

Exercise prescription:

what does it mean for primary care?

HOW FAR HAS EXERCISE PRESCRIPTION PROGRESSED?

Exercise promotion is not a new concept. The ancient Greeks were among the first to promote exercise with Hippocrates himself stating:

'if we could give every individual the right amount of nourishment and exercise, not too little and not too much, we would have found the safest way to health.'

Little progress was made from then until the 1800s, when a physician named McKenzie was one of the first to think of exercise as a medical treatment for chronic disease rather than an activity reserved for the physically fit.¹ In the UK, there have been many attempts to get the country more physically active with a host of strategies and initiatives. The government has tried to sell exercise as a low-cost, low-tech and non-drug intervention to improve the health and social welfare of the population. But how far has exercise prescription really come? And why has exercise awareness and promotion not progressed as far as other public health concerns such as smoking, diet, and alcohol?

The World Health Organization (WHO) has reported that physical inactivity is one of the 10 leading causes of death in developed countries and results in about 1.9 million preventable deaths worldwide annually.² The benefits of physical activity on various health issues including atherosclerotic vascular disease, hypertension, diabetes mellitus, osteoporosis, dyslipidaemia, obesity, mental health, and a reduction in mortality, are now undisputed. In addition, a sedentary lifestyle is shown to be a more significant risk factor for coronary artery disease than other 'established' risk factors such as smoking, hypertension, and hyperlipidaemia.³ There are also positive economic benefits of physical activity programmes to communities, corporations and public health, shown by cost-benefit ratios. Less openly known and discussed benefits of exercise include prevention against certain cancers, with studies demonstrating that physical inactivity can almost double the risk of developing colon cancer with other cancers such as breast, prostate, and lung following close behind.⁴

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WHAT DOES EXERCISE PRESCRIPTION MEAN TO PRIMARY CARE PHYSICIANS?

Most doctors would claim to be prescribing exercise already when they tell their patients to 'exercise more'. Perhaps one of the biggest misconceptions in primary care is the difference between 'exercise' and 'physical activity'. The WHO describes exercise as 'a subcategory of physical activity that is planned, structured, repetitive, and purposeful in the sense that the improvement or maintenance of one or more components of physical fitness is the objective'. Hence, increasing a patient's physical activity level may include exercise as well as other activities, which involve bodily movement, in playing, active transport, (walking or cycling for example), house chores, and recreational activities. Doctors are also renowned for becoming obsessed with patient weight reduction and measuring BMI rather than increasing physical activity levels per se.

SCHEMES OUTSIDE THE UK

In the US, government schemes such as the National Physical Activity Plan promote that physical activity should be viewed as a modifiable 'vital sign'.⁵ Primary care physicians are encouraged to enquire about physical activity just as they would measure blood pressure routinely and as with any clinical consultation, appropriate questioning will lead to any deficiencies that may be present. Financial incentives are also given when done so appropriately.

Exercise prescription is considered to be like any other prescription, with a type, dose, frequency, duration and therapeutic goal.¹ Outside the US, other European countries are also much more established in the way they prescribe exercise. The Swedish National Institute of Public Health has produced a comprehensive guide for physicians and describe physical activity promotion as one of their main healthcare objectives. Physicians are able to prescribe an individually adapted, written prescription of physical activity known as the 'FaR'.⁶ Unfortunately, no such system exists in the UK and it is up to the GP to prescribe exercise and follow-up their patients.

GUIDELINES FOR PHYSICAL ACTIVITY

Guidelines published in the UK by the Chief Medical Officers describe the recommended physical activity level for all age groups.⁷ Adults aged 19–64 years should aim for 150 minutes of moderate intensity activity in bouts of 10 minutes or more (that is, 30 minutes at least 5 days a week). Comparable benefits can be achieved through 75 minutes of vigorous intensity activity spread across the week and at least 2 days of the week activity should be aimed at improving muscle strength. Although the guidelines for people over 65 years are similar, older adults are encouraged to include activities that improve balance and coordination, especially if at risk of falls. Similar guidance can also be found for children, including infants.⁷ Patients can obtain this 'daily dose' by addressing their

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sedentary lifestyle, for example, taking the stairs instead of a lift, and walking to work. The ideal exercise regimen should consist of periods of warming up, endurance exercise, flexibility exercise, resistance training, and cooling down. The 'FITT' principle is a mnemonic commonly used among fitness trainers standing for frequency, intensity, time and type of exercise. By using the FITT principle exercise can be tailored for each individual patient to suit his or her lifestyle and health requirements. It is important to consider that the more intense an exercise is, the greater its effects usually are on fitness, but not necessarily in terms of health benefits. Perhaps the most crucial part of exercise prescription is adequate patient follow-up. Patient compliance is drastically improved when they have been set goals to achieve, and their progress is quantified.

OBSTACLES FACING GPs

In spite of the proven benefits of exercise to health care, the obstacles that physicians face when prescribing exercise means the topic is often overlooked. These include a scarcity of referral pathways, lack of time, not having adequate access to reference materials to guide them in the practical aspects of exercise prescription and lacking confidence in the services they are referring to. Furthermore, the referral process has no financial or quality incentives, such as Quality and Outcomes Framework (QOF) points. These points are emphasised by a lack of national coordination across the country. Perhaps the biggest limiting factor for physicians is a lack of knowledge on the subject matter or an underestimation on how much influence they have over helping patients modify their behaviour and lifestyle (for example reducing sedentary lifestyles). This may be a reflection on the poor curriculum coverage on the benefits of physical activity for health during a doctor's training in the UK. This is something that is already changing as the field of sport and exercise medicine grows and is introduced into medical school curricula across the UK.⁸

PRESCRIBING EXERCISE IN PRACTICE

Exercise prescription services are already established in some cohorts of patients in secondary care, such as cardiac rehabilitation,⁹ but there needs to be greater links between these services and primary care health clinicians. However, there are some tools already available for the GP including the General Practice Physical Activity Questionnaire (GPPAQ) or the Exercise Vital Sign (EVS) questions. Patient's activity levels should be compared to the recommended guidelines and recorded in their records to facilitate the comparison of future activity levels.¹⁰ Monitoring patient progress can also be done easily in the practice setting by instruments such as the 6-minute walk, Shuttle walk and the Chester step test. Another useful tool available for reference is the 'Exercise is Medicine' initiative, a joint collaboration between the American College of Sports Medicine and American Medical Association (<http://www.exerciseismedicine.org/>). This online open access tool provides clinicians with a 'step by step' algorithm to prescribe exercise. An actual exercise prescription template is available for download and can be handed to the patient.

SUMMARY

It is evident that the UK is far behind other European countries and the US in exercise prescription, with few pathways in place. However, it is up to the individual physician to demonstrate initiative and make prescribing exercise part of their daily practice. This is something that must undoubtedly change in order to combat future pressures on the healthcare system.

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Provenance

Freely submitted; externally peer reviewed.

Competing interests

The author has declared no competing interests.

DOI: 10.3399/bjgp14X676294

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