



# Musculoskeletal Health: Current Awareness Update

March 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

[Development, spread and impact of primary care and musculoskeletal communities of practice to assist rapid translation of evidence into practice](#)

23 Mar 2021

CONCLUSION: The CoP model encourages the rapid translation of evidence into practice by engaging staff to identify areas of clinical concern in their own context, thereby stimulating their interest and involvement. This creates a meaningful link between research and practice. Clinical leadership and the CoP model ensure that practice change is quick and efficient

[Many physiotherapists lack preparedness to prescribe physical activity and exercise to people with musculoskeletal pain: A multi-national survey](#)

04 Mar 2021

CONCLUSION: Many physiotherapists lack knowledge and training to provide physical activity advice, and to prescribe aerobic exercise and resistance training to people with musculoskeletal pain

[A systematic review of movement and muscular activity biomarkers to discriminate non-specific chronic low back pain patients from an asymptomatic population](#)

13 Mar 2021

The identification of relevant and valid biomarkers to distinguish patients with non-specific chronic low back pain (NSCLBP) from an asymptomatic population in terms of musculoskeletal factors could contribute to patient follow-up and to evaluate therapeutic strategies. Several parameters related to movement and/or muscular activity impairments have been proposed in the literature in that respect

[Recommendations for shaping the future of low back pain prevention research](#)

27 Feb 2021

No abstract

[Osteopathic model of the development and prevention of occupational musculoskeletal disorders](#)

26 Feb 2021

CONCLUSIONS: The presented osteopathic model of the development and prevention of work-related musculoskeletal disorders suggests that a combination of preventive interventions will be more effective than any single preventive intervention.

[Remote Musculoskeletal Assessment Framework: A Guide for Primary Care](#)

25 Feb 2021

Introduction Remote consulting has exploded into primary care following the initial COVID-19 surge as a measure to reduce potential cross-infection (staff-patient or patient-patient). Musculoskeletal (MSK) conditions comprise up to 21% of the annual primary care caseload in England. Established techniques for MSK examination, however, rely on face-to-face attendance

[A review of the evolution of scientific literature on technology-assisted approaches using RGB-D sensors for musculoskeletal health monitoring](#)

15 Mar 2021

The human musculoskeletal (MSK) system (also known as the locomotor system) provides strength and assistance to perform functional tasks and daily life activities. The MSK health monitoring plays a vital role in maintaining the body mobility and quality of life. Manual approaches for musculoskeletal health monitoring are subjective and require a clinician's intervention.

## Living well with MSK conditions

### [Suffering in silence: a qualitative study of older adults' experiences of living with long-term musculoskeletal pain at home](#)

22 Mar 2021

Long-term musculoskeletal pain is a major, disabling, and often undertreated health problem among the increasing number of older adults worldwide. However, there is limited knowledge of community-dwelling older adults' experiences of living with this type of pain

### [Evidence for integrating exercise training into the multidisciplinary management of non-specific chronic low back pain](#)

26 Feb 2021

BACKGROUND: Worldwide, low back pain (LBP) is the leading cause of disability and affects 16% of the Australian population. Pain that lasts more than 12 weeks and is presumed lumbar musculoskeletal in origin is deemed non-specific chronic LBP. Managing LBP requires a multidisciplinary approach.

### [Managing Low Back Pain in Primary Care](#)

15 Mar 2021

Low back pain (LBP) is one of the most common pathologies for which patients present for consultation in primary medical practice. The objective of the study was to determine the number of patients with LBP who presented to the general practitioner 's (GP) office between October 2019 and March 2020, to determine risk factors, favoring factors and their correlation with clinical data obtained

### [eHealth interventions to support self-management in people with musculoskeletal disorders: a scoping review protocol](#)

16 Mar 2021

OBJECTIVE: The objective of this scoping review is to explore existing literature related to the role of eHealth interventions in supporting self-management in those with musculoskeletal disorders in order to investigate and chart the evidence, and identify any gaps within the literature.

### [Predictors of functional capacity as measured by the Glittre activities of daily living test in women with rheumatoid arthritis](#)

17 Mar 2021

Although pulmonary involvement is the most common extra-articular manifestation of rheumatoid arthritis (RA), traditional pulmonary function tests (PFTs) do not show a good correlation with the field tests usually performed in these patients

## MSK in child and adolescent health

### [Prevalence of Low Back Pain and Associated Risks in School-Age Children](#)

02 Mar 2021

CONCLUSION: LBP is prevalent in younger schoolchildren, and the factors associated with this outcome can be effectively addressed through the promotion of health measures. LBP in schoolchildren is a musculoskeletal discomfort that negatively affects the quality of life of these individuals and persists in adulthood.

### [Lifetime prevalence of non-specific low back pain in adolescents: a cross-sectional epidemiological survey](#)

19 Feb 2021

CONCLUSION: In a large sample of adolescents, LBP lifetime prevalence is high and often associated with disabling pain and sedentary lifestyle, requiring professional care. These findings may support the development of prevention and treatment strategies of LBP in adolescents, reducing the risk of developing chronic pain.

### [Are psychological symptoms a risk factor for musculoskeletal pain in adolescents?](#)

03 Mar 2021

Adolescent musculoskeletal pain is common and is associated with musculoskeletal pain in adulthood. Psychological symptoms, also common in adolescence, have been shown to be associated with musculoskeletal pain, but the current evidence is mixed and may be dependent on effect modifiers

### [An Alternative Model of Care for the Treatment of Adolescent Athletes with Extension-Based Low Back Pain: A Pilot Study](#)

19 Feb 2021

CONCLUSION: This pilot study demonstrated that the physical therapist guided functional progression program may be a viable method for treating young athletes with LBP and further research is warranted.

## MSK and multi-morbidity

### [Subjective social status moderates back pain and mental health in older men](#)

18 Mar 2021

CONCLUSION: Where one ranks oneself within their nation or community matters for the back pain and mental health relationship. Higher SSS may be a psychosocial resource that buffers the negative associations of severe and frequent back pain on mental health in older men.

### [Coexistence of low back pain and lumbar kyphosis is associated with increased functional disability in knee osteoarthritis: the Nagahama Study](#)

19 Feb 2021

CONCLUSION: These findings suggest that both LBP and lumbar kyphosis are useful clinical signals indicating functional disability and knee symptoms in patients with knee OA.

## MSK Health and inequalities

### [The collection and reporting of measures of deprivation in musculoskeletal research: An international survey study](#)

15 Mar 2021

BACKGROUND: The reporting of deprivation measures is typically poor in musculoskeletal (MSK) research.

### [Race Differences in Resilience Among Older Adults with Chronic Low Back Pain](#)

17 Mar 2021

INTRODUCTION: Racial minorities are disproportionately affected by pain. Compared to non-Hispanic Whites (NHWs), non-Hispanic Blacks (NHBs) report higher pain intensity, greater pain-related disability, and higher levels of mood disturbance

[Low Back Pain-Related Disability Is Associated with Pain-Related Beliefs Across Divergent Non-English-Speaking Populations: Systematic Review and Meta-Analysis](#)

24 Feb 2021

OBJECTIVES: This systematic review and meta-analysis examined relationships between low back pain (LBP)-related disability and pain beliefs, including pain catastrophizing, pain-related fear, self-efficacy, and back pain beliefs, in non-English-speaking populations. Additionally, the effects of selected cultural factors (i.e

[Gender differences in health anxiety and musculoskeletal symptoms during the COVID-19 pandemic](#)

08 Mar 2021

CONCLUSIONS: Females are more anxious and have more musculoskeletal symptoms during the pandemic than males. Also, health anxiety is related to musculoskeletal symptoms in both genders.

[Prevalence and diagnosis experience of osteoporosis in postmenopausal women over 50: Focusing on socioeconomic factors](#)

02 Mar 2021

Osteoporosis is the most common disease of the musculoskeletal system in old age. Therefore, research on osteoporosis risk factors is actively being conducted. However, whether socioeconomic inequality is associated with the prevalence and diagnosis experience of osteoporosis remains largely unexplored

## MSK Health and nutrition

[Need for Testing and Supplementation of Vitamin D3 After Release of COVID-19 Lockdown in Patients with Increased Musculoskeletal Pain](#)

15 Mar 2021

CONCLUSION: There might be many reasons for increased pain during lockdown, but we focussed specially only on vitamin D3 because of its association with increased symptoms of COVID-19. This is a gentle reminder to test for vitamin D3 levels and supplement if found deficient.

[Vegan Diet and Bone Health-Results from the Cross-Sectional RBVD Study](#)

06 Mar 2021

Scientific evidence suggests that a vegan diet might be associated with impaired bone health. Therefore, a cross-sectional study (n = 36 vegans, n = 36 omnivores) was used to investigate the associations of veganism with calcaneal quantitative ultrasound (QUS) measurements, along with the investigation of differences in the concentrations of nutrition- and bone-related biomarkers between vegans

[Incorporating nutrition, vests, education, and strength training \(INVEST\) in bone health: Trial design and methods](#)

25 Feb 2021

BACKGROUND: Achievement of 5-10% weight loss (WL) among older adults living with obesity considerably improves prognosis of health-related outcomes; however, concomitant declines in bone mineral density (BMD) limit overall benefit by increasing fracture risk

[The effect of vitamin D supplementation and nutritional intake on skeletal maturity and bone health in socio-economically deprived children](#)

21 Feb 2021

CONCLUSION: Deprived children have significant delay in skeletal maturation but no substantial impairment in bone health as assessed by BHI. BA delay was influenced by total calorie intake, but not bolus vitamin D supplementation.

## MSK Health and workplace wellbeing

[A deep learning approach for lower back-pain risk prediction during manual lifting](#)

19 Feb 2021

Occupationally-induced back pain is a leading cause of reduced productivity in industry. Detecting when a worker is lifting incorrectly and at increased risk of back injury presents significant possible benefits. These include increased quality of life for the worker due to lower rates of back injury and fewer workers' compensation claims and missed time for the employer

[An Innovative Intervention to Prevent Musculoskeletal Disorders Related to Sedentary Work: Gimme A Break](#)

04 Mar 2021

No abstract

[The effects of ergonomic intervention on the musculoskeletal complaints and fatigue experienced by workers in the traditional metal casting industry](#)

01 Mar 2021

This research aimed to evaluate the effects of ergonomic intervention on the musculoskeletal complaints and fatigue experienced by workers of the traditional metal casting industry that manually pour molten metal into molds

[Impact of anxiety and depression disorders on sustained return to work after work-related musculoskeletal strain or sprain: a gender stratified cohort study](#)

21 Mar 2021

Objective The aim of this study was to examine the impact of anxiety and depression disorders on sustained return to work (RTW) for men and women with musculoskeletal strain or sprain. Methods Accepted lost-time claims for spine and upper-extremity strain or sprain were extracted for workers in the Canadian province of British Columbia from 2009 to 2013 (N=84 925)

[Occupational and non-occupational risk factors for neck and lower back pain among computer workers: A cross-sectional study](#)

11 Mar 2021

The aim of this study was to identify major determinants for neck and lower back pain among office workers in different ages. Methods: Computer workers (N=2000) responded to a questionnaire on demographics, musculoskeletal disorders (MSDs), lifestyle characteristics, ergonomics of computer work, psychosocial and physical job characteristics

[Work-Time Compositions of Physical Behaviors and Trajectories of Sick Leave Due to Musculoskeletal Pain](#)

10 Feb 2021

We aimed to investigate the association between work-time compositions of physical behavior and sick leave trajectories due to musculoskeletal pain over one year. We conducted a secondary analysis using the data of 981 workers in a Danish prospective cohort (DPHACTO 2012-2014)

[Study on the Associations of Individual and Work-Related Factors with Low Back Pain among Manufacturing Workers Based on Logistic Regression and Structural Equation Model](#)

10 Feb 2021

Work-related musculoskeletal injuries are one of the major occupational health issues of the workers, especially low back pain (LBP). The aim of this study was to survey the prevalence of LBP among manufacturing workers and to identify associations of individual and work-related factors with LBP. A cross-sectional questionnaire study was performed with 1173 participating manufacturing workers

[The effect of occupational exposure to ergonomic risk factors on osteoarthritis of hip or knee and selected other musculoskeletal diseases: A systematic review and meta-analysis from the WHO/ILO Joint Estimates of the Work-related Burden of Disease and Injury](#)

06 Feb 2021

CONCLUSIONS: Overall, for both outcomes, the main body of evidence was assessed as being of low quality. Occupational exposure to ergonomic risk factors increased the risk of acquiring MSD and of acquiring OA of knee or hip

## MSK Health communication

[COVID-19 pandemic impact on people with rheumatic and musculoskeletal diseases: Insights from patient-generated health data on social media](#)

25 Feb 2021

CONCLUSION: The findings show that Twitter serves as a real-time data source to understand the impact of the COVID-19 pandemic on people with RMDs. The platform provided "early signals" of potentially critical health behaviour changes

["I would not go to him": Focus groups exploring community responses to a public health campaign aimed at reducing unnecessary diagnostic imaging of low back pain](#)

18 Feb 2021

CONCLUSIONS: Public health campaigns including posters and leaflets displayed in waiting rooms could raise awareness about overuse of diagnostic imaging and the harms of overdiagnosis more broadly. However, negative reactions are possible and must be managed carefully

[Can Crafted Communication Strategies Allow Musculoskeletal Specialists to Address Health Within the Biopsychosocial Paradigm?](#)

07 Jan 2021

CONCLUSION: Crafted communication strategies allow musculoskeletal specialists to address health within the biopsychosocial paradigm without harming their relationship with the patient.