Abstracts

Healthy survival past age 70 and adiposity in middle-aged women

Qi Sun and colleagues, in a study published in the *British Medical Journal,* have found a relationship between health survival past the age of 70 and how fat or otherwise women are in middle age. The data were obtained from the Nurse's Health Study in the USA.

They examined 17 065 women who survived until at least the age of 70, provided information on occurrence of chronic disease, cognitive function, physical function, and mental health at older ages, and were free from major chronic diseases at mid-life (mean age was 50 at baseline in 1976).

The main outcome measures were healthy survival to age 70, which was defined as having no history of 11 major chronic diseases and having no substantial cognitive, physical, or mental limitations.

Of the women who survived until at least age 70, 1 686 (9.9%) met our criteria for healthy survival. Increased body mass index (BMI) at baseline was significantly associated with linearly reduced odds of healthy survival compared with usual survival, after adjustment for various lifestyle and dietary variables ($p<0.001$ for trend). Compared with lean women (BMI 18.5 - 22.9), obese women (BMI 30) had 79% lower odds of healthy survival (odds ratio (OR) 0.21, 95% confidence interval (CI) 0.15 - 0.29). In addition, the more weight gained from age 18 until mid-life, the less likely was healthy survival after the age of 70. The lowest odds of healthy survival were among women who were overweight (BMI 25) at age 18 and gained 10 kg weight (OR 0.18, 95% CI 0.09 - 0.36), relative to women who were lean (BMI 18.5 - 22.9) and maintained a stable weight.

These data provide evidence that adiposity in mid-life is strongly related to a reduced probability of healthy survival among women who live to older ages, and emphasise the importance of maintaining a healthy weight from early adulthood.

Sun Q, *et al. BMJ* 2009; 339: b3796 (doi:10.1136/bmj.b3796).

Bad habits will catch up with you

A study in the *British Medical Journal* suggests that, even if attenuated over time, early cardiac risk factors still reduce life expectancy. Robert Clarke and colleagues followed up 19 000 men for 38 years in the Whitehall study. They looked at life expectancy in relation to cardiovascular risk factors recorded in middle age, using a prospective cohort study.

Their participants were 18 868 men employed in the civil service in London, England, who were examined between 1967 and 1970 and followed for 38 years. During this time, 13 501 died and 4 811 were re-examined in 1997.

The main outcome measures were life expectancy estimated in relation to fifths and dichotomous categories of risk factors (smoking, 'low' or 'high' blood pressure (140 mmHg), and 'low' or 'high' cholesterol (5 mmol/l)), and a risk score from these risk factors.

At entry, 42% of the men were current smokers, 39% had high blood pressure, and 51% had high cholesterol. At the re-examination, about two-thirds of the previously 'current' smokers had quit smoking shortly after entry and the mean differences in levels of those with high and low levels of blood pressure and cholesterol were attenuated by two-thirds. Compared with men without any baseline risk factors, the presence of all three risk factors at entry was associated with a 10-year shorter life expectancy from age 50 (23.7 v. 33.3 years). Compared with men in the lowest 5% of a risk score based on smoking, diabetes, employment grade, and continuous levels of blood pressure, cholesterol concentration, and body mass index (BMI), men in the highest 5% had a 15-year shorter life expectancy from age 50 (20.2 v. 35.4 years).

The authors concluded that despite substantial changes in these risk factors over time, baseline differences in risk factors were associated with 10 - 15-year shorter life expectancy from age 50.

Clarke R, *et al. BMJ* 2009; 339: b3513 (doi:10.1136/bmj.b3513).

Mild gestational diabetes is worth treating

Maternal hyperglycaemia in pregnancy is bad for both mother and baby. Even mild gestational diabetes was associated with worse pregnancy outcomes in a recent trial. The women had normal fasting concentrations of glucose, but mildly abnormal results on a formal glucose tolerance test at 24 - 31 weeks' gestation. The 473 women allocated to standard care had bigger babies (3 408 g v. 3 302 g; $p<0.001$), more caesarean sections (33.8% v. 26.9%; $p=0.02$), a higher risk of shoulder dystocia (4% v. 1.5%; $p=0.02$), and a higher incidence of hypertensive disorders (13.6% v. 8.6%; $p=0.01$) than the 485 women who were actively managed with monitoring, diet, and the option of insulin. No neonatal deaths occurred in either group, and active treatment had no effect on the combination of deaths, birth trauma, hyperbilirubinaemia, hypoglycaemia, and hyperinsulinaemia (32.4% v. 37%).

Only 37 women in the treatment group needed insulin. The rest were successfully managed with dietary counselling and daily self-monitoring. The treatment group gained significantly less weight than controls (2.8 kg v. 5 kg; $p<0.001$).

This is the second big trial to suggest that women with mild gestational diabetes should be monitored and treated, says an editorial. The first, an Australian study published 4 years ago, found that treated women had fewer perinatal complications and a better quality of life.

Landon MB, *et al. N Engl J Med* 2009; 361:1339-1348.