

Table of extracted systematic review evidence statements

| Source | Evidence statements | Quality reported (yes or no/unclear) | Method of quality assessment |
|---|---|--------------------------------------|--|
| Cochrane | | | |
| Bala <i>et al.</i> 2008 ¹²¹ | There is evidence that comprehensive tobacco control programmes that include mass media campaigns can be effective in changing smoking behaviour in adults | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported [Cochrane Effective Practice and Organisation of Care Group (EPOC 2006) ⁴²¹] |
| Brunner <i>et al.</i> 2007 ²³² | Dietary advice appears to be effective in bringing about modest beneficial changes in diet (longer-term effects are not known) | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (descriptive) |
| Cahill <i>et al.</i> 2008 ¹⁶⁷ | Varenicline increased the chances of successful long-term smoking cessation | Recommendations: no Evidence: yes | Included only RCTs Recommendations: no Evidence: criteria reported (<i>Cochrane handbook for systematic reviews on interventions</i> ⁴²²) |
| Cahill <i>et al.</i> 2008 ¹²³ | Workplace interventions including individual counselling, group counselling and pharmacological treatment are effective | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (descriptive) |
| Dobbins <i>et al.</i> 2009 ¹⁸⁰ | There is good evidence that school-based physical activity interventions have a positive impact on four of the nine outcome measures. Specifically, positive effects were observed for duration of physical activity, television viewing and VO_{2max} | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (a previously developed and tested quality assessment tool ⁴²³) |
| Foster <i>et al.</i> 2005 ²⁰⁴ | Results are indicative that professional advice and guidance with continued support can encourage people to be more physically active in the short to mid-term. Conclusions about the effectiveness of individual aspects of interventions must be interpreted with caution as studies were heterogeneous | Recommendations: no Evidence: yes | Included RCTs only Recommendations: no Evidence: criteria reported (descriptive) |
| Hughes <i>et al.</i> 2007 ¹⁶³ | The antidepressants bupropion and nortriptyline aid long-term smoking cessation (evidence suggests that they are of similar efficacy to nicotine replacement) | Recommendations: no Evidence: yes | Included RCTs only Recommendations: no Evidence: criteria reported (descriptive – reported to be consistent with Cochrane methods) |
| Lancaster and Stead 2005 ¹³⁰ | Individually delivered smoking cessation counselling can assist smokers to quit. Did not detect a greater effect with intensive counselling compared with brief counselling | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (descriptive) |
| Lancaster and Stead 2005 ¹⁴⁰ | Standard self-help materials may increase quit rates compared with no intervention, but the effect is likely to be small. Absolute effect size that tailored materials are more effective than untailored materials was small | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (descriptive) |
| Rice and Stead 2008 ¹⁵⁰ | Reasonable evidence of potential benefits of smoking cessation advice and/or counselling provided by nurses to patients; the effect was weaker when nurse providers' main role was not health promotion or smoking cessation | Recommendations: no Evidence: yes | Included RCTs only Recommendations: no Evidence: criteria reported (Cochrane methods) |
| Stead and Lancaster 2005 ¹³³ | Group therapy is effective for helping people stop smoking. There is insufficient evidence to support the use of any specific psychological components and insufficient evidence whether or not group counselling is more effective than intensive counselling | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (descriptive) |

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| Stead <i>et al.</i> 2006 ¹³⁶ | Proactive telephone counselling helps smokers interested in quitting to quit. Evidence of dose-response: one or two calls may be insufficient; three or more calls increase likelihood of quitting. This is compared with minimal intervention, i.e. standard self-help materials, brief advice or pharmacotherapy alone | Recommendations: no Evidence: yes | Included RCTs or quasi-RCTs Recommendations: no Evidence: criteria reported (descriptive) |
| Stead <i>et al.</i> 2008 ¹⁵⁴ | All of the commercially available forms of NRT (gum, transdermal patch, nasal spray, inhaler and sublingual tablets/lozenges) can help people who make a quit attempt to increase their chances of successfully stopping smoking. NRTs increase the rate of quitting by 50–70% regardless of setting. The effectiveness of NRT appears to be largely independent of the intensity of the additional support provided | Recommendations: no Evidence: yes | Included RCTs only Recommendations: no Evidence: criteria reported (descriptive) |
| Stead <i>et al.</i> 2008 ¹⁴⁷ | Physician-provided brief advice has a small effect on smoking cessation: it can increase quitting by 1–3% over the assumed unassisted quit rate of 2–3%. There is a small additional benefit from more intensive intervention compared with brief intervention | Recommendations: no Evidence: yes | Included only RCTs Recommendations: no Evidence: criteria reported (<i>Cochrane Handbook</i> ⁴²²) |
| Whittaker <i>et al.</i> 2007 ¹⁶⁹ | Mobile telephone (any intervention via mobile telephone delivery) interventions have been shown to have short-term effectiveness only; no long-term outcomes. Meta-analysis of text message programme trials demonstrated a significant increase in short-term self-reported quitting (RR 2.18, 95% CI 1.80 to 2.65). When data from the internet and mobile telephone programmes were pooled it significantly increased both short- and long-term self-reported quitting (RR 2.03, 95% CI 1.40 to 2.94) | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (descriptive) |
| Database of Abstracts of Reviews of Effects | | | |
| Adams and White 2003 ¹⁹⁶ | Transtheoretical model-based activity promotion programmes are effective in promoting adoption of physical activity in the short term; long-term evidence is limited but likely not promising | Recommendations: no Evidence: no | Recommendations: no Evidence: no explicit method reported |
| Ammerman <i>et al.</i> 2001 ²²⁹ | Components such as social support, group delivery and family are associated with increasing fruit and vegetable consumption (greater increases in fruit than vegetable). Average increase in fruit and vegetable intake reported was 0.6 servings per day, along with consistent decreases in intake of total fat and saturated fat. The mean change in total fat intake estimated as a 7.3% reduction in the percentage of calories from fat. Interventions appeared to be more successful for those at risk or diagnosed with disease than for healthy populations. Difficult to draw conclusions because of heterogeneity; unclear long-term sustainability | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (developed own quality rating form) |
| Ammerman <i>et al.</i> 2002 ²³⁰ | Counselling patients can improve dietary behaviours, including reduction in dietary total and saturated fat and increases in fruit and vegetable intake. More intensive counselling and counselling directed to higher-risk patients have generally produced larger changes than less intensive interventions delivered to low-risk populations. Common feature: goal setting and self-monitoring | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (descriptive) |

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| Ashenden <i>et al.</i> 1997 ¹³⁸ | For smoking cessation, meta-analysis showed that providing smoking cessation advice, brief or intensive, in primary care increased the odds of stopping smoking (OR 1.32, 95% CI 1.18 to 1.48); intensive-only advice improves this by a small amount (OR 1.46 compared with 1.27) – meta-analysis studies showed no significant difference between brief and intensive advice (OR 1.07, 95% CI 0.88 to 1.29). General practice-based lifestyle intervention may be promising but no evidence so far of substantial changes No definite conclusions for diet and exercise | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (simplified version of Chalmers <i>et al.</i> ⁴²⁴) |
| Blue and Black 2005 ²¹¹ | There is evidence that physical activity and dietary interventions which include educational components, including written materials; involving group sessions; and utilising behaviour change theory are successful in improving physical activity and dietary outcomes | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (descriptive according to methods of Sidani and Braden ⁴²⁵) |
| Bravata <i>et al.</i> 2007 ²⁰⁸ | Pedometer use increases physical activity. In RCTs pedometer users significantly increased their physical activity by 2491 steps per day compared with control participants (95% CI 1098 to 3885 steps per day, $p=0.001$). Among observational studies, pedometer users significantly increased their physical activity by 2183 steps per day over baseline (95% CI 1571 to 2796 steps per day, $p<0.0001$). Overall, pedometer users increased their physical activity by 26.9% over baseline. An important predictor of increased physical activity was having a step goal such as 10,000 steps per day ($p=0.001$). When data from all studies were combined, pedometer users significantly decreased their BMI by 0.38 (95% CI 0.05 to 0.72, $p=0.03$). This decrease was associated with older age ($p=0.001$) and having a step goal ($p=0.04$) | Recommendations: no Evidence: no | Recommendations: no Evidence: some criteria reported (descriptive) |
| Breckon <i>et al.</i> 2008 ¹⁸⁸ | Counselling can result in behavioural change and increased physical activity | Recommendations: no Evidence: no | Recommendations: no Evidence: no explicit method reported although criteria were mentioned |
| Brothwell 2001 ¹⁵¹ | There is good evidence to recommend oral health professionals provide cessation counselling. Separately, there is good evidence to recommend the use of smoking cessation adjuncts, including NRT patches and gum and bupropion | Recommendations: yes Evidence: yes | Recommendations: there is good evidence to recommend that oral health professionals provide cessation counselling for all patients who use tobacco [level of recommendation A, level of evidence I (meta-analysis and systematic reviews) and III (case series)]; there is good evidence to recommend the use of smoking cessation adjuncts (nicotine patches, gum and bupropion) [level of recommendation A, level of evidence I (meta-analysis and systematic reviews)] Evidence: criteria reported (Canadian Task Force on the Periodic Health Examination ⁴²⁶) |
| Brunner <i>et al.</i> 1997 ²³⁴ | Dietary advice can lead to dietary change and modest risk reduction (changes in blood pressure and serum cholesterol) among healthy adults. Longest study was 18 months | Recommendations: no Evidence: no | Randomised (or systematically allocated) studies only Recommendations: no Evidence: no explicit measure of quality of evidence reported |

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| Brunton <i>et al.</i> 2003 ¹⁷⁹ | For physical activity, the following have been demonstrated to be effective in one or more studies: education and provision of monitoring equipment for television or video game use; engaging parents in supporting or encouraging their children's physical activity and providing opportunities for family participation; and multicomponent, multisite interventions using a combination of education in the classroom, improvements in school PE and home-based activities. Unclear if consistent association or which are the essential components | Recommendations: no Evidence: no | Recommendations: no Evidence: criteria reported (methods used reported in previous EPPI-Centre health promotion reviews; only five evaluations judged to be methodologically sound – recommendations are based on these five evaluations) |
| Ciliska <i>et al.</i> 2000 ²³³ | Of the 18 studies that were rated strong or moderate in quality, the most effective interventions were clear messages about increasing fruit and vegetable consumption; longer, more intensive interventions rather than one or two contacts; involved family members; had a greater impact on those with lower baseline values for knowledge and intake | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (descriptive) |
| Clemmens and Hayman 2004 ¹⁹⁸ | School-based, multicomponent interventions designed to decrease sedentary behaviour were also effective in increasing physical activity | Recommendations: no Evidence: no | RCTs and quasi-experimental designs only Recommendations: no Evidence: no explicit method reported |
| Contento <i>et al.</i> 1995 ²¹⁸ | Multifaceted, sustained, ongoing nutrition education, goal oriented with supportive educational strategies. Successful elements include motivating communications and group educational strategies, strategies for behavioural change, active involvement of both the individual and the community and building health-enhancing environments | Recommendations: no Evidence: unclear | Recommendations: no Evidence: some criteria reported (descriptive) |
| Coruh <i>et al.</i> 2005 ²²⁷ | Religion/religious setting, faith-based partnerships, collaboration with churches may improve fruit and vegetable intake – although all of the studies this was based on were in African American populations | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (investigators independently reviewed abstracts and used a modified Delphi to reach consensus; RCTs evaluated using CONSORT guidelines; other studies used guidelines published in the <i>Canadian Medical Journal</i> ^{427, 428}) |
| DeMattia <i>et al.</i> 2007 ²⁰⁹ | Decreasing sedentary behaviours, as measured by self-reported television/video use and improved weight measures | Recommendations: no Evidence: no | Only controlled intervention studies included Recommendations: no Evidence: criteria reported (validity assessed with items from the Jadad scale ⁴²⁹) |
| Dishman and Buckworth 1996 ¹⁹⁹ | Behaviour modification for healthy people – larger effect observed when exercise is group based, unsupervised or when the emphasis is on leisure activities and is low intensity | Recommendations: no Evidence: no | Strict inclusion criteria for meta-analysis Recommendations: no Evidence: no explicit method reported |
| Dobbins <i>et al.</i> 2001 ¹⁸¹ | Limited but good evidence that school-based physical interventions are effective in increasing physical activity rates and duration in children and adolescents | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (developed own) |
| Eakin <i>et al.</i> 2000 ¹⁸⁴ | Primary care-based counselling for physical activity was found to be moderately effective in the short term, although heterogeneous studies. Tailoring to participant characteristics and provision of written materials have larger effects | Recommendations: no Evidence: yes | RCTs or quasi-experimental studies with comparison group Recommendations: no Evidence: criteria reported (based on the RE-AIM model ⁴³⁰) |

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| Eakin <i>et al.</i> 2007 ¹⁸⁶ | Telephone interventions are effective for physical activity and nutrition; positive factors include length of intervention and the number of calls, with interventions lasting 6–12 months and those including ≥ 12 calls producing the most favourable outcomes | Recommendations: no Evidence: yes | RCTs prioritised for inclusion Recommendations: no Evidence: Cochrane guidelines ⁴³¹ |
| Eisenberg <i>et al.</i> 2008 ¹⁵² | Pharmacotherapy (varenicline, bupropion and five other NRTs) was more efficacious than placebo for smoking abstinence at 6 and 12 months | Recommendations: no Evidence: no | Only included double-blind, placebo-controlled RCTs with biochemically validated outcomes Recommendations: no Evidence: no explicit method reported |
| Engbers <i>et al.</i> 2005 ²²⁵ | Strong evidence of effect for worksite programmes on dietary intake; inconclusive for physical activity | Recommendations: no Evidence: yes | Only RCTs/controlled trials included Recommendations: no Evidence: criteria reported (checklist by Cochrane Back Review Group ⁴³²) |
| Eriksen and Gottlieb 1998 ¹²⁴ | Smoking cessation worksite programmes found to be more effective than minimal treatment programmes. Tobacco worksite policies also reduced cigarette consumption at work | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (descriptive) |
| Etter and Stapleton 2006 ¹⁵⁵ | NRT is effective for smoking cessation; addition of NRT to brief advice or behavioural support has OR of 2, representing a 70–90% increase in cessation rate without NRT | Recommendations: no Evidence: no | RCTs only included Recommendations: no Evidence: no explicit method reported |
| Faith <i>et al.</i> 2007 ²¹⁷ | Strong evidence that subsidisation influences food purchases (but not necessarily food consumption or body weight). Ease of food access may influence food purchases, and possibly food intake and body weight. Policies at organisational level (e.g. schools and universities) | Recommendations: yes Evidence: yes | Recommendations: yes Evidence: criteria reported (NHLBI 2000 criteria ⁴³³) |
| Fichtenburg and Glantz 2002 ¹²⁵ | Smoke-free workplaces protect non-smokers and encourage smokers to quit or reduce consumption | Recommendations: no Evidence: no | Recommendations: no Evidence: no explicit method reported |
| Fiore <i>et al.</i> 1994 ¹⁶⁰ | NRT patch is an effective aid to quitting smoking across different patch-use strategies | Recommendations: no Evidence: no | Included only double-blind, placebo-controlled nicotine patch studies with random assignment of subjects and biochemical validation of abstinence Recommendations: no Evidence: no explicit method reported |
| Foster and Hillsdon 2004 ¹⁷⁵ | Changing environment or creating 'point of choice' educational materials show small increases for physical activity (before-and-after studies), e.g. stimulus for stair climbing shows consistent, small and short-term effects | Recommendations: no Evidence: no | Recommendations: no Evidence: no explicit method reported |
| Friend and Levy 2002 ¹¹⁹ | Mass media campaigns for smoking cessation targeting the general population (state level) along with comprehensive tobacco control programmes are associated with reduced smoking rates. More mixed results observed in youth-targeted interventions | Recommendations: no Evidence: no | Recommendations: no Evidence: no explicit method reported |
| Gorin and Heck 2004 ¹⁴⁵ | Provider for increased smoking cessation: physicians > multiprovider > dentists and nurses (in order of effectiveness) | Recommendations: no Evidence: no | Only included RCTs or quasi-experimental studies Recommendations: no Evidence: no explicit method reported |
| Gourlay 1994 ¹⁶¹ | Transdermal nicotine therapy is an effective smoking cessation therapy for motivated, nicotine-dependent smokers | Recommendations: no Evidence: no | Only included randomised double-blind trials Recommendations: no Evidence: no explicit method reported |

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| Hillsdon and Thorogood 1996 ¹⁹⁴ | Home-based moderate-intensity walking with regular follow-up increased physical activity. Home-based walking more successful than attendance-based structured exercise sessions | Recommendations: no Evidence: no | Recommendations: no Evidence: no explicit method reported, although EPPI-Centre review guidelines ⁴³⁴ used |
| Hillsdon <i>et al.</i> 1995 ¹⁹³ | Home-based physical activity intervention targeting sedentary subjects. Techniques associated with high levels of participation include unsupervised, informal or frequent professional contact, walking and moderate intensity | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (descriptive) |
| Holmes <i>et al.</i> 2004 ¹⁶⁴ | There is a growing body of evidence supporting the effectiveness of bupropion slow release as an aid to smoking cessation; 6-month point prevalence smoking cessation rates ranged from 25% to 49% | Recommendations: no Evidence: no | Recommendations: no Evidence: no explicit method reported |
| Holtzman <i>et al.</i> 2004 ²¹⁵ | Behavioural interventions for physical activity provided evidence for short-term effect only | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (<i>Guide to community preventive services</i> by Briss <i>et al.</i> ⁴³⁵ and scale developed by Chalmers <i>et al.</i> ⁴³⁶) |
| Hopkins <i>et al.</i> 2001 ¹¹⁸ | Setting/policy: smoking bans in the workplace reduce exposure Environment: increasing tobacco prices; mass media to reduce tobacco use; reducing cost of cessation therapies Providers: multicomponent health-care systems with provider reminders and education with or without self-help materials Resources: telephone cessation services combined with other components such as self-help materials as a minimum | Recommendations: yes Evidence: yes | Recommendations and evidence: community guide method (Briss <i>et al.</i> ⁴³⁵) |
| Howerton <i>et al.</i> 2007 ²¹⁹ | School-based nutrition interventions produced a moderate increase in fruit and vegetable intake among children | Recommendations: no Evidence: no | Recommendations: no Evidence: no explicit method reported |
| Hughes <i>et al.</i> 2003 ¹⁵⁷ | Over-the-counter NRT is pharmacologically efficacious and produces modest quit rates similar to those seen in real-world prescription practice | Recommendations: no Evidence: no | Recommendations: no Evidence: no explicit method reported |
| Jago and Baranowski 2004 ¹⁷⁸ | Physical activity can be increased during school break periods; can be increased by 17–60% through existing youth organisations, summer day camps and active transportation | Recommendations: no Evidence: no | Recommendations: no Evidence: no explicit method reported |
| Kamath <i>et al.</i> 2008 ²¹² | Paediatric obesity prevention programmes (physical activity and nutrition) caused small changes in target behaviours such as increasing physical activity, decreasing sedentary activity and decreasing unhealthy dietary behaviours. Trials of duration 6+ months and trials with post-intervention outcomes showed slightly larger effects | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (descriptive) |
| Kerr <i>et al.</i> 2007 ¹⁶⁸ | Varenicline shown to increase cessation rates compared with placebo (and possibly bupropion slow release). Limited safety concerns | Recommendations: no Evidence: no | Only included RCTs Recommendations: no Evidence: no explicit method reported |

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| Knai <i>et al.</i> 2006 ²²⁰ | The evidence is strongest in favour of multicomponent interventions to increase fruit and vegetable consumption in children | Recommendations: no Evidence: unclear | Recommendations: no Evidence: criteria reported [a quality assessment tool (www.lshtm.ac.uk/ecohost/projects/interventions-fruit-veg.htm) was designed based on those of previous reviews by the Centre for Reviews and Dissemination of the University of York, UK ^{437,438}] |
| Kroeze <i>et al.</i> 2006 ²⁰⁷ | Overall, there seems to be potential for the application of computer tailoring for promoting healthy diets | Recommendations: no Evidence: no | Only included RCTs with pre-test and post-test Recommendations: no Evidence: criteria reported (study protocol based on the <i>Cochrane Handbook</i> ⁴³⁹) |
| Kuhn <i>et al.</i> 1999 ¹²² | Health coalitions for tobacco reduction; decrease in smoking prevalence of 7% (10% for women < 35 years of age) among low socioeconomic neighbourhoods in a large city compared with 1% in comparable neighbourhoods in another city | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (<i>Quality assessment tool for quantitative studies</i> developed for the EPHP ²⁴⁹) |
| Law and Tang 1995 ¹⁴⁸ | Physician advice, behavioural modification techniques (relaxation, rewards and punishment, avoiding 'trigger' situations, etc.) used in group or individual sessions led by a psychologist and NRT are all effective for smoking cessation. Among those who seek help in cessation, the effect is greater in those who are nicotine dependent | Recommendations: no Evidence: unclear | Only included RCTs Recommendations: no Evidence: no explicit method reported |
| Manske <i>et al.</i> 2004 ¹³² | Multicomponent behavioural interventions and pharmacological treatment (NRT, bupropion) are effective for group-based smoking cessation programmes. Successful components include behavioural skills, information about smoking, self-monitoring, social support and four or more sessions of 60–90 minutes. Results did not differ between worksite or community interventions | Recommendations: yes Evidence: yes | Recommendations: criteria reported (descriptive – effective, plausible and practical) Evidence: criteria reported (developed own – RCTs and quasi-experimental received high rating if met three or more quality criteria) |
| McArthur 1998 ²²¹ | School-based interventions are effective for improving healthy eating behaviours of students; overall effect size was 0.24 (95% CI 0.17 to 0.30) | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (seven items for 18 points, higher score = higher quality) |
| McClure 2002 ¹¹⁵ (general behaviour change) | Biomarkers (biological information) can produce behaviour change (motivation, intent, change) for diet, physical activity and tobacco use compared with control group (did not receive biomarker feedback). Using multiple biomarkers or one biomarker at more than one time point increased detection of behaviour change | Recommendations: no Evidence: no | Only included published randomised trials Recommendations: no explicit method reported Evidence: no explicit method reported |
| McRobbie <i>et al.</i> 2006 ¹⁷⁰ | Using NRT to assist in reducing cigarette consumption before quitting Use of NRTs prior to quitting can reduce number of cigarettes smoked before quitting Five published, randomised, placebo-controlled trials with sample size of 2138 excluded no-treatment arm. Pooled results at 6–12 months: 16% using NRT vs 9% using placebo sustained reduction of ≥ 50% of baseline levels at 1 year. No meta-analysis owing to heterogeneity. 8% using NRT stopped smoking 6–12 months post randomisation vs 4% using placebo (OR 2.50; 95% CI 1.69 to 3.68) | Recommendation: no Evidence: unclear | Recommendation: no Evidence: no criteria reported |

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| Mojica <i>et al.</i> 2004 ¹⁴⁶ | Physicians, counsellors/psychologists, nurses and self-help without NRT are effective for smoking cessation. Effectiveness with NRT is doubled for most providers | Recommendations: no Evidence: unclear | Recommendations: no Evidence: criteria reported (quality of the study based on study design: RCT > CCT; blinding not considered a factor) |
| Morgan 2005 ¹⁶² | Exercise referral schemes can increase physical activity in certain populations [not sedentary/slightly active, older adults, overweight (but not obese)] in the short term. Long-term sustainability unknown | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported [SIGN framework (rating) ⁴⁴⁰] |
| Mullen <i>et al.</i> 1997 ¹²⁹ | Behavioural techniques, especially self-monitoring, with multiple communication channels, e.g. media + personal, can increase behaviour change for smoking/nutrition groups | Recommendations: no Evidence: unclear | Recommendations: no Evidence: no explicit method reported |
| Müller-Riemenschneider <i>et al.</i> 2008 ¹⁸⁹ | Additional exercise prescription strategies, counselling and provision of materials and booster interventions by telephone or mail can facilitate long-term increases in physical activity behaviour. Unclear most effective and efficient delivery mode of booster messages. Information technologies used for booster interventions may be equally as effective as print materials | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (SIGN framework ⁴⁴⁰) |
| Myung <i>et al.</i> 2007 ¹⁶² | Nicotine patches effective for smoking abstinence at 1 year compared with placebo group: OR 1.79 (95% CI 1.55 to 2.08) | Recommendations: no Evidence: yes | Only RCT studies with 1 year of follow-up, abstinence biochemically validated, OR as outcome measure included Recommendations: no Evidence: criteria reported (Jadad scale ⁴²⁹) |
| Ogilvie <i>et al.</i> 2004 ¹⁹⁷ | Evidence that targeted behaviour change programmes to increase walking and cycling over using cars can produce behaviour change in motivated subgroups (short-term benefits). No good evidence on health effects of intervention at population level | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (descriptive) |
| Ogilvie <i>et al.</i> 2007 ²⁰² | Interventions that cater to people's needs, targeted at either the most sedentary or the most motivated at the individual level (brief advice, supported use of pedometers, telecommunications), can increase walking in the short term; increase an average of 30–60 minutes/week | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (validity score between 1 and 7) |
| Pan 2006 ¹³⁵ | Proactive telephone counselling as an additional component to minimal intervention is effective for smoking cessation for particular subgroups (younger, male, light smokers) | Recommendations: no Evidence: no | Recommendations: no Evidence: no explicit method reported |
| Petrella and Lattanzio 2002 ¹⁹⁰ | Positive associations found between counselling and adoption of physical activity, stage of change and change in physical activity level | Recommendations: no Evidence: no | Recommendations: no Evidence: no explicit method reported |
| Pomerleau <i>et al.</i> 2005 ²²⁸ | Positive effects on fruit and vegetable intake observed with face-to-face education or counselling, as well as with telephone contacts or computer-tailored information and community-based multicomponent interventions. Larger effects for those with pre-existing health disorders | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (based on tools used in previous reviews; studies of poor quality excluded) |
| Proper <i>et al.</i> 2003 ¹⁸⁵ (some general health behaviour but mostly physical activity) | Worksite physical activity programmes can increase physical activity. No evidence for physical fitness, general health | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (Cochrane Back Review Group ⁴³²) |

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| Resnicow and Robinson 1997 ¹¹⁴ | School setting interventions are effective | Recommendations: no Evidence: no | Recommendations: no Evidence: no (effect ratios reported instead) |
| Revere and Dunbar 2001 ¹¹⁶ (general health behaviour) | Computer-generated health behaviour interventions are effective when used as an adjunct to face-to-face patient care, e.g. tailored interventions had positive effects on health behaviour change compared with targeted, personalised and generic interventions. Computer-generated health behaviour interventions as extensions of face-to-face patient care in ambulatory settings are effective | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (created own system, 10 points maximum, minimum 5 for inclusion) |
| Rice 1999 ¹⁴⁹ | Nurses as intervention provider can increase smoking cessation. Modest effects at 6 months or longer; no evidence that intensiveness of intervention made any difference to effect | Recommendations: no Evidence: yes | Only RCTs included Recommendations: no Evidence: criteria reported (<i>Cochrane Handbook</i> ⁴⁴²) |
| Ritvo <i>et al.</i> 1997 ¹⁴⁴ | Family physician/practice setting can enhance smoking cessation; NRT can double effect of physician intervention alone | Recommendations: no Evidence: no | Recommendations: no Evidence: no explicit method reported |
| Roe <i>et al.</i> 1997 ²²² | Interventions in school, workplace, primary care and the community with diet only or diet and exercise showed sustained effect on diet-related outcomes, e.g. reduction of dietary fat as a percentage of total energy intake Behavioural theories and goals rather than information alone, personal contact with individuals or groups, degree of personalisation, feedback, multiple contacts and social support were features of effective healthy eating interventions | Recommendations: no Evidence: yes | In most settings, only included controlled experimental and quasi-experimental studies Recommendations: no Evidence: criteria reported (descriptive – more weight given to well-designed and well-conducted studies) |
| Salmon <i>et al.</i> 2007 ²¹⁰ | School setting can increase physical activity for children and adolescents by focusing on physical education, activity breaks and family strategies. Family settings demonstrated weak positive effects | Recommendations: no Evidence: unclear | Sample size of > 16; RCT, group randomised trial or quasi-experimental study design Recommendations: no Evidence: criteria reported (methodological limitations described) |
| Seymour <i>et al.</i> 2004 ²¹⁶ | Workplace and university point-of-purchase interventions can affect behaviour change (e.g. food choices). Grocery stores were the least effective setting. Interventions in 'limited access' sites (i.e. with fewest choices for food) had greatest effect | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (research design rated using published rating schemes; studies with serious methodological limitations excluded) |
| Shepherd <i>et al.</i> 2001 ²²⁴ | 'Whole school' approach can promote healthy eating; this includes availability of health foods and classroom activities with information on nutrition. These may be effective, particularly among young women | Recommendations: no Evidence: Evidence: criteria reported (EPPI-Centre Review Guidelines ⁴⁴³) | Recommendations: no Evidence: criteria reported (Jadad scale ⁴²⁹) |
| Shiffman and Ferguson 2008 ¹⁵⁶ | Nicotine patch use before quitting smoking compared with starting on quit day is effective for cessation. Patches double the odds of quitting at 6 weeks (pooled OR 1.96, 95% CI 1.31 to 2.93) and 6 months (pooled OR 2.17, 95% CI 1.46 to 3.22) | Recommendations: no Evidence: no | Recommendations: no Evidence: no explicit method reported |
| Shilts <i>et al.</i> 2004 ²¹³ | Goal setting shows some positive effects for promoting dietary and physical activity behaviour change in adults, whereas evidence of effect in adolescents and children was limited | Recommendations: no Evidence: yes | Experimental, quasi-experimental or pre-experimental studies were included Recommendations: no Evidence: criteria reported (grading – methodological quality rated with four-letter rating system designating research qualities) |

| Source | Evidence statements | Quality reported (yes or no/unclear) | Method of quality assessment |
|--|--|--|--|
| Smedslund <i>et al.</i> 2004 ¹²⁶ | Workplace settings for smoking cessation are effective in the short term; however, effects decrease over time and are not sustained beyond 12 months. The adjusted random effects OR was 2.03 (95% CI 1.42 to 2.90) at 6 months' follow-up, 1.56 (95% CI 1.17 to 2.07) at 12 months' follow-up and 1.33 (95% CI 0.95 to 1.87) at >12 months' follow-up | Recommendations: no Evidence: no | Studies analysed according to randomised and non-randomised. The non-randomised studies show a much stronger effect (OR 4.65) than the randomised ones (OR 1.74) Recommendations: no Evidence: no explicit method reported |
| Sorensen <i>et al.</i> 2006 ¹⁹² | Exercise on prescription can increase physical activity levels compared with control groups (the level of physical activity was significantly increased for patients in half of the studies reviewed). Limited effectiveness evidence on intensive vs less intensive interventions; unknown if sustainable for everyday use in general practice | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (studies rated high, medium or low quality; all studies included) |
| Thomas <i>et al.</i> 2003 ²²³ | Schools can promote healthy eating (hands-on learning, parent/teacher involvement) for children aged 4–10 years. Fruit consumption easier to increase than vegetable consumption; important that health benefits were not emphasised; interventions focused on fruits and vegetables only | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported [EPPI-Centre health promotion review criteria (four factors) ^{444–446}] |
| Thomas <i>et al.</i> 2004 ²¹⁴ | Schools can be effective in increasing physical activity of children by balancing aerobic activity and skill development. Actual differences and clinical significance unknown. Involving parents had mixed results. Teachers' skills need addressing | Recommendations: no Evidence: unclear | RCTs and cohort studies included Recommendations: no Evidence: criteria reported (methodological limitations assessed, only strong studies described) |
| Thorogood <i>et al.</i> 2007 ²²⁶ | Workplaces and churches can reduce fat intake and increase fruit and vegetable intake (small positive effects). Community-based interventions showed little effect. Short-term effects may not be sustained | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (own method for assessing methodological quality) |
| Vandelanotte <i>et al.</i> 2007 ²⁰⁶ | Website-delivered physical activity interventions can increase physical activity. Better outcomes with five or more contacts and short follow-up times. Effects were small and only short term | Recommendations: no Evidence: no | Recommendations: no Evidence: no explicit method reported |
| van den Berg <i>et al.</i> 2007 ²⁰⁵ | Internet-based physical activity interventions tailored to individuals may be effective compared with waiting list control. Self-monitoring and feedback used; longer-term effects unknown | Recommendations: no Evidence: yes | Only RCTs included Recommendations: no Evidence: criteria reported (rating – list based on Cochrane Back Review Group ⁴⁴⁷) |
| van der Bij <i>et al.</i> 2002 ²⁰³ | Home-based, group-based and educational physical activity interventions can increase physical activity, but effect was small and short term | Recommendations: no Evidence: unclear | Only RCTs included Recommendations: no Evidence: methodological rigour evaluated but not reported |
| van Sluijs <i>et al.</i> 2007 ¹⁷⁷ | School-based interventions with involvement of family or community and multicomponent interventions can increase physical activity in adolescents | Recommendations: no Evidence: unclear | Recommendations: no Evidence: criteria reported (only studies with high methodological quality included) |
| VanWormer and Boucher 2004 ²³⁵ | Motivational interviewing plus education moderately effective for diet behaviour change compared with education alone. Reduced fat and sodium intake and increased fruit and vegetable intake; longer-term maintenance unknown | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (simplified version of the American Diabetes Association evidence grading system ⁴⁴⁸) |
| VanWormer <i>et al.</i> 2006 ²³¹ | Telephone-based counselling can increase fruit and vegetable consumption and reduce dietary fat intake compared with usual care; effects particularly evident among women with (or at high risk for developing) cancer. Not enough evidence to recommend over other forms of dietary counselling; best used as adjunct to clinical care | Recommendations: no Evidence: yes | Only RCTs included Recommendations: no Evidence: criteria reported (American Diabetes Association evidence grading system ⁴⁴⁸) |

| Source | Evidence statements | Quality reported (yes or no/unclear) | Method of quality assessment |
|--|---|--------------------------------------|---|
| Wagena <i>et al.</i> 2005 ¹⁶⁵ | Nortriptyline is effective for smoking cessation compared with placebo. Higher prolonged abstinence rates after at least 6 months (RR 2.4, 95% CI 1.7 to 3.6; RD 0.11, 95% CI 0.07 to 0.15). Lower cost than bupropion | Recommendations: no Evidence: yes | Only RCTs included Recommendations: no Evidence: criteria reported (score between 7 and 11; items from the Delphi list ⁴⁴⁹ + Jadad criteria ⁴²⁹) |
| Wall <i>et al.</i> 2006 ²³⁷ | Four trials showed that monetary incentives on food purchases, food consumption or weight loss had a positive effect; goal was to reduce financial barriers or reward behaviour change (e.g. farmers' market coupons, payment for weight loss) | Recommendations: no Evidence: yes | Only RCTs included Recommendations: no Evidence: criteria reported |
| Wang <i>et al.</i> 2008 ¹⁴² | NRT-supported reduction in smoking can result in long-term (12-month) abstinence. The 12-month sustained abstinence success rate was approximately 5.3% with NRT vs 2.6% with placebo. | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (quality appraisal guidelines in Report No. 4 of the NHS Centre for Reviews and Dissemination ⁴⁵⁰) |
| Wantland <i>et al.</i> 2004 ¹¹⁷ (general behaviour) | One time web-based intervention can improve positive outcomes for knowledge and behaviour change compared with non-web-based interventions. Studies demonstrated heterogeneity | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (quality appraisal from Haynes <i>et al.</i> ⁴⁵¹) |
| White and Moody 2006 ¹⁴¹ | Auricular acupuncture may be effective for smoking cessation compared with control interventions (OR 2.24, 95% CI 1.61 to 3.10); effect may not depend on point location | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (reviewer developed points system) |
| Wilcox <i>et al.</i> 2001 ¹⁸³ | Health-care settings can improve outcomes for physical activity, dietary fat, BMI or weight, albeit these are modest changes. Effects larger for older adults (> 50 years) and for studies with shorter follow-up times (< 6 months) | Recommendations: no Evidence: no | Majority were RCTs Recommendations: no Evidence: no explicit method reported |
| Williams <i>et al.</i> 2007 ¹⁹⁵ | Exercise referral schemes can increase physical activity in sedentary people. A statistically significant increase was observed in the proportion of participants doing moderate exercise (combined RR 1.20, 95% CI 1.06 to 1.35) | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (descriptive and scored out of a maximum of 34 on quality scale) |
| Williams <i>et al.</i> 2008 ¹⁸⁷ | Telephone counselling (brief and intensive) can increase physical activity, especially when tailored and theory based; individual studies support walking prescriptions to increase walking; mass media campaigns can increase knowledge and awareness but unclear if they can initiate individual behaviour change | Recommendations: no Evidence: no | Only RCTs Recommendations: no Evidence: no explicit method reported |
| Woolacott <i>et al.</i> 2002 ¹⁵⁸ | NRT and bupropion are effective for smoking cessation | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported |
| Wu <i>et al.</i> 2006 ¹⁵⁹ | NRT, bupropion and varenicline can assist smoking cessation; hierarchy varenicline > bupropion > NRTs (gum, patch) > placebo | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported [(descriptive) quality of studies described] |
| National Institute for Health Research Health Technology Assessment | | | |
| Cohen <i>et al.</i> 1998 ¹²⁸ | Brief structured counselling in primary care settings and dental services followed by clear recommendations to stop smoking and advice on NRTs is cost-effective when performed routinely | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (descriptive) |
| Elford <i>et al.</i> 2001 ¹¹³ (general health behaviours) | Brief counselling in primary care setting | Recommendations: no Evidence: no | Recommendations: no Evidence: no explicit method reported |
| Gorgojo Jimenez <i>et al.</i> 2003 ¹³⁴ | Bupropion and NRT plus medical advice and support are effective and cost-effective for smoking cessation. Medical practitioners to advise and support cessation | Recommendations: no Evidence: no | Recommendations: no Evidence: criteria reported (descriptive – high-quality interventions included) |

| Source | Evidence statements | Quality reported (yes or no/unclear) | Method of quality assessment |
|---|--|---------------------------------------|---|
| Ranney <i>et al.</i> 2006 ¹⁵³ | Self-help alone is not effective in smoking cessation; however, counselling and pharmacotherapy, either alone or combined with each other, are effective in smoking cessation | Recommendations: yes Evidence: yes | Recommendations: criteria reported [strength of evidence using categories (strong, sufficient, insufficient) based on criteria from the Task Force on Community Preventive Services ⁴⁵²] Evidence: criteria reported (US Preventive Services Task Force ⁴³⁵ and the NHS Centre for Reviews and Dissemination ⁴⁵⁰) |
| Swedish Council on Technology Assessment in Health Care 2007 ²⁰¹ | Advice and counselling by health-care professionals can increase physical activity by 12–50% for at least 6 months after the counselling session; more frequent, intensive counselling can additionally increase physical activity; counselling plus prescribed physical activity, diaries, pedometers and information brochures also increase physical activity; lifestyle-focused interventions reinforce the increase in activity; multicomponent school interventions, theory-based behavioural interventions and structured exercise programmes increase physical activity compared with usual care | Recommendations: yes Evidence: yes | Recommendations: criteria reported (evidence grades 1, 2 and 3) Evidence: criteria reported (weak, medium, strong) |
| Van den Bruel <i>et al.</i> 2004 ¹³¹ | For smoking, recommended brief interventions – doctor or nurse (for every 50 smokers advised, one will stop smoking); individual counselling (for every 25 people, one will stop smoking); group counselling; telephone counselling (for every 40 people, one will stop smoking); NRT and bupropion (effective and cost-effective). Group counselling > self-help; group counselling < individual counselling; group counselling + NRT = group counselling alone Self-help found not to be effective Not enough evidence for aversion therapy, exercise therapy, hypnotherapy or acupuncture | Recommendations: no Evidence: yes | Recommendations: no Evidence: criteria reported (Cochrane based) |

BMI, body mass index; CCT, clinical controlled trial; CI, confidence interval; CONSORT, Consolidated Standards of Reporting Trials; NRT, nicotine replacement therapy; OR, odds ratio; PE, physical education; RCT, randomised controlled trial; RD, risk difference; RR, risk ratio; SIGN, Scottish Intercollegiate Guidelines Network.