

Ms A Cryer
British Egg Information Service
126-128 Cromwell Road
London
SW7 4ET

20 November 2001

Dear Ms Cryer

Thank you for your letter requesting that SACN consider and update past government advice in relation to dietary cholesterol, egg intake and cardiovascular disease.

We have considered the evidence which you cite; other recent reviews on the subject, as well as the most recently published advice of the American Heart Association. I have also discussed the issue with the Chairman of SACN, Professor Alan Jackson.

COMA advice did not prescribe a limit on egg consumption of 2/week. COMA advice suggests no rise in cholesterol consumption from an average of 245 mg/day. As one egg yolk contains about 200 mg cholesterol, this simply means that egg consumption must be taken in the context of the rest of the diet. Most sources of saturated fats, such as meat and dairy products, are also sources of cholesterol. Therefore, any advice must take into account the whole diet.

The paper you quote by Frank Hu concluded that consumption of up to one egg per day is unlikely to have substantial overall impact on the risk of CHD or stroke among healthy men and women. However, they did find an apparently increased risk of CHD associated with higher egg consumption in diabetic patients, which warranted further study.

The American Heart Association advice, which you also mention, advocates a population wide limitation of dietary cholesterol to <300mg/d, and lower intakes for individuals based on blood cholesterol and lipoprotein levels and the presence of existing diseases such as heart disease or diabetes. The AHA do not say specifically that individuals can eat an egg per day, but state that targets for cholesterol levels can readily be achieved even with 'periodic' consumption of eggs and shellfish.

Several studies have shown that dietary cholesterol not only increases levels of LDL cholesterol but also concentrations of HDL cholesterol. The ratio of total to HDL cholesterol involves the opposing effects of LDL and HDL cholesterol on coronary heart disease risk. As a result, the ratio is a better predictor of CHD risk than are individual lipoprotein concentrations.

Recently, Weggemans et al, 2001, reviewed all well-controlled studies investigating the effect of dietary cholesterol from egg intake on the ratio of

total to HDL cholesterol concentrations in humans. Dietary cholesterol was shown to raise the ratio of total to HDL cholesterol and, therefore, adversely affect the cholesterol profile. Consequently, the 1994 COMA recommendation 'that average dietary intake of cholesterol should not rise' still appears valid.

Our present advice does not preclude egg consumption, nor prescribe a specific limit on egg consumption. Nutrient based advice must also, however, take into account the diet as a whole, as eggs are not the only source of cholesterol in the diet.

Yours sincerely,

Dr Lisa Jackson

cc: Professor Alan Jackson
Dr Sheela Reddy
Mr Tom Murray