

Stress May Affect Chances of Getting Pregnant

Study Shows Women With High Levels of Stress-Related Hormone Less Likely to Conceive

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Aug. 12, 2010 -- There is now scientific evidence to back up the widely held belief that [stress](#) can interfere with [fertility](#).

Women in a newly published study were less likely to conceive when they exhibited higher levels of a stress-related enzyme known as alpha-amylase.

The research is the first of its kind to suggest a biological basis for the long-held notion that stress can reduce a woman's chances of becoming [pregnant](#).

More Stress, Fewer Pregnancies

Researchers from the National Institutes of Health and the UK's University of Oxford followed 274 couples trying to conceive for six months. None of the women in the study had a history of [infertility](#), and all tracked their monthly cycles using at-home fertility kits.

On their sixth cycle day each month, the women provided saliva samples that were tested for alpha-amylase and another stress hormone, cortisol.

Cortisol levels did not appear to influence [conception](#) during the six days when pregnancy was most likely to occur. But women with the highest alpha-amylase levels were roughly 12% less likely to get pregnant during each cycle than women with the lowest levels.

The study was published online this week in the journal *Fertility and Sterility*.

Stress May Slow Egg Passage

Long known as an enzyme that helps the body digest starch, alpha-amylase has only recently been recognized as an indicator of stress, says Germane Buck Louis, PhD, of the Eunice Kennedy Shriver National Institute of Child Health and Human Development.

Alpha-amylase is secreted when the nervous system produces compounds known as catecholamines in response to the "fight or flight" stress reactions.

Buck Louis says there is early evidence that catecholamines released in response to this type of stress reduce blood flow, which slows the passage of the fertilized egg to the uterus.

"That may mean the egg does not get there in time to implant," she tells WebMD. "This is all very

speculative at this point, but we are hoping this research will stimulate scientists who study stress response to explore it more carefully."

Buck Louis' research team is in the final phases of a larger study in which couples trying to conceive were followed for a full year.

One goal is to determine if failure to achieve pregnancy affects stress hormone levels and, if so, how this affects conception rates.

The findings support the idea that taking steps to [reduce stress](#) at work or at home may help fertile women achieve a desired pregnancy, study researcher Cecilia Pyper, MS, of the University of Oxford tells WebMD.

While this has not been confirmed in scientific studies, the anecdotal evidence abounds. It seems that just about everyone knows someone who conceived on vacation or at some other time when stress levels were low.

"Relaxing certainly won't do couples trying to conceive any harm," Pyper says. "Reducing stress may be difficult, but [meditation](#), [yoga](#) or other relaxation techniques might help."