



**Medical
Blueprints**

TIPS TO MAKING SMARTER BABIES REPORT #2828

BACKGROUND: Vitamin D is a nutrient we eat and a hormone our bodies make. It is a fat-soluble vitamin that is known to help the body absorb and retain calcium and phosphorus which are critical for building bone. Vitamin D has been shown to reduce cancer cell growth, help control infections and reduce inflammation. There are few foods that naturally contain vitamin D. The best way to get enough vitamin D is taking a supplement because it is hard to eat enough through food. There are two forms of vitamin D supplements: vitamin D2 and vitamin D3. Both are naturally occurring forms that are produced in the presence of the sun's UVB rays. However, D2 is produced in plants and fungi and D3 in animals, including humans. The role of vitamin D in disease prevention is a popular area of research, but clear answers about the benefit of taking amounts beyond the recommended dose are not conclusive.

(Source: <https://www.hsph.harvard.edu/nutritionsource/vitamin-d/>)

VITAMIN D AND PREGNANCY: Approximately 40-60% of the U.S. population is vitamin D deficient, including pregnant women. One reason for this widespread deficiency is a very short list of foods that contain vitamin D. These foods are egg yolk, salmon and cod liver oil, however, most vitamin D is consumed through fortified foods like milk. Additionally, many factors influence the body's ability to make and absorb vitamin D. Factors like where you live, the season, how much time you spend outdoors without sunscreen, skin pigmentation, age, obesity, pollution, and having healthy intestines with optimal absorption capacity. These factors come in to play because vitamin D is a hormone and needs sunlight for the body to manufacture it properly. A recent study found women taking 4,000 IU of vitamin D daily had the greatest benefits in preventing preterm labor/births and infections. The study confirmed vitamin D is safe for the mom and baby, and recommend this daily dosage for all pregnant women.

(Source: <https://americanpregnancy.org/healthy-pregnancy/pregnancy-health-wellness/vitamin-d-and-pregnancy-4915/>)

VITAMIN D LINKED TO IQ: A study in the *Journal of Nutrition* showed that higher vitamin D levels in pregnancy may lead to greater childhood IQ scores. The study also identified significantly lower levels of vitamin D among Black pregnant women. A mother's vitamin D supply is passed to her baby in utero and helps regulate processes including brain development. "I hope our work brings greater awareness to this problem, shows the long-lasting implications of prenatal vitamin D for the child and their neurocognitive development, and highlights that there are certain groups providers should be paying closer attention to. Wide-spread testing of vitamin D levels is not generally recommended, but I think health care providers should be looking out for those who are at higher risk, including Black women," said Melissa Melough, the lead author of the study and research scientist in the Department of Child Health, Behavior, and Development at Seattle Children's Research Institute. Additional research is needed to determine the optimal levels of vitamin D in pregnancy, but Melough hopes this study will help develop nutritional recommendations for pregnant Black women and those at high risk.

(Source: <https://www.sciencedaily.com/releases/2020/11/201102142242.htm>)

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