Low SHBG is a better indicator of metabolic syndrome than low total testosterone

Previous studies suggested that decreased testosterone levels are associated with an increased risk of metabolic syndrome in aging men. Chubb and colleagues, therefore, examined the relative contributions of levels of total testosterone, free testosterone and SHBG to this increased risk of metabolic syndrome. They found that measurements of SHBG best identify those at risk of the metabolic syndrome.

The study included 2,502 nondiabetic men aged ≥70 years. Blood samples were taken after patients had fasted overnight. Levels of serum total testosterone and SHBG were measured by immunoassays, and free testosterone level was calculated from these data.

Metabolic syndrome was diagnosed in 602 patients. Low levels of SHBG and total testosterone were both significantly and independently associated with metabolic syndrome, but SHBG showed the strongest association (odds ratios 1.77, 95% CI 1.53–2.06, versus 1.34, 95% CI 1.18–1.52). Calculated free testosterone was not independently associated with metabolic syndrome.

The authors conclude that low SHBG levels are a better predictor of metabolic syndrome than low total testosterone in men older than 70 years. They suggest that strategies to prevent development of metabolic syndrome might aim to increase levels of circulating SHBG rather than focus exclusively on total testosterone.

Original article Chubb SA *et al.* (2008) Lower sex hormone-binding globulin is more strongly associated with metabolic syndrome than lower total testosterone in older men: the Health in Men study. *Eur J Endocrinol* **158:** 785–792

Once-weekly risedronate benefits postmenopausal breast-cancer survivors

In women with breast cancer, chemotherapy might induce early menopause, which is associated with bone loss and increased risk of fractures. Risedronate, a bisphosphonate that is used to treat osteoporosis, might reduce bone loss in affected patients; therefore, Greenspan and colleagues conducted a randomized, placebo-controlled clinical trial to investigate the efficacy of oral risedronate in this setting.

The study included 87 women with stage I–III breast cancer who underwent chemotherapy and had recently (≤8 years previously) entered menopause. Patients were randomly allocated to receive once-weekly oral risedronate 35 mg ($n = 43$) or placebo ($n = 44$) for 24 months following chemotherapy. Concomitant treatment with tamoxifen or aromatase inhibitors was permitted.

At 24 months, BMD had decreased at most of the spine and hip sites assessed in patients who received placebo, whereas BMD generally remained stable in women treated with risedronate. Patients who were receiving concomitant aromatase inhibitors had greater BMD reductions than those who were not taking this therapy. Patients who received risedronate but no aromatase inhibitors showed the greatest BMD increases and a trend for reduced bone-turnover markers.

The authors conclude that once-weekly oral risedronate, with or without concomitant aromatase-inhibitor therapy, was beneficial for postmenopausal breast-cancer survivors in terms of spine and hip BMD and bone turnover.

Original article Greenspan SL *et al.* (2008) Risedronate prevents bone loss in breast cancer survivors: a 2-year, randomized, double-blind, placebo-controlled clinical trial. *J Clin Oncol* **26:** 2644–2652

Sibutramine significantly decreases body weight in women with PCOS

The antiobesity drug sibutramine reduces body weight by up to 10% in obese individuals, and has shown promising results in open-label studies of women with polycystic ovary syndrome (PCOS). Lindholm and colleagues conducted a prospective, double-blind, multicenter, randomized, placebo-controlled study to evaluate the efficacy of sibutramine in overweight and obese women with PCOS.

The study included 42 women (age 18–40 years, BMI >27 kg/m^2) who met the Rotterdam criteria for PCOS. Patients were randomly assigned to receive sibutramine 15 mg once daily or placebo for 24 weeks. All participants were also given lifestyle-modification advice that included information on diet and physical exercise.

In total, 34 of 42 patients completed the treatment. Mean reductions in weight and BMI at the end of the study were significantly greater in