



Musculoskeletal Health Current Awareness Update

June 2024

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

UKHSA, 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.

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. For further information on Athens accounts please visit [here](#). If you are not eligible to access our library services, then you may want to approach your local health library service.

We do not accept responsibility for the availability or reliability of the items of content included in this alert and their inclusion is not an endorsement of any views that may be expressed.

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Prevention of MSK conditions across the life course

Prevention of MSK conditions across the life course

1. The Synchronous Application of Yoga and Myofascial Release Therapy for Musculoskeletal Pain: A Case Report

31-05-2024 - *National Library of Medicine*

CONCLUSION: These outcomes indicate a potential role for YRT in an integrative approach to managing MSK pain. They justify prospective research to validate YRT's efficacy and explore its mechanisms. [Read more...](#)

2. Assessing pain severity and treatment outcomes in patients with low back pain: A Structural equation modeling approach at the center for the rehabilitation of the Paralysed, Bangladesh

31-05-2024 - *National Library of Medicine*

CONCLUSION: The research found out the psychological health situation and work stress of patients are significantly related with pain severity with acceptable strength. Also, Pain severity is significantly associated with treatment scheme intensity. [Read more...](#)

3. Appropriateness of exercise therapy delivery in chronic low back pain management: cross-sectional online survey of physiotherapy practice in Germany

29-05-2024 - *National Library of Medicine*

CONCLUSION: Appropriate exercise delivery in NSCLBP management was achieved by only 11.9% of respondents. However, the vast majority of 95.2% of respondents was classified to deliver exercise therapy partly appropriate. Long work experience seemed to negatively affect appropriate exercise delivery. Positive influences were attributed to scientific literacy, the average clinical assessment ... [Read more...](#)

4. Associations of serum vitamin B12 and its biomarkers with musculoskeletal health in middle-aged and older adults

29-05-2024 - *National Library of Medicine*

CONCLUSIONS: Vitamin B12 and its biomarkers are closely related to BMD, body composition, muscle strength and physical function in middle-aged and older adults. Vitamin B12 may be an important indicator of musculoskeletal health in the elderly. [Read more...](#)

5. Work-related musculoskeletal disorders: prevalence, associated factors, and impact on quality of life among kitchen workers in hospitality industry, Bahir Dar City, Northwest Ethiopia, 2023

29-05-2024 - *National Library of Medicine*

CONCLUSION: This study revealed that the prevalence of WMSDs was relatively high. Age between 30 and 39 years, job dissatisfaction, anxiety, prolonged standing, and arm overreaching were identified as

significant determinants of WMSDs among kitchen workers in hospitality industries. The presence of one or multiple WMSDs, in turn, is associated with worse quality of life dimensions of individuals. [Read more...](#)

6. Correlation between plasma aldosterone concentration and bone mineral density in middle-aged and elderly hypertensive patients: potential impact on osteoporosis and future fracture risk

29-05-2024 - National Library of Medicine

CONCLUSION: This study demonstrates that elevated PAC levels are strongly associated with decreased BMD, increased prevalence of osteoporosis, and the risk of future fractures in middle-aged and elderly hypertensive patients. Further studies are needed to confirm this relationship and reveal its underlying mechanisms. [Read more...](#)

7. What have we learned about risk assessment and interventions to prevent work-related musculoskeletal disorders and support work participation?

29-05-2024 - National Library of Medicine

CONCLUSION: Research has provided valuable insights into risk assessment, interventions for preventing work-related MSD, and supporting work participation. Intervention studies remain warranted and new areas include adopting whole-system approaches to prevent work-related MSD and promoting the concept of musculoskeletal health. [Read more...](#)

8. A Stratified Approach for Managing Patients With Low Back Pain in Primary Care (SPLIT Program): A Before-and-After Study

28-05-2024 - National Library of Medicine

CONCLUSIONS: Patients in the SPLIT program for LBP showed greater benefits regarding health-related outcomes than those receiving UC. [Read more...](#)

9. Evaluation of Steroid-Induced Osteoporosis Prevention Using Tracing Reports in Collaboration between Hospitals and Community Pharmacists

28-05-2024 - National Library of Medicine

Glucocorticoid-induced osteoporosis (GIOP) is a side effect of glucocorticoid (GC) treatment however, despite established prevention guidelines in various countries, a gap persists between these guidelines and clinical practice. To address this gap, we implemented a collaborative intervention between hospitals and community pharmacists, aiming to assess its effectiveness. [Read more...](#)

10. Effects of pain education on disability, pain, quality of life, and self-efficacy in chronic low back pain: A randomized controlled trial

28-05-2024 - National Library of Medicine

CONCLUSION: The findings suggest that integrating a pain education program enhances the therapeutic benefits of standard physiotherapy care for individuals dealing with chronic LBP. In conclusion, the clinical benefits of pain education become apparent when delivered in conjunction with standard care physiotherapy during the management of chronic low back pain. [Read more...](#)

11. Comment on "Radiofrequency Denervation on Lumbar Facet Joint Pain in the Elderly: A Randomized Controlled Prospective Trial"

28-05-2024 - National Library of Medicine

No abstract [Read more...](#)

12. The PREVSAM model, "prevention of sickness absence through early identification and rehabilitation of at-risk patients with musculoskeletal disorders", is seen as beneficial for patients risking persistent musculoskeletal disorders but may be difficult to implement - a focus group study

27-05-2024 - National Library of Medicine

CONCLUSIONS: The participants experienced that the PREVSAM model may be beneficial for the patients, for their own work situation and workplace, and for society. Identifying psychological risk factors was perceived as helpful, but not enough to capture patients in need of team-based rehabilitation. While considered feasible, barriers for implementing the model were identified. [Read more...](#)

13. Principles of musculoskeletal sport injuries for epidemiologists: a review

27-05-2024 - National Library of Medicine

CONCLUSION: An understanding of sport injuries is important for researchers in sport injury epidemiology when determining how to best define and assess their research questions and measures. [Read more...](#)

14. Predicting fracture risk for elderly osteoporosis patients by hybrid machine learning model

27-05-2024 - National Library of Medicine

CONCLUSIONS: The hybrid machine learning model can be a reliable tool for predicting the risk of fracture in patients with osteoporosis. It is expected to assist clinicians in identifying high-risk fracture patients and implementing early interventions. [Read more...](#)

15. Impact of Osteoporosis on Short-Term Surgical Outcomes in Lumbar Degenerative Disease Patients Undergoing Lateral Lumbar Interbody Fusion: A Retrospective Analysis

27-05-2024 - National Library of Medicine

CONCLUSIONS: Osteoporosis increases the risk of CS in LLIF surgery for LDD patients but does not affect short-term pain relief and quality of life improvements. [Read more...](#)

16. Exploring the association between Frailty Index and low back pain in middle-aged and older Chinese adults: a cross-sectional analysis of data from the China Health and Retirement Longitudinal Study (CHARLS)

27-05-2024 - National Library of Medicine

CONCLUSIONS: The findings suggest a complex relationship between frailty and LBP, highlighting the need for early screening and tailored interventions to manage LBP in this demographic. Further research is necessary to understand the mechanisms of this association and to validate the findings through longitudinal studies. [Read more...](#)

17. Survey on Actual Management of Osteoporosis with the Japanese Medical Data Vision Database in Elderly Patients Undergoing Spinal Fusion

25-05-2024 - National Library of Medicine

Background: No actual data on spinal fusion and management of osteoporosis in Japan have been reported. The aim of the survey was to investigate pre- and post-operative management of osteoporosis, including testing and prescription, in elderly patients undergoing spinal fusion in Japan. **Methods:** Medical data on patients aged 65 years or older undergoing spinal fusion from April 2018 to March ... [Read more...](#)

18. Predictors, Protective Factors, and Adverse Outcomes of Joint Pain among Malaysian Community-Dwelling Older Adults: Findings from the LRGS-TUA Longitudinal Study

25-05-2024 - National Library of Medicine

Background: Joint pain has been recognized as one of the major causes of limitations in mobility, functional decline, and consequently declined quality of life in older adults. Hence, this study aimed to identify the predictors, protective factors, and adverse outcomes of joint pain in community-dwelling older adults. **Methods:** In this Long-term Research Grant Scheme-Towards Useful Ageing ... [Read more...](#)

19. Quality of Life in Patients with Chronic Low Back Pain and Differences by Sex: A Longitudinal Study

25-05-2024 - National Library of Medicine

CONCLUSIONS: The chronification of low back pain complicates people's biopsychosocial adaptation to life. There is a longitudinal inverse association between pain and functional limitation and health-related quality of life. [Read more...](#)

20. The Effect of Denosumab on Rotator Cuff Repair in Women Aged 60 and over with Osteoporosis: A Prospective Observational Study

25-05-2024 - National Library of Medicine

CONCLUSIONS: The administration of denosumab following arthroscopic rotator cuff repair in women aged 60 and over with osteoporosis resulted in a re-tear rate that was similar to that observed in patients without osteoporosis. This result suggests that denosumab administration might be beneficial for rotator cuff healing, particularly in the context of osteoporosis, ... [Read more...](#)

21. A Comparative Study of Endoscopic versus Percutaneous Epidural Neuroplasty in Lower Back Pain: Outcomes at Six-Month Follow Up

25-05-2024 - National Library of Medicine

Background and Objectives: Endoscopic epidural neuroplasty (EEN) facilitates adhesiolysis through direct epiduroscopic visualization, offering more precise neural decompression than that exhibited by percutaneous epidural neuroplasty (PEN). We aimed to compare the effects of EEN and PEN for 6 months after treatment with lower back and radicular pain in patients. [Read more...](#)

22. Sports-Related Musculoskeletal Injuries in Medical Students

24-05-2024 - National Library of Medicine

CONCLUSIONS: Almost one-fifth of the students reported sustaining a sports-related MSK injury after joining medical school. The risk factors identified for these injuries were male gender, participation in team sports, participation in noncontact sports, and lack of adequate preparation or practice. [Read more...](#)

23. Work-related Musculoskeletal Disorders and Health-Related Quality of Life Among Corrugated Box Factory Workers in India

24-05-2024 - National Library of Medicine

CONCLUSIONS: This study concludes that WRMSDs are significantly prevalent among corrugated box factory workers in urban India along with manifestations of lower HRQoL. [Read more...](#)

24. Health Impact of Drinking Water Quality on the Occurrence of Osteoporosis in Gaza Strip, Palestine

24-05-2024 - National Library of Medicine

CONCLUSIONS: The study has identified the need for preventive measures to improve drinking water quality to reduce the incidence of various health conditions, including osteoporosis. [Read more...](#)

25. Delayed center of mass feedback in elderly humans leads to greater muscle co-contraction and altered balance strategy under perturbed balance: A predictive musculoskeletal simulation study

24-05-2024 - National Library of Medicine

Falls are one of the leading causes of non-disease death and injury in the elderly, often due to delayed sensory neural feedback essential for balance. This delay, challenging to measure or manipulate in human studies, necessitates exploration through neuromusculoskeletal modeling to reveal its intricate effects on balance. In this study, we developed a novel three-way muscle feedback control ... [Read more...](#)

26. Assessment of the Effects of Physiotherapy on Back Care and Prevention of Non-Specific Low Back Pain in Children and Adolescents: A Systematic Review and Meta-Analysis

24-05-2024 - National Library of Medicine

Non-specific low back pain (NSLBP) in children and adolescents has increased in recent years, and the evidence of the physiotherapy interventions in back care needs to be updated. Our main goal was to quantify the effects of preventive physiotherapy interventions on improving behavior and knowledge related to back care and prevention of NSLBP in children and adolescents. [Read more...](#)

27. Navigating Online Health Information: Assessing the Quality and Readability of Dietary and Herbal Supplements for Chronic Musculoskeletal Pain

24-05-2024 - *National Library of Medicine*

No abstract [Read more...](#)

28. A Biopsychosocial Model for Understanding Training Load, Fatigue, and Musculoskeletal Sport Injury in University Athletes: A Scoping Review

23-05-2024 - *National Library of Medicine*

McClean, ZJ, Pasanen, K, Lun, V, Charest, J, Herzog, W, Werthner, P, Black, A, Vleuten, RV, Lacoste, E, and Jordan, MJ. A biopsychosocial model for understanding training load, fatigue, and musculoskeletal sport injury in university athletes: A scoping review. *J Strength Cond Res* 38(6): 1177-1188, 2024-The impact of musculoskeletal (MSK) injury on athlete health and performance has been ... [Read more...](#)

29. Efficacy of neuromuscular exercises to promote movement quality and reduce musculoskeletal injury during initial military training in Royal Navy recruits

23-05-2024 - *National Library of Medicine*

CONCLUSION: A neuromuscular control intervention was successfully implemented during the initial military training in the Royal Navy. The cohort undertaking the intervention demonstrated lower injury incidence compared with an equivalent cohort of recruits who undertook standard training. Movement control improved following the intervention, indicating better movement quality. [Read more...](#)

30. Management of Low Back Pain With Concurrent Hamstring Tightness: A Case Report Highlighting the Efficacy of Proprioceptive Neuromuscular Facilitation, Mulligan's Two-Leg Rotation Technique, and Exercise Regimen

23-05-2024 - *National Library of Medicine*

Low back pain (LBP) is a prevalent musculoskeletal issue characterized by discomfort in the lumbosacral region. LBP localized between the 12th thoracic vertebra and inferior gluteal folds is common and often lacks a clear etiology. Various factors contribute to LBP, including increased lumbar lordosis, diminished abdominal muscle strength, reduced back extensor muscle endurance, ... [Read more...](#)

31. Personalizing Injury Management and Recovery: A Cross-Sectional Investigation of Musculoskeletal Injuries and Quality of Life in Athletes

23-05-2024 - *National Library of Medicine*

CONCLUSION: The study underscores the significant prevalence of musculoskeletal injuries among youth athletes and delineates their profound impact on the quality of life, encompassing both the physical and mental health realms. These findings advocate for the critical integration of preventive measures and personalized training protocols, spotlighting the pivotal role of comprehensive ... [Read more...](#)

32. Treatment of anterior knee pain due to chondromalacia patellae with platelet-rich plasma and hyaluronic acid in young and middle-aged adults, a cohort study

23-05-2024 - *National Library of Medicine*

INTRODUCTION: Anterior knee pain commonly affects young women resulting in the declination of the quality of life. One of the possible pathologies causing this symptom is chondromalacia patellae (CMP). Although CMP is used to describe the softening of patellar articular cartilage, it remains a general descriptive term as it cannot be associated with a specific pathophysiologic mechanism. [Read more...](#)

33. The impact of ageing mechanisms on musculoskeletal system diseases in the elderly

22-05-2024 - National Library of Medicine

Ageing is an inevitable process that affects various tissues and organs of the human body, leading to a series of physiological and pathological changes. Mechanisms such as telomere depletion, stem cell depletion, macrophage dysfunction, and cellular senescence gradually manifest in the body, significantly increasing the incidence of diseases in elderly individuals. [Read more...](#)

34. Longitudinal impact of leisure-time physical activity on pain intensity and daily activity limitation in people with low back pain. Findings from the PAMPA cohort

22-05-2024 - National Library of Medicine

CONCLUSION: Not practicing at least 150 min/week of physical activity resulted in higher levels of pain and an increased risk of daily activity limitation in individuals with LBP. Moreover, various forms of activities have shown to be advantageous in alleviating pain among this group. [Read more...](#)

35. Increased water content in multifidus muscles of young adults with chronic nonspecific low back pain detected by dual-energy CT and MRI

21-05-2024 - National Library of Medicine

CONCLUSIONS: The T2 values in MRI and WD in DECT are higher in multifidus muscles of lower vertebra levels for young CNLBP patients, and there exists positive correlation between WD and T2 values, providing useful information for diagnosing CNLBP. [Read more...](#)

36. The usage of a modified straight-leg raise neurodynamic test and hamstring flexibility for diagnosis of non-specific low back pain: A cross-sectional study

21-05-2024 - National Library of Medicine

CONCLUSIONS: The mSLR test was found to be associated with lumbar nerve root compression, regardless of the existence of radiating leg symptoms, and showed no association solely with the report of LBP. The findings highlight the diagnostic dilemma facing clinicians in patients with chronic nonspecific LBP with uncorrelated neuroanatomical image findings. Clinically, ... [Read more...](#)

37. Musculoskeletal disorders and quality of life for Chilean teachers during the COVID-19 pandemic at the academic year-end

21-05-2024 - National Library of Medicine

CONCLUSION: High musculoskeletal disorders rates suggest that preventive and informative actions must be taken regarding these disorders in order to protect teachers' mental and physical health, considering the effects of the school year and the COVID-19 health crisis. [Read more...](#)

38. Educating patients on osteoporosis and bone health: Can "ChatGPT" provide high-quality content?

20-05-2024 - National Library of Medicine

CONCLUSION: ChatGPT-3.5 provided high-quality educational content. It showcased a high degree of accuracy in addressing osteoporosis-related questions, aligning closely with expert opinions and current literature, with structured and inclusive answers. However, while AI models can enhance patient information accessibility, they should be used as an adjunct rather than a substitute for human ... [Read more...](#)

39. Adolescent Athletes with Stronger Athletic Identity Perceptions Have Weaker Fear Avoidance Perceptions During Musculoskeletal Injury Rehabilitation Return to Sports Preparation

20-05-2024 - National Library of Medicine

CONCLUSION: Adolescent athletes with stronger athletic identity perceptions during the return to the sports preparation phase of musculoskeletal injury rehabilitation had weaker fear avoidance perceptions. As age increased from early to late adolescence, athletic identity perceptions became weaker, and fear avoidance perceptions became stronger. To decrease re-injury rates, ... [Read more...](#)

40. Prior acupuncture experience among elderly participants enrolled in a clinical trial of acupuncture for chronic low back pain: Implications for future trials

20-05-2024 - National Library of Medicine

CONCLUSION: Contextual consideration for prior acupuncture utilization rates is warranted and may be higher than expected or previously reported. We found few differences in baseline characteristics between participants who were acupuncture-naïve and those with prior acupuncture experience thus, future pragmatic clinical trials might relax previous acupuncture-use considerations in their ... [Read more...](#)

41. The effect of pelvic clock exercises on pain reduction and lumbopelvic proprioception in middle-aged women with chronic nonspecific low back pain (CNSLBP)

19-05-2024 - National Library of Medicine

CONCLUSION: According to the results of the present study, pelvic clock exercises should be used as a new and practical method to reduce pain and improve lumbopelvic proprioception in middle-aged women with CNSLBP. [Read more...](#)

42. Comparison of aquatic physiotherapy and therapeutic exercise in patients with chronic low back pain

19-05-2024 - National Library of Medicine

CONCLUSION: The AG group showed significant and clinical improvement in pain, disability, and quality of life. Improvements related to social aspects were found in the EG compared to the CG. The water provides a safe environment that facilitates the onset of exercise, so aquatic physiotherapy could be considered the first recommendation for patients with low back pain. [Read more...](#)

43. Effect of Eutony, Holistic Gymnastics and Pilates on hamstring flexibility and back pain in pre-adolescent girls: Randomized clinical trial

19-05-2024 - National Library of Medicine

CONCLUSION: Eutony, Holistic Gymnastics, and Pilates increased hamstring flexibility, reduced back pain complaints, and incentivized the girls to carry the school backpack correctly. [Read more...](#)

44. Effects of pilates exercises on radiographic lumbo-pelvic alignment and range of motion in non-specific low back pain patients

19-05-2024 - National Library of Medicine

CONCLUSIONS: Patients self-perceived long-term functional improvements based on responding to questionnaires after Pilates exercises were not reflected in significant changes in lumbo-pelvic alignment or lumbar ROM. This may be due to the current cohort demonstrating within normal ranges due to the lesser severity of their condition, but further research is needed for clarification. [Read more...](#)

45. Physical activity attenuates the excess mortality risk from prolonged sitting time among adults with osteoporosis or osteopenia

17-05-2024 - National Library of Medicine

CONCLUSIONS: PA can attenuate the excess mortality risk from prolonged sitting for individuals with osteoporosis and/or osteopenia. The combination of prolonged sedentary behaviour with inactive (participants without any PA during a week) PA was associated with an increased risk of mortality. The all-cause mortality risk of individuals who engage in less than 150 min/wk PA and sit more than 8 ... [Read more...](#)

46. Association of systemic inflammatory response index with bone mineral density, osteoporosis, and future fracture risk in elderly hypertensive patients

16-05-2024 - National Library of Medicine

CONCLUSIONS: Our findings indicate a potential association between SIRI and BMD, osteoporosis, and the risk of future fractures in elderly hypertensive patients. However, further studies are warranted to confirm these findings. [Read more...](#)

47. The combination of *Butyricoccus pullicaecorum* and 3-hydroxyanthranilic acid prevents postmenopausal osteoporosis by modulating gut microbiota and Th17/Treg

16-05-2024 - National Library of Medicine

CONCLUSION: The combination therapy of Bp and 3-HAA can prevent PMO by modulating the gut microbiota and restoring Th17/Treg immune homeostasis. [Read more...](#)

48. Understanding social determinants of health and physical therapy outcomes in patients with low back pain: A scoping review

15-05-2024 - National Library of Medicine

CONCLUSIONS: Sex and age were the most frequent SDOH examined followed by education level. Other factors were evaluated less frequently, making it difficult to draw conclusions. Study design and heterogeneity of determinants and outcomes were barriers to examining the potential impact on patients with LBP. [Read more...](#)

49. Opportunistic prediction of osteoporosis in patients with degenerative lumbar diseases: a simplified T12 vertebral bone quality approach

15-05-2024 - National Library of Medicine

CONCLUSION: T12VBQ can be used as an effective opportunistic screening method for osteoporosis in patients with lumbar degenerative diseases. It can be used as a supplement to the evaluation of DEXA and preoperative evaluation. [Read more...](#)

50. Physical activity, musculoskeletal disorders, burnout, and work engagement: a cross-sectional study on Italian white-collar employees

15-05-2024 - National Library of Medicine

INTRODUCTION: Both mental and physical health of office workers had a positive relationship with their work engagement, with the latter relationship being driven by the association of a healthy diet and physical activity (PA). This observational study aimed to investigate the associations between PA levels, musculoskeletal disorders (MSDs), burnout, and work engagement, ... [Read more...](#)

51. Exercise interventions for nonspecific low back pain: a bibliometric analysis of global research from 2018 to 2023

14-05-2024 - National Library of Medicine

CONCLUSION: This study reveals the global trends in research on exercise interventions for nonspecific low back pain over the past 5 years and highlights potential research frontiers in the field. These findings provide a solid foundation for focusing on key issues, potential collaboration directions, and trends in research development in the future, offering valuable references for further ... [Read more...](#)

52. The effect of exercise therapy as a tool for preventing and treating musculoskeletal disorders among school-aged children: a randomised controlled trial

14-05-2024 - National Library of Medicine

CONCLUSIONS: This study demonstrated the effectiveness of exercise therapy in reducing and preventing MSDs and improving physical activity levels among school-aged children aged 13-15 years. [Read more...](#)

53. Osteoporosis management in Australian aged care facilities: a mixed method study

14-05-2024 - National Library of Medicine

CONCLUSION: Pharmacist identified DRPs and recommendations revealed common aspects of clinical practice that can be addressed to improve osteoporosis management for aged care residents. A need to raise awareness of aged care-specific consensus recommendations concerning vitamin D and calcium is evident. Facility protocols and procedures must be developed and implemented to ensure safe and ... [Read more...](#)

54. Associations between pain intensity, pain sensitivity, demographics, psychological factors, disability, physical activity, pain phenotype and COVID-19 history in low back pain: An observational study

14-05-2024 - National Library of Medicine

BACKGROUND AND PURPOSE: Knowledge of the factors affecting pain intensity and pain sensitivity can inform treatment targets and strategies aimed at personalizing the intervention, conceivably increasing its positive impact on patients. Therefore, this study aimed to investigate the association between demographic factors (sex and age), body mass index (BMI), psychological factors (anxiety and ... [Read more...](#)

55. Targeting SAT1 prevents osteoporosis through promoting osteoclast apoptosis

13-05-2024 - National Library of Medicine

Osteoporosis is a systemic bone disease characterized by decreased bone mass that is tightly regulated by the coordinated actions of osteoclasts and osteoblasts. Apoptosis as a precise programmed cell death involves a cascade of gene expression events which are mechanistically linked to the regulation of bone metabolism. Nevertheless, the critical biomolecules involved in regulating cell ... [Read more...](#)

56. Generalizability of a Musculoskeletal Therapist Electronic Health Record for Modelling Outcomes to Work-Related Musculoskeletal Disorders

13-05-2024 - National Library of Medicine

CONCLUSION: The study shows the EHR has strong potential to be used for further research into WMSDs as it has a similar population to the Australian workforce, manufacturing industry and workers' compensation claims. It contains many variables that may be relevant in modelling outcomes to WMSDs that are not typically available in existing datasets. [Read more...](#)

57. Prevention of sickness absence through early identification and rehabilitation of at-risk patients with musculoskeletal disorders (PREVSAM): short term effects of a randomised controlled trial in primary care

13-05-2024 - National Library of Medicine

CONCLUSIONS: The findings suggest that for sickness absence, the PREVSAM model may have an advantage over TAU, although the difference did not reach statistical significance at the $p < 0.05$ level, and similar positive effects on patient-reported health outcomes were found in both groups. Long-term effects must be evaluated before firm conclusions can be drawn. [Read more...](#)

58. The lack of EphB3 receptor prevents bone loss in mouse models of osteoporosis

13-05-2024 - National Library of Medicine

Bone homeostasis is a complex process in which some Eph kinase receptors and their ephrin ligands appear to be involved. In the present study we address this issue by examining, both in vitro and in vivo, the role of EphB2 and EphB3 in MSC differentiation into bone tissue. This was firstly evaluated by RT-qPCR and histological staining in MSCs cultured in specific mediums revealing that, ... [Read more...](#)

59. Hashimoto's Thyroiditis Presenting As Non-specific Low Back Pain: A Case Report on Diagnostic Challenges and Management in Primary Care

13-05-2024 - National Library of Medicine

Non-specific low back pain (NSLBP) may account for 90-95% of cases of low back pain presenting to primary care. Clinicians should remain vigilant however to non-spinal musculoskeletal conditions that may mimic NSLBP and musculoskeletal complaints. We present a case of a 38-year-old female with low back pain, lower limb tightness, groin pain, and leg cramps. Symptoms failed to improve with ... [Read more...](#)

60. A Comprehensive Workplace Exercise Intervention to Reduce Musculoskeletal Pain and Improve Functional Capacity in Office Workers: A Randomized Controlled Study

10-05-2024 - National Library of Medicine

The high levels of musculoskeletal pain, in conjunction with the low levels of functional capacity, may negatively affect workers' health, efficiency, and productivity. This randomized controlled study investigated the efficacy of a 6-month comprehensive workplace exercise program on musculoskeletal pain and functional capacity in office workers. Seventy male and female office workers with ... [Read more...](#)

61. Bone health and awareness of osteoporosis in women aged 40 to 60 years in Jiaxing City, China

10-05-2024 - National Library of Medicine

The objective of this study is to evaluate the pattern of bone mineral density (BMD) in native Jiaxing women, and to investigate their awareness of osteoporosis. A total of 538 native Jiaxing women aged 40 to 60 years were recruited from January 2022 to December 2023 when they had routine examinations in the physical examination center of Jiaxing Maternal and Child Health Hospital. [Read more...](#)

62. Implementation of an integrated primary care prevention and management program for chronic low back pain (LBP): patient-reported outcomes and predictors of pain interference after six months

09-05-2024 - National Library of Medicine

CONCLUSION: The outcomes of this novel LBP program will inform wider implementation considerations by identifying key components for further effectiveness, sustainability, and scale-up of the program. [Read more...](#)

63. Frailty, Sarcopenia and Osteoporosis

09-05-2024 - National Library of Medicine

Frailty, sarcopenia and osteoporosis are entities specific to the elderly, who share some risk factors. For this reason, their relationship has been studied in different works, which have provided disparate results, probably because these studies have not always focused on the same aspects. This article reviews the relationship of frailty and sarcopenia with osteoporosis. [Read more...](#)

64. Cryoneurolysis versus radiofrequency ablation outcome on pain experience in chronic low back pain (COPE): a single-blinded randomised controlled trial

09-05-2024 - National Library of Medicine

CONCLUSIONS: Denervation of the medial branch nerve by either cryoneurolysis or RF compared with placebo did not demonstrate significant improvement in PGIC, pain intensity, function and quality of life in patients with facetogenic chronic LBP at short-term or long-term follow-up. [Read more...](#)

65. Development and validation of the osteoporosis scale among the system of quality of life instruments for chronic diseases QLICD-OS (V2.0)

07-05-2024 - National Library of Medicine

CONCLUSION: As the first osteoporosis-specific quality of life scale developed by the modular approach in China, the QLICD-OS showed good reliability, validity and medium responsiveness, and could be used to measure quality of life in osteoporosis patients. [Read more...](#)

66. Pharmacologic Treatment of Primary Osteoporosis or Low Bone Mass to Prevent Fractures in Adults: A Living Clinical Guideline From the American College of Physicians (Version 1, Update Alert)

06-05-2024 - National Library of Medicine

No abstract [Read more...](#)

67. The Utilization of Diagnostic Musculoskeletal Ultrasound in the Evaluation of Gluteus Medius Tendon Pathology: A Perspective for Rehabilitation Providers

06-05-2024 - National Library of Medicine

Gluteus medius tendon pathology, encompassing tendinopathy and tears, is a significant source of lateral hip pain and functional impairment. Traditional diagnostic approaches have relied on clinical examination and magnetic resonance imaging (MRI). However, the advent of diagnostic musculoskeletal ultrasound (MSKUS) has transformed the evaluation process. Musculoskeletal ultrasound has ... [Read more...](#)

68. Update Alert: Effectiveness and Safety of Treatments to Prevent Fractures in People With Low Bone Mass or Primary Osteoporosis: A Living Systematic Review and Network Meta-analysis for the American College of Physicians

06-05-2024 - National Library of Medicine

No abstract [Read more...](#)

69. Musculoskeletal Knowledge on the in-Training Examination Improves in Family Medicine Residents Participating in a Longitudinal Sports Medicine Clinical Track

06-05-2024 - National Library of Medicine

CONCLUSIONS: Our data demonstrates that participation in an SM track is associated with an increase in MSK knowledge of ITE, suggesting that an SM track may provide FM residents with a better understanding of MSK conditions. [Read more...](#)

70. Secondary osteoporosis prevention: three-year outcomes from a Fracture Liaison Service in elderly hip fracture patients

05-05-2024 - National Library of Medicine

CONCLUSIONS: The implementation of a FLS protocol was associated with a lower all-cause one-year mortality rate and a higher survivorship in elderly hip fracture patients. However, no three-year mortality rate differences were observed between the two groups. We also found a reduction in the complication and second-fracture rates. [Read more...](#)

71. Evaluating osteoporosis and bone quality in the aging spine: modern considerations for surgical management in the geriatric population

04-05-2024 - National Library of Medicine

Surgical management paradigms of spinal pathologies in the aging population carry inherent substantial risks, with surgical complications being more prevalent among patients with osteoporosis compared to those with normal bone mineral density. In this narrative review, we aim to highlight important clinical understanding and considerations in perioperative evaluation and management of ... [Read more...](#)

72. Voice Quality of Life and Musculoskeletal Symptoms of Pregnant Women

04-05-2024 - National Library of Medicine

CONCLUSION: Pregnant women showed a deterioration in the physical domain of voice-related quality of life and the presence of pain and tingling in the lower back. Pregnant women who had discomfort and musculoskeletal impairments also showed a deterioration in voice-related quality of life, mainly in the physical domain. [Read more...](#)

73. Disability reduction following a lumbar stabilization exercise program for low back pain: large vs. small improvement subgroup analyses of physical and psychological variables

04-05-2024 - National Library of Medicine

CONCLUSIONS: The large-improvement subgroup showed more improvement than the small-improvement subgroup with regard to physical factors typically targeted by this specific exercise program as well as for psychological factors that are known to influence clinical outcomes. [Read more...](#)

74. Hydrolyzed egg yolk peptide prevented osteoporosis by regulating Wnt/beta-catenin signaling pathway in ovariectomized rats

03-05-2024 - National Library of Medicine

Hydrolyzed egg yolk peptide (YPEP) was shown to increase bone mineral density in ovariectomized rats. However, the underlying mechanism of YPEP on osteoporosis has not been explored. Recent studies have shown that Wnt/ β -catenin signaling pathway and gut microbiota may be involved in the regulation of bone metabolism and the progression of osteoporosis. The present study aimed to explore the ... [Read more...](#)

75. The Effect of Graston Technique on Pain, Proprioception, Flexibility, and Disability in Patients with Chronic Non-specific Low Back Pain

03-05-2024 - National Library of Medicine

CONCLUSION: GT added to exercise in patients with CNLBP better reduces pain and disability, improves proprioceptive sense, and increases mobility and quality of life. GT may be used as a supportive treatment during the rehabilitation of CNLBP patients. [Read more...](#)

76. Impact of Sacroiliac Belt Utilization on Balance in Patients with Low Back Pain

03-05-2024 - National Library of Medicine

CONCLUSION: The Serola Sacroiliac Belt positively impacted dynamic balance for subjects with low back pain. Further research is needed to examine additional interventions and outcomes related to balance in patients with back pain, and to elucidate the mechanisms behind improvements in balance related to sacroiliac belt utilization. [Read more...](#)

77. Factors influencing the outcomes of non-pharmacological interventions for managing fatigue across the lifespan of people living with musculoskeletal (MSK) conditions: a scoping review protocol

03-05-2024 - National Library of Medicine

INTRODUCTION: Fatigue is an important and distressing symptom for many people living with chronic musculoskeletal (MSK) conditions. Many non-pharmacological interventions have been investigated in recent years and some have been demonstrated to be effective in reducing fatigue and fatigue impact, however, there is limited guidance for clinicians to follow regarding the most appropriate ... [Read more...](#)

78. Pilot Study on Therapeutic Horticulture for Chronic Low Back Pain: A Mixed Methods Study

03-05-2024 - National Library of Medicine

CONCLUSION: Patients presenting to an outpatient spine clinic may be receptive to trying TH in conjunction with or in place of conventional medicine to promote health and well-being. The pilot experimental group data suggested that acute TH is enjoyable and may confer the benefits of reducing anxiety and improving spine motion. Future larger studies could use different dose response ... [Read more...](#)

79. Comparative efficacy of acupuncture, venesection, and physical therapy on chronic low back pain outcomes: a randomized clinical trial

02-05-2024 - National Library of Medicine

CONCLUSION: Considering the pain and functional scores, both acupuncture and venesection can reproduce reliable results. Acupuncture and venesection both have sustained effects on pain and daily function of the patients even after treatment termination, while physical therapy had more relapse in pain and functional limitations. [Read more...](#)

80. Primary care barriers and facilitators to nonpharmacologic treatments for low back pain: A qualitative pilot study

02-05-2024 - National Library of Medicine

CONCLUSIONS: Preliminary insight on key determinants of nonpharmacologic treatments for LBP should be further examined in large multisite studies. Future studies may also determine whether a CHW-led strategy can improve nonpharmacologic treatment access and clinical outcomes in primary care. [Read more...](#)

81. Prognostic Factors and Treatment Effect Modifiers for Physical Health, Opioid Prescription, and Health Care Utilization in Patients With Musculoskeletal Disorders in Primary Care: Exploratory Secondary Analysis of the STEMS Randomized Trial of Direct Access to Physical Therapist-Led Care

02-05-2024 - National Library of Medicine

CONCLUSIONS: Patients with musculoskeletal conditions with lower levels of pain self-efficacy, higher pain severity, and presenting with low back pain have less favorable clinical and health care outcomes in primary care. Prespecified characteristics did not modify the treatment effect of the offer of a direct-access physical therapist-led pathway compared to GP-led care. [Read more...](#)

82. The association of physical activity and sedentary behaviour with low back pain disability trajectories: A prospective cohort study

01-05-2024 - National Library of Medicine

CONCLUSIONS: Habitual SB was not associated with LBP disability trajectories over a one-year follow-up. High levels of habitual PA at baseline were associated with improved recovery in LBP disability trajectory, but the finding is not clinically relevant. [Read more...](#)

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Living well with MSK conditions

Living well with MSK conditions

1. Functional Disability Due to Chronic Low Back Pain in the Geriatric Population of a Tertiary Care Hospital in North India: A Cross-Sectional Study

31-05-2024 - National Library of Medicine

Background Chronic low back pain (CLBP) is one of the painful and disabling conditions affecting the young as well as the geriatric population. There is a limited body of research to find out the impact of CLBP and functional disability on geriatric adults in the Indian region. Aim This study aims to determine the prevalence of functional disability due to CLBP in the geriatric population and ... [Read more...](#)

2. Effects of MLS Laser on pain, function, and disability in chronic non-specific low back pain: A double-blind placebo randomized-controlled trial

31-05-2024 - National Library of Medicine

CONCLUSION: Both MLS Laser and Sham Laser therapies lead to a significant and comparable reduction in pain and disability in patients with chronic non-specific low back pain. However, one month after treatment, MLS Laser therapy has been found to be significantly more effective in reducing pain as compared to sham treatment. [Read more...](#)

3. Analysis of lumbar spine loading during walking in patients with chronic low back pain and healthy controls: An OpenSim-Based study

31-05-2024 - National Library of Medicine

Low back pain (LBP) is one of the most prevalent and disabling disease worldwide. However, the specific biomechanical changes due to LBP are still controversial. The purpose of this study was to estimate the lumbar and lower limb kinematics, lumbar moments and loads, muscle forces and activation during walking in healthy adults and LBP. A total of 18 healthy controls and 19 patients with ... [Read more...](#)

4. Ultrasound-guided posterior lateral branches steroid injections of the sacral foramina for chronic new-onset sacroiliac joint pain management after spinal fusion surgery: A prospective study of single-center in Vietnam

31-05-2024 - National Library of Medicine

No abstract [Read more...](#)

5. Comparison of the efficacy of auricular vagus nerve stimulation and conventional low back rehabilitation in patients with chronic low back pain

30-05-2024 - National Library of Medicine

BACKGROUND: In recent years, human and animal studies have provided increasing evidence that vagus nerve stimulation (VNS) can produce analgesic effects as well as alleviating resistant epilepsy and depression. Our study was designed to compare the efficacy of transcutaneous auricular vagus nerve stimulation with conventional low back rehabilitation in patients with chronic low back pain (CLBP). [Read more...](#)

6. A novel case-finding strategy based on artificial intelligence for the systematic identification and management of individuals with osteoporosis or at varying risk of fragility fracture

30-05-2024 - National Library of Medicine

CONCLUSIONS: The ODTP through BFQ tool is a feasible, convenient and time-saving osteoporosis model of care for GPs during routine clinical practice. It enables GPs to shift their focus from what to do (clinical guidelines) to how to do it in the primary health care setting. It also allows a systematic approach to primary and secondary prevention of fragility fractures, ... [Read more...](#)

7. High Body Fat as a Predictor of Osteoporosis Risk in Postmenopausal Women: Insights From a Community-Based Cross-Sectional Study in Rural South India

30-05-2024 - National Library of Medicine

CONCLUSION: This community-based study found a 20% osteoporosis risk among postmenopausal women using the OSTA scale, with age, lower education, and waist-hip ratio as key determinants. Early identification and interventions, particularly targeting older and obese individuals, are crucial to alleviate the burden and complications of osteoporosis. [Read more...](#)

8. ERGONOMIC PRACTICE IN DENTAL CLINICS AND MUSCULOSKELETAL DISORDERS AMONG DENTISTS IN GEORGIA

29-05-2024 - National Library of Medicine

The dental profession is associated with occupational health problems. The working environment of a dentist is associated with ergonomic risk factors that can significantly reduce the dentist's working ability and even cause the termination of his/her professional activity. Numerous studies have been conducted in different countries (Sweden, Denmark, Germany, Poland, Australia, etc. [Read more...](#)

9. The bidirectional relationship between sleep problems and chronic musculoskeletal pain: a systematic review with meta-analysis

29-05-2024 - National Library of Medicine

Chronic musculoskeletal pain and sleep problems/disorders exhibit a recognized bidirectional relationship yet, systematic investigations of this claim, particularly in a prospective context, are lacking. This systematic review with meta-analysis aimed to synthesize the literature on the prospective associations between sleep problems/disorders and chronic musculoskeletal pain. [Read more...](#)

10. Update on fracture risk assessment in osteoporosis

29-05-2024 - National Library of Medicine

PURPOSE OF REVIEW: The assessment of fracture risk is playing an ever-increasing role in osteoporosis clinical management and informing international guidelines for osteoporosis. FRAX, a fracture risk calculator that provides individualized 10-year probabilities of hip and major osteoporotic fracture, has been widely used since 2008. In this review, we recap the development and limitations of ... [Read more...](#)

11. Detection of musculoskeletal inflammatory lesions in patients with chronic chikungunya infection using 3T whole-body magnetic resonance imaging

29-05-2024 - National Library of Medicine

CONCLUSIONS: This study represents the first utilization of 3T WBMRI to assess musculoskeletal inflammatory disorders in chronic CHIKV infection. The aim was to identify the most affected joints and prevalent lesions, providing valuable insights for future research and clinical management of this condition regarding understanding disease pathophysiology, developing targeted treatment ... [Read more...](#)

12. Insight into the potential of bone turnover biomarkers: integration in the management of osteoporosis and chronic kidney disease-associated osteoporosis

28-05-2024 - National Library of Medicine

PURPOSE OF REVIEW: Disturbances in mineral and bone metabolism occurring in osteoporosis and chronic kidney disease-associated osteoporosis place patients at high risk of fracture making these conditions a major public health concern. Due to the limited use of bone histomorphometry in clinical practice, the gold standard for assessing bone turnover, extensive efforts have been made to ... [Read more...](#)

13. Psychosocial Factors and Musculoskeletal Symptoms in Office Workers: Validating the Maastricht Upper Extremity Questionnaire

28-05-2024 - National Library of Medicine

CONCLUSION: The psychometric evaluation of the Persian version of the MUEQ showed that it is a valid and reliable tool for evaluating psychosocial factors in the work environment. Identifying psychosocial factors influential in musculoskeletal problems will lead to better planning to change behavior and design constructive interventions to improve behavior. By addressing psychosocial ... [Read more...](#)

14. Efficacy of Medical Ozone for Treatment of Chronic Musculoskeletal Pain with Abnormal Mitochondrial Redox State: Prospective Randomized Clinical Trial

28-05-2024 - National Library of Medicine

CONCLUSIONS: Ozone therapy or combined ozone and betamethasone treatment are effective techniques for management of pain since it produced a significant reduction of muscle pain and increase of the pain free interval experienced by patients. Ozone therapy causes pain improvement which increases with time and it improves muscle oxygenation and mitochondrial function. [Read more...](#)

15. Ergonomic interventions to reduce upper limb musculoskeletal pain during robotic surgery: a narrative review

27-05-2024 - National Library of Medicine

There is a high prevalence of upper limb musculoskeletal pain among robotic surgeons. Poor upper limb ergonomic positioning during robotic surgery occurs when the shoulders are abducted, and the elbows are lifted off the console armrest. The validated rapid upper limb assessment can quantify ergonomic efficacy. Surface electromyography and hand dynamometer assessment of strength are the most ... [Read more...](#)

16. Efficacy of Cooled-Radiofrequency Ablation of the Genicular Nerve as Treatment for Chronic Knee Pain: A Retrospective Study

27-05-2024 - National Library of Medicine

CONCLUSION: The study demonstrated that c-RFA can potentially be utilized as an alternative safe therapy for chronic knee pain, providing pain relief with a relatively prolonged duration. Inherent challenges of retrospective studies remain a part of the limitations of this study. [Read more...](#)

17. How well do participants in clinical trials represent the U.S. population with chronic neck or back pain?

27-05-2024 - National Library of Medicine

CONCLUSIONS: Health disparity populations are not well represented in spine pain clinical trials. Embracing key community-based approaches, which have shown promise for increasing participation of underserved communities, is needed. [Read more...](#)

18. Assessing muscle energy technique and foam roller self-myofascial release for low back pain management in two-wheeler riders

27-05-2024 - National Library of Medicine

Pain in the lower back is a major concern in today's era due to prolonged sitting in two-wheeler riders, mainly due to hamstring tightness. It also creates physical disability and impairment in activities of daily living. The study aimed to compare the efficacy of muscle energy technique (MET) and self-myofascial release (SMFR) using the foam roller on hamstring flexibility, dynamic balance, ... [Read more...](#)

19. The effect of chronic low back pain and lumbopelvic stabilization instructions on gluteus medius activation during sidelying hip movements

27-05-2024 - National Library of Medicine

CONCLUSION: Knowledge of changes in gluteus medius muscle activation patterns with trunk stabilization instruction may help clinicians with assessment of exercise performance to optimize gluteus medius activation. [Read more...](#)

20. An Adaptive Pragmatic Randomized Controlled Trial of Emergency Department Acupuncture for Acute Musculoskeletal Pain Management

25-05-2024 - National Library of Medicine

CONCLUSION: ED acupuncture is feasible and acceptable and can reduce acute musculoskeletal pain better than UC alone. [Read more...](#)

21. DEXA Body Composition Asymmetry Analysis and Association to Injury Risk and Low Back Pain in University Soccer Players

25-05-2024 - National Library of Medicine

Soccer is a laterally dominant sport owing to the repetitive nature of unilateral kicking. The relationship between functional and body composition asymmetries related to limb dominance in soccer players has yet to be established. When present, asymmetries can increase the risk of injury and low back pain. Our study investigated whether lateral dominance is associated with limb asymmetries in ... [Read more...](#)

22. Disclosing Strain: How Psychosocial Risk Factors Influence Work-Related Musculoskeletal Disorders in Healthcare Workers Preceding and during the COVID-19 Pandemic

25-05-2024 - National Library of Medicine

Healthcare workers, particularly nurses, engage in a daily work routine that takes a toll on their emotional well-being, rendering them vulnerable to psychosocial risk factors. This research seeks to analyse the influence of psychosocial risk factors on the occurrence of work-related musculoskeletal disorders among nurses. An additional analysis was performed to understand the role of age in ... [Read more...](#)

23. Work fatigue and musculoskeletal disorders in gas station operators in Pontianak city, Indonesia

24-05-2024 - National Library of Medicine

This study analyzes the relationship between work fatigue and musculoskeletal disorders in gas station operators in Pontianak City. This study used with a cross-sectional approach. The sample consists of 150 gas station workers. Data collection was carried out by observing and interviewing. Respondents characteristics were recorded through interviews using a questionnaire. [Read more...](#)

24. The effect of fixation type on periprosthetic fractures in high-risk patients who have osteoporosis undergoing total joint arthroplasty

24-05-2024 - National Library of Medicine

CONCLUSION: There is an increased risk of PFF at 5 years following TKA in patients at high risk for osteoporosis undergoing cementless fixation in comparison to cemented fixation. There is an increased risk of PFF at 5 years following THA in patients at high risk for osteoporosis for both cementless fixation and cemented fixation, but no clinically meaningful difference between the two groups. [Read more...](#)

25. Job stress and chronic low back pain: incidence, number of episodes, and severity in a 4-year follow-up of the ELSA-Brasil Musculoskeletal cohort

24-05-2024 - National Library of Medicine

We investigated the association between job stress, as assessed by the effort-reward imbalance model, and the incidence of chronic low back pain (CLBP) over a 4-year period. A total of 1733 participants from the ELSA-Brasil Musculoskeletal cohort, who were free from LBP at baseline (2012-2014), were included. Episodes of LBP in the past 30 days, intensity, and the presence of disability were ... [Read more...](#)

26. Osteoporosis screening in Australian community pharmacies: A mixed methods study

23-05-2024 - National Library of Medicine

CONCLUSION: Using an implementation science approach, a community pharmacy osteoporosis screening service for the Australian context was designed and found to be acceptable to pharmacy staff and effective in reaching the target population. **SO WHAT?:** This low-cost and non-invasive health promotion has potential to sustainably increase national screening rates for osteoporosis. [Read more...](#)

27. Patients with Osteoporosis Are at Higher Risk for Periprosthetic Femoral Fractures and Aseptic Loosening Following Total Hip Arthroplasty

23-05-2024 - National Library of Medicine

This report provides an updated analysis for patients with osteoporosis following total hip arthroplasty (THA). The comorbidities of alcohol abuse, chronic kidney disease, cerebrovascular disease, obesity, and rheumatoid arthritis continue to be significant risk factors for periprosthetic femur fracture (PPFFx) and aseptic loosening in the population with osteoporosis. [Read more...](#)

28. Mesenchymal stem cells for chronic knee pain secondary to osteoarthritis: a systematic review and meta-analysis of randomized trials

22-05-2024 - National Library of Medicine

CONCLUSIONS: When restricted to moderate certainty evidence, compared to placebo, intra-articular injection of MSCs for chronic knee pain associated with OA probably provides little to no improvement in pain or physical function. [Read more...](#)

29. Investigating neuroepigenetic alterations in chronic low back pain with positron emission tomography

22-05-2024 - National Library of Medicine

Epigenetics has gained considerable interest as potential mediators of molecular alterations that could underlie the prolonged sensitization of nociceptors, neurons, and glia in response to various environmental stimuli. Histone acetylation and deacetylation, key processes in modulating chromatin, influence gene expression elevated histone acetylation enhances transcriptional activity, ... [Read more...](#)

30. Outdoor walking, genetic predisposition, and the risk of incident osteoporosis among older adults: A prospective large population-based cohort study

21-05-2024 - National Library of Medicine

CONCLUSIONS: A significant negative correlation exists between an extended period of daily outdoor walking and osteoporosis incidence risk. This correlation is particularly pronounced among individuals with low genetic risk. The results above underscore the significance of outdoor walking as a simple and economical adjunct to public health programs to prevent osteoporosis. [Read more...](#)

31. Vascular endothelial growth factor I/D variant and postmenopausal osteoporosis risk in the Turkish population

21-05-2024 - National Library of Medicine

CONCLUSION: Our results showed that the VEGF I/D variant was not a significant factor in the development of PMOP in a Turkish population sample. These findings need confirmation in other ethnic populations. [Read more...](#)

32. Characterization of pain-related behaviors in a rat model of acute-to-chronic low back pain: single vs. multi-level disc injury

21-05-2024 - National Library of Medicine

INTRODUCTION: Low back pain is the most common type of chronic pain. We examined pain-related behaviors across 18 weeks in rats that received injury to one or two lumbar intervertebral discs (IVD) to determine if multi-level disc injuries enhance/prolong pain. [Read more...](#)

33. Association of combined healthy lifestyle factors with incident osteoporosis in patients with and without type 2 diabetes

21-05-2024 - National Library of Medicine

CONCLUSIONS: Participants with T2DM who adhered to a variety of healthy lifestyle factors demonstrated a substantially reduced risk of developing OP. [Read more...](#)

34. Physiotherapeutic and non-conventional approaches in patients with chronic low-back pain: a level I Bayesian network meta-analysis

21-05-2024 - National Library of Medicine

Chronic low back pain (cLBP) is a major cause of disability and healthcare expenditure worldwide. Its prevalence is increasing globally from somatic and psychosocial factors. While non-pharmacological management, and in particular physiotherapy, has been recommended as a first-line treatment for cLBP, it is not clear what type of physiotherapeutic approach is the most effective in terms of ... [Read more...](#)

35. An Integrated Approach to Chronic Low Back Pain: Evaluating the Impact of Consecutive Loop TheraBand Training Combined With Proprioceptive Neuromuscular Facilitation and Conventional Physiotherapy

21-05-2024 - National Library of Medicine

Chronic low back pain (CLBP) is a prevalent musculoskeletal condition characterized by persistent discomfort in the lumbosacral region lasting beyond 12 weeks. Individuals with CLBP often experience limitations in range of motion and compromised performance of affected body parts. Core muscle weakness/delayed activation and impaired lumbar proprioception are established contributors to CLBP. [Read more...](#)

36. 'Specialist before physiotherapist': physicians' and physiotherapists' beliefs and management of chronic low back pain in Ghana - A qualitative study

20-05-2024 - National Library of Medicine

CONCLUSION: The CLBP beliefs and practices of HCPs involved with CLBP in Ghana is modelled around a professional identity that is largely hinged on paternalism and bio-medical/mechanical understandings. Lack of collaboration and sociocultural expectations also play a significant role. There is the need for a reconstitution of Ghanaian HCPs' CLBP beliefs and management approaches to align with ... [Read more...](#)

37. Evaluation of effectiveness of osteopathic visceral manipulation in patients with chronic mechanical low back pain: A multi-center, single-blind, randomized-controlled study

20-05-2024 - National Library of Medicine

CONCLUSION: The results suggest that OVM combined with physical therapy is useful to improve pain, depression, and functional impairment in patients with chronic mechanical low back pain. We believe that

OVM techniques should be combined with other physical therapy modalities in this patient population. [Read more...](#)

38. Comparing the effectiveness of flexi-bar and stability exercises on postural control in chronic nonspecific low back pain: A randomized controlled study

20-05-2024 - National Library of Medicine

CONCLUSION: Both flexi-bar and stabilization exercises effectively improved static and dynamic postural control, but none of the exercises was superior to the other. Flexi-bar is recommended as an effective tool in low back pain rehabilitation. [Read more...](#)

39. The relationship between the psoas major muscle morphology characteristics with disability index and pain in patients with chronic nonspecific low back pain

19-05-2024 - National Library of Medicine

CONCLUSIONS: There is no significant relationship between the PM morphological characteristics and disability index and pain score. Therefore, muscle CSA and diameters are insufficient to determine the cause of CNLBP. [Read more...](#)

40. WHICH SCALE TO ASSESS PAIN SELF-EFFICACY SHOWS BETTER MEASUREMENT PROPERTIES IN CHRONIC LOW BACK PAIN? A HEAD-TO-HEAD COMPARISON STUDY

19-05-2024 - National Library of Medicine

CONCLUSIONS: It was not possible to calculate structural validity for PSEQ-2, CPSS-SF did not meet the criterion for suitable hypothesis testing for construct validity and all the questionnaires did not show suitable measurement error, except for the PSEQ-10. Hence, the PSEQ-10 was the unique scale that met all the criteria for good measurement properties for assessing pain self-efficacy in CLBP. [Read more...](#)

41. Duloxetine and cognitive behavioral therapy with phone-based support for the treatment of chronic musculoskeletal pain: study protocol of the PRECICE randomized control trial

18-05-2024 - National Library of Medicine

BACKGROUND: Chronic musculoskeletal pain (CMP) is the most common, disabling, and costly of all pain conditions. While evidence exists for the efficacy of both duloxetine and web-based cognitive behavioral therapy (CBT) as monotherapy, there is a clear need to consider study of treatment components that may complement each other. In addition, given the reported association between patient's ... [Read more...](#)

42. Knowledge, attitude, and practice toward osteoporosis among patients with chronic kidney disease in Zhejiang

17-05-2024 - National Library of Medicine

Patients with chronic kidney disease (CKD) are considered high-risk group for osteoporosis. However, the current understanding of their knowledge, attitude, and practice toward osteoporosis remains unclear. CKD patients were recruited from Li Huili Hospital, Ningbo Medical Center between March 2023 and June 2023. A self-designed questionnaire was used to collect the participant's demographic ... [Read more...](#)

43. Nutrition and chronic musculoskeletal pain: A narrative review and directions for temporomandibular disorder research and management

17-05-2024 - National Library of Medicine

CONCLUSION: Considering diet may influence CPC, allied with the scarcity of studies evaluating the role of nutrition on TMD, well-designed clinical trials based on dietary assessments and measurements capable of evaluating food quality, UPF consumption and nutrient adequacy-added to serum nutrient levels evaluation-are suggested. [Read more...](#)

44. Gender Equality in Diastasis Rectus Abdominis in Chronic Back Pain: A Model of M. Transversus Abdominis Motor Control Impairment

16-05-2024 - National Library of Medicine

Introduction: Diastasis rectus abdominis (DRA) is defined as an increased distance between the left and right muscle of the m. rectus abdominis. Pregnancy-related factors are assumed to be dominant factors in the occurrence of DRA. However DRA is not only found in peri-partum women but also in men and nulliparous women with back or pelvic pain. This study provides an inventory of the ... [Read more...](#)

45. Changes needed to reduce risk of musculoskeletal disorders

16-05-2024 - National Library of Medicine

Musculoskeletal disorders (MSDs) are the main contributor to disability levels, which are rising as populations age. Workplace hazard exposures are a major source of this problem, and current workplace risk management practices require substantial changes to tackle it more effectively. Most importantly, the current focus of risk management on "manual handling" tasks must broaden to encompass ... [Read more...](#)

46. Low back pain management in primary healthcare: findings from a scoping review on models of care

16-05-2024 - National Library of Medicine

CONCLUSIONS: This study examines the features of MoCs for LBP, highlighting that research is in its early stages and stressing the need for better reporting to fill gaps in care delivery and implementation. This knowledge is crucial for researchers, clinicians and decision-makers in assessing the applicability and transferability of MoCs to primary healthcare settings. [Read more...](#)

47. Risk factors of primary Sjogren's syndrome combined with osteoporosis

16-05-2024 - National Library of Medicine

Primary Sjögren's syndrome (pSS) is a systemic autoimmune disease that is prevalent in middle-aged and elderly women, characterized by dry mouth, dry eyes, fatigue, and joint pain. Nearly one-third pSS patients have been suffering with osteoporosis (OP), displaying symptoms of lumbago, back pain, and even fracture, all of which severely affect their life quality. [Read more...](#)

48. Predictive validity of the STarT Back screening tool among older adults with back pain

16-05-2024 - National Library of Medicine

CONCLUSION: The predictive validity of the SBT risk groups in predicting persistent disabling back pain in older adults was poor. [Read more...](#)

49. Opportunistic screening for osteoporosis using routine clinical care computed tomography brain studies

16-05-2024 - National Library of Medicine

CONCLUSION: Frontal bone density from routine CTB is significantly different between females with and without osteoporosis, but not between males. However, frontal bone density was a weak predictor for DEXA-defined osteoporosis. Further research is required to determine the role of CTB in opportunistic osteoporosis screening. [Read more...](#)

50. Factors affecting functional disability in patients with non-specific chronic low back pain: a cross-sectional study

16-05-2024 - National Library of Medicine

CONCLUSION: Educational background, DSITR, and SSA are independent factors affecting functional disability in NSCLBP patients. NSCLBP patients with a lower educational background, shorter DSITR, or smaller SSA should be taken into account in clinical practice and therapeutic choices. Extending sitting time for rest and the avoidance of a forward-leaning standing position are beneficial for ... [Read more...](#)

51. Network Meta-analysis and Economic Evaluation of Neurostimulation Interventions for Chronic Non-surgical Refractory back Pain

16-05-2024 - National Library of Medicine

OBJECTIVES: Different types of spinal cord stimulation (SCS) have now been evaluated for the management of chronic non-surgical refractory back pain (NSRBP). A direct comparison between the different types of SCS or between closed-loop SCS with conventional medical management (CMM) for patients with NSRBP has not been previously conducted, and therefore, their relative effectiveness and ...

[Read more...](#)

52. A Causal Relationship Between Type 1 Diabetes and Risk of Osteoporosis: A Univariable and Multivariable Mendelian Randomization Study

16-05-2024 - National Library of Medicine

Objective: This Mendelian randomization (MR) analysis aims to investigate the causal relationship between type 1 diabetes (T1D) and osteoporosis (OP). **Methods:** Single nucleotide polymorphisms (SNPs) associated with T1D were selected from the summary statistics of the genome-wide association study (GWAS) in European ancestry as instrumental variables (IVs) for univariable MR (UVMR) to explore ...

[Read more...](#)

53. Comparison of multi-task ergonomic assessment methods for risk of upper extremity and low back musculoskeletal disorders

15-05-2024 - National Library of Medicine

Work-related musculoskeletal disorder of upper extremity multi-task assessment methods (Revised Strain Index [RSI], Distal Upper Extremity Tool [DUET]) and manual handling multi-task assessment methods (Revised NIOSH Lifting Equation [RNLE], Lifting Fatigue Failure Tool [LiFFT]) were compared. RSI and DUET showed a strong correlation ($r(s) = 0.933, p < 0.001$) where increasing risk factor ...

[Read more...](#)

54. Endoscopy-related musculoskeletal injuries to endoscopists: time for an "ergonomic time-out"

15-05-2024 - National Library of Medicine

No abstract [Read more...](#)

55. Work-related musculoskeletal complaints: risk factors and impact on work productivity among university administrative employees

14-05-2024 - National Library of Medicine

CONCLUSION: Musculoskeletal problems were highly prevalent among administrative employees. Being female and not having adequate rest breaks were significant predictors for the occurrence of WMSDs. Ergonomic interventions and improvement of working conditions are recommended to reduce WMSDs.

[Read more...](#)

56. Persuasive Narratives About Osteoporosis: Effects of Protagonist Competence, Narrator Point of View, and Subjective Risk

14-05-2024 - National Library of Medicine

Narratives have been widely acknowledged as a powerful persuasion tool in health promotion and education. Recently, great efforts have been devoted to identifying message components and causal pathways that maximize a narrative's persuasion power. Specifically, we investigated how narrator point of view and readers' subjective relative risk moderate the effects of protagonist competence on ...

[Read more...](#)

57. Transarterial microembolization for the management of refractory chronic joint pain in osteoarthritis

13-05-2024 - National Library of Medicine

Osteoarthritis (OA) is a chronic degenerative disease significantly impacting both patient quality of life and socioeconomics. Traditional treatment options, including pharmacological and surgical interventions, are often limited. Advancements in our understanding of the pathological mechanisms behind OA indicate the involvement of pathological angiogenesis. Transarterial microembolization ... [Read more...](#)

58. Occupational psychosocial exposures and chronic low-back pain: a systematic review and meta-analysis

13-05-2024 - National Library of Medicine

CONCLUSION: In this study, we found no association between occupational psychosocial exposures and chronic LBP. However, it is important to underline that the level of evidence was very low. High quality studies are highly warranted. [Read more...](#)

59. Role of the Flexion Relaxation Phenomenon in the Analysis of Low Back Pain Risk in the Powerlifter: A Proof-of-Principle Study

11-05-2024 - National Library of Medicine

CONCLUSIONS: FRR could be considered as a useful parameter for studying the risk of LBP in powerlifting. The FRR index not only refers to the possible myoelectric silence of the lumbar muscles in trunk maximum forward flexion but also takes into account the energy value delivered by the lumbar muscles during the flexion. Furthermore, we can indicate that the size of the powerlifter ARCH may ... [Read more...](#)

60. Which patients with chronic low back pain respond favorably to multidisciplinary rehabilitation? A secondary analysis of a randomized controlled trial

11-05-2024 - National Library of Medicine

CONCLUSIONS: In patients with CLBP, female patients as well as patients who were self-supporting or receiving retirement benefits were significantly more likely than male patients or patients on temporary or permanent social benefits to be a responder to multidisciplinary rehabilitation. [Read more...](#)

61. Exploring Risk Factors for Predicting 30-Day Postoperative Morbidity in Musculoskeletal Tumor Surgery

11-05-2024 - National Library of Medicine

Background: This study investigates the risk factors associated with postoperative complications in musculoskeletal tumor surgeries and evaluates the impact of benchmarking in enhancing surgical outcomes. Methods: Conducted at a tertiary referral center, this retrospective analysis included 196 patients who underwent surgeries for various musculoskeletal tumors, ... [Read more...](#)

62. Effects of Paraspinal Intramuscular Injection of Atelocollagen in Patients with Chronic Low Back Pain: A Retrospective Observational Study

11-05-2024 - National Library of Medicine

Background/Objectives: Atelocollagen is used for soft tissue repair and reconstruction by replacing defective or damaged muscles, membranes, ligaments, and tendons. This study aimed to evaluate the clinical efficacy and safety of additional paraspinal intramuscular injection of atelocollagen on lumbar epidural steroid injection for reducing pain and improving functional capacity of patients ... [Read more...](#)

63. Serum vitamin D and chronic musculoskeletal pain: a cross-sectional study of 349,221 adults in the UK

11-05-2024 - National Library of Medicine

Insufficient and deficient vitamin D may be associated with chronic musculoskeletal pain, but study findings are conflicting, and few account for important confounding factors. This cross-sectional study explored the association between serum vitamin D status and chronic musculoskeletal pain in various body sites, adjusting for a wide range and number of potential confounding factors. [Read more...](#)

64. Efficacy of a Psychologically-Informed Physiotherapy Intervention in Patients with Chronic Low Back Pain at High Risk of Poor Prognosis: A Pilot and Feasibility Randomized Controlled Trial

10-05-2024 - National Library of Medicine

CONCLUSIONS: As most success criteria were met, conducting an RCT evaluating PIPT and PU is feasible with modifications. PIPT and UP appear to be similarly effective. [Read more...](#)

65. Isometric vs Isotonic Core Stabilization Exercises to Improve Pain and Disability in Patients with Non-specific Chronic Low Back Pain: A Randomized Controlled Trial

10-05-2024 - National Library of Medicine

CONCLUSIONS: Both ISOM and ISOT methods are effective in alleviating pain and disability in patients with NSCLBP. However, there is no significant difference in the benefits between them. Numerically, ISOM exercises were found to be superior. Further studies are needed to obtain a more accurate answer regarding their superiority. [Read more...](#)

66. Perioperative Health Interventions in Children With Chronic Neuromuscular Conditions Undergoing Major Musculoskeletal Surgery: A Scoping Review

10-05-2024 - National Library of Medicine

CONCLUSIONS: The findings reveal various impacts of POHI in CCNMC undergoing major musculoskeletal surgery. Multicenter prospective studies are needed to better address the overall impact of specific interventions on perioperative outcomes in CCNMC. [Read more...](#)

67. Translation and initial cross-cultural adaptation of the tool for support-gradual return-to-work for persons with chronic musculoskeletal pain to the Swedish setting

10-05-2024 - National Library of Medicine

CONCLUSIONS: The study found strong alignment between questionnaire responses and group consultations outcomes, affirming the adapted tool's suitability for use in a Swedish context. The tool benefits employers and employees by enhancing communication, encouraging collaboration, and structuring processes, promising lasting improvements to work conditions. [Read more...](#)

68. Cross-sectional study of psychiatric disorders in patients with chronic musculoskeletal pain and individuals without pain

10-05-2024 - National Library of Medicine

CONCLUSION: Positive correlations of mental disorders and chronic musculoskeletal pain have been documented. This suggests that psychiatric components must be taken into account in the management of chronic pain syndromes. The use of Mini Plus as a diagnostic tool for psychiatric disorders can contribute to optimizing the diagnosis and treatment of patients with chronic pain and encourage the ... [Read more...](#)

69. Passive intervertebral restraint is different in patients with treatment-resistant chronic nonspecific low back pain: a retrospective cohort study and control comparison

10-05-2024 - National Library of Medicine

CONCLUSION: Peaking time of passive intervertebral velocity occurs early at L5-S1 in patients with CNSLBP however, these findings should be treated with caution pending their replication. Future studies should explore relationships with altered disc pressures and biochemistry. Usefulness for monitoring regenerative disc therapies should be considered. [Read more...](#)

70. Skeletal muscle index based on CT at the 12th thoracic spine level can predict osteoporosis and fracture risk: a propensity score-matched cohort study

10-05-2024 - National Library of Medicine

CONCLUSION: SMI based on CT images of the 12th thoracic vertebrae can effectively diagnose osteoporosis and predict fracture risk. Therefore, SMI can make secondary use of chest CT to screen people who are prone to osteoporosis and fracture, and carry out timely medical intervention. [Read more...](#)

71. Work-Related Musculoskeletal Injury Rates, Risk Factors, and Ergonomics in Different Endoscopic Specialties: A Review

10-05-2024 - National Library of Medicine

Endoscopy-related musculoskeletal injuries (ERIs) are frequent among gastrointestinal, pulmonary, nasal, and urologic endoscopists, impacting the healthcare system. The present review aims to compare the ERI rates, risk factors, and ergonomic recommendations in the different endoscopic fields. A review was conducted using PubMed and Cochrane Library for articles based on surveys and published ... [Read more...](#)

72. Age-adjusted Charlson comorbidity index is associated with the risk of osteoporosis in older fall-prone men: a retrospective cohort study

10-05-2024 - National Library of Medicine

CONCLUSIONS: The current study indicated an association of higher aCCI with an increased risk of osteoporosis among older fall-prone men, supporting the possibility of aCCI as a marker of long-term skeletal-related adverse clinical outcomes. [Read more...](#)

73. Examining Resilient Pain Behaviors for Chronic Low Back Pain: A Scoping Review

09-05-2024 - National Library of Medicine

CONCLUSION: The majority cross-sectional design and heterogeneity of a resilience definition indicates resilience research is still emerging. The lack of operationalized resilience, specifically as a behavior, and the limited use of theoretical frameworks suggest advancements in resilience pain research are needed. [Read more...](#)

74. The Impact of Baseline Pain Intensity on the Effectiveness of Whole-Body Electromyostimulation (WB-EMS) for Nonspecific Chronic Back Pain

09-05-2024 - National Library of Medicine

CONCLUSION: The findings support the hypothesis that NSCBP patients with higher baseline NRS values benefit more substantially from WB-EMS. Those with NRS values above 7 show the greatest improvement and highest rate of clinical significance. The overall positive correlation between initial pain intensity and pain reduction further underscores the efficacy of WB-EMS in managing NSCBP across ... [Read more...](#)

75. End-to-End Semi-Supervised Opportunistic Osteoporosis Screening Using Computed Tomography

09-05-2024 - National Library of Medicine

CONCLUSION: CT scans collected during routine examinations without bone densitometry calibration can be used to generate DXA BMD predictions. [Read more...](#)

76. Chronic neck and low back pain from personal experiences: a written narrative approach

08-05-2024 - National Library of Medicine

Background: Chronic neck and low back pain are very common and have detrimental effects for people and society. In this study, we explore the experiences of individuals with neck and/or back pain using a written narrative methodology. Materials & methods: A total of 92 individuals explained their pain experience using written narratives. Narratives were analyzed through thematic analysis and ... [Read more...](#)

77. Do patients with nephrotic syndrome have an increased risk of osteoporosis? A nationwide population-based retrospective cohort study in Taiwan

08-05-2024 - National Library of Medicine

CONCLUSION: NS patients, particularly those treated with CS, should be evaluated for subsequent risk of osteoporosis. [Read more...](#)

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MSK in child and adolescent health

MSK in child and adolescent health

1. A case report of a childhood scurvy musculoskeletal manifestation: Radiologic findings and diagnostic implications

27-05-2024 - National Library of Medicine

Scurvy is an infrequent pathological condition resulting from a sustained dietary vitamin C deficiency. Radiology becomes pivotal because the diagnostic process for scurvy can be intricate, given its resemblance to bone neoplasms. A 6-year-old boy, reported persistent pain and swelling in the right thigh for 2 months prior to hospitalization. Clinical examination revealed a mass localized in ... [Read more...](#)

2. Perioperative Evaluation and Management of Children with Osteoporosis and Low Bone Mineral Density

23-05-2024 - National Library of Medicine

As medical and surgical treatment options for children with osteoporosis expand, multidisciplinary strategies for bone health optimization become more important. Each patient's bone mineral density and fracture history should be interpreted in context. Off-label bisphosphonate use is a standard pharmacologic intervention for children with osteoporosis for optimal bone accrual. [Read more...](#)

3. Child with high fever and knee pain

22-05-2024 - National Library of Medicine

No abstract [Read more...](#)

4. Adolescent girls' musculoskeletal pain is more affected by insomnia than boys', and through different psychological pathways

19-05-2024 - National Library of Medicine

Prior research has established that insomnia is predictive of pain in adolescents and that psychological mechanisms have a crucial role in this relationship. Adolescent girls report more insomnia and pain than boys, yet little is known of gender differences in how insomnia influences pain. This study assessed gender differences in levels and trajectories of insomnia and pain during adolescence, ... [Read more...](#)

5. Credibility, readability and content analysis of treatment recommendations for adolescents with nonspecific back pain published on consumer websites

16-05-2024 - National Library of Medicine

CONCLUSIONS: Parents of adolescents with nonspecific back pain may find that treatment recommendations published online are numerous and varied, with visits to the doctor encouraged. The credibility scores of these web pages are generally low, while the median reading level may be too high for the general population. [Read more...](#)

6. Musculoskeletal Issues in Pediatric Burn Patients

15-05-2024 - National Library of Medicine

A burn injury affects virtually every organ system. The purpose of this article is to review musculoskeletal issues in children with burn injuries. Both acute and long-term problems will be discussed. A low threshold to consult a pediatric orthopaedist is recommended. [Read more...](#)

7. Efficacy and Safety of Oral Alendronate Treatment in Children and Adolescents with Osteoporosis

14-05-2024 - National Library of Medicine

No abstract [Read more...](#)

8. The beauty of pediatric musculoskeletal ultrasound

13-05-2024 - National Library of Medicine

Ultrasound is a powerful technique in pediatric imaging and musculoskeletal (MSK) imaging in many specific clinical scenarios. This article will feature some common and less common spot diagnoses in pediatric musculoskeletal ultrasound. Cases were collected by members of the Educational Committee of the ESSR (European Society of musculoSkeletal Radiology) and the Pediatric Subcommittee of the ... [Read more...](#)

9. Rehabilitation of back pain in the pediatric population: a mixed studies systematic review

09-05-2024 - National Library of Medicine

CONCLUSIONS: Spinal manipulation and group-based exercise may be beneficial in reducing LBP intensity in adolescents. Education should be provided as part of a care program. The overall evidence is sparse. Methodologically rigorous studies are needed. [Read more...](#)

10. Quantitative Musculoskeletal Imaging of the Pediatric Shoulder

07-05-2024 - National Library of Medicine

Pediatric acquired and congenital conditions leading to shoulder pain and dysfunction are common. Objective, quantitative musculoskeletal imaging-based measures of shoulder health in children lag recent developments in adults. We review promising applications of quantitative imaging that tend to be available for common pediatric shoulder pathologies, especially brachial plexus birth palsy and ... [Read more...](#)

11. Effect of 12 weeks of Judo Practice and Ball Games on Neck and Low Back Pain in Children and Adolescents: A Randomized Clinical Trial

06-05-2024 - National Library of Medicine

No abstract [Read more...](#)

12. Musculoskeletal misdiagnoses in pediatric patients with spinal tumors

06-05-2024 - National Library of Medicine

CONCLUSION: Less aggressive spinal tumors may manifest as gradual skeletal abnormalities and musculoskeletal symptoms without neurological/general symptoms, leading to misdiagnoses and delays. [Read more...](#)

13. Long-term Musculoskeletal Consequences of Chemotherapy in Pediatric Mice

06-05-2024 - National Library of Medicine

Thanks to recent progress in cancer research, most children treated for cancer survive into adulthood. Nevertheless, the long-term consequences of anticancer agents are understudied, especially in the pediatric population. We and others have shown that routinely administered chemotherapeutics drive musculoskeletal alterations, which contribute to increased treatment-related toxicity and ... [Read more...](#)

14. Adverse Childhood Experiences and Chronic Low Back Pain In Adulthood: The Role of Emotion Regulation

01-05-2024 - National Library of Medicine

Chronic low back pain (cLBP) is characterized by biopsychosocial determinants that collectively result in substantial burden at the individual, community, and healthcare system levels. A growing body of literature suggests that childhood adversity is longitudinally associated with the development and maintenance of various chronic pain conditions in adulthood. [Read more...](#)

15. Molecular Imaging with PET-CT and PET-MRI in Pediatric Musculoskeletal Diseases

30-04-2024 - National Library of Medicine

Molecular imaging has emerged as an integral part of oncologic imaging. Given the physiologic changes that precede anatomic changes, molecular imaging can enable early detection of disease and monitoring of

response. [18F] Fluorodeoxyglucose (FDG) Positron emission tomography (PET) is the predominant molecular imaging modality used in oncologic assessment and can be performed using PET/CT or ... [Read more...](#)

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MSK and multi-morbidity

MSK and multi-morbidity

1. Obesity and lipid metabolism in the development of osteoporosis (Review)

31-05-2024 - National Library of Medicine

Osteoporosis is a common bone metabolic disease that causes a heavy social burden and seriously threatens life. Improving osteogenic capacity is necessary to correct bone mass loss in the treatment of osteoporosis. Osteoblasts are derived from the differentiation of bone marrow mesenchymal stem cells, a process that opposes adipogenic differentiation. The peroxisome proliferator-activated ... [Read more...](#)

2. Surgical Interventions for the Management of Obesity-Related Joint Pain: A Narrative Review

27-05-2024 - National Library of Medicine

Obesity-related joint pain is a common and debilitating condition that significantly impacts the quality of life, primarily due to the excess weight straining the joints. This results in inflammation and degeneration, which can cause pain, stiffness, and difficulty moving. We aimed to comprehensively review the literature discussing surgical interventions for obesity-related joint pain. [Read more...](#)

3. Association between multisite musculoskeletal pain and disability trajectories among community-dwelling older adults

23-05-2024 - National Library of Medicine

CONCLUSIONS: Persons with multisite musculoskeletal pain had a higher risk of disability. It is essential to adopt effective pain management strategies to maintain the independent living ability of older adults and to realize active aging. [Read more...](#)

4. Correction: Allied health professionals' experiences and views towards improving musculoskeletal services in the UK for patients with musculoskeletal and co-existing mental health conditions: a qualitative study

23-05-2024 - National Library of Medicine

No abstract [Read more...](#)

5. Snyder-Robinson syndrome presenting with learning disability, epilepsy, and osteoporosis: a novel SMS gene variant

21-05-2024 - National Library of Medicine

Snyder-Robinson syndrome (SRS) is a rare X-linked recessive disorder characterized by a collection of clinical features including mild to severe intellectual disability, hypertonia, marfanoid habitus, facial asymmetry, osteoporosis, developmental delay and seizures. Whole genome sequencing (WGS) identified a mutation in the spermine synthase (SMS) gene (c.746 A>G, p. [Read more...](#)

6. Prevalence of disability secondary to work-related musculoskeletal injuries among orthopaedic surgeons

16-05-2024 - National Library of Medicine

CONCLUSION: This study captures the prevalence of disability claims made by orthopaedic surgeons due to work-place hazards. To our knowledge, this is the first study to broadly compare disability claims

amongst orthopaedic surgeons. This data should be used to implement changes in the orthopaedic community to decrease injuries and disability claims. [Read more...](#)

7. Relative Contribution of Metabolic Syndrome Components in Relation to Obesity and Insulin Resistance in Postmenopausal Osteoporosis

11-05-2024 - National Library of Medicine

Introduction. Osteoporosis (OP) affects 30% of postmenopausal women, often complicated by metabolic syndrome (MetS) with a still controversial role. We aimed to characterize MetS and its components in relation to bone mineral density (BMD), body mass index (BMI), and insulin resistance. Methods. Patients (n = 188) underwent DEXA scans, spine X-rays, and metabolic and hormonal investigations, ... [Read more...](#)

8. Links among Obesity, Type 2 Diabetes Mellitus, and Osteoporosis: Bone as a Target

11-05-2024 - National Library of Medicine

Obesity, type 2 diabetes mellitus (T2DM) and osteoporosis are serious diseases with an ever-increasing incidence that quite often coexist, especially in the elderly. Individuals with obesity and T2DM have impaired bone quality and an elevated risk of fragility fractures, despite higher and/or unchanged bone mineral density (BMD). The effect of obesity on fracture risk is site-specific, ... [Read more...](#)

9. Musculoskeletal disorders and risk indicators for pain chronification among German dentists: A cross-sectional questionnaire-based study

07-05-2024 - National Library of Medicine

CONCLUSIONS: Almost two-thirds of practicing German dentists have MS pain, and one-third of these have a moderate through high risk of developing pain chronification. These health problems have an adverse impact on their ability to successfully perform dental services, with the potential for prolonged sick leave, disability, and early retirement. Accordingly, ... [Read more...](#)

10. Risk factors for treatment-related bone loss and osteoporosis in patients with follicular lymphoma

06-05-2024 - National Library of Medicine

The survival rate of non-Hodgkin lymphoma (NHL) has steadily improved. However, osteoporosis introduced by treatment is prevalent and associated with increased mortality and disability for patients with NHL. We aimed to investigate factors impacting bone mineral density (BMD) reduction and osteoporosis, and the trend of BMD after chemotherapy. Overall, 97 newly diagnosed patients with ... [Read more...](#)

11. Osteoporosis and fracture risk assessment in adults with ischaemic stroke

04-05-2024 - National Library of Medicine

CONCLUSION: The FRAC-stroke score is a simple clinical tool that can be used to identify patients at high risk of fracture post-stroke who would most benefit from osteoporosis therapy. Stroke is a risk factor for fracture due to immobilisation, vitamin D deficiency and increased falls risk. This study found that a simple bedside tool, the FRAC-stroke score, can predict fracture after ... [Read more...](#)

12. Study of musculoskeletal disorders risk factors and discomfort in sculptors in the north of Mexico

03-05-2024 - National Library of Medicine

CONCLUSIONS: Sculptors suffer from MD. Demographic and work characteristic factors influence MD prevalence. Postural training, improved adaptation of work organization, and intervention guidance on ergonomic risks may reduce the prevalence of MD and the risk of MSDs in this population. [Read more...](#)

13. The role of traditional Chinese medicine on fracture surgery, hospitalization, and total mortality risks in diabetic patients with osteoporosis

02-05-2024 - National Library of Medicine

CONCLUSION: This study provides longitudinal evidence through a cohort study of the value of integrated TCM for T2DOP. More research is needed to fully understand the clinical significance of these results.

[Read more...](#)

14. Guidelines for fracture risk assessment and management of osteoporosis in postmenopausal women and men above the age of 50 in Qatar

02-05-2024 - National Library of Medicine

CONCLUSION: Guidance is provided to all physicians across the country who are involved in the care of patients with osteoporosis and fragility fractures. [Read more...](#)

15. Risk Factors for Residual Back Pain After Balloon Kyphoplasty for Osteoporotic Vertebral Fracture

02-05-2024 - National Library of Medicine

CONCLUSION: The incidence of residual BP 2 years after BKP was 33% in the current study. The risk factor for residual BP after BKP was a preoperative vertebral body height ratio of 50% or less, which should be attentively assessed for the selection of a proper treatment scheme and to provide adequate stabilization. [Read more...](#)

16. Relationship between Serum 25-hydroxyvitamin D and Bone Mineral Density, Fracture Risk, and Bone Metabolism in Adults with Osteoporosis/Fractures

01-05-2024 - National Library of Medicine

CONCLUSION: Vitamin D deficiency is significantly associated with decreased total hip and femoral neck BMD and increased fracture risk as assessed by FRAX. In those with osteoporosis/fractures, vitamin D is implicated in the causal relationship between bone remodeling and BMD. Assessing vitamin D status is imperative for those at risk for osteoporosis/fractures. [Read more...](#)

17. Biomechanical and ergonomic risks associated with cervical musculoskeletal dysfunction amongst surgeons: A systematic review

01-05-2024 - National Library of Medicine

CONCLUSION: The current literature assessing ergonomic and biomechanical factors predisposing surgeons to cervical musculoskeletal dysfunction is insufficient to provide reliable guidance for clinicians. Although the literature identifies factors contributing to work-related cervical dysfunction, few attempt to evaluate interventions for improved surgical ergonomics. [Read more...](#)

18. The optimal cut-off values of FRAX without BMD for predicting osteoporosis fracture risk in the older adults at Nan, Thailand

01-05-2024 - National Library of Medicine

CONCLUSIONS: A simple screening tool like the FRAX which is available in the annual health screening activities has the potential to be used to predict the risk of developing fragility fractures in rural areas of Thailand. Different cut-off values should be used in females and males because the risk of MOF and HF of both genders is significantly different. [Read more...](#)

19. Causal roles of educational duration in bone mineral density and risk factors for osteoporosis: a Mendelian randomization study

01-05-2024 - National Library of Medicine

CONCLUSION: A longer educational duration was causally linked with increased BMD. No causal relationship had been found between educational duration and lean mass, time for light-to-moderate PA, milk intake, and alcohol consumption as risk factors for osteoporosis. [Read more...](#)

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MSK health and inequalities

MSK health and inequalities

1. Translation and cross-cultural adaptation of Osteoporosis Knowledge Assessment Tool (OKAT) for Chinese populations in Australia

30-05-2024 - National Library of Medicine

CONCLUSION: The cross-culturally adapted version of OKAT improves the overall readability and understandability of the questionnaire among Chinese-speaking populations in Australia. [Read more...](#)

2. Questionnaires assessing knowledge and beliefs about musculoskeletal conditions are potentially suitable for use, but further research is needed: a systematic review

29-05-2024 - National Library of Medicine

CONCLUSION: No PROM designed to assess knowledge and/or beliefs about musculoskeletal conditions meets the COSMIN criteria of suitable for use. Most PROMs identified in this systematic review were considered as potentially suitable for use and need further high-quality research to assess their measurement properties. [Read more...](#)

3. Study on the Mechanism of Action of the Traditional Chinese Medical Prescription Gushukang in Treating Osteoporosis Based on Network Pharmacology and Experimental Verification

29-05-2024 - National Library of Medicine

CONCLUSION: The findings of network pharmacology, molecular docking, as well as experimental verification provide a new further study for elucidating the pharmacodynamic substance basis and polypharmacology mechanism of GSK in treating osteoporosis. [Read more...](#)

4. High-molecular-weight Hyaluronan Administration Inhibits Bone Resorption and Promotes Bone Formation in Young-age Osteoporosis Rats

28-05-2024 - National Library of Medicine

Osteoporosis poses a significant global health concern, affecting both the elderly and young individuals, including athletes. Despite the development of numerous antiosteoporotic drugs, addressing the unique needs of young osteoporosis patients remains challenging. This study focuses on young rats subjected to ovariectomy (OVX) to explore the impact of high-molecular-weight hyaluronan (HA) on ... [Read more...](#)

5. The International Skeletal Society: a look back at 50 years of multidisciplinary expertise, collaboration, and education in musculoskeletal health and disease

25-05-2024 - National Library of Medicine

Multidisciplinary collaboration and radiology-pathology correlation are key components to advancing our knowledge and understanding of musculoskeletal disease and improving clinical care. The International Skeletal Society was founded on this principle and in its 50-year history it has successfully cultivated a globally recognized and respected Annual Meeting and Refresher Course to foster ... [Read more...](#)

6. Validation of the Arabic Version of the Attitude Toward Education and Advice for Low Back Pain Questionnaire

23-05-2024 - National Library of Medicine

CONCLUSION: The Arabic version of AxEL is a valid tool that can assess individuals' beliefs and attitudes towards low back pain (LBP). It fills a significant void in cross-cultural research and can help healthcare providers understand the attitudes and beliefs influencing individuals' management of LBP within the Arabic context. [Read more...](#)

7. Sex-specific association of serum dehydroepiandrosterone and its sulfate levels with osteoporosis in type 2 diabetes

20-05-2024 - National Library of Medicine

CONCLUSION: In patients with T2DM, independent of testosterone and estradiol, higher DHEA and DHEAS levels are associated with higher BMD and lower risk of osteopenia/osteoporosis in postmenopausal women but not men over the age of 50. [Read more...](#)

8. A network pharmacological study to unveil the mechanisms of xianlinggubao capsule in the treatment of osteoarthritis and osteoporosis

17-05-2024 - National Library of Medicine

CONCLUSIONS: Neuroactive ligand-receptor interaction, cAMP signaling pathway, and calcium signaling pathway might be the critical pathways upon which the capsule might act. The present study laid down a foundation to understand the molecular mechanisms of the XLGB capsule and also provided fundamental information for better improvement of the drug with the concept "less herbal materials for ... [Read more...](#)

9. Menopause modified the association of blood pressure with osteoporosis among gender: a large-scale cross-sectional study

17-05-2024 - National Library of Medicine

CONCLUSION: In resource-limited settings, higher SBP and PP are associated with the increased prevalence of osteoporosis in women, potentially influenced by menopause-related factors. This indicates that potential gender-based differences and social inequalities may affect bone health. [Read more...](#)

10. Mechanism of action of Sambucus williamsii Hance var. miquelii in the treatment of osteoporosis analyzed by UHPLC-HRMS/MS combined network pharmacology and experimental validation

10-05-2024 - National Library of Medicine

Sambucus williamsii Hance var. miquelii(SWH) is a precious wild Chinese herb whose fruit, rhizome, leaves and root bark can be used as medicine. Sambucus Linn has pharmacological effects such as anti-osteoporosis, promoting fracture healing, anti-viral and anti-inflammatory. In this study, the main chemical components of the alcoholic extracts from SWH were rapidly identified by ultra-high ... [Read more...](#)

11. The Current State of Knowledge on Osteoporosis in Holocaust Survivors and Their Descendants

08-05-2024 - National Library of Medicine

CONCLUSIONS: The review of these studies showed a higher prevalence of osteoporosis among Holocaust survivors and their offspring. Knowledge of the trans-generational inheritance of osteoporosis in the descendants of Holocaust survivors should increase the awareness of primary care health workers on osteoporosis screening and early diagnosis and implementation of preventive measures, ... [Read more...](#)

12. Pain Education and Virtual Reality Improves Pain, Pain-related Fear of Movement, and Trunk Kinematics in Individuals with Persistent Low Back Pain

06-05-2024 - National Library of Medicine

OBJECTIVES: To evaluate the effect of combining pain education and virtual reality exposure therapy using a cognitive behavioural therapy-informed approach (VR-CBT) on pain intensity, fear of movement, and trunk movement, in individuals with persistent low back pain. [Read more...](#)

13. Mediating effect of metabolic syndrome in the association of educational attainment with intervertebral disc degeneration and low back pain

06-05-2024 - National Library of Medicine

The causal association of educational attainment (EA) with intervertebral disc degeneration (IVDD) or low back pain (LBP), and the mediating effect of metabolic syndrome (MetS) in this association, is not studied to date. In this study, using summary statistics of genome-wide association studies primarily conducted in the individuals of European ancestry, Mendelian randomization (MR) analyses ... [Read more...](#)

14. Efficacy of Xianling Gubao capsule vs. its combination therapy in the treatment of primary osteoporosis: A network meta-analysis of randomized controlled trials

06-05-2024 - National Library of Medicine

CONCLUSIONS: The XLGB combination therapy is a desirable option for treating POP as it can effectively improve the therapeutic effects, BMD, and serum BGP, as well as relieve pain in patients with POP. [Read more...](#)

15. A multi-resolution physics-informed recurrent neural network: formulation and application to musculoskeletal systems

03-05-2024 - National Library of Medicine

This work presents a multi-resolution physics-informed recurrent neural network (MR PI-RNN), for simultaneous prediction of musculoskeletal (MSK) motion and parameter identification of the MSK systems. The MSK application was selected as the model problem due to its challenging nature in mapping the high-frequency surface electromyography (sEMG) signals to the low-frequency body joint motion ... [Read more...](#)

16. The influence of low back pain-related attitudes and beliefs on the clinical decision making of physical therapists

03-05-2024 - National Library of Medicine

CONCLUSION: Some physical therapists hold biomedically oriented beliefs about the connection between pain and physical activity. Clinician beliefs were associated with activity and work recommendations, and treatment choices. Physical therapists with more biomedically oriented beliefs were more likely to limit physical activity and work, and less likely to incorporate psychologically informed ... [Read more...](#)

17. An in silico approach to elucidate the pathways leading to primary osteoporosis: age-related vs. postmenopausal

03-05-2024 - National Library of Medicine

Numerical models of bone remodelling have traditionally been used to perform in silico tests of bone loss in postmenopausal women and also to simulate the response to different drug treatments. These models simulate the menopausal oestrogen decline by altering certain signalling pathways. However, they do not consider the simultaneous effect that ageing can have on cell function and bone ... [Read more...](#)

18. Enrollment, adherence and retention rates among musculoskeletal disorders rehabilitation practitioners in knowledge translation studies: a systematic review and meta-regression

03-05-2024 - National Library of Medicine

CONCLUSIONS: Intense (e.g., high frequency, short duration) single KT intervention was more appealing for practitioners. Future evaluation studies should clearly report follow-up data, and practitioners' prior training. Results may not apply to non-MSD healthcare providers. [Read more...](#)

19. Age and sex are excellent predictors of bone complications in patients with type 2 diabetes with no history of osteoporotic fracture or treatment for osteoporosis

03-05-2024 - National Library of Medicine

CONCLUSIONS: Older women have the highest risk of osteopenia and osteoporosis among patients with T2DM who have no history of fracture or osteoporosis treatment. These patients should undergo intensive monitoring for bone fragility from an early stage of their disease. [Read more...](#)

20. An osteoporosis knowledge assessment instrument - development and validation

01-05-2024 - National Library of Medicine

The consequences of osteoporotic fractures are extremely detrimental to the individual as well as to society. Adopting effective preventative measures is a top public health priority. [Read more...](#)

21. Subject-specific trunk segmental masses prediction for musculoskeletal models using artificial neural networks

01-05-2024 - National Library of Medicine

Accurate determination of body segment parameters is crucial for studying human movement and joint forces using musculoskeletal (MSK) models. However, existing methods for predicting segment mass have limited generalizability and sensitivity to body shapes. With recent advancements in machine learning, this study proposed a novel artificial neural network-based method for computing ... [Read more...](#)

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MSK health and nutrition

MSK health and nutrition

1. Surgical Considerations for Osteoporosis, Osteopenia, and Vitamin D Deficiency

23-05-2024 - National Library of Medicine

No abstract [Read more...](#)

2. Surgical Considerations for Osteoporosis, Osteopenia, and Vitamin D Deficiency in Upper Extremity Surgery

23-05-2024 - National Library of Medicine

Fragility fractures as a result of osteoporosis, osteopenia, or vitamin D deficiency are some of the most common injuries encountered in orthopedics and require careful consideration when determining the appropriate management and treatment options. A thorough perioperative evaluation can identify causes of low bone mineral density allowing for initiation of appropriate therapy. [Read more...](#)

3. Multiomics profiling reveals VDR as a central regulator of mesenchymal stem cell senescence with a known association with osteoporosis after high-fat diet exposure

22-05-2024 - National Library of Medicine

The consumption of a high-fat diet (HFD) has been linked to osteoporosis and an increased risk of fragility fractures. However, the specific mechanisms of HFD-induced osteoporosis are not fully understood. Our study shows that exposure to an HFD induces premature senescence in bone marrow mesenchymal stem cells (BMSCs), diminishing their proliferation and osteogenic capability, ... [Read more...](#)

4. Vitamin D and bone health: What vitamin D can and cannot do

22-05-2024 - National Library of Medicine

Historically vitamin D deficiency had devastating consequences for children causing rickets resulting in severe bone deformities often leading to death. The mystery of the cause of rickets finally came to light when it was observed that cod liver oil and sunlight could prevent and cure rickets. The first vitamin D to be discovered was vitamin D(2) from ergosterol in ultraviolet irradiated yeast. [Read more...](#)

5. Multi-omics analysis of kidney, bone and bone marrow explored potential mechanisms of Erzhi Wan against osteoporosis with kidney-Yin deficiency

17-05-2024 - National Library of Medicine

Osteoporosis (OP) is a metabolic bone disease that can lead to major health challenges. The theory of Traditional Chinese medicine believes that kidney-Yin deficiency (KYD) is the main cause of postmenopausal osteoporosis. This study was aimed to investigate the effect of EZW on anti-osteoporosis with KYD, and explore potential mechanisms from the perspective of the kidney, ... [Read more...](#)

6. Nutrition and Bone Marrow Adiposity in Relation to Bone Health

16-05-2024 - National Library of Medicine

Bone remodeling is energetically demanding process. Energy coming from nutrients present in the diet contributes to function of different cell type including osteoblasts, osteocytes and osteoclasts in bone marrow participating in bone homeostasis. With aging, obesity and osteoporosis the function of key building blocks, bone marrow stromal cells (BMSCs), changes towards higher accumulation of ... [Read more...](#)

7. Water-soluble biopolymers calcium polymalate derived from fermentation broth of *Aureobasidium pullulans* markedly alleviates osteoporosis and fatigue

02-05-2024 - National Library of Medicine

Osteoporosis is a prevalent condition characterized by bone loss and decreased skeletal strength, resulting in an elevated risk of fractures. Calcium plays a crucial role in preventing and managing osteoporosis. However, traditional calcium supplements have limited bioavailability, poor solubility, and adverse effects. In this study, we isolated a natural soluble biopolymer, ... [Read more...](#)

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MSK health and workplace wellbeing

MSK health and workplace wellbeing

1. Work-related musculoskeletal disorders and associated factors among weavers working in Bahir Dar City, Northwest Ethiopia: cross-sectional study design

29-05-2024 - National Library of Medicine

CONCLUSIONS: This study revealed a high prevalence of WMSDs among weavers. Our study findings reported that longer working hours, lack of back support during sitting, having repetitive movement in weaving attaining awkward posture, and having job stress were significantly associated with work-related musculoskeletal disorders. [Read more...](#)

2. Variables associated with the prevalence of self-reported work-related musculoskeletal disorders in veterinary laparoscopic surgeons

28-05-2024 - National Library of Medicine

CONCLUSION: Female surgeons report more musculoskeletal injuries than their male counterparts. Surgeons with musculoskeletal injuries experience more difficulty performing particular laparoscopic maneuvers. [Read more...](#)

3. Work-related musculoskeletal pain among physical therapists: A cross-sectional study in Kyoto and Shiga Prefectures, Japan

27-05-2024 - National Library of Medicine

CONCLUSIONS: The prevalence of LBP and ULP among physical therapists in Japan was as high as that in nurses and care workers. Work-related factors associated with LBP and ULP were identified among physical therapists. Thus, to prevent work-related musculoskeletal disorders, measures to reduce the physical burden from the perspective of occupational health are required. [Read more...](#)

4. Investigating the relationship between body structure status, work activity type, and the prevalence of musculoskeletal disorders among detergent industry workers

24-05-2024 - National Library of Medicine

CONCLUSIONS: The prevalence of pain in the right shoulder and middle back may be due to abnormalities in the upper and intermediate body structure. Production line workers reported a higher prevalence of pain in the left shoulder, middle back, and foot compared to office workers. [Read more...](#)

5. Agreeing priority categories and items for inclusion in a future best practice delegation framework for musculoskeletal outpatient physiotherapy services: A consensus groups study

22-05-2024 - National Library of Medicine

CONCLUSION: Key stakeholder groups were able to reach consensus on five priority areas which will be developed into a best practice framework to standardise delegation and guide physiotherapists when delegating clinical tasks to support workers. [Read more...](#)

6. A systematic review of work related musculoskeletal disorders among physical therapists and physiotherapists

19-05-2024 - National Library of Medicine

Physical therapists and physiotherapists (PPTs) perform and repeat physical tasks that can lead to work-related musculoskeletal disorders (WMSD). The aim was to study the main research concerning this problem, i.e. the risk factors, activities that exacerbate WMSD symptoms, alterations in work habits and the proposed responses, and to estimate mean value (\pm standard deviation, ... [Read more...](#)

7. Epidemiology of work-related injuries, musculoskeletal disorders and dermatitis among hospital food service workers in a tertiary hospital in Asia

17-05-2024 - National Library of Medicine

CONCLUSION: FSWs with jobs involving cooking and preparation of food, and those with obesity, are at higher risk of sustaining workplace injuries or musculoskeletal symptoms. Targeted interventions should be implemented for injury prevention and to mitigate these risks. [Read more...](#)

8. Trends in severity of work-related traumatic injury and musculoskeletal disorder, Ontario 2004-2017

16-05-2024 - National Library of Medicine

CONCLUSION: The incidence of severe work-related injuries increased among females in Ontario between 2004 and 2017. The methods applied in this surveillance study of traumatic injury severity are plausibly generalizable to applications in other jurisdictions. [Read more...](#)

9. Prognostic Factors and Models for Predicting Work Absence in Adults with Musculoskeletal Conditions Consulting a Healthcare Practitioner: A Systematic Review

16-05-2024 - National Library of Medicine

CONCLUSION: Analysis was difficult due to the wide range of measures of both prognostic factors and outcome and the differing timescales for follow-up. Future research should ensure that consistent measures are employed and where possible these should be in-line with those suggested by Ravinskaya et al. (2023). [Read more...](#)

10. Interventions to reduce work-related musculoskeletal disorders among healthcare staff in nursing homes An integrative literature review

15-05-2024 - National Library of Medicine

CONCLUSION: : These findings have the potential to inform the development and adherence to injury prevention policies and regulations by healthcare managers and staff which could reduce injuries. Identifying the appropriate interventions to prevent and reduce work-related musculoskeletal disorders is significant for staff wellbeing, has economic implications in terms of reduced work-related ... [Read more...](#)

11. Work-related musculoskeletal disorders in Polish sonographers-A questionnaire study

15-05-2024 - National Library of Medicine

CONCLUSIONS: WMSDs pose a significant risk to Polish sonographers, especially those specializing in vascular surgery, general surgery and obstetrics and gynecology specialties. The study underscores a notable deficit, with only 10% of the personnel reporting training in ergonomics for ultrasound work. [Read more...](#)

12. Factors associated with work-related musculoskeletal disorders in commercial motorcyclists

13-05-2024 - National Library of Medicine

This study aimed to explore the prevalence of work-related musculoskeletal disorders (WMSDs) and to investigate factors associated with WMSDs in commercial motorcyclists in Indonesia. This cross-sectional study involved commercial motorcyclists operating in Indonesia. Data were collected using an anonymous questionnaire, including the Indonesian Version of the Nordic Musculoskeletal ... [Read more...](#)

13. Lateral Pelvis and Lumbar Motion in Seated and Standing Office Work and Their Association With Transient Low Back Pain

07-05-2024 - National Library of Medicine

CONCLUSION: The majority of participants displayed lateral asymmetries for the pelvis and lumbar spine within 5° of their upright standing posture. [Read more...](#)

14. Treatment effect modifiers for return-to-work in patients with musculoskeletal disorders

06-05-2024 - National Library of Medicine

Investigating how individual characteristics modify treatment effects can improve understanding, interpretation, and translation of trial findings. The purpose of this secondary analysis was to identify treatment effect modifiers of the MI-NAV trial, a three arm, parallel randomized controlled trial which compared motivational interviewing and stratified vocational advice intervention in ... [Read more...](#)

15. Assessment and evaluation of work-related musculoskeletal disorders among nuclear medicine professionals in India: A cross-sectional study

03-05-2024 - National Library of Medicine

CONCLUSION: Work-related musculoskeletal disorders among NMP are resulting from factors of individual demographic variables (such as age, height, weight, body mass index), years of experience at the current workplace and of using instruments in their work area. [Read more...](#)

16. Lower Limb Proprioception in Low Back Pain and Its Relationship With Voluntary Postural Control

02-05-2024 - National Library of Medicine

This study aimed to investigate whether patients with low back pain (LBP) had impaired lower limb proprioception and its association with somatosensory acuity. Thirty patients with LBP and 30 asymptomatic people volunteered, using Sway Discrimination Apparatus tests to assess somatosensory acuity during voluntary anteroposterior and mediolateral postural sway. [Read more...](#)

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MSK health communication

MSK health communication

1. Cross-cultural validation and formulation of key evidence-based back pain messages for Zambian nurses

13-05-2024 - National Library of Medicine

RATIONALE: Workplace attitudes among nurses with back pain disability are usually unsupportive as nurses tend to rely on passive approaches like pain medications and taking sick leave to manage the impact of their back pain experiences. [Read more...](#)

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MSK health data and surveillance

MSK health data and surveillance

1. Custom-made 3D-printed boot as a model of disuse-induced atrophy in murine skeletal muscle

31-05-2024 - National Library of Medicine

Skeletal muscle atrophy is characterized by a decrease in muscle mass and strength caused by an imbalance in protein synthesis and degradation. This process naturally occurs upon reduced or absent physical activity, often related to illness, forced bed rest, or unhealthy lifestyles. Currently, no treatment is available for atrophy, and it can only be prevented by overloading exercise, ... [Read more...](#)

2. Predictive models of radiographic progression and pain progression in patients with knee osteoarthritis: data from the FNIH OA biomarkers consortium project

30-05-2024 - National Library of Medicine

CONCLUSIONS: We identified risk factors for imaging progression and pain progression in patients with knee OA over a 2- to 4-year period, and provided effective predictive models, which could help identify patients at high risk of progression. [Read more...](#)

3. Development of a Risk Model and Genotyping Patterns Based on Disulfidptosis-Related lncRNAs to Predict Prognosis and Immune Landscape in Osteosarcoma

30-05-2024 - National Library of Medicine

CONCLUSIONS: The present study identified DRLncs in OS, and conducted a comprehensive investigation of DRLncs-related expression patterns, survival status, immune landscape and drug sensitivity to reveal the difference in prognostic, pharmacological and immunological phenotype characteristics between distinct subtypes. Additionally, we developed a risk model to predict the prognosis, ... [Read more...](#)

4. Estimation of patient-reported outcome measures based on features of knee joint muscle co-activation in advanced knee osteoarthritis

30-05-2024 - National Library of Medicine

Electromyography (EMG) is considered a potential predictive tool for the severity of knee osteoarthritis (OA) symptoms and functional outcomes. Patient-reported outcome measures (PROMs), such as the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) and visual analog scale (VAS), are used to determine the severity of knee OA. We aim to investigate muscle activation and ... [Read more...](#)

5. Molecular mechanism of the influence of related genes expression in synovium tissue around shoulder joint of secondary frozen shoulder model rats on angiogenesis

30-05-2024 - National Library of Medicine

The study aimed to explore the pathogenesis of secondary frozen shoulder and its influence on synovium tissue and angiogenesis by constructing a rat secondary frozen shoulder model along with transforming growth factor. 40 healthy male rats aged 8 weeks were divided into Sham group (n=10, no modeling treatment), Control group (n=10, modeling treatment), Low group (n=10, modeling treatment, ... [Read more...](#)

6. Rasch analysis, reliability, and validity of the Turkish version of the Lumbar Spine Instability Questionnaire

30-05-2024 - National Library of Medicine

CONCLUSION: The LSIQ-T is a valid unidimensional scale for the Turkish population. Although the LSIQ-T had low internal consistency, it demonstrated unidimensionality and is appropriate for use. Therefore, the LSIQ-T can be used in clinical practice and scientific research. [Read more...](#)

7. Deep learning model for differentiating nasal cavity masses based on nasal endoscopy images

29-05-2024 - National Library of Medicine

CONCLUSION: Although there were some misclassifications, the results of gradient-weighted class activation mapping were generally consistent with the areas under the curve determined by otolaryngologists. These results suggest that the convolutional neural network is highly reliable in resolving lesion locations in nasal endoscopic images. [Read more...](#)

8. An ALK2 inhibitor, BLU-782, prevents heterotopic ossification in a mouse model of fibrodysplasia ossificans progressiva

29-05-2024 - National Library of Medicine

Fibrodysplasia ossificans progressiva (FOP) is a rare genetic disease driven by gain-of-function variants in activin receptor-like kinase 2 (ALK2), the most common variant being ALK2^(R206H). In FOP, ALK2 variants display increased and dysregulated signaling through the bone morphogenetic protein (BMP) pathway resulting in progressive and permanent replacement of skeletal muscle and ... [Read more...](#)

9. Building and validating an artificial intelligence model to identify tracheobronchopathia osteochondroplastica by using bronchoscopic images

28-05-2024 - National Library of Medicine

CONCLUSION: We built an AI model that could differentiate TO from other multinodular airway diseases (mainly amyloidosis, tumors, and inflammation) by using bronchoscopic images. The model could help young physicians identify this rare airway disease. [Read more...](#)

10. Osteoporosis induced by cellular senescence: A mathematical model

28-05-2024 - National Library of Medicine

Osteoporosis is a disease characterized by loss of bone mass, where bones become fragile and more likely to fracture. Bone density begins to decrease at age 50, and a state of osteoporosis is defined by loss of more than 25%. Cellular senescence is a permanent arrest of normal cell cycle, while maintaining cell viability. The number of senescent cells increase with age. [Read more...](#)

11. Assessing quadriceps strength in patellofemoral pain patients: A study on the reliability and validity of a low-cost strain-gauge for clinical practice

28-05-2024 - National Library of Medicine

CONCLUSION: The present commercially available strain gauge is reliable and sensitive enough to detect clinically meaningful differences in quadriceps strength of both healthy individuals and those with PFP. However, the strain gauge lacks validity and therefore cannot replace isokinetic dynamometry. Given the low cost and excellent reliability, the strain gauge can be a valuable tool to ... [Read more...](#)

12. Using the technology acceptance model to assess clinician perceptions and experiences with a rheumatoid arthritis outcomes dashboard: qualitative study

27-05-2024 - National Library of Medicine

CONCLUSIONS: The study provides valuable insights into clinicians' perceptions and experiences with the RA PRO dashboard. The dashboard showed promise in enhancing patient-clinician communication, shared decision-making, and overall acceptance among clinicians. Addressing challenges related to data collection, education, and tailoring dashboard use to specific patient populations will be ... [Read more...](#)

13. Epidemiological trends in psoriatic arthritis: a comprehensive population-based study

27-05-2024 - National Library of Medicine

CONCLUSIONS: This comprehensive population-based study pointed to an increase prevalence of PsA, emphasizing the rising healthcare demands and economic burden faced by this patient population. Further research is essential to delve into the factors driving these trends. [Read more...](#)

14. Differences in avidity of anti-post-translationally modified protein antibodies in mouse models and rheumatoid arthritis patients: not one-size-fits-all

25-05-2024 - National Library of Medicine

No abstract [Read more...](#)

15. Recent Trends in Adipose Tissue-Derived Injectable Therapies for Osteoarthritis: A Scoping Review of Animal Models

25-05-2024 - National Library of Medicine

Background and Objectives: This scoping review investigates recent trends in adipose tissue-derived injectable therapies for osteoarthritis (OA) in animal models, focusing on minimally manipulated or lightly processed adipose tissue. By evaluating and examining the specific context in which these therapies were investigated across diverse animal OA models, this review aims to provide valuable ... [Read more...](#)

16. Single Injection AAV2-FGF18 Gene Therapy Reduces Cartilage Loss and Subchondral Bone Damage in a Mechanically Induced Model of Osteoarthritis

24-05-2024 - National Library of Medicine

CONCLUSION: FGF18 gene therapy treatment of OA joints can provide benefits to both cartilage and subchondral bone, with a high degree of localization and durability. [Read more...](#)

17. Assessing and Optimizing Large Language Models on Spondyloarthritis Multi-Choice Question Answering: Protocol for Enhancement and Assessment

24-05-2024 - National Library of Medicine

CONCLUSIONS: Our trained model aims to capitalize on the capabilities of LLMs in analyzing complex clinical data, thereby enabling precise detection, diagnosis, and treatment of SpA. This innovation is anticipated to play a vital role in diminishing the disabilities arising from delayed or incorrect SpA diagnoses. By promoting this model across diverse health care settings, ... [Read more...](#)

18. An examination from 1990 to 2019: investigating the burden of knee dislocation on a global scale

24-05-2024 - National Library of Medicine

CONCLUSION: The disease burden of knee dislocation remains heavy. It is essential to recognize the evolving epidemiology of knee dislocation. Utilizing data-driven assessments can assist in formulating public health policies and strategies to improve overall well-being. [Read more...](#)

19. An interpretable data-driven prediction model to anticipate scoliosis in spinal muscular atrophy in the era of (gene-) therapies

23-05-2024 - National Library of Medicine

5q-spinal muscular atrophy (SMA) is a neuromuscular disorder (NMD) that has become one of the first 5% treatable rare diseases. The efficacy of new SMA therapies is creating a dynamic SMA patient landscape, where disease progression and scoliosis development play a central role, however, remain difficult to anticipate. New approaches to anticipate disease progression and associated sequelae ... [Read more...](#)

20. Characterization of clinical data for patient stratification in moderate osteoarthritis with support vector machines, regulatory network models, and verification against osteoarthritis Initiative data

23-05-2024 - National Library of Medicine

Knee osteoarthritis (OA) diagnosis is based on symptoms, assessed through questionnaires such as the WOMAC. However, the inconsistency of pain recording and the discrepancy between joint phenotype and symptoms highlight the need for objective biomarkers in knee OA diagnosis. To this end, we study relationships among clinical and molecular data in a cohort of women (n = 51) with ... [Read more...](#)

21. Annual epidemiological and health insurance disease burden of hip osteoarthritis in Hungary based on nationwide data

23-05-2024 - National Library of Medicine

CONCLUSIONS: The prevalence of hip osteoarthritis was 1.96 times higher (the age-standardised prevalence was 1.5 times higher) in women compared to men. Acute inpatient care was the major cost driver in the treatment of hip osteoarthritis. The average annual treatment cost per patient was 15.6% higher for women compared to men. [Read more...](#)

22. Healthcare burden changes by restricted physical activities in lumbar spinal stenosis and spondylolisthesis: a retrospective large cohort study during the COVID-19 pandemic

23-05-2024 - National Library of Medicine

CONCLUSION: Restricted physical activity during the SoD period decreased the healthcare burden for patients with LSS or, conversely, it did not significantly affect patients with SPL. Under circumstances of physical inactivity, patients with LSS may underrate their symptoms, while maintaining an appropriate activity level may be beneficial for patients with SPL. [Read more...](#)

23. Test-retest reliability and concurrent validity of knee extensor strength measured by a novel device incorporated into a weight stack machine vs. handheld and isokinetic dynamometry

22-05-2024 - National Library of Medicine

CONCLUSIONS: The ND's test-retest reliability and concurrent validity make it a potential strength assessment tool with utility in physical therapy and fitness settings for large muscle groups such as the knee extensors. [Read more...](#)

24. Estimating thoracic kyphosis without information on upper thoracic kyphosis: an observational study on 455 patients examined by EOS imaging

22-05-2024 - National Library of Medicine

CONCLUSION: If EOS technology is available, the above linear regression model could be used to estimate TK based upon information on age, sex, LL and LTK. Alternatively, TK could be estimated by adding to LTK $17.0^\circ \pm 7.4$ for patients < 40 years of age, or $13.6^\circ \pm 7.4$ in patients 40 + years old. The evidence from the present study may be used as reference for research purposes and clinical ... [Read more...](#)

25. Utility of hydroxychloroquine laboratory monitoring in dermatologic and rheumatologic patients

22-05-2024 - National Library of Medicine

Hydroxychloroquine (HCQ) is an immunomodulator used in dermatology and rheumatology. Side effects may be observed on routine monitoring studies before they become clinically apparent. The goal of this retrospective chart review was to assess laboratory abnormalities in dermatologic and rheumatologic patients taking HCQ. Medical records of patients prescribed HCQ were retrospectively reviewed. [Read more...](#)

26. Combined ROS Sensitive Folate Receptor Targeted Micellar Formulations of Curcumin Effective Against Rheumatoid Arthritis in Rat Model

20-05-2024 - National Library of Medicine

CONCLUSION: The unique ROS-responsive targeted micelles with targeting, ROS sensitivity and anti-inflammatory properties were successfully prepared and may offer an effective therapeutic strategy against RA. [Read more...](#)

27. Development and internal validation of a clinical prediction model for osteopenia in Chinese middle-aged and elderly men: a prospective cohort study

20-05-2024 - National Library of Medicine

CONCLUSIONS: Our study provides a novel nomogram and a web calculator that can effectively predict the 7-year incidence risk of osteopenia in Chinese middle-aged and elderly men. It is convenient for clinicians to prevent fragility fractures in the male population. [Read more...](#)

28. Leg length discrepancies (LLD): An etiology to be considered in its proper measure. A critical and historical review

19-05-2024 - National Library of Medicine

CONCLUSION: The authors argue for the need to define in the future a lesion significance score that would not be correlated to painful symptomatology, but rather to the presence of co-morbidities such as age, anatomical variability, sports practice and/or patients' professional activities. Other parameters, such as mobility, should also be taken into consideration, while gender, ... [Read more...](#)

29. Long-term monitoring of stimulated lower leg skeletal muscle forces compared with voluntary contractions in myopathy patients - A five-year follow-up report on 5 adults

19-05-2024 - National Library of Medicine

CONCLUSIONS: Long-term monitoring of lower leg muscle forces in ambulant patients is limited by the patient's health status. In a small group of patients, stimulated lower leg forces did not worsen over many years relative to their diagnosed myopathies. Tracking involuntary forces, could be a useful monitoring providing phenotypic information, in addition to MMT. [Read more...](#)

30. Three-dimensional magnetic resonance imaging-based statistical shape analysis and machine learning-based prediction of patellofemoral instability

18-05-2024 - National Library of Medicine

This study performed three-dimensional (3D) magnetic resonance imaging (MRI)-based statistical shape analysis (SSA) by comparing patellofemoral instability (PFI) and normal femur models, and developed a machine learning (ML)-based prediction model. Twenty (19 patients) and 31 MRI scans (30 patients) of femurs with PFI and normal femurs, respectively, were used. [Read more...](#)

31. Global intracranial arterial tortuosity is associated with intracranial atherosclerotic burden

17-05-2024 - National Library of Medicine

The effect of arterial tortuosity on intracranial atherosclerosis (ICAS) is not well understood. This study aimed to evaluate the effect of global intracranial arterial tortuosity on intracranial atherosclerotic burden in patients with ischemic stroke. We included patients with acute ischemic stroke who underwent magnetic resonance angiography (MRA) and classified them into three groups ... [Read more...](#)

32. Therapeutic potential of oleic acid supplementation in myotonic dystrophy muscle cell models

17-05-2024 - National Library of Medicine

CONCLUSIONS: For the first time in DM1, we describe a fatty acid metabolism impairment that originated, at least in part, from a decrease in SCD1. Because OA allosterically inhibits MSI2 binding to molecular targets, reduced OA levels synergize with the overexpression of MSI2 and contribute to the MSI2 > miR-7 > autophagy axis that we proposed to explain the muscle atrophy phenotype. [Read more...](#)

33. Cellular and molecular alterations to muscles and neuromuscular synapses in a mouse model of MEGF10-related myopathy

17-05-2024 - National Library of Medicine

Loss-of-function mutations in MEGF10 lead to a rare and understudied neuromuscular disorder known as MEGF10-related myopathy. There are no treatments for the progressive respiratory distress, motor impairment, and structural abnormalities in muscles caused by the loss of MEGF10 function. In this study, we deployed cellular and molecular assays to obtain additional insights about ... [Read more...](#)

34. Validity of remote live stream video evaluation of the North Star Ambulatory Assessment in patients with Duchenne muscular dystrophy

16-05-2024 - National Library of Medicine

Conducting functional assessments remotely can help alleviate the burden of in-person assessment on patients with Duchenne muscular dystrophy and their caregivers. The objective of this study was to evaluate whether scores from remote functional assessment of patients with Duchenne muscular dystrophy correspond to in-person scores on the same functional assessments. [Read more...](#)

35. Creating machine learning models that interpretably link systemic inflammatory index, sex steroid hormones, and dietary antioxidants to identify gout using the SHAP (SHapley Additive exPlanations) method

16-05-2024 - National Library of Medicine

CONCLUSION: The interpretable XGBoost model demonstrated accuracy, efficiency, and robustness in identifying associations between SII, sex steroid hormones, DA, and gout in participants. Decreased TT in males and decreased E2 in females may be associated with gout, and increased DA intake and decreased SII may reduce the potential risk of gout. [Read more...](#)

36. Recombinant Human Proteoglycan Aggrecan-G1 Domain-induced Arthritis (GIA) Mouse Model

16-05-2024 - National Library of Medicine

The recombinant human proteoglycan aggrecan-G1 domain (rhG1)-induced arthritis (GIA) mouse model is a complex model of rheumatoid arthritis (RA). In GIA, autoimmune arthritis is induced by repeated intraperitoneal immunization of genetically susceptible BALB/c mice with the rhG1 antigen emulsified in the adjuvant dimethyldioctadecylammonium (DDA). This article describes the steps for ... [Read more...](#)

37. A model-based quantitative analysis of efficacy and associated factors of platelet rich plasma treatment for osteoarthritis: Erratum

15-05-2024 - National Library of Medicine

No abstract [Read more...](#)

38. Anti-inflammatory properties and characterization of water extracts obtained from Callicarpa kwangtungensis Chun using in vitro and in vivo rat models

14-05-2024 - National Library of Medicine

Callicarpa kwangtungensis Chun (CK) is a common remedy exhibits anti-inflammatory properties and has been used in Chinese herbal formulations, such as KangGongYan tablets. It is the main component of KangGongYan tablets, which has been used to treat chronic cervicitis caused by damp heat, red and white bands, cervical erosion, and bleeding. However, the anti-inflammatory effects of CK water ... [Read more...](#)

39. Measurement of distances and locations of thoracic and lumbar vertebral bodies from CT scans in cases of spinal deformation

14-05-2024 - National Library of Medicine

CONCLUSIONS: The distances, the clustering of the locations of the vertebral bodies as a function of the vertebral level, and the trends therein could in the future be used in context with biomechanical modeling of a patient's individual spinal deformation in scoliosis assessment using 3D body scanner images during follow-up examinations. [Read more...](#)

40. The Epidemiology of Spinal Neurosurgery in Nigeria: A Systematic Review and Patient-Level Analysis

14-05-2024 - National Library of Medicine

CONCLUSIONS: This systematic review and pooled analysis provide an epidemiological overview of spinal neurosurgery in Nigeria over the last 60 years and serves as a useful reference to direct future global research in this arena. [Read more...](#)

41. The experiences and perspectives of people with gout on urate self-monitoring

14-05-2024 - National Library of Medicine

CONCLUSION: Urate self-monitoring was viewed by people with gout as convenient and useful for independent management of gout. They believed self-monitoring achieved better gout control with a less restricted lifestyle. Urate data was shared with doctors at the patient's discretion and helped inform clinical decisions, such as allopurinol dose changes. Further research on implementing urate ... [Read more...](#)

42. The role of bone turnover markers in diagnosis, monitoring, and pathological fractures of osteoporosis

13-05-2024 - National Library of Medicine

CONCLUSION: Our study underscores the significance of these biomarkers in advancing the diagnosis and management of osteoporosis, offering valuable insights into the disease's progression and treatment outcomes. [Read more...](#)

43. Operation Procedure and Precautions of Lingnan Fire-Needle Therapy in Osteoporosis Model Rats

13-05-2024 - National Library of Medicine

Compared to filiform needle therapy, fire-needle therapy has both the stimulation of needles and the warming effect of heat, making it have unexpected effects on some chronic diseases and incurable diseases. Osteoporosis (OP) has a high incidence in postmenopausal women and middle-aged and elderly men, and the treatment cycle is long. According to Traditional Chinese Medicine (TCM), ... [Read more...](#)

44. Updated 2022 ACC/AHA Guideline Improves Concordance Between TTE and CT in Monitoring Marfan Syndrome and Related Disorders, but Relevant Measurement Differences Remain Frequent

13-05-2024 - National Library of Medicine

CONCLUSION: This study demonstrates for the first time that the 2022 ACC/AHA guideline improves concordance between ECG-triggered CT and TTE measurements in Marfan syndrome patients, crucial for preventing life-threatening aortic complications. However, the frequency of differences >2 mm remains high. [Read more...](#)

45. Epidemiological investigation and diagnostic analysis of osteonecrosis of the femoral head in three northeastern provinces of China

12-05-2024 - National Library of Medicine

CONCLUSIONS: Most patients with ONFH in three northeastern provinces of China were middle-aged, male, and had alcohol-induced ONFH. The misdiagnosis rate of ONFH at the first visit was very high, especially for misdiagnosis of lumbar disc herniation, indicating that the diagnosis of ONFH requires further improvement. [Read more...](#)

46. Advanced Home-Based Shoulder Rehabilitation: A Systematic Review of Remote Monitoring Devices and Their Therapeutic Efficacy

11-05-2024 - National Library of Medicine

Shoulder pain represents the most frequently reported musculoskeletal disorder, often leading to significant functional impairment and pain, impacting quality of life. Home-based rehabilitation programs offer a more accessible and convenient solution for an effective shoulder disorder treatment, addressing logistical and financial constraints associated with traditional physiotherapy. [Read more...](#)

47. Epstein-Barr Virus DNA Exacerbates Arthritis in a Mouse Model via Toll-like Receptor 9

11-05-2024 - National Library of Medicine

Epstein-Barr virus (EBV) DNA is known to be shed upon reactivation of latent EBV. Based on our previous findings linking Toll-like receptor-9 (TLR9) to an EBV DNA-driven surge in IL-17A production, we aimed to examine the therapeutic potential of TLR9 inhibition in EBV DNA-exacerbated arthritis in a collagen-induced arthritis (CIA) mouse model. C57BL/6J mice were administered either collagen, ... [Read more...](#)

48. Cross-cultural adaptation, validity, and reliability of the Japanese version of the Central Aspects of Pain in the Knee (CAP-Knee-J) questionnaire in patients with knee pain: a validation study

10-05-2024 - National Library of Medicine

CONCLUSIONS: CAP-Knee-J is a reliable and valid questionnaire for assessing central pain mechanisms specific to knee pain in older Japanese individuals, with moderate correlations with the CSI and weak with the PCS, thus indicating construct validity. This study supports the development of effective knee pain treatments and prognosis predictions. [Read more...](#)

49. Improving Patient Understanding of Femoroacetabular Impingement Syndrome With Three-Dimensional Models

09-05-2024 - National Library of Medicine

CONCLUSION: In this study, the use of 3D printed models in clinic visits with patients with FAIS improved patients' perceived understanding of diagnosis and surgical treatment. [Read more...](#)

50. Bioengineered vascular grafts with a pathogenic TGFBR1 variant model aneurysm formation in vivo and reveal underlying collagen defects

08-05-2024 - National Library of Medicine

Thoracic aortic aneurysm (TAA) is a life-threatening vascular disease frequently associated with underlying genetic causes. An inadequate understanding of human TAA pathogenesis highlights the need for better disease models. Here, we established a functional human TAA model in an animal host by combining human induced pluripotent stem cells (hiPSCs), bioengineered vascular grafts (BVGs), ... [Read more...](#)

51. Histological and immunohistochemical analyses of articular cartilage during onset and progression of pre- and early-stage osteoarthritis in a rodent model

08-05-2024 - National Library of Medicine

Early diagnosis and treatment of pre- and early-stage osteoarthritis (OA) is important. However, the cellular and cartilaginous changes occurring during these stages remain unclear. We investigated the histological and immunohistochemical changes over time between pre- and early-stage OA in a rat model of traumatic injury. Thirty-six male rats were divided into two groups, ... [Read more...](#)

52. Metalloproteins as risk factors for osteoarthritis: improving and understanding causal estimates using Mendelian randomization

08-05-2024 - National Library of Medicine

Osteoarthritis (OA) is one of the most prevalent musculoskeletal disorders and a primary cause of pain and disability among the elderly population. Research on the relationship between metalloproteins (MPs) and OA is limited, and causality remains unclear. Our objective is to utilize Mendelian randomization (MR) to explore the possible causal relationship between MPs and OA. [Read more...](#)

53. A finite element model of human hindfoot and its application in supramalleolar osteotomy

07-05-2024 - National Library of Medicine

BACKGROUND: The majority of the ankle osteoarthritis cases are posttraumatic and affect younger patients with a longer projected life span. Hence, joint-preserving surgery, such as supramalleolar osteotomy becomes popular among young patients, especially those with asymmetric arthritis due to alignment deformities. However, there is a lack of biomechanical studies on postoperative evaluation ... [Read more...](#)

54. Response Shifts in the Canadian Occupational Performance Measure: A Convergent Mixed-Methods Study

06-05-2024 - National Library of Medicine

CONCLUSIONS AND RELEVANCE: Diverse RS effects have been identified in the COPM, which also affect score interpretation. **Plain-Language Summary:** The Canadian Occupational Performance Measure has a potential measurement bias that is due to a response shift in which there is an individual perceptual gap between pre and post assessments. The results of this study reveal a need to establish more ... [Read more...](#)

55. Translation and adaptation of the Arabic version of the injustice experience questionnaire in patients with chronic musculoskeletal pain

06-05-2024 - National Library of Medicine

CONCLUSIONS: The Arabic version of the IEQ-SF demonstrated high reliability and validity and would be useful for clinicians and researchers studying Arabic-speaking individuals with chronic pain. [Read more...](#)

56. Burden evaluation and prediction of osteoarthritis and site-specific osteoarthritis coupled with attributable risk factors in China from 1990 to 2030

02-05-2024 - National Library of Medicine

CONCLUSIONS: OA and site-specific OA remain huge public health challenges in China. The burden of OA and site-specific OA is increasing, especially among people over 50 years old. Health education, exercise, and removing modifiable risk factors contribute to alleviate the growing burden. **Key Points** • In China, the burden of osteoarthritis and site-specific osteoarthritis (hip, knee, hand, ... [Read more...](#)

57. Prognostic models of drug-induced neutralizing antibody formation in patients with rheumatoid arthritis, psoriatic arthritis, ankylosing spondylitis treated with TNF-alpha blockers

01-05-2024 - National Library of Medicine

This study aimed to construct prognostic mathematical models utilizing multifactorial regression analysis to assess the risk of developing drug-induced neutralizing antibodies in patients with rheumatoid arthritis, psoriatic arthritis, and ankylosing spondylitis treated with tumor necrosis factor alpha blockers. [Read more...](#)

58. Reduced sympathetic activity is associated with the development of pain and muscle atrophy in a female rat model of fibromyalgia

01-05-2024 - National Library of Medicine

Fibromyalgia (FM) is characterized by chronic widespread musculoskeletal pain accompanied by fatigue and muscle atrophy. Although its etiology is not known, studies have shown that FM patients exhibit altered function of the sympathetic nervous system (SNS), which regulates nociception and muscle plasticity. Nevertheless, the precise SNS-mediated mechanisms governing hyperalgesia and skeletal ... [Read more...](#)

59. A reconfigurable integrated smart device for real-time monitoring and synergistic treatment of rheumatoid arthritis

01-05-2024 - National Library of Medicine

Rheumatoid arthritis (RA) is a global autoimmune disease that requires long-term management. Ambulatory monitoring and treatment of RA favors remission and rehabilitation. Here, we developed a wearable reconfigurable integrated smart device (ISD) for real-time inflammatory monitoring and synergistic therapy of RA. The device establishes an electrical-coupling and substance delivery interfaces ... [Read more...](#)

60. The burden of skull base chordomas: insights from a meta-analysis of observational studies

01-05-2024 - National Library of Medicine

CONCLUSIONS: The results of this comprehensive meta-analysis highlight the tremendous impact of GTR and adjuvant PBRT on improving OS and PFS of patients harboring skull base chordomas, with better survival rates demonstrated for patients with chondroid tumors. Even in experienced hands, the rate of surgical morbidity remains high. Proper management in high-volume centers is mandatory to ... [Read more...](#)

61. Development of a New Focal Mouse Model of Bone Metastasis in Renal Cell Carcinoma

30-04-2024 - National Library of Medicine

CONCLUSION: We developed a normal immunity mouse model of local bone metastasis from RCC. This model could prove valuable for research into the treatment of bone metastases in RCC. [Read more...](#)

62. Reverse total shoulder replacement versus anatomical total shoulder replacement for osteoarthritis: population based cohort study using data from the National Joint Registry and Hospital Episode Statistics for England

30-04-2024 - National Library of Medicine

CONCLUSIONS: This study's findings provide reassurance that RTSR is an acceptable alternative to TSR for patients aged 60 years or older with osteoarthritis and intact rotator cuff tendons. Despite a significant difference in the risk profiles of revision surgery over time, no statistically significant and clinically important differences between RTSR and TSR were found in terms of long term ... [Read more...](#)

63. Social difficulties and care burden of adult Duchenne muscular dystrophy in Japan: a questionnaire survey based on the Japanese Registry of Muscular Dystrophy (Remudy)

30-04-2024 - National Library of Medicine

CONCLUSIONS: Adult DMD patients in Japan experience many social difficulties from childhood up to adulthood. As adults, many DMD patients experience bullying and workplace difficulties. Families were found to provide most of the care and financial support for DMD patients. Our results suggest the need to improve public patient care systems, including financial support, ... [Read more...](#)

64. Rate of Change in Cardiac Magnetic Resonance Imaging Measures Is Associated With Death in Duchenne Muscular Dystrophy

30-04-2024 - National Library of Medicine

CONCLUSIONS: Duchenne muscular dystrophy death is associated with the rate of change in left ventricular ejection fraction, midcircumferential strain, and ventricular volumes. Aggressive medical therapy to decrease the rate of progression may improve the mortality rate in this population. A decrease in the rate of progression may serve as a valid surrogate outcome for therapeutic trials. [Read more...](#)

65. Rheumatoid arthritis epidemiology: a nationwide study in Poland

27-04-2024 - National Library of Medicine

To assess the incidence and prevalence of rheumatoid arthritis (RA) in Poland for the period 2013-2021, total and dependent on gender, age, region and serological status. Information on reported National Health Fund (NHF) health services and reimbursed prescriptions were used, defining an RA patient as a person who had at least two visits in different quarters with ICD-10 code M05 or M06 and ... [Read more...](#)

66. A mouse model of autoimmune inner ear disease without endolymphatic hydrops

26-04-2024 - National Library of Medicine

Autoimmune inner ear disease (AIED) is an organ-specific disease characterized by irreversible, prolonged, and progressive hearing and equilibrium dysfunctions. The primary symptoms of AIED include asymmetric sensorineural hearing loss accompanied by vertigo, aural fullness, and tinnitus. AIED is divided into primary and secondary types. Research has been conducted using animal models of ... [Read more...](#)

67. The potential role of SNHG16/ miRNA-146a/ TRAF6 signaling pathway in the protective effect of zoledronate against colorectal cancer and associated osteoporosis in mouse model

24-04-2024 - National Library of Medicine

Bone fracture as a consequence of colorectal cancer (CRC) and associated osteoporosis (OP) is considered a risk factor for increasing the mortality rate among CRC patients. SNHG16/ miRNA-146a/ TRAF6 signaling pathway is a substantial contributor to neoplastic evolution, progression, and metastasis.

Here, we investigated the effect of zoledronate (ZOL) on the growth of CRC and associated OP in ... [Read more...](#)

68. Performance of medial pivot, posterior stabilized and rotating platform total knee arthroplasty based on anteroposterior stability and patient-reported outcome measures a multicentre double-blinded randomized controlled trial of 210 knees

23-04-2024 - National Library of Medicine

CONCLUSION: MP-, PS- and RP-TKA all provide excellent and comparable results. Although MP-TKA provided better AP stability at early flexion compared to PS- and RP-TKA, this was found to be unrelated to improved PROMs in favour of MP-TKA. More studies focusing on early and mid-flexion performance based differences between MP and other TKA designs are required to confirm our findings. [Read more...](#)

69. Alternative models to support weight loss in chronic musculoskeletal conditions: effectiveness of a physiotherapist-delivered intensive diet programme for knee osteoarthritis, the POWER randomised controlled trial

18-04-2024 - National Library of Medicine

CONCLUSION: A VLED delivered by physiotherapists achieved clinically relevant weight loss and was safe for people with knee OA who were overweight or obese. The results have potential implications for future service models of care for OA and obesity. [Read more...](#)

70. Developing and assessing the measurement properties of an instrument to assess the impact of musculoskeletal pain in children aged 9 to 12-the pediatric musculoskeletal pain impact summary score

18-04-2024 - National Library of Medicine

CONCLUSION: The Pediatric MSK Pain Impact summary showed limited internal consistency and construct validity however, it can discriminate between children with frequent and infrequent pain. The results are promising for clinical and research practices as it is a short and convenient tool to be used in school-aged children. [Read more...](#)

71. Development of a precision tumor bone metastasis model by a magnetic micro-living-motor system

14-04-2024 - National Library of Medicine

An ideal bone metastasis animal model is critical and fundamental for mechanistic research and following development of new drug and treatment. Caudal artery (CA) injection allows bone metastasis in the hindlimb, while in-depth targeted and quantitative studies of bone metastasis require a new model to overcome its limitations. Here, we developed a targeted, quantitative, ... [Read more...](#)

72. Parasympathetic neurons derived from human pluripotent stem cells model human diseases and development

12-04-2024 - National Library of Medicine

Autonomic parasympathetic neurons (parasympNs) control unconscious body responses, including "rest-and-digest." ParasympN innervation is important for organ development, and parasympN dysfunction is a hallmark of autonomic neuropathy. However, parasympN function and dysfunction in humans are vastly understudied due to the lack of a model system. Human pluripotent stem cell (hPSC)-derived neurons ... [Read more...](#)

73. The BALB/c.mdx62 mouse exhibits a dystrophic muscle pathology and is a model of Duchenne muscular dystrophy

11-04-2024 - National Library of Medicine

Duchenne muscular dystrophy (DMD) is a devastating monogenic skeletal muscle-wasting disorder. Although many pharmacological and genetic interventions have been reported in preclinical studies, few

have progressed to clinical trials with meaningful benefit. Identifying therapeutic potential can be limited by availability of suitable preclinical mouse models. More rigorous testing across ... [Read more...](#)

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