Authors' objectives
To determine whether lifestyle advice provided by general practitioners (GPs) is effective in changing patient behaviour in four areas: smoking, alcohol consumption, diet and exercise.

Searching
The following sources were searched: MEDLINE, PsycLIT, Sociofile, CINAHL, EMBASE and a pharmaceutical database, and bibliographies of retrieved articles; the search strategy is provided. Only English language reports were included.

Study selection
Study designs of evaluations included in the review
Randomised controlled trials (RCTs) of more than 6 months' duration for the smoking interventions, and with any length of follow-up for the other interventions, were included.

Specific interventions included in the review
GP-based lifestyle interventions, in the form of brief or intensive advice.

Participants included in the review
GP attendees with no apparent age restrictions were included.

Outcomes assessed in the review
The outcome measures varied according between trials and included changes in alcohol consumption levels, gamma-glutamyl transpeptidase (GGT) levels and alcohol-related morbidity for the alcohol trials; changes in fat and fibre intake, lipid and blood-pressure levels, and body weight for the dietary advice trials; changes in the duration and frequency of exercise, blood-pressure lipid levels and body weight for the exercise trials; and abstinence from smoking in the smoking trials.

How were decisions on the relevance of primary studies made?
The authors do not state how the papers were selected for the review, or how many of the authors performed the selection.

Assessment of study quality
Validity was assessed in a standardised fashion using a checklist. The authors do not state how the papers were assessed for validity, or how many of the authors performed the validity assessment.

Data extraction
The data were extracted by one author and checked by two authors.

Methods of synthesis
How were the studies combined?
The studies were combined by a meta-analysis where feasible, and by narrative review.

How were differences between studies investigated?
Differences between the studies were investigated both statistically and narratively.
Results of the review
Thirty-seven trials were included: 23 assessed smoking interventions, 6 assessed alcohol-related interventions, 10 assessed dietary interventions and 6 assessed exercise-related interventions; 23 were suitable for meta-analysis (total n=16,385).

Effectiveness of smoking cessation advice: provision of either brief or intensive advice significantly increases the odds of stopping smoking compared to no advice, odds ratio (OR) 1.32 (95% confidence interval, CI: 1.18, 1.48), with the odds being higher for intensive advice rather than brief advice (1.46 versus 1.27). The numbers-needed-to-treat are therefore, 35 for advice, 50 for brief advice, and 25 for intensive advice. However, in studies directly comparing brief with intensive advice, there is no significant difference between brief and intensive advice (OR=1.07, 95% CI: 0.88, 1.29).

Alcohol consumption: half of the trials found that consumption was significantly reduced when advice was provided, but this was not felt to provide conclusive evidence for or against the effectiveness of this intervention.

Dietary behaviour: the results of the trials were mixed, making it difficult to draw conclusions.

Exercise: again, the results of the primary studies made it difficult to determine the effectiveness of exercise, although a range of parameters relevant to cardiovascular disease risk (e.g. lipid levels, blood-pressure or weight reduction) were affected by provision of advice relating to exercise.

Authors' conclusions
GP-based health programmes have a modest and variable effect on health outcomes. These interventions show promise in effecting small changes in behaviour.

CRD commentary
A good quality systematic review. Inclusion of non-English literature may have identified more studies of the efficacy of advice, although these may not have been relevant to a general practice setting.

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Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.