



*ivf success plan*

helping you have your baby

Which Supplement Has Science Proven  
Can **Double** or Even **Triple** Your Chances  
of IVF Success?

Hint: it is one of 11 supplements proven to boost success rates

helping you have your baby

## The answer?

**..Vitamin D. BUT only if taken in the right form and at the right level.**

We'll show you exactly how to do that below.

## Introduction

Your vitamin D level is critical to your chances of IVF success.

In fact, it is critical for health generally.

Having adequate vitamin D levels has been linked with a range of health benefits from preventing obesity<sup>1</sup>, heart disease<sup>2</sup> and Parkinson's disease<sup>3</sup> to improved foetal brain development<sup>4</sup> and blood sugar regulation<sup>5</sup>.

## How does it improve your chances of having a baby?

Let's have a (plain English!) look at the evidence.

### Women

A study at Mount Sinai Hospital in Toronto, reported in the Canadian Medical Association Journal, followed 173 women undergoing IVF and found that women with sufficient levels of vitamin D were **50%** more likely to become pregnant than those with insufficient levels<sup>6</sup>.

The women were aged between 18 and 41 and had blood tests to assess their vitamin D levels in the week of egg collection. The researchers then divided them into two groups: those with levels above 30ng/ml (the "sufficient" group) and those with levels below 30ng/ml (the "insufficient" group).

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<sup>1</sup> Vitamin D deficiency is the cause of common obesity. Med Hypotheses. 2009 Mar;72(3):314-21

<sup>2</sup> Vitamin D Deficiency and Risk for Cardiovascular Disease. Am J Med Sci. 2009 Jul; 338(1): 40-44

<sup>3</sup> Serum vitamin D and the risk of Parkinson's disease. Arch Neurol. 2010 Jul; 67(7): 808-811

<sup>4</sup> Circulating 25-hydroxyvitamin D3 in pregnancy and infant neuropsychological development. Pediatrics. 2012 Oct;130(4):e913-20

<sup>5</sup> The Endocrine Society 96<sup>th</sup> Annual Meeting, 22 June 2014

<sup>6</sup> Effect of vitamin D status on clinical pregnancy rates following in vitro fertilization. CMAJ Open. 2013 May-Jul; 1(2): E77-E82

Another study revealed even more impressive results<sup>7</sup>. This time the researchers followed 99 women and did blood tests around the time of embryo transfer to measure vitamin D levels. The average number of embryos transferred was 2.5, higher than the previous study. They again used the cut-off of 30ng/ml to determine sufficiency. Pregnancy rates in the sufficient group were **78%** compared to only 37% in the insufficient group and live birth rates were **59%** compared to 31%. By having sufficient vitamin D levels the women virtually doubled their chances of success.

Yet another study<sup>8</sup> found that women with sufficient vitamin D Levels (above 30ng/ml again) had implantation rates of **26%** and pregnancy rates of **47%** whereas women with insufficient levels had an implantation rate of 10% and a pregnancy rate of 18%.

Finally, a study<sup>9</sup> looked specifically at women who had previously experienced a miscarriage to understand whether there was a relationship between vitamin D levels and miscarriage. It found that vitamin D deficiency was more common in these women with **53%** having insufficient levels.

## Men

Men can also benefit from vitamin D.

For example, in one study<sup>10</sup> couples where the male partner had sufficient levels of vitamin D were **3 times as likely to become pregnant** (27.7% compared to 9.2%) and **6 times as likely to have a live birth** (22.2% compared to 3.7%) than couples where the male had insufficient levels.

## Are you deficient?

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<sup>7</sup> Influence of vitamin D levels on in vitro fertilization outcomes in donor-recipient cycles. February 2014 Volume 101, Issue 2, Pages 447–452

<sup>8</sup> Replete vitamin D stores predict reproductive success following in vitro fertilization. Fertil Steril. 2010 Sep;94(4):1314-9

<sup>9</sup> Association of preconception serum 25-hydroxyvitamin D concentrations with livebirth and pregnancy loss: a prospective cohort study. The Lancet Diabetes & Endocrinology, May 2018

<sup>10</sup> Males with low serum levels of vitamin D have lower pregnancy rates when ovulation induction and timed intercourse are used as a treatment for infertile couples: results from a pilot study. Reprod Biol Endocrinol. 2015; 13: 127

The obvious question then is are you deficient?

The chances are that the answer is “yes”, particularly if you live in a climate that is not sunny and/or if you are of certain ethnic origins. A study in the US found that overall **41.6%** of adults were vitamin D deficient with **82.1%** of Afro-caribbeans and **69.2%** of Hispanics being deficient<sup>11</sup>.

Vitamin D levels can only reliably be measured by blood tests. You can either ask your doctor to carry out a test or you can buy a kit from an online testing provider. These kits involve pricking your thumb, squeezing a few drops of blood into a vial then sending the vial back to the laboratory.

The threshold used in the studies to determine sufficiency is 30ng/ml (or 75nmol/l) and if your levels are below this you should strongly consider supplementing with vitamin D.

## Sufficient or optimal?

The Vitamin D Council (a US non-profit organisation concerned with vitamin D and health) looks at things from a different angle. Rather than looking at what is “sufficient”, ie “just enough” it looks at what level is optimal for humans. Based on the research it suggests that an optimal level of vitamin D is between 40-50ng/ml (or 100-125nmol/l). My wife and I took the decision to shoot for optimal levels but you should discuss this with your doctor.

Whether you opt to go for sufficient levels or optimal levels the research suggests that the best dosage is 70-80iu per 2.2lbs/kg per day<sup>12</sup>. So, for a 110lb/50kg woman this would be 3,500iu to 4,000iu per day. Once your levels reach the desired level you may need to experiment with reducing the dose. However, the research suggests you will not need to reduce it much to maintain your levels.

## The best type to take

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<sup>11</sup> Prevalence and correlates of vitamin D deficiency in US adults. Nutr Res. 2011;31:48-54

<sup>12</sup> Volumetric dilution, rather than sequestration best explains the low vitamin D status of obesity. Obesity (Silver Spring). 2012 Jul;20(7):1444-8

Vitamin D supplements are relatively cheap but you do need to be careful to ensure that you take a specific type. It generally comes in one of two forms, D2 and D3. D3 is the type that our bodies produce and is therefore most effective so be sure to choose this type.

## Action steps

- Get your vitamin D levels checked.
- If you are deficient decide with your doctor whether to raise levels to “sufficient” or “optimal”.
- Under your doctor’s supervision consider supplementing with vitamin D3 for a few weeks then have your levels rechecked. Repeat this process until you are within the desired range.

## 10 More Supplements Proven to Increase Your Chances of IVF Success

Unfortunately, vitamin D is not a magic pill. It will not guarantee that IVF will work for you, particularly if you eat a typical modern diet or have been exposed to household toxins.

The good news is that science has proven that there are many “lifestyle” steps you can take to boost your chances of having a baby with IVF.

For example, there are 10 other nutritional supplements proven to increase IVF success rates. [You can check them out in our Ultimate Guide to IVF Supplements which for a limited time is available for ~~\\$24.99~~ \\$14.99 \(40% off\).](#)