



Public Health  
England

# Musculoskeletal Health: Current Awareness Update

August 2021

Welcome to the monthly **Musculoskeletal Health Current Awareness Update** (MSKH-CAU), produced by [PHE Knowledge and Library Services](#) and the [Musculoskeletal Health](#) team. The purpose of this update is to provide the latest research to inform future policy and practice to support the prevention of Musculoskeletal (MSK) conditions.

Public Health England, jointly with NHS England, Versus Arthritis and partners, published the [Musculoskeletal Health: 5 Year Prevention Strategic Framework](#), setting out a clear statement of commitments to promote good MSK health to prevent MSK conditions across the life course. The MSKH-CAU resource will provide evidence and knowledge to support the decisions made by health and social care professionals, the wider public health workforce and employers.

To receive these Current Awareness Updates regularly, sign-up [here](#).

Please note that not all the articles and resources referred to in this alert are freely available. Some articles may require an Athens username and password, and for PHE and NHS staff, these can be obtained [here](#). If you do not work for PHE or the NHS, you may want to approach your [local health library service](#) to discuss how you may have access to library services.

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- [Prevention of MSK conditions across the life course](#)
- [Living well with MSK conditions](#)
- [MSK in child and adolescent health](#)
- [MSK and multi-morbidity](#)
- [MSK Health and inequalities](#)
- [MSK Health and nutrition](#)
- [MSK Health and workplace wellbeing](#)
- [MSK Health communication](#)

## Prevention of MSK conditions across the life course

[Knee pain in young adult women- associations with muscle strength, body composition and physical activity](#)

22 Aug 2021

CONCLUSION: Knee pain is already common among women in their mid-thirties. Lower thigh muscle strength in the mid-twenties was not associated with future knee pain, however women with knee pain tended to have lower thigh muscle strength and a body composition of higher body fat combined with lower lean mass

[The Prospective Prognostic Value of Biopsychosocial Indices of Sensitivity to Physical Activity Among People With Back Pain](#)

22 Aug 2021

OBJECTIVES: Many people living with musculoskeletal pain conditions experience a range of negative biopsychosocial responses to physical activity, referred to as increased sensitivity to physical activity (SPA), that may undermine successful rehabilitation

[Exercise interventions can improve muscle strength, endurance, and electrical activity of lumbar extensors in individuals with non-specific low back pain: a systematic review with meta-analysis](#)

20 Aug 2021

Exercise interventions have been recommended for people with non-specific low back pain. The literature is scarce regarding the effects of exercise on muscle strength, endurance, and electrical activity of lumbar extensor muscles. Electronic searches were carried out from May 2020 until August 2020 in the following databases: PUBMED, CENTRAL, EMBASE, PEDro, SPORTDiscus, Scielo, and LILACS

[Providing easier access to community-based healthcare for people with joint pain: Experiences of delivering ESCAPE-pain in community venues by exercise professionals](#)

10 Aug 2021

CONCLUSIONS: ESCAPE-pain delivered in community venues facilitated access to better care and on-going support. Partnerships between healthcare commissioners and community providers maximised efficient use of their facilities and resources and fulfilled national policy of encouraging self-management of long-term conditions in the community.

[Predictors of health-related quality of life in musculoskeletal disease patients: a longitudinal analysis](#)

09 Aug 2021

CONCLUSION: We have identified several diagnoses, treatments, and comorbidities independently associated with HRQoL in a cohort of outpatients attending a rheumatology clinic.

[Yoga for treating low back pain: a systematic review and meta-analysis](#)

30 Jul 2021

Yoga is frequently used for back pain relief. However, evidence was judged to be of only low- or moderate. To assess the efficacy and safety of yoga in patients with low back pain a meta-analysis was performed. Therefore Medline/PubMed, Scopus, and the Cochrane Library was searched to May 26 2020

[Empirical study of the 30-s chair-stand test as an indicator for musculoskeletal disorder risk of sedentary behaviour in Japanese office workers: a cross-sectional empirical study](#)

26 Jul 2021

CONCLUSIONS: Sensitivity was high, but specificity was insufficient. The CS-30 may be a potential proactive screening index for musculoskeletal disorder risk of sedentary behaviour, in combination with other indicators.

[Common reported barriers and facilitators for self-management in adults with chronic musculoskeletal pain: A systematic review of qualitative studies](#)

20 Aug 2021

CONCLUSION: Learning to self-manage for patients in chronic pain required ongoing support either from healthcare practitioners or from social circles. To further assist the self-management process practitioners can improve self-efficacy through increasing patient knowledge of chronic pain, utilising goal setting and finding ways an individual can access ongoing support, either from the

[Move to health-a holistic approach to the management of chronic low back pain: an intervention and implementation protocol developed for a pragmatic clinical trial](#)

19 Aug 2021

BACKGROUND: The prevalence of chronic pain conditions is growing. Low back pain was the primary cause of disability worldwide out of 156 conditions assessed between 1990 and 2016, according to the Global Burden of Disease Study

[A process evaluation of the Mind Your Back trial examining psychologically informed physical treatments for chronic low back pain](#)

18 Aug 2021

CONCLUSION: It is important to deliver tailored digital health supports that is personalised and fosters a therapeutic alliance.

[Changes in body weight and knee pain in adults with knee osteoarthritis 3.5 years after completing diet and exercise interventions](#)

09 Aug 2021

OBJECTIVE: To determine whether long-term diet (D) and exercise (E) interventions, alone or in combination (D+E), have beneficial effects for older adults with knee osteoarthritis 3.5-years after the interventions end.

[Combined effects of lifestyle and psychosocial factors on central sensitization in patients with chronic low back pain: A cross-sectional study](#)

18 Aug 2021

CONCLUSIONS: In this study, we clarified that perceived stress and anxiety were correlated with central sensitization in patients with chronic low back pain. In addition, sleep quality mediates anxiety and may be associated with central sensitization.

[Prevalence of primary osteoporosis and low bone mass in postmenopausal women and related risk factors](#)

16 Aug 2021

CONCLUSIONS: Given the high prevalence of primary osteoporosis and low bone mass in postmenopausal women, health education is necessary for preventing modifiable risk factors and reducing the complications of this disease.

[Comparison of a Single-Session Pain Management Skills Intervention With a Single-Session Health Education Intervention and 8 Sessions of Cognitive Behavioral Therapy in Adults With Chronic Low Back Pain: A Randomized Clinical Trial](#)

16 Aug 2021

CONCLUSIONS AND RELEVANCE: Among adults with CLBP, a single-session pain management class resulted in clinically significant improvements in pain catastrophizing, pain intensity, pain interference, and other secondary outcomes that were noninferior to 8-session CBT at 3 months.

[Pilates-based core exercise improves health-related quality of life in people living with chronic low back pain: A pilot study](#)

15 Aug 2021

CONCLUSIONS: An 8-week supervised Pilates-based core exercise program is an effective therapeutic modality for improving self-perceived health status in patients with chronic low back pain. This finding could inform clinicians of better alternatives when they suggest exercise interventions for chronic low back pain.

[Different pain variables could independently predict anxiety and depression in subjects with chronic musculoskeletal pain](#)

13 Aug 2021

CONCLUSIONS: This study showed that two different independent variables, the influence of pain on daily activities and the number of pain locations, significantly predicted the levels of depression. The predictor, the influence of pain on daily activities, significantly predicted the levels of anxiety

[Lifestyle Medicine for Chronic Lower Back Pain: An Evidence-Based Approach](#)

09 Aug 2021

Lower back pain is a leading cause of work absence and activity limitations globally, with a 60% to 85% lifetime chance of occurrence. This article highlights the role that lifestyle medicine plays in managing lower back pain as a cost-effective intervention strategy

[The effect of video exercise-based telerehabilitation on clinical outcomes, expectation, satisfaction, and motivation in patients with chronic low back pain](#)

06 Aug 2021

CONCLUSIONS: The video exercise-based telerehabilitation software positively affects clinical parameters and adherence to rehabilitation in patients with CLBP.

[Comparing an e-Health program vs home rehabilitation program in patients with non-specific low back pain: A study protocol randomized feasibility trial](#)

26 Jul 2021

CONCLUSIONS: The e-Health programs could be an effective healthcare tool that can reach a large number of people living in rural or remote areas.

## MSK in child and adolescent health

[Backpack improper use causes musculoskeletal injuries in adolescents: A systematic review](#)

16 Aug 2021

CONCLUSION: The results of this review study specified that improper use of the backpack, which exceeded the standard weight, caused chronic pain and injuries between both genders of adolescents. The generalizability of the results is suitable for this review study.

[Motor performance and back pain in children and adolescents: a systematic review](#)

08 Aug 2021

BACKGROUND AND OBJECTIVE: Motor performance during childhood and adolescence is recognized as a relevant determinant of present and future health, but its effects on back pain (BP) remain unclear. In this systematic review, we aimed to identify the association between motor performance and BP in children and adolescents.

[Influence of commuting methods on low back pain and musculoskeletal function of the lower limbs in elementary school children: A cross-sectional study](#)

04 Aug 2021

CONCLUSIONS: The decreased walking duration and increased sitting duration associated with vehicle commuting had little effect on lower limb morphology but could induce lower limb dysfunction and low-back pain in children. Thus, supplemental walking should be instated for children who commute by car.

[A matter of choice: Should students self-select exercise for their nonspecific chronic low back pain? A controlled study](#)

17 Aug 2021

CONCLUSIONS: Autonomy may serve as a factor to enhance treatment adherence and clinical outcomes of ET for NSCLBP among students.

## MSK and multi-morbidity

[The Relationship between Muscle Size, Obesity, Body Fat Ratio, Pain and Disability in Individuals with and Without Non-Specific Low Back Pain](#)

11 Aug 2021

Patients with non-specific low back pain (NSLBP) may face motor control problems and health disability barriers during various tasks. However, studies investigating the extent of these disadvantages, and possible associated factors are quite limited in patients with NSLBP. To compare motor control performances and physical assessment domains between patients with NSLBP and asymptomatic controls

[The effect of dancing interventions on depression symptoms, anxiety, and stress in adults without musculoskeletal disorders: An integrative review and meta-analysis](#)

06 Aug 2021

CONCLUSIONS: This review indicates that dancing interventions significantly reduce depression symptoms, stress, and anxiety; and adults with or without musculoskeletal disorders would benefit from engaging in a dancing intervention for at least 150 min per week. Dancing interventions are recommended to be incorporated in health promotion activities to promote psychological wellbeing.

## MSK Health and inequalities

[Attitudes and beliefs of older adults with acute low back pain: 12-month results from the Brazilian cohort back complaints in the elders](#)

11 Aug 2021

CONCLUSION: Ageing, hopelessness, and physical and functional impairment impact pain-related behaviours among older patients seeking healthcare due to acute LBP complaints. Their screening may assist in strategies to manage symptoms and prevent the persistence of pain.

## MSK Health and nutrition

### [Vitamin D and bone health in adults: a systematic review and meta-analysis](#)

11 Aug 2021

Low bone health is associated with vitamin D deficiency in older individuals; however, this association is not well established in adults. The aim of the study was to analyze the association between serum concentrations of 25-hydroxyvitamin D and bone health in adults by systematic review and meta-analysis

### [Vitamin D in athletes: focus on physical performance and musculoskeletal injuries](#)

27 Jul 2021

**CONCLUSION:** Vitamin D is a potential nutritional factor that can significantly affect physical performance and musculoskeletal injuries in athletes. The importance and role of vitamin D in athletes should be emphasized, and the current levels of vitamin D should be assessed. Therefore, it is essential to periodically evaluate and monitor serum vitamin D levels in athletes.

## MSK Health and workplace wellbeing

### [Does work-family conflict play a role in the relationship between work-related hazards and musculoskeletal pain?](#)

30 Jul 2021

**CONCLUSIONS:** Addressing the work-life interface is worthy of further investigation as a legitimate means through which musculoskeletal pain can be reduced. Musculoskeletal risk management strategies need to include risk factors related to the work-life interface, along with those related to physical and psychosocial work-related hazards.

### [Assessing the Work Activities Related to Musculoskeletal Disorder among Critical Care Nurses](#)

26 Jul 2021

Nurses are physically exhausted with an incidence of work-related musculoskeletal disorders (MSDs), especially those working in critical care units that require exhaustive physical efforts to fulfill patients' needs. The current study aims to assess work activities related to the occurrence of MSDs in nurses working in critical care units.

## MSK Health communication

### [Validity and reliability of the Norwegian version of the Musculoskeletal Health Questionnaire in people on sick leave](#)

04 Aug 2021

**CONCLUSIONS:** The Norwegian version of the MSK-HQ demonstrated high internal consistency, a three-factor structure, good construct validity and good test-retest reliability when used among people on sick leave due to musculoskeletal disorders.

### [Telehealth e-mentoring in postgraduate musculoskeletal physiotherapy education: A mixed methods case study](#)

20 Aug 2021

**CONCLUSIONS:** Telehealth e-mentoring is a valuable alternative to face-to-face mentored physiotherapy practice to support development in advanced musculoskeletal physiotherapy practice. Findings indicate that technical and professional skills are required, high levels of communication skills were valued, there is a need for reconceptualisation of musculoskeletal physiotherapeutic interventions.