Nature Reviews Endocrinology **7**, 694 (2011); published online 8 November 2011;
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IN BRIEF

GENETICS

AKT2 mutation leads to insulin-independent hypoglycemia

Hypoglycemia is normally caused by increased insulin secretion, increased activation of insulin receptors or congenital underproduction of glucose. The effects of insulin are mediated by a signaling pathway involving AKT2 activation. Hussein and colleagues identified a mutation in the *AKT2* gene in three individuals with unexplained hypoglycemia whose parents do not carry the mutation. This mutation leads to transmembrane localization and constitutive activation of AKT2 and, as a result, to hypoglycemia that is independent of insulin.

Original article Hussein, K. *et al*. An activating mutation of *AKT2* and human hypoglycemia. *Science* doi:10.1126/science.1210878

REPRODUCTIVE ENDOCRINOLOGY

LC–MS/MS vs RIA for measuring androgen levels in women

The performance of liquid chromatography–tandem mass spectrometry (LC–MS/MS) and extraction radioimmunoassay (RIA) to measure androgen concentrations was compared in 208 women with primary ovarian insufficiency, 200 patients with polycystic ovarian syndrome and 45 healthy controls. The precision, sensitivity and accuracy of the two methods for testosterone, androstenedione and dehydroepiandrosterone measurement were comparable. These results suggest that LC–MS/MS is a convenient alternative to RIA for measurement of androgen concentrations in women.

Original article Janse, F. *et al.* Assessment of androgen concentrations in women: liquid chromatography–tandem mass spectrometry and extraction radioimmunoassay show comparable results. *Eur. J. Endocrinol.* doi:10.1530/EJE-11-0482

OBESITY

Long-term maintenance of weight loss in young people with obesity is linked to family factors

Fröhlich and colleagues analyzed weight changes in patients with overweight or obesity aged 7–15 years, in 111 parent–child dyads who participated in a 1–year lifestyle intervention program. Failure (<5% weight reduction) at 1 year after conclusion of the program was best determined by maternal depression, with maternal insecure–anxious attachment attitudes being the best failure predictor between the conclusion of the program and the 1-year follow-up.

Original article Fröhlich, G. *et al.* Conditions of long-term success in a lifestyle intervention for overweight and obese youths. *Pediatrics* **128**, e779–e785 (2011)

DIABETES

Does membrane repair failure underlie diabetic myopathy?

Membrane repair failure in myocytes after laser injury to these cells or downhill running is significantly higher in mice models of type 1 or type 2 diabetes mellitus than in control mice. This defect, which can lead to more rapid cell death, was also reported in myocytes in culture that were exposed to high glucose concentrations or to advanced glycation end products.

Original article Howard, A. C. *et al.* A novel cellular defect in diabetes: membrane repair failure. *Diabetes* doi:10.2337/db11-0851