Re: Quitting smoking and gaining weight: the odd couple

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We are grateful to Fernandez and Chapman for the interest in our work. We concur completely that the risk of weight gain should not deter people from quitting smoking. The reduction in risk from cessation far outweighs the risks from weight gain. However, we are concerned that the phrasing and some of the messages in the editorial may give the wrong impression. The authors suggest that the results may not apply to most smokers, seem to imply that the weight gain is temporary, and that the weight gain may not matter to health.

Fernandez and Chapman suggest that the results apply directly to people given treatment to assist cessation, which is true. They suggest that people who do not use such treatment may have higher self-efficacy for smoking cessation and this may relate to their ability to control weight gain. The authors do not quote data on the difference in self-efficacy between smokers using assisted cessation and those quitting without help. Even if such data were available, how relevant is it to explaining differences in propensity to gain weight? A systematic review and meta-analysis showed that self-efficacy for cessation was only modestly associated with cessation success.1 The self-efficacy scores prior to quitting of successful abstainers were 0.21 standard deviations higher than those who relapsed. If cessation self-efficacy is only modestly related to cessation success, it seems unlikely that there is a strong relation between cessation self-efficacy and ability to prevent weight gain. We agree that a review of general population-based cohort studies would be helpful. The problem interpreting general population based studies is that smoking status is often not well-characterised and may represent a mixed population of continuous and point prevalent abstainers. A one year cohort study reported that people categorised as continuous abstainers gained nearly twice the amount of weight as point prevalent abstainers.2 Presumably many point prevalent abstainers have been abstinent only for a short time and not had time to gain weight. One general population cohort study showed that point prevalence abstainers gained 3.8kg over 3 years compared to 0.6kg in continuing smokers.3 If we were to double this estimate in a rough and ready correction for using point prevalence abstinence then this suggests a net 6kg gain from cessation in the general population, similar to that observed in better characterised clinical populations (see below). Having said this, there is likely to be one important difference that may mean that the general population of smokers gain less weight than smokers who get help with quitting included in this review. Cigarettes seem effective weight control agents and nicotine is probably the main reason. If a person is a light smoker they receive only a small dose and so it stands to reason that removing that small dose will have a less important effect than in a heavier smoker. A review provides some evidence that people smoking more cigarettes per day gain more weight on cessation.4

We believe that the sentence: “Cohort studies have shown that many smokers gain weight after quitting in the short term but not in the long term” could be misleading. The reference that follows this sentence reviews evidence that the rate of weight gain in smokers that quit slows down.5 It is not 4-5kg every year for life. The two long-term cohort studies we know suggest that quitters weight about 6-7kg more than continuing smokers.6,7 This is compatible with data from the Health Survey for England, which shows that smokers have a BMI about 1kg/m2 lower than never smokers but it is about 1kg/m2 more in former smokers than never smokers (unpublished data).
The authors quote a cohort study that shows that modest weight gain does not increase mortality. However, not all cohort studies show this.8 A comprehensive systematic review and meta-analysis of cohort studies showed a linear increase in risk of mortality for a BMI of greater than 25kg/m.29 Furthermore, several cohort studies show an increase in the incidence of type II diabetes after cessation, which is partly but not completely explained by weight gain.3;10 We suggest this is sufficient reason to believe that weight gain after cessation is likely to be harmful, although less harmful than continuing to smoke, and prevention would be useful.

We have prepared a short article that seeks to give some guidance to clinicians dealing with smokers who ask about weight gain and ways that it might be managed. In particular, it discusses the competing health risks of continued smoking versus weight gain. The link is http://www.ncsct.co.uk/Content/FileManager/weight-gain-post-cessation.pdf.

Reference List

(7) Lycett D, Munafo M, Johnstone E, Murphy M, Aveyard P. Associations between weight change over 8 years and baseline body mass index in a cohort of continuing and quitting smokers. Addiction 2011; 106(1):188-196.

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