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Interventions to prevent diabetes have long-lasting effects. In the original Diabetes Prevention Program (DPP) randomized trial, the incidence of diabetes in high-risk adults was reduced by 58% with intensive lifestyle interventions and by 31% with metformin over a period of 3 years. Now we have data from the follow up of around 2800 subjects from the same DPP trial wherein those originally assigned to lifestyle intervention received additional lifestyle support and the metformin group continued their treatment. Over a median follow up of 10 years, benefits of the interventions persisted—overall the incidence of diabetes was reduced by 34% in the lifestyle group and by 18% in the metformin group, relative to placebo (*Lancet* 2009 doi:10.1016/S0140-6736(09)61457-4).

Fever is part of the normal inflammatory process after immunization, and prophylactic antipyretic drugs are frequently used. Perhaps it is not such a good idea! In a study, of the 400-odd infants receiving primary and booster immunizations half were administered acetaminophen via suppository in 3 doses over the first 24 hours after vaccination and half received no prophylaxis. Though the percentage of children with a temperature of 38 °C or higher was significantly lower (by almost 50%) in the acetaminophen group, immunogenicity due to the vaccine was lower in the acetaminophen group (*Lancet* 2009;374:1339–50).

A peculiar after-effect of herpes zoster. According to a retrospective study, a patient's risk for stroke increases during the year after a herpes zoster attack. This finding was borne out of an analysis of a national database from Taiwan in which researchers examined the incidence of stroke in some 7800 adults who had herpes zoster attacks and 23 000 matched controls. Patients with zoster and ophthalmic complications were at especially high risk (*Stroke* 2009;40:3443–8).

The benefits of a Mediterranean-style diet are not restricted to the reduction of cardiovascular risk. Some 10 000 young Spanish adults completed food-frequency questionnaires to assess how well they followed a Mediterranean dietary pattern (i.e. high in fruits, vegetables, fish, nuts, cereal and legumes; low in meat and whole-fat dairy; moderate alcohol intake; and high ratio of monounsaturated-to-saturated fatty acids). After a median follow up of 4 years, people in the top 3 quintiles of diet adherence had lower hazard ratios for incident self-reported depression than those in the lowest quintile. The authors speculated that this may be due to the beneficial impact on endothelial function, which may, in turn, improve production of brain-derived neurotrophic factor—reported to be reduced in depression (*Arch Gen Psychiatry* 2009;66:1090–8).

There was much hue and cry about the type of mask for protection from influenza. The panic caused severe shortage of the specified N95 respirators in the market. However, it seems regular surgical masks are as efficient as N95 respirators against flu. In a Canadian study, 450-odd nurses working in emergency departments, medical units and paediatric units were randomized to use either a fit-tested N95 respirator or a surgical mask when caring for patients with

febrile respiratory illnesses during the 2008–09 flu season. Almost a quarter of subjects in each arm suffered a laboratory-confirmed influenza infection, showing the non-inferiority of surgical masks (*JAMA* 2009;302 (17) doi:10.1001/jama.2009.1466).

Will the debate on prostate-specific antigen (PSA) come to an end? It really does not measure up as a good screening test for prostatic cancer. It may just be a good prognostic marker. Using the data from a large Swedish cohort linked to a national cancer registry, researchers compared the initial PSA values of those who developed prostate cancer over roughly 7 years post-screening with other matched men who did not develop cancer. The positive likelihood ratio commonly considered to 'rule in disease' is 10; in this study the positive likelihood ratios were 4.5, 5.5 and 6.4 for PSA cut-off values of 3, 4 and 5 ng/ml. The researchers could not define a reasonable cut-off value that had a high specificity as well as sensitivity >50%. The only strong finding was that a PSA value <1 ng/ml 'virtually ruled out' a diagnosis during the follow up period (*BMJ* 2009;339:b3537; doi:10.1136/bmj.b3537).

Cheer up and live longer. Depression has been linked with increased cardiovascular risk. Taking it further, a recent study examined the association of depression with all-cause and cause-specific mortality in diabetes. Over 4000 adults with diabetes in the USA were followed up for more than 4 years. Subjects with major depression at baseline were twice as likely to die from non-cardiovascular, non-cancer causes (e.g. infection, renal failure) as those without depression. They also had a 50% higher risk for all-cause mortality (*Ann Family Med* 2009;7:414–21).

Beware of incorrect administration of what would be considered an innocuous injection—'Phenergan' (promethazine hydrochloride). The US Food and Drug Administration (FDA) has stated that injectable promethazine hydrochloride should carry a boxed warning to emphasize the risk for severe tissue injury when the drug is given incorrectly. Intra-arterial or subcutaneous promethazine injection can result in gangrene and other serious tissue injury, while during intravenous administration, the drug can 'leach out' from the vein and harm nearby tissue. Clinicians who choose intravenous delivery should limit the drug's concentration and the speed of administration (<http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm182498.htm>). The preferred route of administration is injecting the drug deep into the muscle.

The armamentarium of antihypertensive drugs gets a new addition—darusentan. It is a vasodilator that works via endothelin-receptor antagonism. In an industry-supported trial, researchers randomized nearly 400 patients with treatment-resistant hypertension either to placebo or to darusentan for 14 weeks. Patients continued taking customary treatments. Darusentan produced significant reductions in both systolic and diastolic blood pressures in the range of 10–20 mmHg systolic. Significantly more recipients of darusentan achieved their target goals than those on placebo (*Lancet* 2009;374:1423–31).

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