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Rosehip (Rosa canina) for treating osteoarthritis: a Cochrane reviewXiao-Yang Hu^{1,*}, Nadia Corp², Jonathan G Quicke², Beth Stuart¹, Lily Lai³, Jeanne Trill¹¹ University of Southampton, United Kingdom² Keele University, United Kingdom³ Jade Screen Project, United Kingdom

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Introduction: Rosa canina (R.canina) is a promising medicinal plant which has been used orally to manage osteoarthritis (OA) pain and stiffness symptoms. This systematic review evaluates the benefits and harms of R. canina fruit for the treatment of OA symptoms in adults.

Methods: Multiple electronic databases were searched from inception to October 2019. Randomised controlled trials evaluating the effects and/or safety of oral R. canina fruit in people OA, measuring pain, physical function, joint stiffness, radiographic joint changes, quality of life, and adverse events were included. Two reviewers independently screened titles and abstracts, full texts, extracted data and assessed risk of bias using the Cochrane risk of bias tool. Meta-analyses using a random effects model were used to pool effectiveness of primary outcomes. Standardised mean differences (SMD) and risk ratios were reported with 95% confidence intervals (CI). Strength of evidence relating to each primary outcome was appraised using the GRADE approach.

Results: Fifteen randomised controlled trials comprising 1494 patients with OA (30-219 per trial) met the inclusion criteria were included. Studies included knee, hand, hip, neck, shoulder and wrist OA populations. There is moderate-quality evidence that in people with OA, R. canina improved pain, physical function, and joint stiffness. There is low-quality evidence suggesting no AEs were significantly associated with R. canina; and that R. canina did not significantly reduce non-opioid or opioid analgesics.

Conclusion: With evidence of moderate quality at best, R. canina appears to reduce pain and joint stiffness compared to placebo at three months. No serious AEs were identified. The general completeness of reporting in most of the trials was poor. Generalisability of findings is restricted due to lack of bioequivalent active ingredients identified from varied rosehip products. Additional well-designed large parallel trials are warranted.

Keywords: Rosehip, Rosa canina, Osteoarthritis, Systematic review, Meta analysis

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Yoga for low back pain: a systematic review and meta-analysisHolger Cramer^{1,*}, Dennis Anheyer², Heidemarie Haller³, Romy Lauche⁴¹ Department of Internal and Integrative Medicine, Evang. Kliniken Essen-Mitte, Germany² University of Duisburg-Essen³ Department of Internal and Integrative Medicine, Evang. Kliniken Essen-Mitte⁴ Southern Cross University

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Introduction: Yoga is frequently used for back pain relief. However, evidence was judged to be of only low to moderate size and quality. The

aim of this systematic review was to assess the efficacy and safety of yoga in patients with low back pain.

Methods: Medline/PubMed, Scopus, and the Cochrane Library were searched from their inception through April 27, 2021. Randomized controlled trials (RCTs) comparing yoga with passive control (usual care or waitlist), or an active comparator, for patients with low back pain, that assessed pain intensity or pain-related disability as a primary outcome were eligible. Two reviewers independently extracted data on study characteristics, outcome measures, and results at short-term and long-term follow-up. Risk of bias was assessed using the Cochrane Risk of Bias Tool.

Results: 30 articles on 27 individual studies (2,702 patients in total) were included in the review. Compared to passive control, yoga was associated with short-term improvements in pain intensity (15 RCTs; Mean Difference [MD; 0-10 numeric rating scale]=-0.74; 95%CI=-1.04,-0.44; Standardized Mean Difference [SMD]=-0.37; 95%CI=-0.52,-0.22), pain-related disability (15 RCTs; MD [Roland Morris Disability Questionnaire]=-2.28; 95%CI=-3.30,-1.26; SMD=-0.38; 95%CI=-0.55,-0.21), mental health (7 RCTs; MD [SF-36]=1.70; 95%CI=0.20,3.20; SMD=0.17; 95%CI=0.02,0.32) and physical functioning (9 RCTs; MD [SF-36]=2.80; 95%CI=1.00,4.70; SMD=0.28; 95%CI=0.10,0.47). Except for mental health all effects sustained long-term. Yoga was associated with a statistical higher risk of adverse events when compared to passive control (Risk Ratio=3.78; 95%CI=1.79,7.98). Compared to an active comparator, yoga was not associated with any significant differences in short- or long-term outcomes.

Conclusion: Yoga revealed robust short- and long-term effects for pain, disability, physical function and mental health, when compared to non-exercise controls. To some extent, effects include clinically important changes. As yoga is comparably effective and safe as conventional exercise, it can be recommended for patients with low back pain.

Keywords: Yoga, Low back pain, Meta-analysis

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Characteristics of systematic reviews of yoga: a bibliometric analysis of the researchL Susan Wieland^{1,*}, Karen Pilkington¹, Romy Lauche², Holger Cramer³, Amy Verstappen¹, Elizabeth Parker¹¹ University of Maryland School of Medicine, United States² University of Technology Sydney³ University of Duisburg-Essen

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Introduction: Yoga is a popular mind-body practice often used for treatment or prevention of health conditions. Many randomized controlled trials (RCTs) and systematic reviews (SRs) of these yoga interventions have conducted in recent years. We aimed to comprehensively identify and describe the characteristics of all available yoga SRs.

Methods: 8 databases were searched from inception to November 19, 2019; two authors independently screened and selected records for inclusion. We extracted bibliographic data and research topics for all protocols and reviews. For completed SRs focusing solely on yoga, we extracted information on conclusions (positive, neutral, negative).

Results: We identified 319 ongoing and completed SRs of yoga interventions; 157 (49%) focused solely on yoga and 162 (51%) included searches for yoga as part of a broader intervention class (eg, exercise). SRs were published in 2003-2019; 171 (54%) were published in 2016 or later. SRs originated from 32 different countries; 81 (25%) originated from the USA. SRs were most often published in specialty journals (n=158; 50%), CAM journals (n=70; 22%), or SR journals (n=60; 19%). The most common topics were psychiatric (n=71), cancer (n=38), mus-

culoskeletal (n=36), cardiovascular (n=32), metabolic (n=19) and neurological (n=19), while the most common populations included women (n=42), men (n=1), young people (n=11), and older people (n=15). Most SRs focused on yoga stated that yoga had positive effects; only 1 SR had clearly negative conclusions.

Conclusion: Many SRs of yoga are conducted as part of a review of a broader class of interventions. There are several SRs of yoga for some conditions (eg, chronic low back pain, breast cancer) and there is likely extensive duplication of SRs covering identical research questions. We will present further information on the characteristics of yoga SRs and suggest how these results taken together may inform the research agenda in yoga.

Keywords: Yoga; Systematic review; Randomized controlled trials

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Experiences of online yoga for older adults with multi-morbidity in The Gentle Years Yoga Trial.

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Introduction: Covid-19 restrictions necessitated adapting the NIHR-funded Gentle Years Yoga trial for adults aged ≥ 65 years with multi-morbidity from face-to-face to online yoga classes. This study qualitatively explored participant and provider experiences and acceptability of this delivery format.

Methods: Yoga participants recruited for a 12-week online yoga intervention across four sites and the yoga teachers (YTs) delivering these classes were purposively sampled and consented. Individual interviews were conducted via Zoom or telephone, audio-recorded, independently transcribed, and thematically analysed.

Results: Interviews were conducted from October 2020 to January 2021 with four YTs, and 10 yoga participants aged 66-71 years with 2-5 chronic health conditions. Four themes predominated across all interviews. 1) IT skills. In contrast to perceived negative media portrayal, many participants were active engagers with computer technology, often self-taught in response to Covid-19 social restrictions. Engagement with the online yoga classes required minimal IT proficiency and identified issues appeared trial-related rather than skills-based. 2) Improved accessibility. No safety concerns and multiple accessibility benefits were associated with online classes. Many participants preferred online over face-to-face delivery as they removed transport, mobility, and acute health barriers. 3) Facilitated self-practice. Lack of external distractions associated with face-to-face classes enabled participants to better engage with a personal yoga practice. Many participants had integrated yoga into their daily routine and acute health management. 4) Teacher attributes. Communication limitations inherent with online delivery required a more interactive approach from YTs; engagement facilitators included simple instruction, physical demonstrations, and non-verbal feedback.

Conclusion: Online group-based yoga classes provided health and pragmatic benefits to multi-morbid older adults. Preferences for continued online options post-Covid, together with streamlining IT access, suggests online classes are both acceptable and sought by some older adults. Future exploration of online inclusion barriers will optimise accessibility in an older adult population.

Keywords: Older adults; Yoga; Multimorbidity; Clinical trial; Online

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