Scientists studying people with HIV have long been interested in why a small but distinct group of HIV infected individuals are able to successfully keep the virus in check and substantially delay or prevent progression to AIDS. It has been known for some time that the white blood cells of people with long term non-progressive HIV produce an unknown chemical or chemicals that inhibit viral replication. Researchers at Rockefeller University in New York have now identified components of this elusive factor. It is a family of HIV suppressive proteins produced by the CD8 T cells. (www.sciencemag.org/cgi/content/abstract/1076185)

The problems surrounding medical practice in most developed countries have produced a work place that is not seen as congenial. Over the past decade practicing nurses have found US hospitals to be less attractive as a place of work. It now appears that the resulting nursing shortage has a real impact on patient care. In a study from the University of Pennsylvania, investigators found that each additional patient assigned to a nurse on a general, orthopaedic, or vascular surgery ward was associated with a 7% increase in the likelihood of the patient dying within 30 days of admission. Each additional patient assigned per nurse was associated with a 23% increase in the odds of the nurse experiencing burnout and a 15% increase of the odds of that nurse voicing job dissatisfaction. Hospitals with high patient to nurse ratios on surgical wards appear to have a higher risk adjusted mortality than those that have a lower patient to nurse ratio. (JAMA 2002;288:1987–93)

One of the real traumas of growing up is facing the risk of developing acne. Acne appears to vary geographically. In a recent study of 186 people from Denmark who were 15 to 22 years old, acne was found to be less common than in previous reports. The use of oral contraceptives was associated with a significantly lower risk of acne and the use of tobacco smoking was not significantly associated with an increased risk of acne. The prevalence rate of acne among adolescents in recent reports appears to be lower than reports of a decade ago. The entire explanation for this has yet to be determined. (Dermatology 2002;204:179–84)

The epidemic of skin cancer continues in most developed countries. Despite significant public health efforts many young people still do not routinely use sunscreen or avoid sunburns despite the evidence of the linkage of sun induced skin damage and cancer. In a study from Boston, investigators documented that although girls were 34% more likely to use sunscreen routinely than boys, 83% of 12 to 18 year old students studied had had at least one sunburn during the previous summer and 36% had three or more sunburns. Nearly 10% of the students used a tanning bed during the previous year. These findings suggest that many children are at subsequent risk of skin cancer because of suboptimal skin screen use, high rates of sun burning, and tanning bed use. (Pediatrics 2002;109:1009–14)

Dyslipidaemia is a known risk factor for the development of coronary heart disease. Both changes in diet and exercise have been recommended to address this problem. In a randomised controlled pilot study from Montreal, investigators studied 198 subjects. No change in the lipid profile was observed with standard lifestyle recommendations. In contrast, participants in a more intensive intervention programme with a supervised aerobic exercise programme lost weight and reduced their total cholesterol by 4 to 6% and low density lipoprotein cholesterol by 6%. Participants in the exercise programme significantly increased their exercise capacity. Overall, each 10% reduction in body weight was associated with 7.6% reduction in low density lipoprotein cholesterol. The authors suggest that standard lifestyle recommendations as currently given to patients have little effect on blood lipid levels but a more intense exercise and diet programme may be effective in improving blood lipids and other risk factors for coronary artery disease. (Prev Med 2002;35:16–204)

There is growing concern that initial recommendation for prescribed drugs is often twice that needed for sleep and effective use in clinical practice. In a study done by researchers at the Food and Drug Administration, labelled changes for 354 new drugs approved for marketing in the US between 1980 and 1999 were analysed. They discovered the initial recommended dose for 21% of the drugs were later changed and that 70% of these changes were owing to the initial dose needing to be decreased for safety reasons. The authors suggest that more research needs to be done on the process of drug dose selection and initial trial studies of these drugs. (Pharmacoepidemiol Drug Saf. DOI: 10.1002/ps.744)

Many schools of pharmacy are now tending to their own medicinal plant gardens. At the University of Rhode Island plans are underway to enroll women in clinical studies to compare the efficacy of red clover and black cohosh with a prescription drug Prempro® in relieving menopausal symptoms. Previous studies have suggested that black cohosh may be effective in relieving menopausal symptoms. This study is being done in cooperation with the Center for Botanical Dietary Supplement Research in Women’s Health, established by the National Institutes of Health in 1999. (JAMA 2002;288:1706–7)

It is well established that following coronary artery bypass grafting there is a risk of focal neurologic deficits and neuropsychological impairments. The precise cause of these changes has not been fully understood. A recent study from the University of Wurzburg in Germany utilised diffusion weighted magnetic resonance imaging and H-magnetic resonance spectroscopy to investigate these problems. From these studies it would appear that the postoperative impairment in neuropsychological test performance is associated with a transient metabolic neuronal disturbance closely related to the degree of N-acetylaspartate-creatine ratio decrease. Focal ischaemic lesions are more frequent in patients undergoing coronary artery bypass surgery, however they do not appear to be related to the diffuse postoperative encephalopathy. (Arch Neurol 2002;59:1090–3)