Prescription of physical activity: an undervalued intervention

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In *The Lancet*, Peter Kokkinos and colleagues[1] add to the large body of work on the benefits of physical activity or fitness for health, by showing an inverse association between fitness and all-cause mortality in 10 043 individuals with dyslipidaemia. Irrespective of whether patients were prescribed statins, the physically fittest participants had a 60–70% reduction in all-cause mortality rates during follow-up, compared with the least fit participants (HR for patients taking statins 0·32, 95% CI 0·23–0·45; HR for patients not taking statins 0·37, 0·31–0·44). Strikingly, patients not prescribed statins but who were highly fit still had a significantly lower risk of mortality than those taking statins, but who were unfit (HR 0·53, 95% CI 0·44–0·65).[1] Patients who were taking statins and were physically fit had the lowest mortality risk (0·30, 0·21–0·41).

The fitness associated with significantly lower all-cause mortality can be achieved through moderate-to-vigorous intensity physical activity, including walking, gardening, participation in gym classes and activities, and sport. Population-based data for fitness are not widely available, but data from the Cooper Clinic in the USA[2] indicate that the 20th percentile of fitness among healthy men aged 55–64 years corresponds to 8·9 metabolic equivalents (where 1 metabolic equivalent is the energy consumed by a person at rest). In Kokkinos and colleagues' study, of a population with a mean age of 58·8 years, any level of fitness above 5 metabolic equivalents (equivalent to, for example, light cycling) was associated with low mortality irrespective of statin treatment.

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Practically, the cost of becoming physically active is probably lower than that of buying drugs. Also, moderate intensity physical activity has very few side-effects. Unlike statins, physical activity should be part of everyday life. Also, the fact that physical fitness is inversely related to all-cause mortality even among dyslipidaemic patients not on statin treatment is important because not all patients with dyslipidaemia will be prescribed statins, and not all patients who are prescribed statins will take them.

These factors make the undervaluation of physical activity in clinical practice unacceptable. For example, a survey in Brazil showed that 1505 of 2120 adults (71%) had never been prescribed physical activity in a medical consultation.[3] If clear and equivalent health benefits can be achieved through being physically active or fit, prescription of physical activity should be placed on a par with drug prescription. We are not advocating against treatment with drugs of proven efficacy, but emphasising the importance of another type of treatment, which is complementary, cheap, and has few side-effects when used according to guidelines.[4] Prescription of physical activity alone will not ensure that patients will become active, just as prescription of drugs does not ensure that patients will take them. However, doctors continue to prescribe drugs, and data such as those from Kokkinos and colleagues' study should encourage doctors to also value prescription of physical activity as a routine part of clinical practice.

Even if prescription of physical activity becomes routine clinical practice, this factor alone will be insufficient to increase the activity of many people who fail to adhere to current physical activity guidelines,[5] incurring harms similar to those of smoking or obesity.[6] Concerted efforts are needed from patients, doctors, society, and governments to address the global health problem of physical inactivity.[7–10]

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Youth tobacco use: who has a say?

Tobacco use is a major cause of morbidity and mortality worldwide, and has wide-ranging socioeconomic consequences.[1,2] The Global Burden of Disease Study 2010 ranks tobacco smoking, including second-hand smoke, as the second leading risk factor for global disease burden, accounting for an estimated 6·3 million deaths and 6·3% of disability-adjusted life-years in 2010.[1] US data indicate that almost 90% of adult daily smokers smoked their first cigarette by age 18 years.[2] Hence, targeting young people seems to be a good idea. However, interventions that work in adults do not necessarily apply to children and adolescents. According to the 2012 US Surgeon General's report "coordinated, multicomponent interventions that combine mass media campaigns, price increases including those that result from tax increases, school-based policies and programmes, and statewide or community-wide changes in smokefree policies and norms are effective in reducing the initiation, prevalence, and intensity of smoking among youth and young adults".[2] The report also highlighted the insufficient evidence for health-care prevention strategies to reduce smoking initiation in young people.

On behalf of the US Preventive Services Task Force, Carrie Patnode and colleagues[3] recently presented a systematic review and meta-analysis on the efficacy and harms of primary care interventions to prevent tobacco use or improve tobacco cessation rates among children and adolescents. These interventions varied widely in terms of content, ranging from brief advice, print material, and tailored computer programming to phone calls or in-person counselling and motivational interviewing. Fair and good quality trials were included. Pooled analyses indicated a statistically significant preventive effect of behaviour-based interventions on smoking initiation, with a 19% relative risk reduction (risk ratio 0·81, 95% CI 0·70-0·93) in intervention groups compared with controls within 7–36 months of follow up. The absolute risk reduction was 2 percentage points, corresponding to a number needed to treat of 50. Qualitative exploration of studies did not reveal any clear pattern of associations between intervention or study characteristics and effect size. Pooled analysis showed no statistically significant effects of the interventions on tobacco cessation. However, potential effects could have been masked by factors such as the limited number of studies included, variability in interventions and measures across studies, and lack of stratified data.

The limitations of this study include the short follow-up time and the question of generalisability, since only three studies were undertaken outside the USA. Nonetheless, Patnode and colleagues' study indicates that primary care health workers might have a say in the prevention of cigarette smoking among children and adolescents.

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