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 supplements in combination may prevent the damage caused by neuronal loss characteristic of Alzheimer’s disease. (Scientific American 2004;290:26–7)

Despite their fat content nuts are now in—that is, in most healthy diet recommendations. Substituting walnuts for monounsaturated fat in a Mediterranean diet has been reported to reduce concentrations of total cholesterol, including low density lipoprotein, and it also improved endothelial dependent vasodilation in people with high cholesterol. This may be the explanation of the apparent cardioprotective effect of nut intake. (Circulation 2004;109:1609–14)

Osteoarthritis continues to contribute greatly to the disability of ageing populations of the developed world. Currently, little is known about the underlying biological events leading to this disorder. A new public-private partnership between the National Institutes of Health and the pharmaceutical industry has been established to investigate the risk factors for developing osteoarthritis. Biological specimens, images, and clinical data will be collected from men and women aged 45 years or older at risk for developing osteoarthritis or those with an early stage of the disease. It is hoped that scientists will be able to identify new biological markers that indicate bone or cartilage changes which may help in the treatment of osteoarthritis. (Go to: www.oai.ucsf.edu/clinics.asp)

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.nbir.nih.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 in girls. The authors suggest that these epidemiological data should prompt research to determine the causal 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)