

which is related to HSDD, decreased in women who received testosterone.

The authors conclude that the testosterone patch is efficacious for the treatment of women with HSDD. Furthermore, treatment was well tolerated and no serious safety concerns were recognized throughout the 24-week study. The authors, however, highlight the importance of identifying the long-term safety aspects of testosterone therapy.

Marie Lofthouse

**Original article** Simon J *et al.* (2005) Testosterone patch increases sexual activity and desire in surgically menopausal women with hypoactive sexual desire disorder. *J Clin Endocrinol Metab* [doi:10.1210/jc.2004-1747]

## Depot medroxyprogesterone acetate for contraception causes weight and fat gain in women

In a large, prospective, longitudinal study, Clark *et al.* investigated the changes in weight and fat gain of women receiving the hormonal contraceptive, depot medroxyprogesterone acetate (DMPA), for the first time.

In total, 323 women aged between 18 and 35 years were enrolled in this 30-month study, of whom 178 women had recently started on 150 mg DMPA injections and 145 women used no hormonal contraception. Participants' weight, body fat and the central distribution of fat were measured by electronic scale and dual-energy X-ray absorptiometry at 3-month intervals.

The weight of women receiving DMPA injections increased from a mean of 69.4 kg at baseline to 75.5 kg at the end of the study. Furthermore, fat mass in this group also increased by 6.1 kg at the study endpoint, and the ratio of central to peripheral fat mass changed from 0.95 at baseline to 1.01 at 30 months. Noticeably, lean mass of women receiving DMPA did not significantly alter. Women in the control group experienced no significant weight changes throughout the study period.

The authors conclude that these findings should be taken into consideration when women are counseled on contraceptive methods. The authors call for further studies to evaluate the mechanisms that lead to this weight and fat gain and to investigate the metabolic consequences involved. In addition, the

issue of whether this weight gain is reversed following discontinuation of DMPA needs to be explored.

Marie Lofthouse

**Original article** Clark MK *et al.* (2005) Weight, fat mass, and central distribution of fat increase when women use depot-medroxyprogesterone acetate for contraception. *Int J Obes* 29: 1252–1258

## Early hyperinsulinemia predicts gestational diabetes mellitus in high-risk patients

Increased insulin production during pregnancy is a response to the twofold to threefold increase in insulin requirements, which begins at around 16–18 weeks of gestation. Before this, however, hyperinsulinemia might imply underlying insulin resistance and might, therefore, be predictive of subsequent development of gestational diabetes mellitus (GDM).

To investigate this, Bitó and colleagues performed 2-h, 75-g oral glucose-tolerance tests, and measurement of fasting and 2-h-postprandial serum insulin, in 71 women with at least one risk factor for GDM. Tests were performed before week 16 of pregnancy, at gestational weeks 24–28, and again at gestational weeks 32–34 if the earlier test was negative.

There was a strong correlation between serum insulin levels and development of GDM. The majority of women who had elevated serum insulin levels at or before gestational week 16 went on to develop GDM. Sensitivities were 69.2% and 92.3% and specificities 96.4% and 85.7% for fasting and 2-h-postprandial serum insulin levels, respectively, for prediction of GDM at gestational weeks 24–28. No cases of GDM developed in women who had normal insulin levels at or before gestational week 16. Odds ratios for increased fasting and 2-h-postprandial serum insulin levels, at or before gestational week 16, were 16.6 and 13.3, respectively, for the development of GDM.

In high-risk women, serum insulin determination before gestational week 16 is a reliable indicator of subsequent likelihood of GDM, allowing the earlier introduction of management techniques.

Carol Lovegrove

**Original article** Bitó T *et al.* (2005) Prediction of gestational diabetes mellitus in a high-risk group by insulin measurement in early pregnancy. *Diabet Med* 22: 1434–1439