

Vitamin D for Uterine Fibroid Reduction

Analysis by [Dr. Joseph Mercola](#)

✓ Fact Checked

January 02, 2023

STORY AT-A-GLANCE

- › Research reveals that sufficient serum levels of vitamin D were associated with a lower risk of uterine fibroids, which can present with abdominal pain and bloating, excessive menstrual bleeding, anemia, low back pain and painful sex
- › Fibroids may also affect fertility as they distort the shape and function of the uterus, may obstruct the fallopian tubes that prevent pregnancy, restrict the growth of the baby and make vaginal birth impossible
- › Unfortunately, most of the treatments currently available negatively affect fertility, making it nearly impossible for a woman to have children
- › Vitamin D may prove to be a treatment with few side effects that also preserve fertility
- › Your body produces vitamin D and melatonin through sensible sun exposure. Melatonin is a powerful antioxidant, master hormone, and regulator of inflammation and cell death
- › Low levels of vitamin D are also associated with poor bone health, certain cancers, depression, heart disease and Type 2 diabetes. The only way to be certain you need a supplement and how much to take is by getting a blood test

Uterine fibroids are muscular tumors that are found growing in the wall of the uterus. They are nearly always benign, but the symptoms can be difficult to live with. In extremely rare cases, a fibroid can transform into a malignant tumor.

Fibroids are fairly common and occur in up to 70% of white women and more than 80% of black women,¹ sometimes without symptoms. Factors that can increase the risk you

develop fibroids include obesity, a family history of fibroids, age and ethnic origin.²

Symptoms include excessive or painful bleeding, bleeding between periods, frequent urination, painful sex, low back pain and an inability to completely empty the bladder when the fibroid places pressure over the urethra. Larger fibroids can cause abdominal distension and a feeling of fullness in the abdomen.³ Excessive bleeding during your period can also lead to anemia.

Treatment is determined by symptoms indicative of fibroids, the size and location of the fibroids, age and whether the woman wants to become pregnant. Unfortunately, most of the treatments currently available negatively affect fertility, making it nearly impossible for a woman to have children.

These treatments include surgical procedures such as a hysterectomy, endometrial ablation where the lining of the uterus is removed or destroyed, uterine fibroid embolization and radiofrequency ablation. Women can also choose a myomectomy, which is a surgical procedure to remove the fibroids without disturbing healthy uterine tissue. How the procedure is performed depends on the size and location of the fibroid.

While a myomectomy has a higher chance of preserving fertility, new fibroids can grow back. In addition to surgical procedures, birth control pills, gonadotropin-releasing hormone agonists and other oral therapies may be used to control heavy uterine bleeding. These also affect fertility so a woman cannot get pregnant. Treatments with few side effects that preserve fertility are a priority.

Vitamin D and Uterine Fibroids

A study⁴ published in 2022 in *Fertility and Sterility* examined how vitamin D levels might affect the development and progression of uterine fibroids.

The researchers were seeking a fibroid treatment that would preserve fertility. They studied the association between women with serum vitamin D levels equal to or greater than 30 nanograms per milliliter (ng/mL) against those with serum levels lower than 20 ng/mL.⁵ Participants were enrolled from 2010 to 2012 and followed over 5 years.

The researchers measured vitamin D serum levels, performed standard ultrasounds and updated variants that may have changed since the last evaluation. The patients were African American women between the ages of 23 and 35 years who had no previous history of fibroids.

The researchers enrolled 1,610 women and found 73% were deficient in vitamin D as measured by a level less than 20 ng/mL and only 7% had sufficient levels as defined by vitamin D serum levels greater than or equal to 30 ng/mL.

This level of deficiency is slightly better than has been measured in past studies. A 2011 study⁶ looked at survey data from 2005 to 2006 and found a prevalence of vitamin D serum measurements lower than 20 ng/mL in 82.1% of Blacks and 69.2% of Hispanics, with an overall rate of deficiency of 41.6%.

The rate of vitamin D testing and supplementation has increased significantly in recent years as research has revealed the importance low vitamin D levels play in disease. Deficiency defined as 20 ng/mL or lower is associated with fractures and bone loss and levels less than 12 ng/mL “dramatically increases the risk of excess mortality, infections, and many other diseases, and should be avoided whenever possible.”⁷

The researchers in the featured study found that serum levels of vitamin D equal to or greater than 20 ng/mL were associated with an estimated 9.7% reduction in the growth of fibroids when compared to people with vitamin D levels less than 20 ng/mL.

When the researchers looked at the data of individuals with vitamin D levels equal to or greater than 30 ng/mL, it was associated with an approximately 22% reduction in the incidence of fibroids when compared to individuals with levels less than 30 ng/mL. The group with the highest vitamin D serum levels of greater than 30 ng/mL also had a 32% increase in fibroid tissue loss.

The researchers acknowledged that the data was constrained by the small number of individuals in the cohort who had serum blood levels greater than or equal to 30 ng/mL. However, they believe the data “support the hypothesis that high concentrations of vitamin D decrease fibroid development.”⁸

This was not the first study to analyze the effect of vitamin D on uterine fibroids. A 2014 paper⁹ noted that vitamin D was known to be the main regulator of calcium homeostasis, has strong antifibrotic functions, was a potent antitumor agent that inhibited fibroid cell growth in vitro and shrunk lesions in preclinical animal studies.

Papers published in 2013¹⁰ and 2015¹¹ also found that vitamin D plays a significant biological role in the development and proliferation of uterine fibroids. Another double-blind prospective clinical trial¹² on 69 women with uterine fibroids and vitamin D deficiency found after a 10-week intervention with vitamin D supplementation the size of the uterine fibroid decreased significantly as compared to the placebo group.

Uterine Fibroids Impact Endometrial Function and Fertility

Treatment for uterine fibroids often negatively affects fertility, but so do the fibroids themselves. Fibroids distort the shape and function of the uterus, and they can obstruct the fallopian tubes, which prevents pregnancy. Since they take up space in the uterus, they can also restrict the growth of the baby and may make vaginal delivery impossible.

When a woman has small fibroids, a physician may take a “watch and wait” approach before moving forward with treatments. The most common problems¹³ a woman with fibroids faces during pregnancy include a breech presentation, labor that fails to progress, preterm delivery and placental abruption when the placenta breaks away from the wall of the uterus, which is an emergency.

Scientists recognize that fibroids actively influence the endometrium, or the lining of the uterus. Evidence suggests there is a relationship between the number of fibroids a woman has and her problems with fertility.¹⁴ The molecular pathways in the growth and development of a fibroid can directly affect the function of the endometrium. One of those processes is the production of extracellular matrix (ECM) that contributes to the stiffness and expansion of the tumor.

For some women, fibroids will shrink after menopause. This happens when hormone levels decrease during menopause, which are the same hormones that promote and

support fibroid growth.¹⁵ Fibroids are fairly common and rarely cause acute complications.

However, when they do cause complications, they can be challenging.

Thromboembolism, acute urinary retention and renal failure, acute vaginal or intraperitoneal hemorrhage, intestinal gangrene and mesenteric vein thrombosis are some of the acute complications that can occur when fibroids become large.¹⁶

Light as Medicine

As the Northern Hemisphere moves into the winter months, your exposure to sunlight naturally diminishes. For nearly three decades I have been fascinated by the association of sun exposure to health, and in this MedCram video, I believe we learn some of the important facts that have been missing.

Pulmonologist Dr. Roger Seheult explains the ins and outs of how sunlight impacts your health – not only through increasing your vitamin D levels but also through the production of melatonin. It's roughly two hours long, but well worth it if you have the time and are fascinated by new insights that could radically change your health.

Melatonin is a master hormone,¹⁷ a potent antioxidant¹⁸ and antioxidant recycler,¹⁹ and a master regulator of inflammation and cell death.²⁰ These functions are part of what makes it such an important anticancer molecule.²¹

Seheult also produced a condensed 25-minute version of the video²² in which he discussed some of the key findings that have led him to conclude that sunlight is a significantly important treatment for COVID-19.

To summarize the key findings, most melatonin your body produces is made inside your mitochondria in response to near-infrared radiation from the sun. Only 5% of melatonin is produced in the pineal gland. Contrary to what you might expect, melatonin supplements do not wind up in the mitochondria where they are needed to blunt the damage from oxidative stress.²³

Research has also shown that melatonin is important in COVID treatment as it reduces the incidence of thrombosis and sepsis and lowers mortality.²⁴ Seheult suggests that sun exposure can help combat other respiratory infections, including COVID, and the production of melatonin inside the mitochondria appears to be a key part of how this works.

He reviews the evidence showing that COVID rates across the world correlate to the amount of sun striking the area. Positive case rates also correlate with vitamin D levels in the blood.²⁵ Higher blood levels correlate with lower incidence of COVID and higher rates of survival for inpatients.

In short, vitamin D is more than likely a marker of sun exposure. But the benefits may be due to other factors than vitamin D itself. As noted by Seheult, some studies looking at the effect of giving vitamin D to patients treated for severe COVID found no benefit, even at very high doses.

Optimize Your Vitamin D Supplementation

Low vitamin D levels have been associated with poor bone health, certain cancers, cardiovascular disease, depression, multiple sclerosis and Type 2 diabetes.²⁶

Researchers have also linked low levels with an increased risk of developing uterine fibroids.²⁷

The best way to produce vitamin D and melatonin, and support your overall health is with sensible sun exposure. However, as we're going into the winter months, you may find you need supplementation to support your vitamin D levels. The only way to be certain you need a supplement and how much to take is to have a blood test.

Once you know your serum level, you can plug it into the [Grassroots Health](#) vitamin D calculator.²⁸ This will help you determine how much supplement you may need over the winter months. You can also optimize your vitamin D supplementation by taking vitamin K2 and magnesium.

I've previously written about the importance of taking vitamin K2 to avoid complications associated with excessive calcification in your arteries when you're taking high-dose supplemental vitamin D. According to research by GrassrootsHealth:²⁹

"... combined intake of both supplemental magnesium and vitamin K2 has a greater effect on vitamin D levels than either individually ... those taking both supplemental magnesium and vitamin K2 have a higher vitamin D level for any given vitamin D intake amount than those taking either supplemental magnesium or vitamin K2 or neither."

Magnesium is a necessary component for the activation of vitamin D. Without sufficient amounts, your body cannot properly utilize the vitamin D supplement you're taking.³⁰ This helps explain why many need higher doses of vitamin D to optimize their levels. As noted by Mohammed Razzaque, professor of pathology at Lake Erie College of Osteopathic Medicine in Pennsylvania:³¹

"People are taking vitamin D supplements but don't realize how it gets metabolized. Without magnesium, vitamin D is not really useful. By consuming an optimal amount of magnesium, one may be able to lower the risks of vitamin D deficiency and reduce the dependency on vitamin D supplements."

According to a 2018 scientific review,³² as many as 50% of Americans taking vitamin D supplements may not get significant benefits as vitamin D simply gets stored in its inactive form because they have insufficient magnesium levels.

Sources and References

- ¹ [Gynecology & Obstetrics, 2020; doi.org/10.1002/ijgo.13102](https://doi.org/10.1002/ijgo.13102)
- ² [UCLA Health, What Are Fibroids?](#)
- ³ [Cleveland Clinic, Uterine Fibroids, What are the symptoms of uterine fibroids?](#)
- ^{4, 5, 8, 27} [Fertility and Sterility, 2022; doi.org/10.1016/j.fertnstert.2022.08.851](https://doi.org/10.1016/j.fertnstert.2022.08.851)
- ⁶ [Nutrition research, 2011; 31\(1\)](#)
- ⁷ [European Journal of Clinical Nutrition, 2020; 74](#)
- ⁹ [Women's Health, 2014; 10\(4\)](#)
- ¹⁰ [Epidemiology, 2013;24\(3\)](#)
- ¹¹ [Fertility and Sterility, 2015;104\(3\)](#)

- ¹² [Caspian Journal of Internal Medicine, 2019; 10\(2\)](#)
- ¹³ [Office of Women's Health, Uterine Fibroids, what if I become pregnant and have fibroids?](#)
- ¹⁴ [Frontiers in Cell and Developmental Biology, 2021 doi.org/10.3389/fcell.2021.633180](#)
- ¹⁵ [Cleveland Clinic, Uterine Fibroids, will fibroids go away on their own](#)
- ¹⁶ [Best Practice and Research Clinical Obstetrics and Gynecology, 2009; 23\(5\)](#)
- ¹⁷ [Indian Journal of Experimental Biology 1996; 34\(5\)](#)
- ¹⁸ [Frontiers in Pharmacology, 2020 doi.org/10.3389/fphar.2020.01220](#)
- ¹⁹ [Allergy Research Group, Melatonin, the Antioxidant Recycler](#)
- ²⁰ [Cell Death & Disease 2019; 10\(317\)](#)
- ²¹ [Oncotarget, 2017; 8\(24\)](#)
- ²² [YouTube, January 26, 2022](#)
- ²³ [YouTube, January 21, 2022 Minute 1:01:02](#)
- ²⁴ [Diseases, 2021; doi.org/10.1016/j.ijid.2021.10.012](#)
- ²⁵ [YouTube, January 26, 2022, Minute 3:00 - 4:15](#)
- ²⁶ [National Institutes of Health, Vitamin D, Table of Contents - Vitamin D and Health](#)
- ²⁸ [GrassRootsHealth Vitamin D Calculator](#)
- ²⁹ [GrassrootsHealth Magnesium and Vitamin K2 Combined Important for Vitamin D Levels](#)
- ³⁰ [Live Science February 26, 2018](#)
- ³¹ [Eurekalert February 27, 2018](#)
- ³² [Science Daily February 2018](#)