weight change. By contrast, vitamin K supplementation had no significant effect on HOMA-IR or fasting plasma insulin or glucose concentrations in women; however, the authors speculate that overweight and obesity, which were more prevalent among women taking the vitamin K supplement than control women, might have impaired the vitamin's protective effect.

The authors call for future studies to assess the protective effect of vitamin K supplementation on insulin resistance in elderly populations and to investigate any sex differences in the effect.

Original article Yoshida M *et al.* (2008) Effect of vitamin K supplementation on insulin resistance in older men and women. *Diabetes Care* **31:** 2092–2096

Bone turnover is decreased and BMD increased in patients with hypoparathyroidism

A few small studies have reported that patients with hypoparathyroidism have atypical bone structure and skeletal dynamics. Rubin *et al.* have conducted the largest study to date of bone parameters in patients with hypoparathyroidism in order to establish the features of the skeleton in this setting.

This study enrolled 33 patients who had been affected with hypoparathyroidism for at least 3 years and were receiving calcium and vitamin D supplementation, and 33 age-matched and sex-matched healthy individuals. Mean BMD at key skeletal points was determined by dual-energy X-ray absorptiometry scans. All patients also underwent a percutaneous iliac crest bone biopsy.

BMD was above average or in the normal range in the lumbar spine, hip, femoral neck and distal third of the radius in patients with hypoparathyroidism (Z scores $+2.2 \pm 2.2$, $+1.1 \pm 1.3$, $+1.3 \pm 1.3$ and $+0.64 \pm 0.94$, respectively). Bone reabsorption rate and other histomorphometric variables of bone remodeling in patients with hypoparathyroidism were lower than in the control group. Patients with hypoparathyroidism also had significantly greater cancellous bone volume ($P = 0.02$), trabecular width ($P = 0.03$) and cortical width ($P = 0.05$), regardless of whether their hypoparathyroidism was idiopathic or the result of thyroid surgery. Duration of hypoparathyroidism correlated positively with both trabecular width and cortical width.

The authors conclude that patients with hypoparathyroidism have reduced bone turnover and increased bone volume. The atypical bone quality observed in these patients is most probably a result of parathyroid hormone deficiency.

Original article Rubin MR *et al.* (2008) Dynamic and structural properties of the skeleton in hypoparathyroidism. *J Bone Miner Res* [doi:10.1359/jbmr.080803]

Bazedoxifene shows promise for the treatment of postmenopausal osteoporosis

A number of therapies are approved for the treatment and prevention of postmenopausal osteoporosis, but they might not be suitable for all women. Continued development of new therapeutic agents is, therefore, essential.

In an international, multicenter, double-blind, phase III study, Silverman *et al.* evaluated the safety and efficacy of bazedoxifene, a novel selective estrogen-receptor modulator, in treating postmenopausal women with osteoporosis. A total of 6,847 women (mean age 66.4 years) were randomly allocated to receive 20 mg bazedoxifene, 40 mg bazedoxifene, 60 mg raloxifene or placebo daily, together with calcium and vitamin D supplementation. Patients were monitored for changes in BMD, bone turnover markers, and incidence of vertebral and/or nonvertebral fractures over a 36 month period. Bazedoxifene reduced the risk of new vertebral fracture by 42% (20 mg dose) and 37% (40 mg dose) relative to placebo, and was comparable to raloxifene. A subgroup analysis of 1,782 women at high fracture risk revealed that bazedoxifene significantly reduced the incidence of nonvertebral fracture. In particular, the 20 mg dose of bazedoxifene reduced the nonvertebral fracture risk compared with placebo (50%) and raloxifene (44%). Both bazedoxifene groups showed greater increases in BMD and improvements in bone marker levels compared with the placebo group. Furthermore, both doses of bazedoxifene were generally well tolerated.

Silverman and colleagues conclude that bazedoxifene is a promising new therapy for the treatment of postmenopausal osteoporosis.

Original article Silverman SL *et al.* (2008) Efficacy of bazedoxifene in reducing new vertebral fracture risk in postmenopausal women with osteoporosis: results from a 3-year, randomized, placebo- and active-controlled clinical trial. *J Bone Miner Res* [doi:10.1359/jbmr.080710]