Antioxidants continue to be advocated for the prevention of many illnesses despite the fact that well controlled studies showing their usefulness are relatively few. A study of dementia from the Johns Hopkins University has been completed. In this study elderly residents of one county were assessed from 1995 to 1997. In those subjects who routinely used vitamins E and C as supplements in combinations there was a reduced prevalence of dementia. A trend towards a lower dementia prevalence risk was also evident in users of vitamin E or vitamin C supplements alone or with multiple vitamins containing vitamin E and multiple vitamins containing C. There was no protective effect with the use of vitamin C or vitamin E supplements alone or with multiple vitamins alone, or with vitamin B complex supplements. It appears that the use of vitamins E and C supplements in combination may reduce the prevalence of incidence of dementia. (Archives of Neurology 2004; 61: 82–8)

Despite the growing body of evidence of the importance of routine exercise especially as one gets older, the vast majority of the population of the developed world does not heed this recommendation. In a randomised controlled trial from Duke University sedentary overweight men and women with mild to moderate dyslipidaemia were studied. In the non-dieting overweight subjects who did not exercise, weight gain was routinely documented. In contrast, both low exercise groups and high exercise groups lost weight and fat in a dose-response manner. These findings strongly suggest that without changes in a diet a greater amount of activity is necessary for weight maintenance and...the place of vitamin E and multiple vitamins containing that a positive caloric imbalance in overweight subjects can be reversed by a moderate amount of exercise. For most individuals this can be accomplished by walking 30 minutes a day. (Archives of Internal Medicine 2004; 164: 31–9)

Scientists from Germany have identified the three genes in mosquitoes that control how the insect’s immune system responds to the malarial parasite. These findings may lead to a new antimalarial strategy by using the mosquitoes’ own immune system to block transmission of the infection from mosquitoes to humans. (Science 2004; 303: 2030–2)

Owing to the morbidity associated with cardiopulmonary bypass cardiac surgeons are increasingly performing coronary artery bypass procedures off-pump. Concerns have been raised about the technical difficulty of off-pump bypass surgery and whether or not the outcomes are equivalent to the more accepted on-pump technique. In a randomised single surgeon trial among unselected patients undergoing coronary artery bypass grafting cardiac outcomes and health related quality of life at 30 days and 1 year were similar in patients who underwent surgery off-pump and those who had surgery on-pump. The authors suggest however that a larger multicentre trial is necessary to evaluate the generalised ability of these results and to better clarify the role of off-pump coronary artery bypass surgery. (JAMA 2004; 291: 1841–9)

The grey short tailed South American opossum is now a targeted animal for genome sequencing. Although opossums and humans diverged from a common ancestor more than 130 million years ago opossum genetic information will be useful for comparative studies in other mammals, particularly mice. Moreover, the short tailed South American opossum is the only laboratory animal known in which ultraviolet radiation alone can cause melanoma. It may provide genetic information to enable us learn how sun exposure leads to skin cancer in humans. (Go to www.nhr.gov)

Although classic teaching has asserted that dyslexia is more common in boys than girls recent studies have questioned this. However, in the Dunedin (New Zealand) multidisciplinary health and development study reading disabilities were seen more frequently in boys than girls. The authors suggest that these epidemiological data should prompt research to determine the causual influences that underlie this sex difference, because elucidation could throw light on the process leading to reading disability in the sexes. (JAMA 2004; 291: 2007–12)