

Vitamin D's role in preventing asthma studied in pregnant women

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A group of pregnant women who have asthma or allergies will get extra vitamin D as part of a study to determine if the vitamin can prevent their children from developing asthma.

Washington University School of Medicine in St. Louis is part of the multi-center trial in collaboration with Boston University and Brigham and Women's Hospital in Boston and Kaiser Permanente Medical Center in San Diego.

Children born to one or both parents with asthma or allergies have a higher risk of developing asthma than children whose parents don't have asthma or allergies. Recent studies have shown that vitamin D plays a role late in pregnancy in developing lungs and that higher levels of maternal vitamin D may be associated with lower rates of asthma in their children. However, researchers don't know if increasing or correcting those vitamin D levels prior to or during pregnancy can prevent the disease.

"We want to find a definitive answer to that question," says Robert C. Strunk, M.D., a Washington University pediatric asthma and allergy specialist at St. Louis Children's Hospital. "If we could simply supplement women during pregnancy and decrease asthma prevalence in children, that would be a huge impact on child health."

Strunk, lead investigator of the trial, said asthma has doubled in U.S. children over the last two decades. About 6.7 million American children

suffer from asthma, according to the [Centers for Disease Control and Prevention](#), making it the most common chronic childhood illness. About 90 percent of all cases are diagnosed before age 6.

Vitamin D deficiency is also prevalent in the United States, occurring in healthy children and adults despite fortification of foods and intake of multivitamins. Pregnant and lactating women and their children are at high risk for [vitamin D deficiency](#), although most pregnant women take prenatal vitamins. Researchers say the shift from outdoor activities and less time spent in the sun is one factor.

The Vitamin D Antenatal Asthma Reduction Trial (VDAART), a five-year research study funded by the National Institutes of Health, will enroll women between 10-18 weeks of pregnancy and randomly divide them into two groups. One group will receive a typical prenatal vitamin with 400 units of vitamin D and a 4,000-unit vitamin D supplement. The other group will receive the same prenatal vitamin plus a placebo.

The trial seeks to enroll 870 women nationwide. Washington University School of Medicine seeks to enroll 290 [women](#) from its obstetrics and gynecology clinics and one outside clinic.

During the course of the study, patients will attend regular visits with their obstetrician, provide blood and urine samples and answer questionnaires about diet, pregnancy, sunlight exposure, physical activity, health and medications. Their children born during the study will be evaluated for asthma and recurrent wheezing at ages 1, 2 and 3.

"What's very attractive about this study is how simple it is," said George A. Macones, M.D., the Mitchell and Elaine Yanow Professor and head of Obstetrics and Gynecology at the School of Medicine and a co-investigator on the study. "We hope that supplementing mothers with extra [Vitamin D](#) during pregnancy will help to reduce risks of [asthma](#) in

[children](#) and will improve children's health over the long term."

Source: Washington University School of Medicine ([news](#) : [web](#))

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