Masala

Statins, it would seem, are magic pills; but, they have failed to deliver many a time. A recent meta-analysis examined the data from 11 placebo-controlled trials of statin use in 65 000 high risk patients without cardiovascular disease at baseline. During nearly 4 years of treatment, though the low density lipoprotein levels were lower in statin than in placebo users (mean 94 *v*. 134 mg/dl), there was no difference in all-cause mortality (*Arch Intern Med* 2010;**170:**1024–31). Since there was no benefit of statin therapy on all-cause mortality in a high risk primary prevention setting, they are even less likely to provide benefit in the low risk general population as a primary prevention strategy.

With over 4 billion cell phone connections worldwide, questions pertaining to the possible adverse health effects of radio-frequency exposure, especially carcinogenic effects, assume importance. This risk might be higher for *in utero* exposure. A case–control study investigated the risk of early childhood cancers associated with the mother's exposure to radio-frequency from and proximity to mobile phone base stations during pregnancy. The researchers examined 1400 cases of childhood cancers of the central nervous system, leukaemia and non-Hodgkin lymphoma and matched each case with 4 controls. No increased risk was noted in the offspring of exposed mothers (*BMJ* 2010;**340:**c3077).

This radiowave exposure is not so safe! In a study it was found that listening to an MP3 player for just an hour can lead to temporary hearing loss. Researchers in Belgium had 21 young adults with normal hearing listen to pop rock on an MP3 player at comfortable volumes for an hour, on 6 different occasions at least 2 days apart. The researchers found that, after listening, subjects experienced significant deterioration in hearing at high and low frequencies. However, this short term exposure led to only a reversible hearing loss. One can just speculate about long term exposure (*Arch Otolaryngol Head Neck Surg* 2010;**136:**538–48).

Another reason to celebrate vegetarianism! Meat consumption has been inconsistently associated with development of coronary heart disease (CHD), stroke and diabetes mellitus. A recent systematic review and meta-analysis looked for the relationships of red (unprocessed), processed and total meat consumption with incident CHD, stroke and diabetes mellitus (*Circulation* 2010;**121:**2271–83). The participating 20 studies included over a million subjects. Processed meat intake was associated with almost 40% and 20% increase in the risk of CHD and diabetes, respectively.

People with diabetes on metformin are at an increased risk of vitamin B_{12} deficiency. A study revealed that not only do patients receiving metformin face declines in vitamin B_{12} levels, but the declines are more as the length of treatment increases. Nearly 400 adults taking insulin for type 2 diabetes were randomized to receive metformin (850 mg thrice daily) or placebo for roughly 4.5 years (*BMJ* 2010;**340:**c2181). The percentage change in vitamin B_{12}, folate and homocysteine concentrations from baseline at 4, 17, 30, 43 and 52 months were measured. Metformin treatment was associated with a mean decrease in vitamin B_{12} concentration of 19% and significant increased risk of vitamin B_{12} deficiency associated with increased homocysteine levels.

Background studies have always raised concerns about the cardiovascular safety of non-steroidal anti-inflammatory drugs (NSAIDs) and this been especially highlighted with COX-2 inhibitors. In a Danish study, using national databases, investigators identified a cohort of over 1 million healthy individuals ≥10 years of age over a 9-year period. Their use of NSAID therapy within 30 days of a major cardiovascular event was then tracked. Use of the non-selective NSAID diclofenac was associated with an almost 2-fold increased risk for cardiovascular death (OR 1.91); in comparison, the OR with rofecoxib was 1.66. Both ibuprofen and naproxen showed increased stroke risk, although naproxen had the safest overall risk profile (*Circ Cardiovasc Qual Outcomes* 2010 [Epub ahead of print] doi: 10.1161/CIRCOUTCOMES.109.861104).

Proton-pump inhibitors (PPIs) are overprescribed and, as currently used, their harms might just outweigh their benefits. The US Food and Drug Administration (FDA) recently revised labels of PPIs to warn about a possible increased risk for hip, spine and wrist fractures in patients taking either prescription or over-the-counter versions of the drugs. The action followed a review of 7 epidemiological studies, 6 of which showed increased risk of fractures with PPIs. The greatest risk was observed in patients on high doses or who had been taking the drugs for at least 1 year. In addition, the risk was seen mainly in adults ≥50 years of age (*http://www.fda.gov/Safety/MedWatch/SafetyInformation/Safety Alerts,* accessed on 20 June 2010).

More on the potential harm of PPIs. In one study, researchers examined the records of 100 000 patients for an association between intensity of gastric acid-suppression therapy and incidence of nosocomial *Clostridium difficile* infection (*Arch Intern Med* 2010;**170:**784–90). It was found that as the intensity of gastric acid suppression increased, so did the OR of infection from 1.0 (no suppression) to 1.53 (with H_2-receptor antagonists) to 1.74 (with daily PPIs) to 2.36 (with more frequent PPIs daily). An editorialist contended that one-half to two-thirds of PPIs are prescribed inappropriately and that 'for most patients the adverse effects of PPIs outweigh the benefits'.

Get 'nutty' to lower cholesterol. In a recent publication, data were compiled from 25 studies to assess the effects of the consumption of nuts on blood lipid levels in nearly 600 adults. After at least 3 weeks of a mean daily consumption of 67 g of nuts, there were 5%–10% reductions in total cholesterol, low density lipoprotein cholesterol, ratio of low density lipoprotein to high density lipoprotein cholesterol, and ratio of total cholesterol to high density lipoprotein, compared with control diets. There was a dose–response relationship as well and the effect was similar for different types of nuts (*Arch Intern Med* 2010;**170:**821–7).

Do not work overtime for the sake of your heart. According to a study, working 3–4 extra hours a day is associated with increased risk for coronary heart disease (CHD). The study included about 6000 British civil servants who were free of CHD at baseline and then were followed for an average of 11 years. During that time, the rate of new CHD was 5.5 per 1000 person-years. After appropriate adjustments, participants who worked 3–4 hours of overtime a day (beyond the standard 7–8 hours/day) faced a 60% increase in risk for CHD.

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