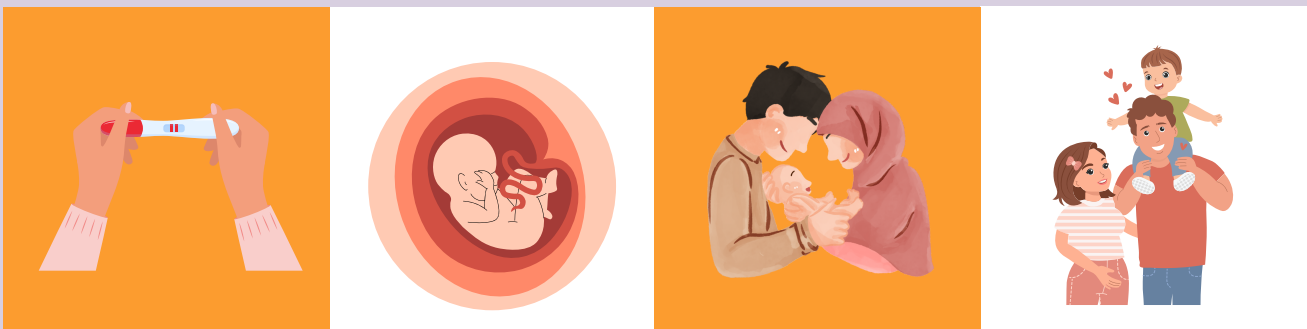


Practitioner Guidance

Consult a health professional with expertise in preconception care if either of you suffer from chronic or existing conditions, if you are or have been exposed to environmental or lifestyle toxins, or if you have a prior reproductive problem. Rest assured that everything we've just outlined will support more specific treatments that might be necessary. Finally, if you need to opt for IVF, thorough preconception preparation by both partners can double the success rate of the procedures.

One last word

Becoming a parent is a life-changing experience. Parenting is the most rewarding and challenging job you will ever do. Tomorrow's children will experience challenges that you, their parents, can only dream about. Ensuring they have the physical, mental, and emotional resources to rise to those challenges is up to you. It begins with embracing preconception care well before you start trying to conceive. The health of the next generation is in your hands. ~Jan



Summary



Empowerment & Knowledge

- The preconception work-up and care applies in equal measure to both partners.
- It should be completed, with all health-promoting measures in place, at least four months prior to conception.
- Give yourself as much time as you need to prepare, but make sure that both of you have the healthiest possible diet, lifestyle, and environment during that critical 4-month period.



Hormones

- Speak to your healthcare provider about the option of hormone testing and/or semen analysis to know
- Consider Femmenessence MacaHarmony (for women) and Revolution Macalibrium (for men) to support the HPTAG axis and hormone balance.



Diet & Nutrition

- Choose a dietary pattern that fits your likes/dislikes, lifestyle, and beliefs.
- Drink 64 ounces or more (based on individual needs) of water daily to stay hydrated.
- Eat whole, anti-inflammatory, low-glycemic foods like berries, legumes, and non-starchy vegetables.
- Avoid processed carbohydrates, refined sugars, and artificial sweeteners.
- “Eat the Rainbow” with one color from every food color daily.
- Aim to eat cruciferous vegetables daily for detoxification support.
- Support gut health with probiotic and prebiotic foods like fermented foods.
- Avoid alcohol intake.
- Focus on key nutrients like zinc, iron, omega 3 fatty-acids



Exercise & Movement

- Select activities you enjoy doing.
- Schedule regular activities on your calendar for consistency.
- Engage in aerobic and resistance training, as well as stretching.



Stress Management

- Make time to relax and decompress.
- Take a bath at night to unwind.
- Practice grounding by walking barefoot on grass or sand.
- Enjoy a regular massage or other bodywork.
- Maintain a positive attitude–You can make a difference in the health of the next generation!



Lifestyle & Environment

- Avoid completely – cigarettes, alcohol, caffeine, and other drugs (including hormonal birth control) in the critical 4-month period prior to conception.
- Avoid environmental toxicity — reduce your use of chemical-laden products and limit your exposure to electromagnetic radiation.
- Sleep soundly for 7- 8 hours each night. Consider Herbatonin 0.3 mg for daily sleep and antioxidant support.
- Support detoxification with pH Quintessence.

References

1. University of Southampton [Internet]. 2006 [cited 2024 Feb 29]. CBE for University medical pioneer Professor David Barker. Available from: <https://www.southampton.ac.uk/news/2006/01/medical-pioneer-professor-david-barker.page>
2. Barker D. Mothers, Babies and Health in Later Life. 2nd ed. Churchill Livingstone; 1998.
3. World Health Organization [Internet]. 2023 [cited 2024 Feb 29]. 1 in 6 people globally affected by infertility: WHO. Available from: <https://www.who.int/news/item/04-04-2023-1-in-6-people-globally-affected-by-infertility>
4. Quenby S, Gallos ID, Dhillon-Smith RK, Podesek M, Stephenson MD, Fisher J, et al. Miscarriage matters: the epidemiological, physical, psychological, and economic costs of early pregnancy loss. Vol. 397, *The Lancet*. 2021.
5. Centers for Disease Control and Prevention [Internet]. 2023 [cited 2024 Feb 29]. Preterm Birth. Available from: <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pretermbirth.htm>
6. Centers for Disease Control and Prevention [Internet]. 2023 [cited 2024 Feb 29]. Birthweight and Gestation. Available from: <https://www.cdc.gov/nchs/fastats/birthweight.htm>
7. Centers for Disease Control and Prevention [Internet]. 2023 [cited 2024 Feb 29]. Data & Statistics on Birth Defects. Available from: <https://www.cdc.gov/ncbddd/birthdefects/data.html>
8. Centers for Disease Control and Prevention [Internet]. 2023 [cited 2024 Feb 29]. Births – Method of Delivery. Available from: <https://www.cdc.gov/nchs/fastats/delivery.htm>
9. Angolile CM, Max BL, Mushemba J, Mashauri HL. Global increased cesarean section rates and public health implications: A call to action. *Health Sci Rep*. 2023;6(5).
10. Center for Disease Control [Internet]. 2006 [cited 2024 Mar 1]. CDC Releases National Recommendations to Improve Health of Babies and Moms. Available from: <https://www.cdc.gov/media/pressrel/r060420b.htm>
11. Naish F, Roberts J. The Natural Way to Better Babies - Preconception Healthcare for Prospective Parents. Random House-Australia; 1996.
12. Price W. Nutrition and Physical Degeneration: A Comparison of Primitive and Modern Diets and Their Effects. Keats Pub; 1990.
13. Barnes N. How to Conceive Healthy Babies – The Natural Way. New Generation Publishing; 2014.
14. Khekade H, Potdukhe A, Taksande AB, Wanjari MB, Yelne S. Preconception Care: A Strategic Intervention for the Prevention of Neonatal and Birth Disorders. *Cureus*. 2023;
15. Leslie SW, Soon-Sutton TL, Khan MA. Male Infertility. 2024.
16. Minich DM, Ross K, Frame J, Fahoum M, Warner W, Meissner HO. Not All Maca Is Created Equal: A Review of Colors, Nutrition, Phytochemicals, and Clinical Uses. *Nutrients*. 2024 Feb 14;16(4):530.
17. Muffone ARMC, De Oliveira Lübke PDP, Rabito EI. Mediterranean diet and infertility: a systematic review with meta-analysis of cohort studies. Vol. 81, *Nutrition Reviews*. 2023.
18. Skoracka K, Ratajczak AE, Rychter AM, Dobrowolska A, Krela-Kaźmierczak I. Female Fertility and the Nutritional Approach: The Most Essential Aspects. Vol. 12, *Advances in Nutrition*. 2021.
19. Hendel B. Water And Salt-The Essence Of Life. Stenhouse Publishers; 2007.
20. Crinnion WJ. Organic foods contain higher levels of certain nutrients, lower levels of pesticides, and may provide health benefits for the consumer. Vol. 15, *Alternative Medicine Review*. 2010.
21. Murphy MM, Higgins KA, Bi X, Barraj LM. Adequacy and sources of protein intake among pregnant women in the United States, NHANES 2003–2012. *Nutrients*. 2021;13(3).
22. Stephens T V., Payne M, Ball RO, Pencharz PB, Elango R. Protein requirements of healthy pregnant women during early and late gestation are higher than current recommendations. *Journal of Nutrition*. 2015;145(1).
23. Miyake K, Mochizuki K, Kushima M, Shinohara R, Horiuchi S, Otawa S, et al. Maternal protein intake in early pregnancy and child development at age 3 years. *Pediatr Res*. 2023;94(1).
24. Thursby E, Juge N. Introduction to the human gut microbiota. Vol. 474, *Biochemical Journal*. 2017.
25. Wald NJ. Folic acid and neural tube defects: Discovery, debate and the need for policy change. *J Med Screen*. 2022;29(3).
26. Schaefer E, Nock D. The Impact of Preconceptional Multiple-Micronutrient Supplementation on Female Fertility. *Clin Med Insights Womens Health*. 2019;12.
27. Keen CL, Clegg MS, Hanna LA, Lanoue L, Rogers JM, Daston GP, et al. The plausibility of micronutrient deficiencies being a significant contributing factor to the occurrence of pregnancy complications. In: *Journal of Nutrition*. 2003.

28. Gunabalasingam S, De Almeida Lima Slizys D, Quotah O, Magee L, White SL, Rigutto-Farebrother J, et al. Micronutrient supplementation interventions in preconception and pregnant women at increased risk of developing pre-eclampsia: a systematic review and meta-analysis. Vol. 77, *European Journal of Clinical Nutrition*. 2023.
29. Naish F, Roberts J. *The Natural Way to Better Birth & Bonding*. Random House; 2000.
30. Naish F, Roberts J. *The Natural Way to Better Breastfeeding*. Random House; 2002.
31. Naish F, Roberts J. *The Natural Way to a Better Pregnancy*. Random House; 1999.
32. Zdilla MJ, Starkey LD, Saling JR. A taste-intensity visual analog scale: An improved zinc taste-Test protocol. *Integrative Medicine (Boulder)*. 2015;
33. Zdilla MJ, Saling JR, Starkey LD. Zinc sulfate taste acuity reflects dietary zinc intake in males. *Clin Nutr ESPEN*. 2016;
34. Yesiladali M, Yazici MGK, Attar E, Kelestimur F. Differentiating Polycystic Ovary Syn-drome from Adrenal Disorders. *Diagnostics*. 2022 Aug 24;12(9):2045.
35. Pascoe MC, Thompson DR, Ski CF. Yoga, mindfulness-based stress reduction and stress-related physiological measures: A meta-analysis. Vol. 86, *Psychoneuroendocrinology*. 2017.
36. Luo J, Jiang W. A critical review on clinical evidence of the efficacy of lavender in sleep disorders. *Phytotherapy Research*. 2022 Jun 12;36(6):2342–51.
37. Ali R, Tariq S, Kareem O, Fayaz F, Aziz T, Meenu, et al. Nutraceuticals for Sleep Disorders. *Comb Chem High Throughput Screen*. 2021 Sep 14;24(10):1583–92.
38. Türközü D, Şanlıer N. L-theanine, unique amino acid of tea, and its metabolism, health effects, and safety. *Crit Rev Food Sci Nutr*. 2017 May 24;57(8):1681–7.
39. Minich DM, Henning M, Darley C, Fahoum M, Schuler CB, Frame J. Is Melatonin the “Next Vitamin D”? A Review of Emerging Science, Clinical Uses, Safety, and Dietary Supplements. *Nutrients* [Internet]. 2022;14(19). Available from: <https://www.mdpi.com/2072-6643/14/19/3934/htm>
40. Kukula-Koch W, Szwajgier D, Gawet-Bęben K, Strzypek-Gomółka M, Głowniak K, Meissner HO. Is phytomelatonin complex better than synthetic melatonin? The assessment of the antiradical and anti-inflammatory properties. *Molecules*. 2021;
41. Ames BN, Grant WB, Willett WC. Does the high prevalence of vitamin d deficiency in afri-can americans contribute to health disparities? Vol. 13, *Nutrients*. 2021.
42. Hynes C, Jesurasa A, Evans P, Mitchell C. Vitamin D supplementation for women before and during pregnancy: An update of the guidelines, evidence, and role of GPs and practice nurses. Vol. 67, *British Journal of General Practice*. 2017.
43. Environmental Working Group [Internet]. 2023 [cited 2024 Feb 29]. Men’s use of personal care products has doubled since 2004, according to new consumer survey. Available from: <https://www.ewg.org/news-insights/news-release/2023/07/mens-use-personal-care-products-has-doubled-2004-according-new>
44. Pizzorno J. Environmental toxins and infertility. *Integrative Medicine (Boulder)*. 2018;17(2).
45. Hackett ES, Twedt DC, Gustafson DL. Milk Thistle and Its Derivative Compounds: A Review of Opportunities for Treatment of Liver Disease. *J Vet Intern Med*. 2013 Jan;27(1):10–6.
46. Ali Esmail Al-Snafi, Hanaa Salman Khadem, Hussein Ali Al-Saedy, Ali M. Alqahtani, Gaber El-Saber Batiha, Jafari-Sales Abolfazl. A review on *Medicago sativa*: A potential medicinal plant. *International Journal of Biological and Pharmaceutical Sciences Archive*. 2021 Feb 28;1(2):022–33.



A Whole Health Guide to Preconception Care

Copyright 2024 by Symphony Natural Health. All rights reserved.