

EDITORIALS



Exercise: not a miracle cure, just good medicine

Physical activity remains the best buy for public health

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There is nothing miraculous about exercise. What is extraordinary is how long it is taking mainstream medicine to accept the importance of physical activity. A recent report from the Academy of Medical Royal Colleges, *Exercise: the Miracle Cure and the Role of the Doctor in Promoting It*, reminds us of the benefits of physical activity,¹ but we already know that it is effective in primary prevention, secondary prevention, and in the treatment of many common diseases. The report builds on decades of epidemiological evidence, years of identifying the “potential” health gain if physicians successfully prescribed physical activity, and even support efforts to medicalise inactivity by labelling it “sedentary death syndrome.”²

The role of doctors in promoting exercise has slowly developed through recent global dissemination of concepts such as “Exercise is Medicine,” started by the American College of Sports Medicine and adopted particularly in Canada, Australia, and South America,³ and “Health Enhancing Physical Activity,” initiated by WHO Europe.⁴ Promoting physical activity is, however, a major challenge in the modern environment with our lifestyle designed to reduce or eliminate physical activity at every opportunity.

Exercise is one of the top modifiable risk factors for chronic disease.⁵ Indeed, exercise produces roughly similar benefits to drugs in the secondary prevention of coronary heart disease, rehabilitation after stroke, treatment of heart failure, and prevention of diabetes.⁶ In addition, exercise has recently been shown to reduce the risk of dementia and improve mental health.⁷ The required dose is modest and achievable, with evidence suggesting that moderate intensity physical activity at even a minimum of 150 minutes a week is effective (about 30 minutes of physical activity most days comprising, for example, three 10 minute walks). And, with so much current attention on obesity, there is interesting evidence that, although both fatness and lack of fitness are associated with cardiovascular risk factors, maintaining or improving fitness may attenuate some of the adverse effects of fat gain with age.⁸

Doctors' contribution

The role of doctors seems more aspirational than evidence based. Although the benefits of exercise are well documented, there is less evidence that interventions led by doctors are effective at the population level. We have developed comprehensive, evidence based guidance on appropriate prescribing of exercise.⁹ But a systematic review of interventions in primary care to promote exercise showed only modest, short lived benefit.¹⁰ Current guidelines from the National Institute for Health and Care Excellence,¹¹ are underpinned by a broader review (including non-randomised studies) suggesting that brief advice can be effective and cost effective in improving self reported physical activity outcomes over the shorter term, but that the effect wanes over time.^{12, 13} In addition, there was no dose-response with increasingly intensive interventions.

Although prescribing exercise in general practice might be important, another systematic review found that the effect of exercise referral schemes on physical activity and health outcomes was uncertain.¹⁴ The academy's report encourages doctors to “make every contact count,” which is well intentioned, but the exhortation is not referenced to a comprehensive evidence source but to a report from the NHS Future Forum.¹⁵ The challenge is that the existing evidence comes from research in selected and motivated doctors and patients.

This lack of generalisability is the biggest challenge, with few doctors delivering physical activity advice to their patients, even when confident in their knowledge.¹⁶ A study of representative samples of clinician practices in the United States found that the proportion of physicians recommending exercise to all patients fell from 14% in 1995 to 11% in 2007. Furthermore, exercise was mentioned to only a sixth of patients with diabetes or hypertension, despite these being conditions for which exercise is recommended.¹⁷ Similarly, in a study of cardiometabolic risk assessment and management in Canada only 17% of people with type 2 diabetes, and 11% without, were advised to increase their physical activity.¹⁸ Doctors can be trained to deliver opportunistic advice on behaviour change,

including exercise,¹⁹ but that doesn't necessarily change population levels of inactivity if efforts are sporadic, confined to motivated practitioners, or isolated from the societal factors that cue inactive choices.

Physical activity remains the best buy for public health. And, in support of the academy's initiative, medicine and individual doctors do have a role. Indeed, academic sports medicine bodies in Canada, Ireland, and the United Kingdom already include "exercise" in their titles. But let's stick to the evidence—otherwise, medicine risks finding itself taking on disproportionate responsibility for promoting health related physical activity when creating community behaviour change requires a multifaceted approach in which medicine can play only a limited part.

Success at the population level also requires changes to government perceptions, so that activity becomes a cross-sectoral issue, with cross-agency policies that promote physical activity. Unlike clinical platforms to change cholesterol concentration or blood pressure, increased physical activity will entail changes to the built environment, better public transport, urban infrastructure that creates walkable spaces and provides facilities for activity, and the implementation of policies that promote active workplaces and schools. But, most of all it requires a comprehensive change in culture and mindset. Without political endorsement and multifaceted strategies, the role of doctors will remain marginal. We can promote change, support change, and facilitate change, but we cannot make it happen alone.

Competing interests: We have read and understood BMJ policy on declaration of interests and declare DMcA has done consultancy work for IOC Research Centres for Prevention of Injury and Protection of Athlete Health and been paid to give lectures on sport and exercise medicine. He is a former employee of *The BMJ*.

Provenance and peer review: Commissioned; not externally peer reviewed.

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Cite this as: *BMJ* 2015;350:h1416

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