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**Baby blues - postpartum depression attributed to low levels of corticotropin-releasing hormone after placenta is gone -
Brief Article**

Many new mothers feel depressed for weeks after giving birth. Physicians have vaguely attributed this malaise to exhaustion and to the demands of motherhood. But a group of researchers at the National Institutes of Health has found evidence for a more specific cause of postpartum blues. New mothers, the researchers say, have lower than normal levels of a stress-fighting hormone that earlier studies have found helps combat depression.

When we are under stress, a part of the brain called the hypothalamus secretes corticotropin-releasing hormone, or CRH. Its secretion triggers a cascade of hormones that ultimately increases the amount of another hormone - called cortisol - in the blood. Cortisol raises blood sugar levels and maintains normal blood pressure, which helps us perform well under stress. Normally the amount of cortisol in the bloodstream is directly related to the amount of CRH released from the hypothalamus. That's not the case in pregnant women.

During the last trimester of pregnancy, the placenta secretes a lot of CRH. The rise is so dramatic that CRH levels in the maternal bloodstream increase threefold. "We can only speculate," says George Chrousos, the endocrinologist who led the NIH study, "but we think it helps women go through the stress of pregnancy, labor, and delivery."

But what happens after birth, when the placenta is gone? Chrousos and his colleagues monitored CRH levels in 17 women from the last trimester to a year after they gave birth. All the women had low levels of CRH - as low as seen in some forms of depression - in the six weeks following birth. The seven women with the lowest levels felt depressed.

Chrousos suspects that CRH levels are temporarily low in new mothers because CRH from the placenta disrupts the feedback system that regulates normal production of the hormone. During pregnancy, when CRH levels are high in the bloodstream, the hypothalamus releases less CRH. After birth, however, when this supplementary source of CRH is gone, it takes a while for the hypothalamus to get the signal that it needs to start making more CRH.

"This finding gives reassurance to people that postpartum depression is a transient phenomenon," says Chrousos. "It also suggests that there is a biological cause."

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