

ADVANCED EXERCISE PROGRAMME FOR PATIENTS WITH INFLAMMATORY JOINT DISEASE: A COMMUNITY FITNESS CENTRE PROGRAMME

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BACKGROUND

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Patients diagnosed with an inflammatory joint disease (IJD) attending the Rheumatology Department at Queen's Hospital, Burton-upon-Trent, receive a 'full package of care' from specialist physiotherapists, which includes assessment, treatment and education in self-management, followed by an annual review.

Annual review

All patients with IJD are reviewed by senior rheumatology physiotherapists as a planned intervention at yearly intervals after the initial referral.

This annual review (AR) assesses patients' physical status, disease control and changes in emotional and/or social circumstances. Patients' knowledge and understanding of their condition, and their ability to self-manage, are also assessed.

With increasing experience of the AR, it became clear that some patients could potentially benefit from an advanced level of exercise because:

1. Standard therapy was insufficient to achieve fitness potential
 2. Patient lacked confidence and/or self-esteem.
- Inclusion criteria depended upon:
- Achievement of disease stability with or without anti-TNF therapy
 - Sound education leading to expert self-management skills
 - An understanding of the principles and limitations of physical exercise and fitness.

Selected patients willing to participate were referred to the Physiotherapy Assistant Practitioner (HN) to progress to the next phase of assessment.

Validation and evidence¹⁻⁷

- The value of strengthening exercises for IJD is now well documented
- Research suggests that more advanced techniques, such as weight-resistance strengthening exercises, are beneficial
- There is no evidence to suggest further joint damage as a result of this approach
- The traditional limits to exercise for this group of patients are now challenged

Aims

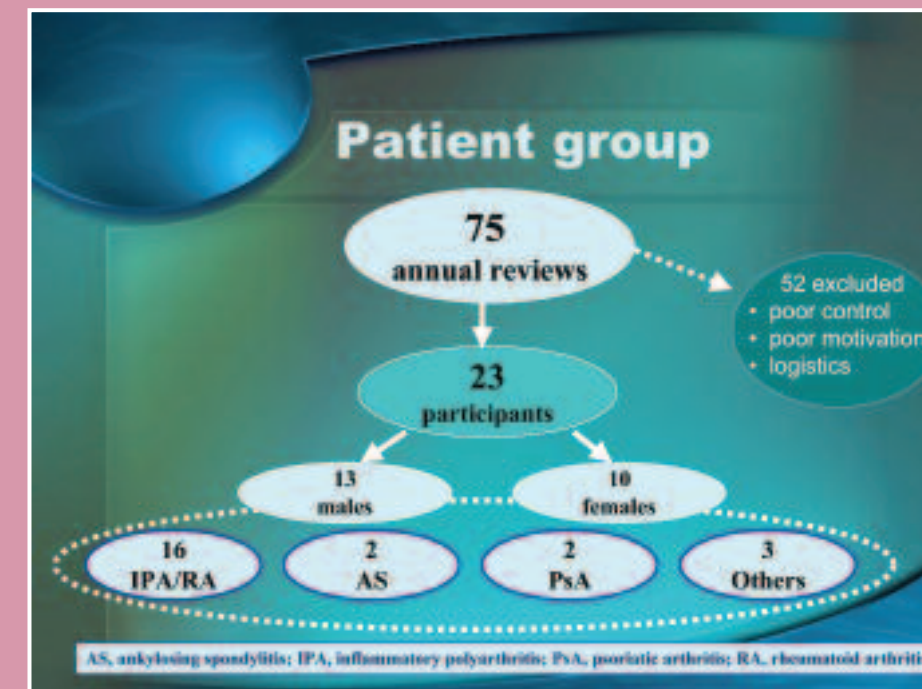
For the participants

- Improved range of movement (ROM), strength and cardiovascular fitness
- Translation of these benefits into meaningful functional improvement
- Improved confidence, self-esteem and self-management skills
- Encouragement of participation in exercise in fitness centre, rather than hospital, setting
- Improvement in quality of life

General

- Ascertain whether it was possible to work in partnership with local fitness centres, especially with a group with such specialist considerations
- Monitor any increase in joint flares as a result of the more intense exercise regimen
- Observation of the effect of the Keiser weight machines used

METHODS



Preparation for 'handover' to the fitness centre

Two to four sessions of more advanced exercises took place in the physiotherapy department gymnasium with the physiotherapy assistant practitioner who would be facilitating handover to the fitness centre.

The aim of this was the following:

- To continue assessment of their suitability for the programme, in terms of level of fitness and self-management knowledge
- To ensure good technique and positioning
- To allay the so-called 'gym phobia'.

This further assessment was undertaken using standard equipment found in a physiotherapy department gymnasium.



Building bridges

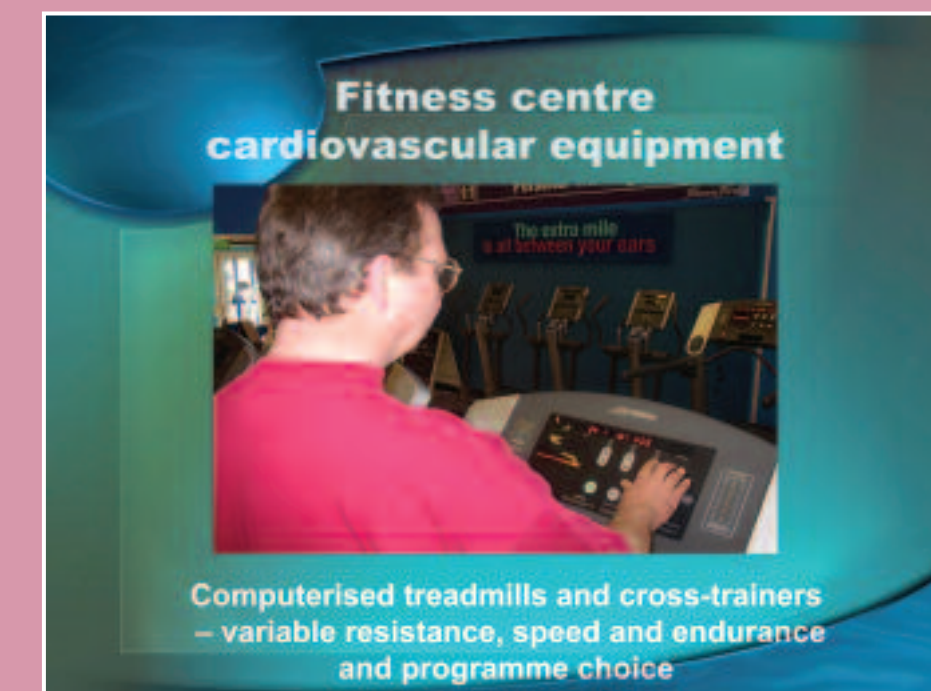
An established 'exercise-on-referral' programme exists between the hospital, the council

and commercial fitness centres locally. For this project to be successful, this partnership had to be enhanced further as the participants had special needs and limitations.

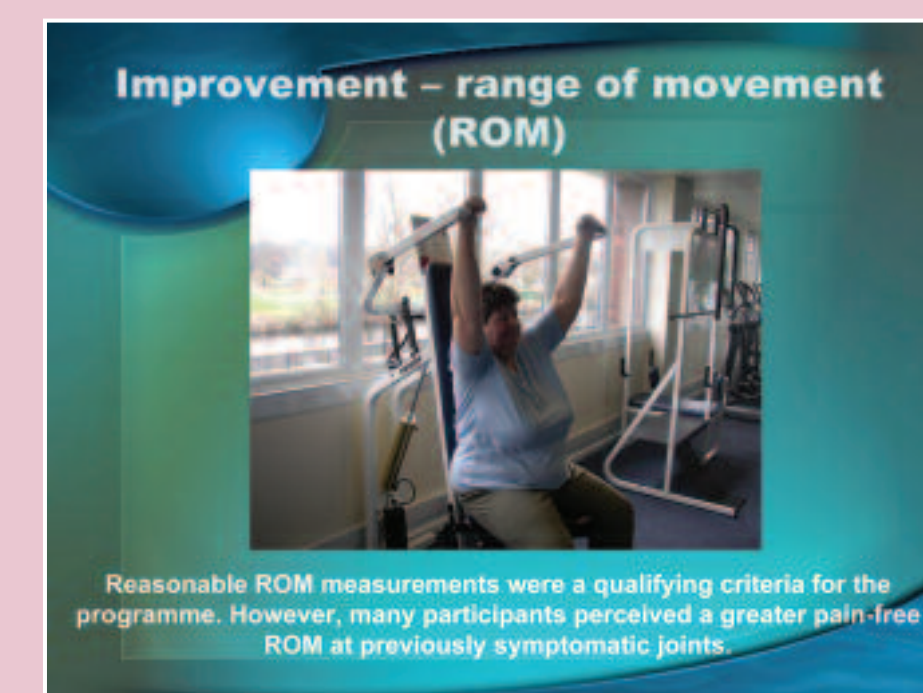
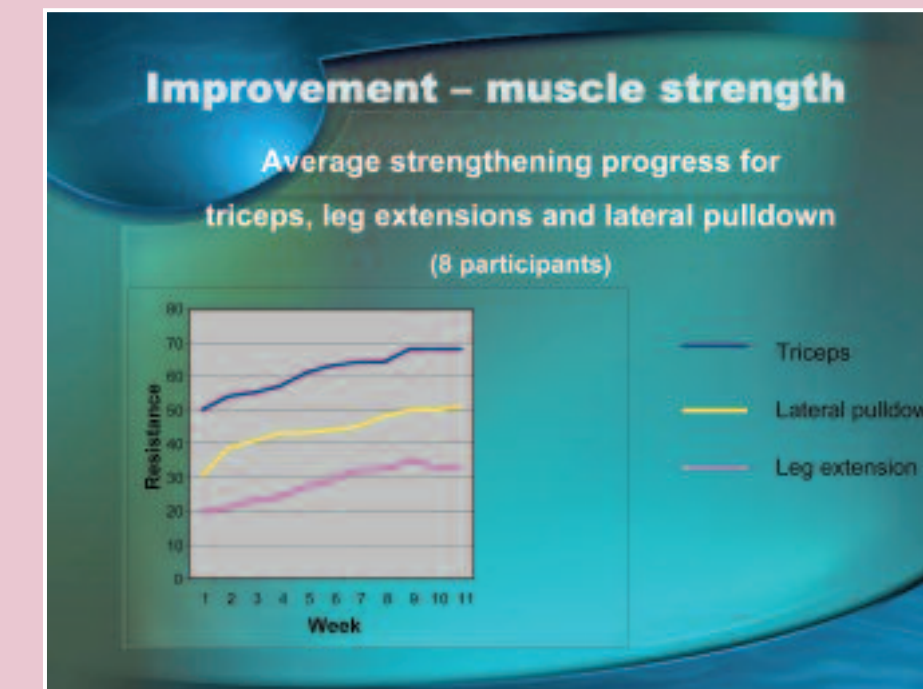
This was achieved by:

- Educating the instructors in a basic understanding of IJD, positioning and joint protection techniques
- Escorting the participants in small groups that were preplanned and structured
- Verbal and written handover of special considerations
- Continuing liaison, education and support.

Building a confident partnership



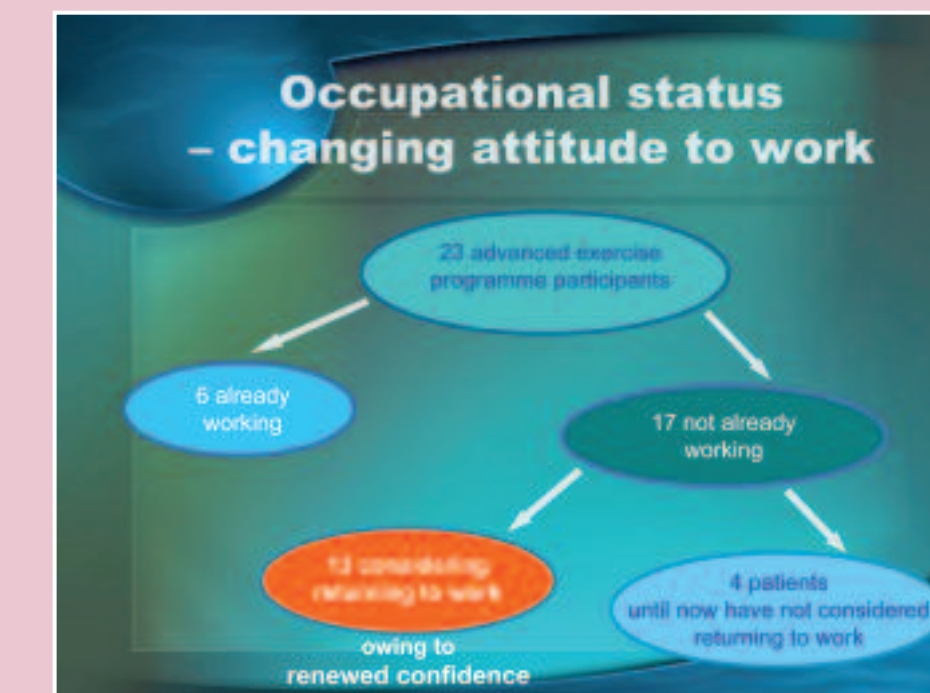
RESULTS



Advanced exercise programme – physiotherapy review

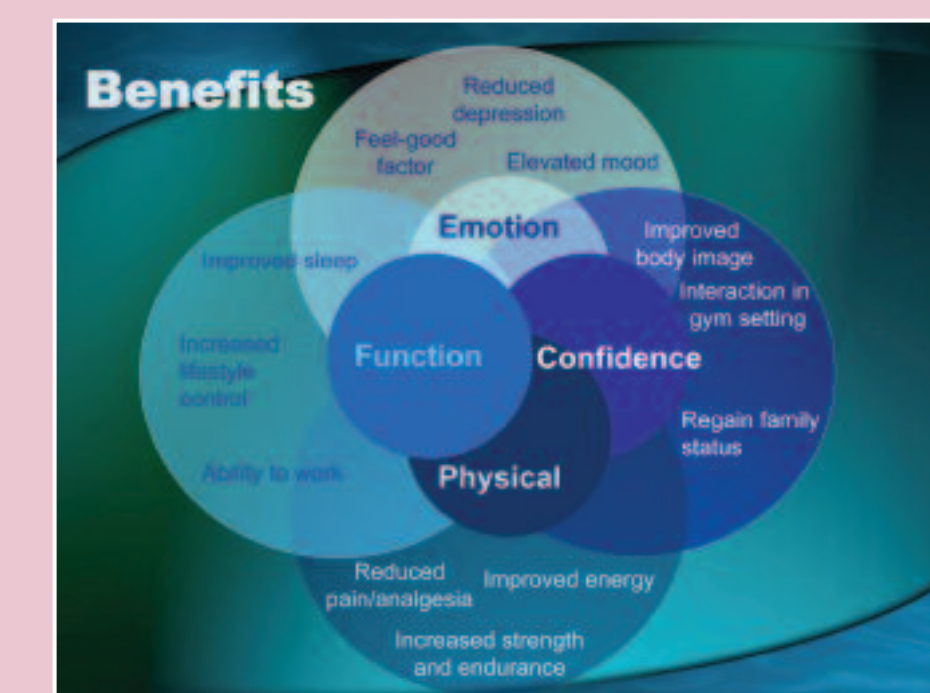
Participants established on the new advanced exercise programme were reassessed by the referring senior physiotherapist to ascertain the following:

- Changes in family status and social circumstances
- Understanding and use of extended pacing and joint protection concepts
- Recognition and management by the participant of new joint symptoms
- Sleep and energy levels
- Confidence and motivation
- Occupational status
- Additional medical intervention.



Added-value results – examples

- 61% were able to reduce their analgesia
- No evidence of joint flares caused by advanced exercises
- Previously booked joint injections could be cancelled
- Improved physical fitness led to increased confidence to cope with planned surgery



CONCLUSIONS

Success of the programme

Despite the validation and support of previous research, these vulnerable patients were enrolled in the fitness centre programme with caution.

Progress was possible because of our confidence in:

- The participants' stable disease status and confirmed self-management skills
- The fitness centre instructors' knowledge and enthusiasm
- A three-way effective partnership which allowed good communication, motivation and mutual support
- The state-of-the-art equipment, including Keiser weight resistance.

The anticipated benefits of increased ROM, strength and endurance were achieved.

However, many additional and unexpected benefits such as improved body image, general health aspirations and participation of family units, added new and deeper dimensions to the success of the programme.

It must be highlighted that the participating group included a broad spectrum of IJD patients, including:

- Primary income providers, some of whom were unable to work and experienced loss of self-esteem as a result of this
- Young professionals who had completed training courses and had promising careers ahead of them, but who were now having to consider retraining
- Parents with demands of a young family and home to manage
- Newly retired people who had worked hard and had looked forward to an active retirement.

Most participants experienced frustration, loss of confidence in their own bodies, lack of self-esteem, guilt, anger and anxiety at their loss of control.

The post-exercise review highlighted the unexpected changes in attitude brought about by the advanced exercise programme in the fitness centre.

- Most participants regained a sense of control, and previous plans were considered possible
- Physical and psychological limits were redefined
- Many participants were even keen to expand their programme further still to include other

equipment such as 'gym balls' and set programmes such as Pilates

- This renewed confidence in their physical abilities reduced their anxieties and increased their body image and self-esteem
- They were able to regain status in all aspects of their lives
- Many have continued to attend the fitness centre and encouraged other family members to join them
- Some participants have undertaken voluntary work and seen this as a stepping stone towards returning to paid employment

Recommendations

This project demonstrates an innovative response to the wider needs of patients with IJD, in the modern healthcare setting.

We suggest that the following measures be considered keys to success:

- A comprehensive traditional multidisciplinary team (MDT) package of care for IJD is an essential requirement
- The advanced exercise programme should be seen as an extension to the care package
- Careful selection of patients is imperative
- Strong links with community fitness centres must be nurtured to achieve working partnerships, three-way communication and trust
- Comprehensive and relevant education of both patient and instructor is paramount to safety
- All paperwork, such as referrals and disclaimers, must conform to local standards.

References

1. Van Den Ende CH, Vliet Vlieland TP, Munneke M, Hazes JM. Dynamic exercise therapy for rheumatoid arthritis. *Cochrane Database Syst Rev* 2000; (2): CD000322.
2. Neuberger GB, Press AN, Lindsley HB et al. Effects of exercise on fatigue, aerobic fitness, and disease activity measures in persons with rheumatoid arthritis. *Res Nurs Health* 1997; 20: 195-204.
3. Hakkinen A, Hannonen P, Nyman K, Lyyksi T, Hakkinen K. Effects of concurrent strength and endurance training in women with early or longstanding rheumatoid arthritis: comparison with healthy subjects. *Arthritis Rheum* 2003; 49: 789-797.
4. Hakkinen A, Soikka T, Kotaniemi A et al. Dynamic strength training in patients with early rheumatoid arthritis: increases muscle strength but not bone mineral density. *J Rheumatol* 1999; 26: 1257-1263.
5. Minor MA, Kay DR. Arthritis. In: Durstine JL (ed). *ACSM's exercise management for persons with chronic diseases and disabilities*. Illinois: Human Kinetics, 1997: 149-154.
6. O'Grady M, Fletcher J, Ortiz S. Therapeutic and physical fitness exercise prescription for older adults with joint disease: an evidence-based approach. *Rheum Dis Clin North Am* 2000; 26: 617-646.
7. Roubenoff R. Exercise and inflammatory disease. *Arthritis Rheum* 2003; 49: 263-266.