RESEARCH

Inflammatory bowel disease and exercise: results of a Crohn's and Colitis UK survey

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ABSTRACT

Background Over 250 000 people in the UK are affected with inflammatory bowel disease (IBD) and approximately 10 000 new cases are diagnosed every year. These chronic bowel conditions have been shown to affect both work and recreational activity. In the general population, regular exercise has numerous benefits to health and well-being and there are additional benefits for those with IBD. However, people with IBD face significant challenges in trying to take regular exercise.

Objective With the renewed focus on sport brought about by the recent London Olympics, Crohn's and Colitis UK surveyed its members to explore their sport and fitness habits.

Methods 918 members participated in the survey, which is the largest survey of its kind, investigating the exercise habits of people with IBD.

Results The survey showed widespread uptake of exercise in those with IBD, with a large number feeling better for it. However, it also identified a considerable number of respondents who reported a significant negative impact of IBD on their ability to take up, enjoy and derive benefit from sporting activities.

Conclusion Asking questions about sporting leisure activity in clinical consultations may identify those in need of help and support and possibly identify factors to be dealt with, in order to enable them to take part in these beneficial activities.

INTRODUCTION

Inflammatory bowel disease (IBD) is a group of conditions of unknown aetiology, resulting in inflammation of the gastrointestinal tract. Over 250 000 people in the UK are affected with IBD and about 10 000 new cases are diagnosed every year.¹ The two main types of IBD are Crohn's disease and ulcerative

colitis. The clinical spectrum of IBD is wide and ranges from an asymptomatic quiescent state to life-threatening severe illness. The conditions are characterised by periods of remission punctuated with relapse. These chronic bowel conditions have been shown to affect work and recreational activity.^{2–3}

Exercise can be defined as physical activity that is planned, structured, repetitive and purposive to improve or maintain physical fitness.⁴ In the general population, it is known that regular exercise can decrease mortality and morbidity, decrease anxiety and depression and enhance feelings of well-being.^{5–6} Perceived benefits of exercise and sport in people with IBD include improved general fitness, managing weight gain (particularly in those requiring steroids for their disease) and helping to control stress levels. Evidence also shows that regular exercise can reverse muscle wasting and weakness, and prevent the loss of protein that often occurs.^{7–10} It has been suggested that exercise should be undertaken by people with Crohn's disease to help maintain bone mineral density and prevent osteopenia.¹⁰ Additionally, exercise has been found to reduce inflammatory disease in these conditions.¹¹

However, the challenges of simply maintaining fitness levels or taking up new sport or fitness activities when the symptoms of uncontrollable diarrhoea, fatigue, joint problems and severe pain are at their worst are challenging to normally healthy people and appear insurmountable to those with IBD.

Crohn's and Colitis UK is a national charity whose aim is to support everyone affected with IBD. With the renewed

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focus on sport brought about by the recent London Olympics, Crohn's and Colitis UK surveyed its members to see if IBD affects their exercise activities, and if so, how and why, so that people with IBD might be better helped to partake in this beneficial activity.

METHODS

All 31 000 members of Crohn's and Colitis UK were invited to complete an online questionnaire, 'IBD: Sport and Fitness Survey'. The survey was open for respondents in early 2012. Members were asked a variety of questions about their condition, exercise habits, perceived fitness level, possible barriers to exercising and the relationship between their condition and exercise. The results were collected and analysed by NSM Research, an independent research agency in Oxford. The study was carried out in accordance with the data protection act and the Market Research Society guidelines. Consent was implied by taking part in the survey. Respondents were informed at the beginning of the questionnaire that the information provided was being used by Crohn's and Colitis UK as part of a campaign to raise awareness of the challenges of living with IBD and its impact on exercise activities.

RESULTS

Nine hundred and eighteen members of Crohn's and Colitis UK completed the online survey, of whom 65% were women. About half the respondents had ulcerative colitis and half had Crohn's disease. The majority of respondents (61%) were aged between 30 and 59 years; 1% of respondents did not reply to this question (table 1).

Current activity

Six hundred and seven respondents (66%) stated that they currently participated in exercise (figure 1). Of these members, 32% reported exercising daily, 57% weekly, 5% monthly, 4% less often and 1% rarely.

Table 1 Demographics of the study population

Demographics	%
Sex	
Male	35
Female	65
Age (years)	
60+	7
30–59	61
16–29	31
No response	1
Disease	
Ulcerative colitis	46
Crohn's	54

Figure 1 Differing age groups and current exercise.

Across the different age groups most exercised weekly followed by those exercising daily (figure 2).

Members reported undertaking a variety of exercises. Less reported activities listed included golf, walking the dog, mountain biking and kickboxing (figure 3).

Fitness levels

When asked about their fitness levels, most respondents (61%) thought they had average levels of fitness, 16% thought they had above average levels and 23% lower than average levels of fitness.

However, most respondents reported that their IBD had affected their level of fitness; 50% reported that their IBD had greatly affected their fitness and 38% reported that it had affected their fitness a little. Only 12% of all respondents stated that IBD had not affected their fitness at all.

Exercise and effects on individuals with IBD

Of all the respondents, 72% reported that exercising made them feel better. Of these, a large proportion felt that exercise improved their general well-being and confidence. Other benefits of exercise included boosted energy levels (12%), feeling fitter or healthier (9%), helping IBD symptoms, weight control and improved sleep (12%), giving them a focus other than IBD (4%) and feeling more 'normal' when taking part in sport (4%).

Twenty-three per cent of respondents found that exercise made them feel worse. Fatigue was the most commonly reported problem (41%). Other problems identified included an increased need for the toilet (12%), increased abdominal pains (17%), increased

Figure 2 Exercise frequency in different age groups of patients with inflammatory bowel disease.

joint pains (7%), exacerbation of IBD symptoms (11%) and slower exercise recovery times (5%). Six per cent of respondents did not answer the question about whether exercise made them feel better or worse.

Of the respondents who reported that exercise made them feel better, most reported several barriers to regular exercise. These included lack of time (43%), fatigue (68%), lack of toilet access (35%), health concerns (34%), pain (32%) and financial constraints (21%).

All respondents were asked if their IBD had ever stopped them from exercising; 80% reported that it had at some point or permanently (figure 4).

DISCUSSION

This is the largest patient survey of its kind investigating the exercise habits of people with IBD. It shows widespread uptake of exercise in those with IBD, with a large number feeling better for it. However, it also identifies a significant number of respondents who report a significant negative impact of IBD on their ability to take up, enjoy and derive benefit from exercise activities.

Fourteen per cent of the adult UK population regularly take part in exercise.¹² It is known that regular exercise has a number of benefits for the population in general, but also for people with IBD. The results of this survey show that a large proportion of people

Figure 3 The different types of exercise in which members reported participating.

with IBD undertake regular exercise and find several benefits. At some point, however, most have had to stop exercise owing to their IBD symptoms. Although this survey provides anecdotal evidence that exercise may improve the symptoms of IBD, no studies to date have shown that it alters the course of Crohn's disease or ulcerative colitis.¹³

Figure 4 Reasons given for stopping exercise owing to inflammatory bowel disease.

Further studies are needed to look at the effects of various types and differing amounts of exercise on IBD.

This survey also shows that some barriers to regular exercise in people with IBD are common to the general population, but people with IBD face additional obstacles that affect their level of fitness. Thus, people with IBD need to be better supported and encouraged to partake or return to exercise activities when medically fit to do so.

The limitations of this study are restricted sampling (to those with internet access and limited to members of Crohn's and Colitis UK), study population bias (no details were obtained on disease severity), disease verification (diagnoses were self-reported) and respondent availability and possible cooperation problems as no face-to-face interviewer was present. It might also be that respondents were more likely to take exercise than those who did not take part in the survey. We also acknowledge that although the study population was large, this is only a small sample of those who have IBD. We believe these limitations do not significantly affect the findings. Internet access is widespread and as the survey was based on the Crohn's and Colitis UK website, self-reporting of diagnoses is likely to be accurate. The advantages of this type of study are convenience and a large study population.

We are aware that further questions could have been asked in our questionnaire. Disease severity, medications, body mass index and smoking history might all have an additional effect on exercise. However, we were also concerned that if the survey became too long, respondent numbers would fall. Further studies looking at these factors, other populations with IBD and comparisons with healthy populations would yield further information.

In summary, this large web-based survey of exercise activity in subjects with IBD has shown good levels of participation in exercise, with the majority deriving benefit. However, for a significant number IBD affects their ability to take part in, and enjoy, exercise. We know that exercise is beneficial in IBD. Questioning about exercise activity in clinical consultations may identify those in need of help and support, and possibly, identify factors that can be dealt with, enabling those with IBD to take part in these beneficial activities if medically fit to do so.

Contributors All authors contributed to the design of the survey, collection of results or analysis and interpretation of the data obtained. All authors contributed to drafting or revising this report and gave final approval for its submission.

Competing interests None.

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