

# Increasing population levels of physical activity through primary care: GPs' knowledge, attitudes and self-reported practice

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**Background.** GPs have the potential to increase population levels of activity and thus produce important health gains.

**Objectives and methods.** The aim of this questionnaire survey was to determine the knowledge, attitudes and self-reported practice of GPs towards promoting regular physical activity and to assess the likely impact of GPs on population levels of physical activity.

**Results and conclusions.** A high response rate to the questionnaire was obtained and the results suggest that GPs have a good level of knowledge of the health benefits of regular physical activity and the levels required to achieve these, but do not promote activity in a way that will have an impact on the population level.

**Keywords.** General practice, health promotion, physical activity, population approach.

## Introduction

Regular physical activity is associated with positive health gain<sup>1,2</sup> and it has been suggested that promoting physical activity is “public health’s best buy”.<sup>3</sup> Although a population approach to promoting physical activity is appropriate, since the mean level of activity in the population is below that required for health benefit,<sup>4</sup> ‘exercise on prescription schemes’ are the commonest physical activity intervention in primary care.<sup>5</sup> These schemes adopt a high-risk approach and do not have a population impact.<sup>6</sup> It has been suggested that GPs are in a good position to influence population levels of activity because of their access to most members of the population,<sup>7,8</sup> because 90% of the population consult their GP at least once every 3 years<sup>9</sup> and because in other areas of lifestyle behaviour change, notably smoking, GP advice has been shown to have a small but important impact on the population.<sup>10,11</sup>

There is very little evidence, from the UK, on effective ways to increase regular physical activity levels in

healthy individuals.<sup>12</sup> Little is known of UK GPs’ attitudes towards promoting physical activity. It has been suggested that GPs have insufficient knowledge about the health benefits of regular activity to be able to give effective advice.<sup>13</sup> The aim of this study is to determine the knowledge, attitudes and self-reported practice of GPs towards promoting regular physical activity and to assess the likely impact of GPs on population levels of physical activity.

## Method

Following a pilot study, a questionnaire survey was mailed to all 235 GPs (from 95 practices) in the Bradford district in May 1997. A second personalized reminder was sent to non-responders in June, followed by a telephone reminder in July.

GPs’ attitudes and self-reported practice were assessed by a number of statements using a four-point Likert-type scale. The scores had no neutral points, forcing a choice for each statement. Knowledge was assessed by asking responders to indicate whether evidence of benefit, from regular physical activity, existed for each of a list of conditions; for this question a ‘don’t know’ option was available. For most of the conditions listed, good evidence exists of a beneficial effect. In addition, two conditions (Alzheimer’s disease and breast cancer) were included as ‘red-herrings’.

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TABLE 1 GPs' knowledge about existence of evidence of beneficial effects of physical activity for various conditions

Statement regarding condition	Numbers (%) of responders who indicated			
	Strong evidence	Some evidence	No evidence	Did not know
Improves the strength of bones and muscles	117 (67.2)	55 (31.6)	1 (0.6)	1 (0.6)
Improves psychological well-being	101 (58.0)	68 (39.1)	2 (1.1)	3 (1.7)
Helps in weight control	98 (56.3)	70 (40.2)	5 (2.9)	1 (0.6)
Reduces death from ischaemic heart disease	95 (54.6)	74 (42.5)	2 (1.1)	3 (1.7)
Reduces the risk of hypertension	63 (36.2)	96 (55.2)	9 (5.2)	6 (3.4)
Reduces premature death	59 (33.9)	96 (55.2)	9 (5.2)	10 (5.7)
Reduces blood pressure in known hypertensives	53 (30.5)	103 (59.2)	9 (5.2)	9 (5.2)
Reduces the likelihood of falls in the elderly	46 (26.4)	81 (46.6)	20 (11.5)	27 (15.5)
Reduces the risk of NIDDM	38 (21.8)	82 (47.1)	24 (13.8)	30 (17.2)
Reduces the risk of breast cancer <sup>a</sup>	8 (4.6)	17 (9.8)	48 (27.6)	101 (58.0)
Reduces the risk of Alzheimer's disease <sup>a</sup>	5 (2.9)	12 (6.9)	53 (30.5)	104 (59.8)

NIDDM: non-insulin-dependent diabetes mellitus. Due to rounding up, some percentages may not add up to 100.0.

<sup>a</sup>Conditions included as 'red-herrings'.

Data from returned questionnaires was entered onto a database and analysed using EPI-INFO. For a subset of questions, answers from responders with similar characteristics to non-responders were compared with those of other responders. Chi-square goodness-of-fit, on two-by-two contingency tables with Yates' correction, was used for all tests of significance.

## Results

Accurately completed questionnaires were received from 174 responders (from 68 practices), giving a response of 74% (72% of practices). Responders were different from non-responders; they were more likely to be in partnerships rather than single-handed practices (8% of responders worked single-handed compared with 23% of non-responders,  $P < 0.01$ ), to be members or fellows of the Royal College of General Practitioners (50 versus 31%,  $P < 0.05$ ), and more likely to have 10 or fewer years of experience as a GP (45 versus 16%,  $P < 0.001$ ). Responders with characteristics similar to those of non-responders showed no significant difference, when compared with other responders, in their response to a subset of questions.

Table 1 illustrates GPs' knowledge of the conditions for which there is evidence of a beneficial effect of regular activity. Generally, GP knowledge was good; only a minority of responders indicated that there was evidence associating regular activity with reduced risk of Alzheimer's disease and breast cancer (10 and 14%, respectively). This group of GPs tended to respond positively to all the conditions listed. GPs' knowledge of

current recommendations of levels of activity required to achieve health gain was also good. Nearly three-quarters of responders believed that any level of activity was beneficial to health, with less than 10% stating that strenuous or vigorous activity was necessary (Table 2).

Table 2 details the responses of GPs to a number of attitudinal statements. Over three-quarters of responders believed that they had sufficient knowledge to give advice about physical activity. Most believed that their advice to increase activity was more effective when linked to a patient's presenting problem, and less than one-quarter agreed that they tried to encourage as many patients as possible to increase their activity.

Table 3 contains the responses of GPs to statements regarding the patient conditions for which they would be likely to give advice about physical activity. GPs indicated that they would give advice to patients who were overweight more frequently than they would for any other condition listed. Large numbers also indicated that they would give advice to patients with risk factors for ischaemic heart disease, known ischaemic heart disease, diabetes and hypertension. Only 8% ( $n = 14$ ) indicated that they would opportunistically give advice to all patients.

The most frequently identified barriers to promoting activity were lack of consultation time (161, 92.5%), physical activity not being relevant to the consultation (119, 68.4%) and a belief that patients would not follow GP advice to be more active (96, 55.2%).

## Discussion

This study indicates that GPs have good levels of knowledge of both the health benefits of regular activity and

TABLE 2 Responses to statements relating to attitudes of GPs towards promoting physical activity

Statement	Numbers (%) of responders who			
	Strongly agreed	Agreed	Disagreed	Strongly disagreed
Health promotion is an important part of primary care work	92 (52.9)	78 (44.8)	4 (2.3)	0 (0.0)
Promoting physical activity is important in primary care	65 (37.4)	103 (59.2)	6 (3.4)	0 (0.0)
Advice to increase physical activity is more effective when linked to an individual's presenting problem	79 (45.4)	89 (51.1)	6 (3.4)	0 (0.0)
I can be effective in promoting health	51 (29.3)	114 (65.5)	9 (5.2)	0 (0.0)
I can be effective in persuading some patients to increase physical activity	33 (19.0)	128 (73.6)	12 (6.9)	1 (0.6)
I have sufficient knowledge to advise patients about physical activity	28 (16.1)	106 (60.9)	39 (22.4)	1 (0.6)
Any amount of physical activity is beneficial to health	54 (31.2)	73 (42.2)	40 (23.1)	6 (3.5)
Only vigorous/strenuous activity is beneficial to health	3 (1.7)	11 (6.3)	98 (56.3)	62 (35.6)
I try to encourage as many patients as possible to increase their physical activity	1 (0.6)	38 (21.8)	103 (59.2)	32 (18.4)
I only discuss physical activity if the patient mentions it	3 (1.7)	11 (6.3)	98 (56.3)	62 (35.6)

Due to rounding up, some percentages may not add up to 100.0.

TABLE 3 Conditions for which GPs indicated they would give advice regarding physical activity

Condition	Number (%) of responders who indicated they would give advice			
	Always	Sometimes	Occasionally	Never
Overweight	134 (77.0)	37 (21.3)	3 (1.7)	0 (0.0)
Risk factors for IHD	97 (55.7)	69 (39.7)	7 (4.0)	1 (0.6)
Hypertension	82 (47.1)	79 (45.4)	12 (6.9)	1 (0.6)
Known IHD	72 (41.4)	91 (52.3)	9 (5.2)	2 (1.1)
Diabetes	58 (33.3)	78 (44.8)	30 (17.2)	8 (4.6)
Opportunistically in all patients	14 (8.0)	52 (29.9)	70 (40.2)	38 (21.8)

IHD, ischaemic heart disease. Due to rounding up, some percentages may not add up to exactly 100.0.

the levels of activity required to achieve these benefits. The low percentage of responders who indicated that there was evidence of benefit for Alzheimer's and breast cancer tended to have a 'set response' for all conditions, suggesting that the results for other conditions may be exaggerated by this small amount.

These findings contrast with other work that has found primary care workers' knowledge of the specific health gains from physical activity to be poor and sketchy.<sup>13,14</sup> Some of this work<sup>14</sup> looked at the knowledge of health professionals using a specific exercise on a prescription scheme, and the results are likely to have been influenced by the clinical referral criteria used in the scheme.

Work by Gould *et al.*<sup>13</sup> was published 3 years ago, and it is possible that the results of our study illustrate an increase in knowledge since then. Knowledge may have increased through information sent to all GPs from the Health Education Authority<sup>7</sup> and Health of the Nation Task Force.<sup>8</sup>

This study suggests that GPs believe advice to increase physical activity is most effective when linked to the presenting complaint, and this belief is reflected in self-reported practice. This approach has been shown to be effective in disease prevention in individuals at high risk, and the conditions that GPs, in this study, indicate they target are appropriate for this individual benefit.<sup>15,16</sup>

However, promoting behaviour change in high-risk individuals will do little to reduce the burden of ill health in the population.

A systematic review of the effectiveness of promoting lifestyle change in general practice found some evidence to suggest a small but important population effect of GP advice to increase activity.<sup>17</sup> A systematic review of interventions aimed at increasing activity in healthy free-living individuals found that promoting activity which was home-based, involved unsupervised informal activity of a moderate intensity and in particular included walking produced successful outcomes in terms of sustained increases in activity.<sup>12</sup> It has been suggested that promoting activity of this nature could easily be done in UK primary care and could have an effect on the population level of activity.<sup>18</sup>

Our study suggests that, in practice, very few GPs promote physical activity in a way that would influence behaviour at the population level. This is in keeping with the findings from GPs in New Zealand and Australia.<sup>19,20</sup> Even in the area of smoking, where evidence for the efficacy of GP advice is strong,<sup>10</sup> GPs do not seem to practice in a way which would influence behaviour at the population level.<sup>21</sup>

Time, lack of relevance to the consultation and concerns that patients were unlikely to follow advice were identified as the most important barriers to promoting activity. Time has been shown to be an important reason for not undertaking more health promotion activity in a number of studies.<sup>19,20,22</sup> In addition GPs' attitudes towards promoting physical activity are likely to have been influenced by 'exercise on prescription schemes', which are now widespread, but which adopt a high-risk approach and do not have a population impact.<sup>6</sup>

The new Green paper "Our healthier nation" marks an important change in its acceptance that health of a population is determined by factors largely outside of medical services.<sup>23</sup> Though health professionals have a role, the green paper makes it clear that to affect the population's health, radical changes are required involving a number of agencies working together to tackle social, environmental and individual factors. Indeed, the white paper "The New NHS: Modern, Dependable" stresses the need for all health professionals to be involved in partnerships with other agencies.<sup>24</sup> This is a new mode of working, but may provide a means for primary care to be active in population-based health promotion. Work from New Zealand suggests that GPs feel their efforts to increase physical activity would be more effective if they were supported by wider measures involving other agencies such as the media and schools.<sup>19</sup>

This study is further evidence that the potential for GPs to affect the health of the population is not achieved in practice. Results from this study suggest this is not owing to a lack of knowledge, but probably reflects the working practices of GPs. The 'New NHS' may offer

different opportunities for a primary care role in population health.

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