ABSTRACTS

STOPPING SMOKING, LUNG FUNCTION AND WEIGHT GAIN

Stopping smoking is known to have positive effects on lung function, but no studies have looked at the potential adverse effects of the weight gain that is generally associated with stopping smoking. Generally, studies have shown that the long-term beneficial effects on lung function outweigh the adverse effects of weight gain. The authors of this study looked at the net benefit of stopping smoking and the independent effects of smoking and weight change on change in ventilatory lung function in the International European Community Respiratory Health Survey. They looked at measured lung function in 6 654 participants in 27 centres between 1991 and 1993, when the participants were aged 20 - 44 years, and again in 1998 - 2000.

Results showed that, compared with those who had never smoked, the decline in FEV_1 was lower in men who gave up smoking permanently and in those who gave up smoking between the two surveys. There was greater decline in FEV_1 among smokers. There was no significant difference between men and women. However, each kilogram of weight gained diminished the benefit of quitting smoking by 38% in men and by 17% in women. The authors conclude that their study shows that, while smoking is good for lung function, for maximum benefit ex-smokers need to control their weight gain aggressively.

Chinn S, *et al. Lancet* 2005; **365:** 1629.

ANTIOXIDANTS AND KWASHIORKOR

Kwashiorkor is a severe form of childhood malnutrition defined by oedema and characterised by anorexia, irritability, ulcerating dermatosis and fatty infiltration of the liver. There is a theory that kwashiorkor is a result of protein deficiency and hypoalbuminaemia, but studies show that the oedema resolves before serum albumin concentrations change, challenging this hypothesis. Another theory suggests that kwashiorkor results from an imbalance between the production of free radicals and their safe disposal, supported by observations that blood concentrations of vitamin E derivatives, glutathione and red cell antioxidants are lower in children with kwashiorkor than in marasmic children. The authors of this study tested the hypothesis that antioxidant supplementation would prevent kwashiorkor in children in 8 villages in Malawi who were at high risk of developing the condition.

Investigators enrolled 2 371 children aged between 1 and 4 years in 2 156 households; 2 332 children completed the trial. The children were given either daily supplementation with an antioxidant powder containing riboflavin, vitamin E, selenium and N-acetylcysteine in a dose that provided about 3 times the recommended daily allowance of each nutrient for 20 weeks, or placebo. Investigators looked at the incidence of oedema, the rates of change for weight and length and the number of days of infections. They found that 62 children developed kwashiorkor (defined by the presence of oedema); 39 out of 1 184 were in the antioxidant group, and 23 out of 1 188 were in the placebo group. The 2 groups did not differ in rates of weight or height gain and the children who were given antioxidant supplements were no less ill than those in the placebo group.

The authors concluded that antioxidant supplementation at the dose provided did not prevent the onset of kwashiorkor and that their findings did not support the hypothesis that depletion of vitamin E, selenium, cysteine, or riboflavin has a role in the development of kwashiorkor.

Cilberto H, *et al. BMJ* 2005; **330:** 1109.

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SINGLE SUTURE

SMOKERS AND ASTHMA

Smokers with mild asthma may do better if they start on high-dose steroid inhalers immediately. A multicentre, randomised, double-blind trial of low-dose versus high-dose inhaled steroids taken for 12 weeks reports that compared with non-smokers, smokers with mild asthma are insensitive to the therapeutic effects of low-dose steroids. Daily peak flow readings were lower, and the number of exacerbations of asthma increased for smokers taking lose-dose inhalers.

Thorax 2005; **60:** 282-287.