

Exercise and health: participation and promotion by general practitioners

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SUMMARY. A survey of 2599 general practitioners was undertaken to assess personal participation, attitudes and facilities for the promotion of exercise and health. The majority of the 1049 respondents took part in two or more vigorous physical activities during an average week and believed in the importance of exercise for health and well-being. Most respondents accepted the importance of fitness assessments in the management of certain diseases but were unable to undertake tests, other than taking a simple history, through lack of time, equipment, staff and space.

It is suggested that health authorities might do more to support the growing interest and enthusiasm for exercise promotion among general practitioners by sponsoring more postgraduate training in the physiology of exercise and practical methods of fitness testing. The provision of additional staff, equipment and facilities to support these promotion initiatives should also be encouraged.

Introduction

OVER the past 10 years, there has been enormous growth in the popularity of physical exercise among the general public. In the United Kingdom, the provision of indoor sports centres has increased 30-fold during this period¹ and major promotional efforts directed at encouraging mass participation in sports and physical leisure activities by post-school and pre-retirement age groups are already underway.²

Relatively little is known about the attitudes of qualified medical practitioners to the relationship between exercise and health. A number of claims have been made that British doctors have been slow to accept that exercise should be part of the accepted management of many common disorders,³ and that they are antipathetic to the promotion of exercise for health.⁴

A survey of final year medical students has suggested that there are important deficiencies in their knowledge of the physiology of exercise and physical training.⁵ A more recent study has shown that about two-thirds of general practitioners believe that it is part of their role to encourage individual patients to take exercise.⁶

It was therefore decided to undertake a more detailed regional

survey of general practitioners in order to assess their own participation in exercise and their beliefs about the value of exercise and fitness assessment in the promotion of health and the management of disease, and also to examine those factors which may prevent their involvement in exercise promotion.

Method

During October 1983, a questionnaire was distributed to all general practitioners in the West Midlands region through their respective family practitioner committees.

The areas covered by the survey were: participation in physical activities by the general practitioners themselves; belief about the relevance of exercise to the prevention and management of specific diseases; desire and ability to undertake fitness testing in their own surgeries; and attitudes and willingness to give advice to patients wishing to take up certain physical activities. The classification of family practitioner areas into urban, semi-urban and rural was based on the population density.

Results

Of the 2599 general practitioners approached, 1049 returned a completed questionnaire. The overall response rate was 40 per cent and this ranged from 36.3 per cent among general practitioners working in urban areas to 46.0 per cent among those working in rural areas. The mean age of the respondents was 45.4 years (standard deviation 11.2 years).

Participation in exercise

General practitioners were asked which physical activities they took part in during an average week. Only 116 respondents (11.1 per cent) stated that they took part in no physical activity at all, while 656 (62.5 per cent) said that they took part in two or more forms of activity. The six most common activities were: gardening (59.6 per cent); walking for more than one hour (45.9 per cent); swimming (19.3 per cent); squash (17.5 per cent); jogging (15.9 per cent) and golf (14.7 per cent). The majority of general practitioners (84.3 per cent) expressed a desire to take more exercise than they were currently able to at present. Time spent at work was the most common hinderance to their taking more exercise.

Attitudes to exercise

The majority of general practitioners (96 per cent) agreed that exercise made an important contribution to health and well-being, and that they should encourage middle-aged people to take some form of exercise.

Fewer general practitioners (87.6 per cent) thought that exercise helped to prevent heart disease and hypertension. Table 1

Table 1. The attitude of general practitioners to the relevance of fitness assessment.

Condition	Number of general practitioners (%)			
	Relevant	Not relevant	Don't know	Total
Simple obesity	927 (89.8)	102 (9.9)	3 (0.3)	1032 (100.0)
Post coronary convalescence	983 (95.4)	38 (3.7)	9 (0.9)	1030 (100.0)
Hypertension	759 (75.1)	233 (23.0)	19 (1.9)	1011 (100.0)
Intermittent claudication	817 (80.4)	186 (18.3)	13 (1.3)	1016 (100.0)
Asthma	844 (82.2)	176 (17.1)	7 (0.7)	1027 (100.0)

shows their response to the relevance of assessing the physical fitness of patients in the clinical management of obesity, post coronary convalescence, hypertension, intermittent claudication and asthma. Of those who had previously stated that they did not believe that exercise helped to prevent hypertension and heart disease, the majority did believe that an assessment of fitness was relevant to the management of these five conditions.

Ability to undertake fitness assessment

More than half of all respondents (55.2 per cent) use simple history taking alone to assess the fitness of patients in the surgery. Table 2 illustrates the types of test used by all the general practitioners responding to the survey. Two-thirds of respondents said that they were not able to undertake as many fitness assessments as they would like. Of the 682 general practitioners who required additional facilities, 88 per cent stated that they wanted more time (Table 3).

Table 2. Number of general practitioners using different fitness tests ($n = 1049$).

Type of assessment	Number	(%)
Simple history	1005	(96)
Step test	234	(22)
Bicycle ergometer	10	(1)
Walking test	75	(7)
Pulse rate recovery test	308	(29)
Assessment not believed to be relevant	16	(2)

Table 3. Number of general practitioners requiring additional facilities for fitness assessment in the surgery.

Additional facilities required	Number	(%)
Equipment	363	(53)
Staff	289	(42)
Time	597	(88)
Space	224	(33)
Total number of respondents	682	

Ability to give patients advice

General practitioners were asked whether or not they would be able to tell patients where to go, or whom to contact, if they were advising them to take up various forms of exercise. Swimming, golf, squash, walking, tennis and badminton were, in order of frequency, the physical activities most commonly listed as those about which detailed advice could be given. The majority of general practitioners (81.5 per cent) stated that they would be able to give patients detailed advice on five or more of the physical activities listed.

Urban/rural differences

More urban (14.1 per cent) than rural (6.1 per cent) doctors stated that they took part in no physical activity during an average week. Ten per cent of urban general practitioners said that they would be unable to give their patients any detailed advice on where to go or whom to contact when encouraging them to take up different forms of physical exercise, compared with 1.5 per cent of rural doctors.

More urban than rural general practitioners stated that they would require additional equipment, staff and space in order to undertake fitness testing in their surgeries, although there were no differences between the two groups in their stated need for more time.

Discussion

Although the sample obtained was a large one, the response rate was low when compared with a similar study on attitudes to health promotion among general practitioners in the Wessex region.⁶ It is therefore possible that some selection bias has arisen and that the sample was not a representative one. Nevertheless, the observation that a large number of general practitioners appear to believe in the value of exercise in the promotion of health and management of disease is encouraging.

Many general practitioners also appear willing and able to give advice to their patients about participation in physical activities and most take part regularly in these activities themselves. Further research is required to define more precisely the vigour and intensity with which these activities are pursued, and the frequency with which advice on exercise is actually given during routine consultation with their patients.

Interestingly, rather fewer general practitioners agreed on the value of fitness assessment and exercise in the prevention of heart disease and hypertension than for other diseases. Although there is conflicting evidence about the role of exercise programmes in the prevention of either first or subsequent heart attacks, various authors have concluded that there is an established association between high levels of physical activity and a low incidence of coronary heart disease.^{8,9} It has also been shown that a useful reduction in moderate hypertension can be achieved through exercise.^{10,11}

A recent report from the Welsh Council of the Royal College of General Practitioners¹² suggests that the use of exercise programmes would be outside the scope of most general practitioners, unless health centres could be developed in conjunction with sports facilities in the community.

Our belief is that simple methods do exist for assessing the fitness of an individual patient in the average surgery premises, and for following this assessment with a suitable exercise programme.

The value of stress testing and exercise tolerance assessment in the diagnosis and monitoring of cardiovascular and respiratory diseases and the promotion of exercise to reduce risk factors for these disorders is supported by a number of recent reports.¹³⁻¹⁵ Together these present a compelling case for general practitioners having available to them a simple clinical procedure for assessing the fitness of a patient.

Simple methods of fitness assessment are based on the monitoring of heart rate during known levels of physical exertion or by monitoring recovery of heart rate after physical exertion. Such tests can be undertaken in as little as eight minutes and are easy to perform even by lay personnel. The use of a bicycle ergometer has certain practical advantages in so far as it reduces the effects of weight as a limiting factor while the actual workload can be varied under controlled conditions.¹⁶⁻²⁰ The results of such tests enable general practitioners to recommend exercise programmes or activities which are suited to their patients' own level of fitness, and will not discourage them by setting unrealistic goals or causing discomfort during their achievement.

Although general practitioners appear interested in this field of health promotion, their level of involvement is probably small for a variety of reasons. The undergraduate and postgraduate education of most general practitioners does not include training to undertake simple fitness assessments or to prescribe suitable exercise programmes. Furthermore, the normal physiology of exercise and its benefits to health have not yet been incorporated into the traditional curriculum of medical education.

Lack of time also prevents many general practitioners from undertaking fitness assessments on their patients, from providing them with carefully graded exercise programmes, and also from taking part in as much exercise as they themselves would like.

The use of other primary care workers for preventive assessment, together with a reduction in list size, could help to alleviate this problem.

Health authorities could also help by sponsoring postgraduate meetings and practical demonstrations of fitness testing in local rehabilitation centres or the surgeries of interested general practitioners. Designated referral centres for fitness testing could also be provided within a locality.

Financial support could also be given to allow the purchase of equipment, provision of additional space and facilities, and more attached staff. General practitioners could, in return, make their premises available to promote the physical recreation facilities available to the local communities which they serve.

References

1. Wessex Regional Health Authority. *Exercise and health in Wessex — what should the NHS be doing? Lifeline Report No. 7*. Wessex Regional Health Authority, 1983.
2. Sports comment. *Sport in the community — the next ten years*. London: The Sports Council, 1982.
3. Smith A. Exercise — cult or cure all? *Br Med J* 1983; **286**: 1637-1639.
4. Morris JF. Cited in report of a symposium. *Lancet* 1983; **2**: 1171.
5. Young A, Gray JAM, Ennis JR. Exercise medicine: the knowledge and beliefs of final-year medical students in the United Kingdom. *Med Educ* 1983; **17**: 369-373.
6. Catford JC, Nutbeam D. Prevention in practice: what Wessex general practitioners are doing. *Br Med J* 1984; **288**: 831-834.
7. Consumers Association. The Which way to fitness. *Which?* 1984; 89-93.
8. Fentem PH, Bassey EJ. *The case for exercise London: The Sports Council research working paper No. 8*. London: The Sports Council, 1977.
9. Joint working party of the Royal College of Physicians of London and the British Cardiac Society. Prevention of coronary heart disease. *J R Coll Physicians Lond* 1976; **10**: 213-275.
10. Bonanno JA, Lies JE. Effects of physical training on coronary risk factors. *Am J Cardiol* 1974; **33**: 760-764.
11. Sannestedt R, Wasir H, Henning R, Werko L. Systemic haemodynamics in mild arterial hypertension before and after physical training. *Clin Sci Mol Med* 1973; **45**: 145-149.
12. Report of a working party of the Welsh Council. *Stitches in time — proposals for action on the prevention of coronary heart disease and stroke by general practitioners in Wales. Special paper 1, II*. London: Welsh Council of the Royal College of General Practitioners, 1983.
13. Exercise, health, medicine: proceedings of the Lilleshall symposium. Smith A (Ed). London: The Sports Council, 1984.
14. Anonymous. Physical activity and health: a documentation. *Scand J Soc Med* 1982; Suppl 29: 5-269.
15. Hanninen O, Kukkonen K, Vuori I. Physical training in health promotion and medical care. *Ann Clin Res* 1982; **14**: Suppl 34: 5-172.
16. Bruce RA. Exercise testing of patients with coronary heart disease. *Ann Clin Res* 1971; **3**: 323.
17. Wahland H. Determination of the physical working capacity. *Acta Med Scand [Suppl]* 215, 1948.
18. Tuxworth W. *Tests of cardio-respiratory endurance in testing physical fitness. Eurofit 14-42*. Strasbourg: Council of Europe, 1983.
19. Tuxworth W and Shahnavaz H. The design and evaluation of a step tests for the rapid prediction of physical work capacity. *Ergonomics* 1977; **20**: 181-191.
20. Jones A, et al. *Clinical exercise testing: a guide to the use of exercise physiology in clinical investigation*. Philadelphia: W B Saunders, 1975.

Acknowledgements

We thank Dr R. McKechnie, Mr Bill Tuxworth, Dr J. Milligan and the Regional General Practitioners Committee, Mr Alan Davies, Miss Rowan Goode, the Exercise for Health Action Group and the family practitioner committees of the West Midlands region for their help with this study. We are also grateful to the general practitioners in the West Midlands region for answering the questionnaire and to the Regional Health Authority for providing financial support.

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