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Study tracks hormone's role in reducing preterm birth risk

by [Nancy Humphrey \(http://news.vanderbilt.edu/author/nancyhumphrey/\)](http://news.vanderbilt.edu/author/nancyhumphrey/) | Posted on Thursday, Sep. 6, 2012 — 10:32 AM

Pregnant women who have had prior preterm births may avoid a subsequent early birth if given progestogens, which are natural or synthetic forms of progesterone, a female hormone that naturally increases during pregnancy, a Vanderbilt analysis shows.



[\(http://news.vanderbilt.edu/2012/09/study-tracks-hormones-role-in-reducing-preterm-birth-risk/melissa-davis-shannon-adkins/\)](http://news.vanderbilt.edu/2012/09/study-tracks-hormones-role-in-reducing-preterm-birth-risk/melissa-davis-shannon-adkins/)

A Vanderbilt study shows that progestogens can help pregnant women who have previously had a preterm birth avoid a subsequent early birth. (file photo)

Women who have had prior preterm births and are given progestogens while expecting a single child show some benefit from additional hormone, Vanderbilt researchers reported in a systematic review released on

Thursday in *Obstetrics & Gynecology* (<http://journals.lww.com/greenjournal/pages/default.aspx>), the official publication of the American College of Obstetricians and Gynecologists, commonly referred to as *The Green Journal*.

The researchers looked at 34 prior studies of women who were given progestogens for prior preterm births, multiple gestations, preterm labor, short cervix or other indications.

Each study included 20 or more women who were given the medication by injection, orally or vaginally, and took place between January 1966 and October 2011.

The work was funded by the [Agency for Healthcare Research and Quality](http://www.ahrq.gov/) (AHRQ).

In contrast, the researchers found progestogens don't seem to help prevent preterm labor in women carrying twins or triplets.

And evidence supporting giving progestogens for all other uses is insufficient to guide clinical care.

The review provides valuable information, but more study is needed, said [Frances Likis](https://medschool.mc.vanderbilt.edu/facultydata/php_files/part_dept/show_part.php?id3=17727) (DrPH, N.P., CNM, research assistant professor of Medicine and the lead author of the review).

"While we know that women have progesterone levels that go up in early pregnancy and remain elevated, we still don't understand why giving extra progestogens would help them stay pregnant," she said. "The pharmaceutical effects are not well understood."

The United States has a very high preterm birth rate and was among the top 10 countries with the highest numbers of preterm births in 2010.

"We haven't been able to move that number very well, and although it's gone down somewhat in past years, it's not a dramatic drop," she said.

Along with the systematic review, the AHRQ is releasing Vanderbilt's longer report on progestogens for preterm birth prevention online today.

The full report looks at other questions such as whether how progestogens are administered makes a difference in effectiveness and the adverse effects of progestogens for preterm birth.

Progestogens are usually given by clinicians to women at the beginning of the second trimester through 37 weeks gestation or until the baby is born.

Most women receive the medication once a week by injection, although some receive it vaginally. Very few take an oral dose.

Likis said asking generally whether progestogens are beneficial isn't possible.

"Women are being given progestogens for very different reasons, so in our review, we decided to look at effectiveness by why women took it. Having had a previous preterm birth is different from having twins, and that's how clinicians make decisions.

"They don't just look at women and say 'you're at risk,' they say 'what is your risk factor?'" To look at complications, a larger group of women is needed, she said.

"There's relatively little evidence about whether babies had complications, and there's also very little

information about long-term health effects in the infant,” she said. “There’s a lot more that needs to be studied. There’s a lot of work to be done.”

In addition to Likis, the Vanderbilt team included Digna R. Velez Edwards, Ph.D., Jeffrey C. Andrews, M.D., Alison L. Woodworth, Ph.D., Rebecca N. Jerome, MLIS, MPH, Christopher J. Fonnesbeck, Ph.D., Nikki McKoy, MPH, and Katherine E. Hartmann, M.D., Ph.D.

The full report can be viewed at www.ahrq.gov (www.ahrq.gov).

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