



Policy Position Paper

Physical Activity and Musculoskeletal Health



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ARMA is the umbrella organisation for the UK musculoskeletal community. Our member organisations are:

Acupuncture Association of Chartered Physiotherapists (AACP)	Institute of Osteopathy (iO)
Arthritis Action	Lupus UK
Arthritis Care	Musculoskeletal Association of Chartered Physiotherapists (MACP)
Arthritis Research UK (AR UK)	Myositis UK
BackCare	National Ankylosing Spondylitis Society (NASS)
British Acupuncture Council (BAC)	National Osteoporosis Society (NOS)
British Association of Sport & Exercise Medicine (BASEM)	National Rheumatoid Arthritis Society (NRAS)
British Chiropractic Association (BCA)	Podiatry Rheumatic Care Association (PRCA)
British Medical Acupuncture Society (BMAS)	Polymyalgia Rheumatica & Giant Cell Arteritis UK (PMRGCA UK)
British Orthopaedic Association (BOA)	Primary Care Rheumatology Society (PCRS)
British Society for Rheumatology (BSR)	Repetitive Strain Injury (RSI) Action
British Society of Rehabilitation Medicine (BSRM)	Royal College of Chiropractors (RCC)
Chartered Society of Physiotherapy (CSP)	Royal College of Nursing (RCN) Rheumatology Forum
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College of Podiatry (COP)	The Society of Musculoskeletal Medicine (SOMM)
Ehlers-Danlos Support UK (EDS UK)	UK Gout Society
Faculty of Sport & Exercise Medicine (FSEM)	
Fibromyalgia Action UK (FMA UK)	
Hypermobility Syndromes Association (HMSA) UK	

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The contents of this document and further resources including contact details for our member organisations and further information about our work are available on the ARMA website at www.arma.uk.net.

Physical Activity and Musculoskeletal Health

In brief:

Musculoskeletal conditions now account for the largest cause of disability globally and in the United Kingdom.¹ The musculoskeletal community share a common vision: ***a world free of the pain and disability of musculoskeletal conditions; a world where people of all ages can enjoy good musculoskeletal health.***

A transformation is now needed so that the health and care system goes beyond tackling musculoskeletal conditions when they arise, to promoting lifelong good musculoskeletal health. At every age people should be supported to maintain and improve the health of their joints, bones and muscles. Prompt advice, education and physical activity are key to this, enabling people to live not only long, but also well.

Role of physical activity in good musculoskeletal health

Physical activity must be at the core of any public health approach to musculoskeletal health. Remaining active is one of the best things anyone can do for their musculoskeletal health, to help strengthen muscles, keep bones healthy, reduce pain and prolong the life of joints. Everyone can benefit from some form of physical activity, including people with a musculoskeletal condition. Initiatives aimed at increasing physical activity should always explicitly refer to the musculoskeletal health benefits.ⁱⁱ

The facts: prevention

Primary prevention

Healthy physical activity improves musculoskeletal health. A wide range of physical activities have been shown to be beneficial in reducing overall risk of musculoskeletal pain and disability. These include swimming, walking, cycling and running.ⁱⁱⁱ Regular physical activity may even reduce the risk of developing painful osteoarthritis, particularly in women.^{iv} High levels of walking are associated with a reduced need for hip replacement surgery.^v

Secondary prevention

For people who have already developed a painful musculoskeletal condition, engaging in appropriate physical activity reduces pain intensity, improves quality of life and prevents further disability.^{vi} Indeed, in the case of some conditions such as axial spondyloarthritis including ankylosing spondylitis, regular exercise is not just a recommendation, but a core part of treatment. Engaging in physical activity generally reduces overall pain. This includes aerobic activity such as walking or swimming,^{vii} as well as other forms of exercise such as t'ai chi or Pilates.^{viii} For particular musculoskeletal condition, specific types of strengthening exercises are also beneficial. For example, exercises to strengthen quadriceps muscles may be particularly helpful for people with knee pain due to osteoarthritis.^{ix}

8.75 million people in the UK have sought treatment for osteoarthritis.^x National Institute for Care and Excellence Clinical Guideline 177^{xi} osteoarthritis: care and management advises people with osteoarthritis to exercise as a core treatment irrespective of age, comorbidity, pain severity or disability. Exercise should include:

- Local muscle strengthening and
- General aerobic fitness.

The guideline also emphasises that the clinicians should advise based on individual needs, circumstances and self-motivation.

Barriers to people with musculoskeletal conditions in undertaking physical activity

Physical activity can improve individual wellbeing in many ways beyond just the physical benefits; it can boost mental health by reducing stress and improving self-confidence and is a good way to socialise. However, there are lots of myths around physical activity such as that it will only make pain and discomfort worse (often due to mobility issues) and that it is always better to rest. People who mistakenly fear that physical activity or work will exacerbate their problem are at increased risk of long-term pain and disability.^{xii} Education and information are needed to ensure that the full benefits of exercise are realised for people living with arthritis.

People with musculoskeletal conditions may have differing levels of ‘patient activation’. Patient activation is a measure of a person’s skills, confidence and knowledge to manage and cope with their health,^{xiii} including the motivation to be physically active.

While some people may find it difficult to do significant levels of exercise, even a small amount of exercise can make a difference (see Resources section below).

These are some of the ‘**internal**’ barriers to physical activity as they relate directly to the symptoms experienced by people with musculoskeletal conditions and can be summarised as:

- Pain
- Mobility/dexterity
- Fatigue
- Motivation/patient activation

In addition, there are also ‘**external**’ barriers such as:

- Time
- Accessibility
- Practically (lack of suitable facilities)
- Cost

Stratification of physical activity for people with musculoskeletal conditions

It is essential to help people with musculoskeletal conditions overcome these barriers by dispelling the myths and the idea that exercise is something negative or harmful and ensuring that advice on how to exercise is tailored to individual needs. This is particularly important in secondary prevention where we know that appropriate physical activity can reduce pain intensity and improve quality of life.

Arthritis Research UK in partnership with the DH, PHE, NHS England is currently developing a commissioning document to establish best practice for the management of musculoskeletal health through physical activity which provides a series of interventions for people with musculoskeletal conditions.

This can be thought of as four tiers:

- Individualised support (physiotherapy, sports and exercise medicine)
- Structured community rehabilitation programmes (physiotherapy, level 4 fitness instructors, intervention programmes)
- Supervised physical activity (e.g. aqua-aerobics, t'ai chi, walking groups)
- Accessible community facilities (e.g. open spaces, active transport, swimming baths)

Examples of intervention programmes designed specifically with the needs of people with musculoskeletal conditions in mind include:

- Enabling Self-management and Coping with Arthritic Pain using Exercise (ESCAPE)^{xiv}
- Cycling Against Hip Pain (CHAIN)^{xv}
- Active Futures^{xvi} (for children with Ehlers-Danlos syndrome)
- National Ankylosing Spondylitis Society (NASS) branches – regular and affordable hydrotherapy and gym sessions led by a fully qualified physiotherapist for people with axial spondyloarthritis including ankylosing spondylitis

Messaging for the general public

In their recent publication *Towards an Active Nation: Strategy 2016-21*^{xvii} Sport England made it their ambition that “Everyone, regardless of their age, background or level of ability feels able to engage in sport and physical activity. Although anyone can be inactive, there are some groups in society who are less likely to take part regularly.”

Sport England aims to address the needs of these groups, including “women and girls, people from lower socio-economic groups, older people, disabled people; people from particular ethnic groups, and those with long-term health conditions”.^{xviii}

Sport England recognise the scale of the challenge “We must not underestimate how difficult it can be to make this change. If sport and physical activity is not on your radar, it is likely to take both time and some tailored support to get involved, and even longer to create a resilient habit.”^{xix}

Messaging for people with long term conditions (including musculoskeletal conditions)

Research conducted on behalf of the Richmond Group in April 2016^{xx} by Britain Thinks gives insights into messaging that resonated with people with long-term conditions in helping them overcome barriers to physical activity.^{xxi} The research included both a qualitative and quantitative sample that included people with multiple long term conditions who had differing levels of physical activity.^{xxii}

The research revealed that “people with long term conditions often have the attitude that both exercise and physical activity are seen as ‘not for people like me.’ However, whilst the broad understanding of both are similar, the negative connotations (e.g. pain) of ‘exercise’ are slightly more dominant.” Public health messages that are overly prescriptive, instructive, make assumptions about people’s conditions or set unrealistic expectations (such as getting fit) will not cut through.

It is therefore important that messaging is positive, encouraging and inclusive. In the words of one respondent to the insights survey:

“Gradually build up physical activity, one step at a time”

Below is a list of what makes successful messages based on the research insights:

Successful messages speak to everyone, regardless of ability or demographic

- Provide reassurance that anyone can do physical activity
- Do not specifically single out the very incapacitated
- Encourage those who may have given up
- Use inclusive, unintimidating language e.g. “everyone”, “active” or

“mobile”

Successful messages combine positivity with realism to sound credible

- Communicate the health benefits of physical activity
- Recognise that some people’s ability to engage may be limited
- Provide reassurance that even a small amount of physical activity will bring benefits
- Setting the bar low (e.g. “just 10 minutes a day”) ensures that the very inactive are not “frightened off”
- Use concrete suggestions for actions they could take e.g. walking to the bus stop

Successful messages speak to people’s aspirations for their own lives

- Recognise that, in addition to health, people with long term conditions might have a range of reasons for wanting to be more active
- Being able to remain independent
- Being able to spend time with their families
- Tap into these aspirations to motivate people.

Recommendation for policy makers

1. **When assessing local and national population health, musculoskeletal conditions must be included in the assessment.** This should describe the needs of people living with musculoskeletal conditions and explore opportunities to promote good musculoskeletal health amongst the population.
2. **When designing, implementing and evaluating programmes targeting physical inactivity, the impact on musculoskeletal health should be explicitly included.** People with joint, muscle or back pain should have equitable access to these programmes and public health teams must ensure that joint or back pain is not seen by professionals or the public as a barrier to participation.
3. **When developing health promotion messages, the benefits of physical activity to people with musculoskeletal conditions should be emphasised.** Common misunderstandings should be challenged, including that nothing can be done if you have arthritis or back pain that rest is beneficial for painful musculoskeletal conditions, or that physical activity is inherently harmful for people living with these conditions.
4. **Everyone can do something to improve and maintain the health of their bones, joint muscles and spine, at every age.** It is never too late to start taking up physical activity and there should be no fear of participation.^{xxiii}

Musculoskeletal health assessments and audits

Musculoskeletal health outcomes should be a core part of routine health assessments.

- **The Arthritis Research UK Musculoskeletal Health Questionnaire (MSK HQ)** allows people with musculoskeletal conditions (including arthritis and back pain) to report their symptoms and quality of life in a standardised way, including their ability to undertake physical activity. It was developed jointly by the Arthritis Research UK Primary Care Sciences Research Centre at Keele University and the University of Oxford, alongside active participation and feedback from people with arthritis and musculoskeletal conditions, clinicians and academics.

In addition:

Specifically for rheumatoid and inflammatory forms of arthritis:

- **National Clinical Audit for rheumatoid and early inflammatory arthritis.** The audit is intended to help clinicians improve their quality of care for patients, and facilitate negotiations with their employers and commissioners to improve services. http://www.rheumatology.org.uk/resources/audits/national_ra_audit/
- **RAID score** – the Rheumatoid Arthritis Impact of Disease score which is a tool for measuring patient outcomes, which include various domains on pain, function, fatigue and well-being.

Specifically for back pain:

- **The Keele StarT Back Screening Tool (SBST)** is a simple prognostic questionnaire that helps clinicians identify modifiable risk factors (biomedical, psychological and social) for back pain disability. The resulting score stratifies patients into low, medium or high risk categories. For each category there is a matched treatment package. This approach has been shown to reduce back pain related disability and be cost-effective <https://www.keele.ac.uk/sbst/startbacktool/>

Useful documents and resources

- Chartered Society of Physiotherapy: public opinion survey - evidence of myths about how to manage back pain, Frontline (media) articles. www.csp.org.uk
- Arthritis Care information on exercise and arthritis: <https://www.arthritiscare.org.uk/managing-arthritis/diet-and-exercise/exercise-and-arthritis>
- Lupus: tips, advice and experiences from patients, plus blog <http://www.lupusuk.org.uk/lupus-and-exercise/>
- NASS: Large exercise section on website <http://nass.co.uk/exercise/exercise-for-your-as/>
- National Rheumatoid Arthritis Society: Exercise information online <http://www.nras.org.uk/exercise>
- Arthritis Research UK:
 - o 'Musculoskeletal health: a public health approach' report: <http://www.arthritisresearchuk.org/policy-and-public-affairs/public-health.aspx>
 - o Exercise and arthritis: <http://www.arthritisresearchuk.org/arthritis-information/arthritis-and-daily-life/exercise-and-arthritis.aspx>
- Chief Medical Office guidance on physical activity: <https://www.gov.uk/government/publications/uk-physical-activity-guidelines>
- Department of Health: Start Active, Stay Active infographics on physical activity <https://www.gov.uk/government/publications/start-active-stay-active-infographics-on-physical-activity>

Opportunities for future work

Physical inactivity presents a huge challenge to the musculoskeletal and the Public Health community. However, there are also great opportunities for us to work collaboratively to understand more about successful physical activity messages with both the general population and the ten million people who have MSK conditions.

We will continue to look for ways to influence and improve public health messaging and opportunities for innovative interventions and programmes.

References

- i Arthritis Research UK (2014) Musculoskeletal Health, A Public Health Approach
- ii Arthritis Research UK (2014) Musculoskeletal Health, A Public Health Approach
- iii Hart DJ et al (1999). Incidence and risk factors for radiographic knee osteoarthritis in middle-aged women: the Chingford Study. *Arthritis Rheum* 42 (1): 17-24
- iv Heesch KC et al. (2007) Relationship between physical activity and stiff or painful joints in mid-aged and older women: a 3-year prospective study. *Arthritis Res* 9(2): R34
- v Ageberg E et al (2012) Effect of leisure time physical activity on severe knee or hip osteoarthritis leading to total joint replacement: A population-based prospective cohort study. *BMC Musculoskeletal Disorders* 13
- vi Deyo RA et al (1986). How many days of bed rest for acute low back pain? A randomized clinical trial. *N Eng J Med* 315(17): 1064-70
- vii Lowe L et al (2012). Ottawa panel evidence-based clinical practice guidelines for aerobic walking programs in the management of Osteoarthritis. *Archives of Physical Medicine and Rehabilitation* 93(7): 1269-85
- viii Kovar P A et al (1992) Supervised fitness walking in patients with osteoarthritis of the knee. A randomized, controlled trial. *Ann intern*
- ix Roddy et al (2005) Aerobic walking or strengthening exercise for osteoarthritis of the knee? A systematic review. *Ann Rheum Dis* 64(4): 544-548
- x Arthritis Research UK (2013) Osteoarthritis in general practice
- xi <https://www.nice.org.uk/guidance/CG177/chapter/1-Recommendations#non-pharmacological-management-2>
- xii Arthritis Research UK (2014) Musculoskeletal Health, A Public Health Approach
- xiii <https://www.england.nhs.uk/2014/05/patient-activation/>
- xiv <http://www.escape-pain.org/>
- xv http://www.rbch.nhs.uk/our_services/support_services/communications/latest_news/2013/24092013.php
- xvi <http://www.active-futures.org.uk/>
- xvii Sport England Strategy 2016-21 <https://www.sportengland.org/media/10629/sport-england-towards-an-active-nation.pdf>
- xviii Ibid
- xix Ibid
- xx People with long-term conditions and attitudes towards physical activity. Research conducted on behalf of the Richmond Group by Britain Thinks. March 2016

References

^{xxi} Full list of conditions listed below. Many of these conditions were present in multiple participants.

- Heart disease
- Arthritis
- Calcific tendonitis
- Overactive thyroid
- Asthma
- Diabetes
- CVID
- Kidney disease
- Osteoporosis
- Chronic back pain
- Depression
- Essential benign tremors
- Eczema
- Cancer
- Bulimia
- Anxiety
- Psychosis
- Multiple sclerosis
- Cerebral palsy
- Crohn's disease

^{xxii} The research included: 8 depth interviews (6 with people with multiple long term conditions (LTCs) who never / rarely exercise, 2 with people who are close to someone with multiple LTCs). 5 focus groups (4 groups with people with LTCs who never / rarely exercise, 1 group with people close to someone with an LTC) & an online poll with 323 respondents.

^{xxiii} Arthritis Research UK (2014) Musculoskeletal Health, A Public Health Approach



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