Biology

John Travis reports from Washington, D.C., at a meeting of the Endocrine Society

Probing the cause of after-baby blues

All too often, the joy of bringing a new life into the world is soon spoiled by a maternal melancholy that lingers for days or even weeks. Known as postpartum depression, these blues burden an estimated 70 percent of women in varying degrees; a few even experience psychosis.

Until recently, physicians simply labeled the problem an emotional letdown after the excitement of giving birth. Now, a group of researchers argues that a biological problem—a temporary hormonal deficiency—prompts the sadness.

In nonpregnant women, explains George P. Chrousos of the National Institute of Child Health and Human Development (NICHD) in Bethesda, Md., the hypothalamus in the brain manufactures corticotropin-releasing hormone (CRH). Among other functions, CRH prompts the release of cortisol, a hormone that fights stress and improves cardiovascular efficiency.

Pregnancy shuts off CRH production by the hypothalamus. That's because the placenta begins to release large amounts of the hormone in the second trimester. This increases concentrations of cortisol, causing the hypothalamus to shut off its CRH supply. Some researchers even believe placental CRH acts as a "pregnancy clock" (SN: 4/29/95, p.260).

After birth, placental CRH vanishes, and it apparently takes the hypothalamus some time to produce normal amounts of the hormone again. In a study of 13 women, CRH secretion by the hypothalamus remained low for as long as 12 weeks after birth, report Chrousos and his colleagues.

The notion that CRH plays a role in postpartum depression is supported by the hormone's involvement in another type of depression, seasonal affective disorder (SAD). During the dark winter months, people with SAD do not make normal amounts of CRH. "As far as I can see, it's the same kind of depression," says Chrousos.

Researchers don't know how CRH affects moods, but Chrousos says physicians need not attempt to treat most women with postpartum depression. "Just reassure them that things are normal," Chrousos stresses, and that the blues should vanish as their bodies resume normal hormone production.

Treating old age with testosterone

Unlike the hormone estrogen, which plummets in women after menopause, the hormone testosterone does not dramatically decrease in men as they age. That's why no one has examined whether older men might benefit from taking testosterone regularly, says Frederick M. Ellyin of the Chicago Medical School. (Many older women take estrogen as a hedge against osteoporosis and heart disease.)

To remedy that, Ellyin conducted a study in which 10 apparently healthy men age 60 to 75 took low doses (25 or 50 milligrams) of testosterone weekly or biweekly for 2 years. Researchers worry that larger doses of the hormone would increase the risk of prostate enlargement and cancer and might have other adverse effects. "We have to be sure that we are not doing something that makes them sick," says Ellyin.

Neither prostate size nor concentrations of a protein called prostate-specific antigen, an indicator of cancer, increased during the study, Ellyin reports. Furthermore, the men appeared to benefit from the hormone. Most reported rises in libido, sexual activity, and sense of well-being. The majority also had lower total concentrations of cholesterol in the blood, decreased body fat, and greater muscle strength, says Ellyin.