Physical activity counseling in primary care: who has and who should be counseling?

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CRD summary
This review could not draw definitive conclusions about the effectiveness of different providers of physical activity counseling interventions in primary care. However, the authors recommended an interdisciplinary model involving both physicians and allied health professionals. There were several limitations of the included studies which limited the data synthesis, which the authors appear to have considered, so their cautious conclusions appear reasonable.

Authors' objectives
To assess the effectiveness of different providers of physical activity counseling interventions in primary care.

Searching
PsycINFO and MEDLINE were searched from 2000; the search terms were reported. In addition, studies were identified from previous reviews, and references of original articles were examined. The searches were restricted to articles written in the English language.

Study selection
Randomised and quasi-randomised controlled trials (RCTs) that assessed physical activity-only (single-risk factor) interventions in adults recruited from a primary care setting, and reported physical activity as the primary outcome, were eligible for inclusion. Studies of multiple risk-factor interventions were excluded from the review.

The included studies used stable or healthy inactive adults, with or without diabetes and with or without risk for cardiovascular disease. A variety of interventions, methods and approaches were used, and some studies included control groups. The duration of the interventions ranged from two to 40 minutes and were delivered in a primary care setting by telephone, or in leisure centres or medical centres. Intervention providers included: physicians alone or with a health educator; nurse or research assistant; an exercise development officer, specialist or consultant; a health visitor; health promotion specialist; nurses; or a behaviour health specialist. The duration of follow-up ranged from one month to two years. The included studies reported short-term (less than 6 months) and/or long-term (more than six months) changes in physical activity, energy expenditure and volume of oxygen levels.

The authors did not state how many reviewers performed the study selection.

Assessment of study quality
The validity of the studies was assessed using published criteria, including items on: study design; attrition, adherence and contamination; reliability and validity of measurement tools; clear definitions of intervention; and intention-to-treat analyses. The studies were rated as good, fair, or poor, with poor studies being excluded from the review.

Two reviewers independently assessed validity.

Data extraction
The authors did not state how many reviewers performed the data extraction.

Methods of synthesis
The included studies were presented as a narrative synthesis and in tabular format.

Results of the review
Fifteen RCTs and four quasi-experimental studies (10,214 participants comprising 3,438 physician only, 2,970 combined-provider, and 3,806 allied health professionals) were included in the review. Sample sizes ranged from 63 to 1,658 participants.

Four studies received a poor quality score and were excluded from the review. Two studies had been rated as poor in a previous review, but were rated as fair in this review, and seven studies received a rating of good or fair.
Physician (seven studies): Three (50%) of six studies reporting short-term outcomes and two (50%) of four studies reporting long-term outcomes showed improvements in physical activity. The interventions reporting successful long-term improvements included longer intervention times and multiple follow-up appointments with the physician, and had high compliance and retention rates.

Combined-provider (five studies): Positive changes in physical activity were reported in two (67%) of three short-term outcome studies and two (67%) of three long-term outcome studies. Behaviour change was more likely to be sustained when the interventions involved multiple components.

Allied health professional-only interventions (seven studies): Both studies reporting short-term outcomes and five (71%) of the seven studies reporting long-term outcomes showed positive changes in physical activity. Effective interventions included behavioural counselling, engendered social support from the participant's personal environment, were endorsed by physicians, or arranged follow-up sessions.

Authors' conclusions
In the absence of direct comparison studies across provider groups, definitive conclusions could not be drawn. However, an interdisciplinary model was recommended, whereby physicians encourage physical activity behaviour change and refer patients to allied health professionals for specialised treatment.

CRD commentary
The review question was clear and was supported by appropriate inclusion criteria for the participants, interventions, outcomes and study design. The electronic literature search was somewhat limited, using only two databases and two other sources. The searches were restricted to English language articles, which might have introduced language bias. Together with the fact that there was no apparent search for unpublished material, it was possible that relevant papers were missed. However, details of the methods used to select studies and extract the data were not provided, the potential for reviewer error and bias could not be ruled out.

Study quality was assessed according to published criteria. No formal test for statistical heterogeneity was reported, although the authors mentioned certain differences between the studies (such as differences in intervention components, different outcomes measures and varied samples), which was reflected by the limited data synthesis. There were a number of further limitations of the included studies, such as selection or provider bias, no direct comparisons across provider groups, and interventions carried out in settings other than primary care, as stated in the review question.

The authors appear to have considered the limitations of the review and their cautious conclusions appear reasonable.

Implications of the review for practice and research
Practice: The authors stated that physical activity counsellors with specialised knowledge of physical activity assessment and interventions, and health behaviour change theories, and trained in counselling strategies to assist patients to become physically active, were most appropriate and could address many of the barriers faced by physicians.

Research: The authors stated that further research should compare different intervention providers with parallel intervention components, participant pools and assessment measures. It would also be beneficial to examine the benefits of interdisciplinary models and the extent of collaboration needed between members of health care teams, as well as intervention intensity and the effect these have on behaviour change, and to report clearer details of the research process. Further research should also assess the cost-effectiveness of short- and long-term health behaviour change interventions, and evaluate the potential incremental financial gains that the addition of a physical activity counsellor would incur.

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