We still don’t know everything about the effect of COVID-19 on fertility, pregnancy and childbirth.

Despite these uncertainties, your nutrition and lifestyle choices both before and during pregnancy can have a long-term impact on both you and your future baby’s health.
There is currently no evidence that COVID-19 infection reduces the fertility of men or women or affects the health of your baby. Many IVF clinics have temporarily stopped performing fertility treatments, to facilitate greater social distancing, to reduce the use of medical resources needed elsewhere, and because the treatments themselves could potentially increase the risk of infection.

Even with all of this, it is important to remember that if you’re trying to conceive naturally, it is never too soon to begin preparing for your baby. As soon as you and your partner decide to start trying, prepare your body for a healthy pregnancy by eating a balanced diet, taking a high-quality preconception supplement and maintaining an overall healthy lifestyle that includes daily moderate exercise. In this eBook we will discuss:

1. COVID-19 and Fertility
2. Pregnancy and COVID-19
3. Things to Do Before You Get Pregnant
4. Healthy Lifestyle Habits
5. Nutrients Needed in Your Preconception Prenatal Vitamin
6. How Fertility Changes as You Get Older
7. How to Maximize Male Fertility
COVID-19 AND FERTILITY

Female Fertility

Women with symptoms of an active viral infection (i.e. fever, body aches, cough, shortness of breath, diarrhea, etc.) should avoid trying to conceive until fully recovered.

While there is no direct evidence that conceiving while ill with COVID-19 would harm the pregnancy, any condition with high fever should prompt a temporary delay, until the fever is gone.

Although more research is underway, there is no current evidence that a past bout of COVID-19 will affect a woman’s ability to conceive.

Male Fertility

Unlike the Zika virus, there is no current evidence that COVID-19 can cause birth defects by infecting sperm.

Although no studies have yet been done to check the sperm count of men who have had a prior COVID-19 infection, there are some theoretical concerns. One small possibility is that the virus itself could cause possible damage to the testicles, resulting in lower sperm counts. The other concern relates to reduced sperm production that could result from a prolonged high fever.

For these reasons, if you are trying to father a pregnancy, and you had COVID-19 in the past, it would be best to have a semen analysis done.

TO TRY OR NOT TO TRY?

Unless you or your partner currently have COVID-19, there is no clear medical reason to stop trying to conceive. Especially for women in their mid-30s or older, a significant delay may reduce your chances for conception.

For some women, there may be logistical or situational reasons to postpone. For instance, in the months ahead, as the healthcare system struggles to deal with COVID-19, access to routine obstetrical care may become more limited.

Finally, while there are no studies to suggest that pregnant women are more susceptible to COVID-19, more research is needed.
PREGNANCY AND COVID-19

Does pregnancy make you more susceptible to COVID-19?

Pregnant women may be more susceptible to some viral infections because of the normal changes that occur in heart and lung function during pregnancy. However, a report issued by the World Health Organization in February 2020 examined the records of 147 pregnant women with COVID-19 in China. It concluded that pregnant women were not more likely to develop severe disease.1

Can COVID-19 be transmitted to the baby during pregnancy?

Several studies have shown that coronaviruses do not appear to cross the placenta. A recent study showed no evidence that COVID-19 is transmitted to the baby during pregnancy.2 Although one recent study has shown that transmission is possible from an infected mother to her baby during a c-section, the affected babies in the study all recovered quickly.3

Can a COVID-19 infection during pregnancy cause birth defects?

A recent Chinese study did not show any increased risk of birth defects. However, the study was small, and all the women had COVID-19 during the third trimester.4 The effect of having COVID-19 early in pregnancy has not yet been determined.

What happens if I get COVID-19 while I’m breastfeeding?

Studies have not found any evidence that the COVID-19 virus is present in breastmilk.5
THINGS TO DO BEFORE YOU GET PREGNANT

Whether you decide to start trying now, or delay for a few months, there are steps you can take to prepare your body for pregnancy. Start today by following these healthy eating tips.

EAT MORE:

- Colorful fruits and vegetables.
- Whole grains such as quinoa, oatmeal, brown rice, and whole grain pasta, bread and cereal.
- Healthy fats such as olive oil, walnuts, almonds and avocados.
- Whole milk or full-fat yogurt and cheese.
- Whole eggs (the yolk is rich in choline).
- Vegetarian sources of iron. These include spinach, beans, legumes, prunes, raisins, and cashews.

EAT LESS:

- Food and drinks with added sugars such as sweets (cakes, cookies, candy bars) and soda.
- Fried foods

ALSO:

Replace a serving of meat with a vegetarian source of protein every day. These include beans, lentils, legumes, quinoa, nuts, seeds and nut butters.

Drink plenty of water every day.

Looking for some quick and easy recipes to jump start your fertility? The recipes in this eBook contain fertility-friendly ingredients such as whole grains, healthy fats, full-fat dairy, and vegetarian sources of iron and protein.

Whole Grain Walnut Cannoli Bowl

This quick breakfast includes whole milk ricotta, whole grain cereal and healthy fats in the walnuts, a perfect way to start your day with foods to help improve fertility.

**Preparation Time: 3 minutes**

**Cooking Time: 30 seconds**

**Serves: 1**

- 1/3 cup whole milk ricotta cheese
- 2 tablespoons chopped walnuts
- 10 dark chocolate chips
- ¾ cup bran cereal with raisins

1. In a bowl add the ricotta cheese, top with walnuts and chocolate chips, sprinkle cereal over the top.
2. If desired, heat on defrost in your microwave for 30 seconds to warm slightly.
HEALTHY LIFESTYLE HABITS

In addition to eating a healthy diet, follow these lifestyle tips to improve your fertility and promote a healthy pregnancy.

Stop smoking.

Stop drinking alcohol.

Limit caffeine found in coffee, tea, chocolate, soda and “energy” drinks.⁶

Do moderate exercises, such as brisk walking, for at least 30 minutes five days per week.⁷

Achieve a healthy body weight. Being overweight or underweight can cause irregular menstrual cycles and can impair ovulation and reduce your chances of getting pregnant.⁷

If you need help, see a registered dietitian.

“As soon as you start thinking of having a baby, it’s important to eat a balanced diet of healthy foods and to take a preconception vitamin.”

Egg Sandwich with Mashed Avocado and Tomato

This filling meal hits so many of your fertility food goals. Egg yolks are rich in choline, an important nutrient for brain and neural tube development. It includes whole grains in the bread and healthy fats in the avocado and olive oil too.

Preparation Time: 11 minutes
Cooking Time: 7 minutes
Serves: 1

1 egg
1 dash black pepper
2 slices whole grain bread
½ avocado
2 teaspoons olive oil
1 dash salt
1 small tomato, sliced

Directions:
1. Coat a skillet with cooking spray for the fried-style egg.
2. Heat the egg on both sides until cooked through, sprinkle with pepper.
3. In a bowl, mash the avocado with the olive oil and salt.
4. Toast the bread and spread with the avocado, fill with the egg and tomato.
NUTRIENTS NEEDED IN PRECONCEPTION

Take a high-quality preconception vitamin that contains at least the following nutrients:

<table>
<thead>
<tr>
<th>NUTRIENT</th>
<th>AMOUNT</th>
<th>PURPOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Folate</td>
<td>600-1350 mcg DFE</td>
<td>To promote healthy neural tube development.⁸</td>
</tr>
<tr>
<td>Vitamin D₃</td>
<td>50 to 100 mcg (2,000 to 4,000 IU)</td>
<td>To promote healthy vitamin D levels for fertility.⁹,¹⁰</td>
</tr>
<tr>
<td>Iron</td>
<td>18 mg</td>
<td>To maintain adequate iron stores and to prevent anemia.¹¹</td>
</tr>
<tr>
<td>Iodine</td>
<td>150 to 220 mg</td>
<td>To promote normal thyroid function and a healthy pregnancy.¹²-¹⁴</td>
</tr>
<tr>
<td>Choline</td>
<td>100 mg to 550 mg</td>
<td>To promote brain and neural tube development.¹⁵,¹⁶</td>
</tr>
</tbody>
</table>

DID YOU KNOW?

According to the Centers for Disease Control and Prevention, 45% of pregnancies in the United States are unplanned.¹⁷

Folate is essential in early pregnancy when many women may not know they are pregnant.⁸

Your preconception vitamin should contain 600 - 1,350 mcg DFE of folate.

Black Bean and Vegetable Quinoa

Quinoa and black beans are vegetarian sources of iron, which is helpful for your fertility. This gluten free meal can be served warm or cold, and is filling too! Top with your choice of avocado, cheddar cheese, sour cream, tomatoes, or salsa for even more flavor.

Preparation Time: 15 minutes
Cooking Time: 35 minutes
Serves: 4

1 teaspoon olive or canola oil
1 small onion, chopped
1 cup chopped red, orange, and/or yellow bell pepper
3 cloves garlic, chopped
¾ cup quinoa
1 ½ cups vegetable broth
2 teaspoons ground cumin
¼ teaspoon cayenne pepper
A dash of salt and ground black pepper
3/4 cup frozen corn kernels
Two 15-ounce cans black beans, rinsed and drained
½ cup fresh cilantro

Directions:
1. Heat oil in a saucepan over medium heat; cook and stir onion, pepper, and garlic until lightly browned, about 10 minutes.
2. Mix quinoa into onion mixture and cover with vegetable broth; season with cumin, cayenne pepper, salt, and pepper. Bring the mixture to a boil. Cover, reduce heat, and simmer until quinoa is tender and broth is absorbed, about 20 minutes.
3. Stir frozen corn into the saucepan, and continue to simmer until heated through, about 5 minutes; mix in the black beans and cilantro.
If you’ve been trying to get pregnant for six months to a year but haven’t had success, it is time to speak to your doctor.

Roughly one out of eight couples in the U.S. will have difficulty getting pregnant.18

Although there are many things that affect the ability to have a baby, the most common factor is increasing age.19 As we get older, our egg quality declines. This decrease in quality can prevent a woman’s eggs from being fertilized and also increase the risk of miscarriage.

There is hope, though. The good news is that there are things you can do to improve your ability to get pregnant and to have a healthy baby. Studies suggest that certain nutrients can help improve your egg quality.

In addition to a preconception prenatal vitamin that contains enough vitamin D, speak to your doctor to see if these additional supplements may be helpful for you.

<table>
<thead>
<tr>
<th>NUTRIENT</th>
<th>AMOUNT</th>
<th>PURPOSE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coenzyme Q₁₀</strong></td>
<td><strong>200 mg, 3 times a day</strong></td>
<td>To promote healthy egg quality.²⁰, ²¹</td>
</tr>
<tr>
<td>(CoQ₁₀)</td>
<td><em>(standard CoQ₁₀)</em>, or</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>125 mg, 2 times a day</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>(CoQ₁₀ with VESIorb for enhanced absorption)</em></td>
<td></td>
</tr>
<tr>
<td><strong>DHEA</strong></td>
<td><strong>25 mg, 3 times a day</strong></td>
<td>To promote egg quality and optimize ovarian reserve.²²</td>
</tr>
<tr>
<td></td>
<td><strong>Take only if recommended by your doctor</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Inositols</strong></td>
<td><strong>2,000 mg myo-inositol plus 50 mg D-chiro-inositol, 2 times a day.</strong></td>
<td>To promote healthy egg quality. To promote regular menstrual cycles and ovulation if you have PCOS.²³-²⁶</td>
</tr>
<tr>
<td><strong>Melatonin</strong></td>
<td><strong>3 mg. Take at bedtime.</strong></td>
<td>To support healthy egg quality prior to IVF.²⁷, ²⁸</td>
</tr>
</tbody>
</table>

There are supplements you can take to improve your egg quality, which will increase your ability to get pregnant and improve your chances for a healthy baby.
MAXIMIZING MALE FERTILITY

Male infertility factors affect about 35% of all couples who are trying to get pregnant. Roughly 1 out of 20 men will be affected by male infertility.

Some of the common reasons for male infertility include infection, blockage, and high levels of oxidative stress in the semen.

Antioxidants, including certain vitamins and minerals, can help combat oxidative stress and maintain healthy sperm.

If you’ve been trying to conceive for 6 months to a year without success, see your doctor to find out what you can do to improve your chances.

30-80% of male fertility concerns are thought to be due to the damaging effects of oxidative stress on sperm.
# NUTRIENTS FOR MALE FERTILITY

**Certain Nutrients Can Help Improve Male Fertility**

In addition to following a healthy diet and lifestyle, speak to your doctor to see if these additional nutrients may be helpful for you.

> Antioxidants may improve the quality of sperm by reducing oxidative stress.

<table>
<thead>
<tr>
<th>SUPPLEMENT</th>
<th>MAY PROTECT SPERM AGAINST OXIDANT DAMAGE</th>
<th>MAY INCREASE THE NUMBER OF SPERM</th>
<th>MAY IMPROVE SPERM ABILITY TO SWIM</th>
<th>NOTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vitamin C (^{30})</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Vitamin E (^{31, 32})</td>
<td>●</td>
<td></td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Vitamin D (^{33, 34})</td>
<td></td>
<td></td>
<td>●</td>
<td>Promotes healthy vitamin D and testosterone levels</td>
</tr>
<tr>
<td>Selenium (^{35})</td>
<td>●</td>
<td></td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Lycopene (^{36})</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Zinc (^{37})</td>
<td></td>
<td></td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Folic Acid (^{37-39})</td>
<td></td>
<td></td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Coenzyme Q(_{10}) (^{40-42})</td>
<td>●</td>
<td></td>
<td>●</td>
<td>Increases sperm density and improves sperm morphology (shape)</td>
</tr>
<tr>
<td>L-Carnitine (^{43})</td>
<td>●</td>
<td></td>
<td>●</td>
<td>Provides energy for sperm</td>
</tr>
</tbody>
</table>
REFERENCES


WHY THERALOGIX?

Theralogix fertility focused supplements are based on the most current scientific evidence for optimal health for mother, father and baby. All formulations are overseen by a Medical Advisory Board of physicians and scientists. Theralogix supplements contain only the highest quality nutrients.

All Theralogix supplements are tested for disintegration, content accuracy, and product purity by NSF® International. NSF is an independent, not-for-profit public health organization that certifies products and writes standards for food, water and consumer goods. NSF has been protecting worldwide public health, safety and the environment for 65 years. Theralogix nutritional supplements are among the most trusted nutritional supplements available.