by which endogenous estrogen might protect against the development of cardiovascular disease. Furthermore, whether treatment with estrogen-modulating agents is able to prevent or delay onset of cardiovascular disease in high-risk men remains to be determined.

Original article Ärnlöv J *et al.* (2006) Endogenous sex hormones and cardiovascular disease incidence in men. *Ann Intern Med* **145:** 176–184

Is it time to ditch the low-fat, high-carbohydrate weight-loss diet?

With the recent surge in popularity of low-carbohydrate and low-glycemic-index (GI) diets, the traditionally recommended low-fat, high-carbohydrate weight-loss diet has lost favor. A 12-week, randomized, controlled Australian study has compared the effects of four types of diet on weight loss and cholesterol level.

A group of 129 overweight volunteers was stratified by weight and sex. Participants were allocated to one of four low-fat diet groups: high carbohydrate, high GI (Group 1); high carbohydrate, low GI (Group 2); high protein, high GI (Group 3); or high protein, low GI (Group 4).

The mean percentage of body weight lost was similar for all groups (4.2–6.2%), but the proportion of patients who lost >5% of their body weight was higher in Groups 2 and 3 than in Groups 1 and 4 (56% and 66% versus 31% and 33%, respectively). Women in Groups 2 and 3 lost almost twice as much fat mass compared with women in Group 1 (approximately 4.5 kg versus 2.5 kg, respectively). LDL cholesterol levels, however, significantly increased in Group 3, and declined in Group 2.

These results suggest that the traditional diet (Group 1) is not the best option for weight control. Although the high-protein, high-GI diet resulted in the greatest loss of fat mass, it also increased participants' LDL cholesterol levels. This study suggests that the best results, in terms of both weight loss and reduction of cardiovascular risk, are obtained by following a high-carbohydrate and low-GI diet—especially for women.

Original article McMillan-Price J *et al.* (2006) Comparison of 4 diets of varying glycemic load on weight loss and cardiovascular risk reduction in overweight and obese young adults: a randomized controlled trial. *Arch Intern Med* **166:** 1466–1475

Jury still out on the benefits and safety of multivitamin and mineral supplements

Published information on the safety and efficacy of multivitamin and mineral supplements is lacking, say the authors of a systematic review commissioned by the NIH for its State-of-the-Science conference.

Through a comprehensive and reproducible approach, the team identified 12 published articles from five randomized, controlled trials that examined the efficacy of multivitamin and mineral supplements in the primary prevention of cancer, cardiovascular disease, hypertension, cataracts, and age-related macular degeneration; not all chronic diseases the team aimed to analyze were represented in the literature. Safety was evaluated in eight articles (three case reports and published data from four randomized, controlled trials). The quality of all studies was rated 'fair', except for those looking at hypertension, which were rated 'poor'.

Overall conclusions were hard to draw, because of the heterogeneity of the studies. Results were also complicated by the studies' limitations, which included allowing participants to self-supplement with different formulations during a study, differences in baseline nutritional status of study populations, and relatively short follow-up times. While supplements are unlikely to have serious adverse effects, little evidence of their efficacy was seen, although some findings suggested a beneficial effect of supplementation in the primary prevention of cancer in patients with poor nutrient or antioxidant intake.

Original article Huang H-Y *et al.* (2006) The efficacy and safety of multivitamin and mineral supplement use to prevent cancer and chronic disease in adults: a systematic review for a National Institutes of Health state-of-the-science conference. *Ann Intern Med* **145:** 372–385

Instant vertebral assessment can diagnose vertebral fracture in postmenopausal women

Around a quarter of European women aged over 75 years are thought to have experienced vertebral fracture; however, around two-thirds of vertebral fractures are not diagnosed immediately, which can delay the diagnosis of osteoporosis and, therefore, its treatment.