



Personal financial incentives to change health-related behaviours

A meta-analysis reported that personal financial incentives helped people to achieve behavioural targets relating to smoking cessation or a healthy lifestyle, but any effects waned 3 months after the incentive stopped.

Overview:

- Personal financial incentives seemed to help people to stop smoking or adopt a healthier lifestyle, but the effects appeared to wear off 3 months after the incentive stopped.
- This meta-analysis was limited by the nature of the studies identified, with the majority of studies focusing on smoking cessation and conducted in the USA.
- More research is needed to assess the role of personal financial incentives before making recommendations to change existing policy and practice in the UK.



Background: Personal financial incentives appear to be effective at influencing health-related behaviours, in particular when used short term for distinct, well-defined behavioural goals, such as attending appointments or receiving vaccinations ([Kane et al. 2004](#)).

Financial incentives also seem to be effective at changing more complex lifestyle behaviours, such as smoking ([Cahill et al. 2015](#)) and diet ([Paul-Ebhohimhen and Avenell 2008](#)).

However, it is not clear under what conditions incentives work best and how behaviour is affected when the incentives stop ([Jochelson 2007](#)).

Current advice: The NICE guideline on [behaviour change: general approaches](#) recommends that individual-level interventions and programmes should motivate and support people to:

- understand the short, medium and longer-term consequences of their health-related behaviours, for themselves and others
- feel positive about the benefits of health-enhancing behaviours and changing their behaviour
- plan their changes in terms of easy steps over time
- recognise how their social contexts and relationships may affect their behaviour, and identify and plan for situations that might undermine the changes they are trying to make

- plan explicit 'if–then' coping strategies to prevent relapse
- make a personal commitment to adopt health-enhancing behaviours by setting (and recording) goals to undertake clearly defined behaviours, in particular contexts, over a specified time
- share their behaviour change goals with others.

Neither NICE's guidance on [behaviour change: general approaches](#) nor its guidance on [behaviour change: individual approaches](#) makes recommendations on financial incentives for behaviour change.

The NICE pathway on [behaviour change](#) brings together all related NICE guidance and associated products on the area in a set of interactive topic-based diagrams.

New evidence: A meta-analysis by [Mantzari et al. \(2015\)](#) investigated the long-term effectiveness of personal financial incentives for changing habitual health-related behaviours in adults.

The authors sought randomised controlled trials in which financial incentives were used to achieve target levels of behaviour change for smoking cessation, diet, alcohol consumption and physical activity. Studies had to compare an incentive with one of the following control approaches: no treatment or incentive; equal treatment but no incentive; or incentives differing in attainment certainty or amount. The minimum duration of intervention and follow-up required was 6 months.

A total of 34 studies (n=10,585) were included in the analysis, 31 of which were conducted in the USA. Smoking cessation was the behaviour of interest in 19 studies; 10 looked at various indicators of a healthy and active lifestyle (for example, body weight or blood cholesterol); 2 focused on physical activity; and 3 targeted more than one behaviour.

Personal financial incentives were more effective at changing people's behaviour than control approaches. The effect was strongest when incentives were used for 6 months (odds ratio [OR]=1.70, 95% confidence interval [CI] 1.42 to 2.02; 33 studies) and became weaker over 12 months (OR=1.59, 95% CI 1.21 to 2.08; 28 studies) and 18 months (OR=1.53, 95% CI 1.05 to 2.23; 13 studies). The effects of financial incentives were maintained up to 3 months after incentive removal (OR=2.11, 95% CI 1.21 to 3.67; 11 studies), but were not significant after 3 months.

Financial incentives appeared to be effective at helping people to stop smoking over 18 months (OR=2.69, 95% CI 1.39 to 5.23; 6 studies) and at improving indicators of a healthy lifestyle for up to 12 months (OR=1.39, 95% CI 1.03 to 1.88; 11 studies). The effect of incentives on smoking cessation was maintained for up to 3 months after the incentive was stopped (OR=2.57, 95% CI 1.20 to 5.54; 7 studies). Financial incentives did not seem to increase physical activity at any of the time points studied (2 studies).

The authors warn that the weakening in the effect of incentives over time may be because the number of studies was lower with each time point, so the decrease may instead reflect reducing statistical power. In addition, the summary effect sizes were driven by studies on smoking cessation. No eligible studies were found on alcohol consumption.

Commentary by Clare Relton, Senior Research Fellow, School of Health and Related Research, University of Sheffield:

“There is growing interest in the potential of financial incentives to help people achieve changes in their habitual behaviours – behaviours that can have both short-term and long-term effects on health and disease. This new and comprehensive systematic review brings together and analyses in depth the findings from 34 studies testing the effectiveness of personal financial incentives relating to 3 habitual health-related behaviours: smoking cessation, diet and physical activity. The authors have identified a new finding that the effect of financial incentives on behavioural targets waned 3 months after the incentive stopped.

“Though rigorous, this review is limited by the nature of the studies identified, with the majority of studies focusing on smoking cessation and conducted in the USA. Several important areas remain

largely unstudied, including the role of financial incentives in alcohol reduction and the potential of financial incentives for parents to help them improve their child's nutritional and physical environment – for example, providing healthy diets or breast milk.

“Any change in future practice or policy will of course need to work within the complex financial environment in which we negotiate our lives. This environment is full of both negative and positive financial incentives: pocket money, grants, wages, salaries, bonuses, fines, taxes, late payment penalties, interest rates, subsidies, ‘buy one get one free’ and so on. Each (dis)incentive affects the overall behaviours and health of our society.

“A considerable amount of research still needs to be conducted before we can fully assess the role of personal financial incentives in reducing disease and promoting health and make recommendations to change existing policy and practice in the UK.”

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