



A. PEDro update (2 August 2021)

PEDro contains 51,742 records. In the 2 August 2021 update you will find:

- 39,938 reports of randomised controlled trials (39,060 of these trials have confirmed ratings of methodological quality using the PEDro scale)
- 11,105 reports of systematic reviews, and
- 699 reports of evidence-based clinical practice guidelines.

PEDro was updated on 2 August 2021. For latest guidelines, reviews and trials in physiotherapy visit [Evidence in your inbox](#).

B. DiTA update (2 August 2021)

DiTA contains 2,200 records. In the 2 August 2021 update you will find:

- 1,984 reports of primary studies, and
- 216 reports of systematic reviews.

DiTA was updated on 2 August 2021. For the latest primary studies and systematic reviews evaluating diagnostic tests in physiotherapy visit [Evidence in your inbox](#).

C. DiTA now contains 2,200+ primary studies and systematic reviews

We are pleased to announce that DiTA has just achieved an important milestone. There are

now 2,200+ articles reporting the results of primary studies and systematic reviews evaluating the accuracy of diagnostic tests used by physiotherapists indexed in DiTA.



DiTA

Diagnostic Test Accuracy

contains

2,200+

primary studies and systematic reviews

dita.org.au

D. Vote for which infographic you prefer for the systematic review that found that exercise-based prevention programs may reduce the risk of non-contact musculoskeletal injuries in football (soccer) players

Last month we summarised the [systematic review by Lemes et al.](#) The review concluded that exercise-based prevention programs may reduce the risk of non-contact musculoskeletal injuries in football (soccer) players.


As you may know, the PEDro Education and Training Subcommittee have been thinking about the format of the infographics we have been producing to summarise the implications of important systematic reviews. In June we sought feedback from PEDro users about their [preferred format](#). Votes for the two options was so close that we have

decided to run the poll again.

This month we have produced two versions of the infographic for the Lemes et al review. We invite all PEDro users to give us feedback about their preferred format. We'd like to know which format (original or alternate) would make you more likely to use the infographic to apply the evidence in clinical practice AND your main physiotherapy job (clinician, academic, researcher). You can submit your preference by:

- using the [PEDro web-site](#)
- tagging us in a Tweet ([@PEDro_database](#)), or
- commenting on our infographic Facebook post on 9 August 2021 ([@PhysiotherapyEvidenceDatabase.PEDro](#)).

Both infographics provide some suggestions for providing exercise-based prevention programs for football players. Which do you prefer?




A systematic review of 10 trials found that exercise-based prevention programs may reduce the risk of non-contact musculoskeletal injuries in football (soccer) players

Interventions and implications

- Focused or generalised exercise to develop function, skills or fitness
- Performed at least twice per week for 3-9 months
- Focused programs were no different from generalised programs for the prevention of non-contact hamstring injuries

CITATION Lemes IR, et al. Do exercise-based prevention programmes reduce non-contact musculoskeletal injuries in football (soccer)? A systematic review and meta-analysis with 13,355 athletes and more than 1 million exposure hours. *Br J Sports Med* 2021 May 17:Epub ahead of print



Original

STUDY DESIGN	METHODS	FINDINGS
<p>Systematic review and meta-analysis.</p>	<p>Prospectively registered protocol.</p> <p>Sensitive searches of six databases (including Medline, Embase and PEDro), three clinical trial registries and citation tracking.</p> <p>Two reviewers independently selected trials and extracted data.</p> <p>Risk of bias was evaluated using the PEDro scale and certainty of evidence was evaluated using the Grading of Recommendations, Assessment, Development and Evaluation (GRADE) approach.</p> <p>Meta-analysis was used to compute the pooled injury risk ratio and its 95% confidence interval (CI). One pre-planned subgroup analysis was undertaken based on exercise type: focused/unimodal (exercises chosen to train and protect a specific muscle or joint) vs. generalised/multimodal (exercises that targeted many body segments) on non-contact hamstring injuries.</p>	<div data-bbox="970 228 1152 318"> </div> <p>Trials were conducted across 4 continents. Most trials (7) recruited youth players and all trials included amateur players.</p> <p>Focused exercise was used in 3 trials (Nordic Hamstring Exercise, Bounding Exercise Program) and generalised exercise in 7 (Prevent Injury and Enhance Performance Program, FIFA 11+, FIFA 11, Knäkontroll (neuromuscular training)). All interventions were applied at least twice a week to every training session for 3-9 months.</p> <p>Exercise-based programs reduce the risk of non-contact injuries by 23% compared to control, with an injury risk ratio of 0.77 (95% CI 0.61 to 0.97; 10 trials; 13,355 participants; low certainty).</p> <p>Focused programs were not different from generalised programs for the prevention of non-contact hamstring injuries.</p>
INCLUSION CRITERIA		<p>TAKE AWAY</p> <p>Exercise-based prevention programs may reduce the risk of non-contact musculoskeletal injuries in football (soccer) players.</p>
<p>Study types: Randomised controlled trials</p> <p>Population: Football (soccer) players aged 13 years and older</p> <p>Intervention: Any exercise therapy performed to develop function, skills or physical fitness</p> <p>Comparator: Usual training or warmup, minimal intervention, education or no intervention</p> <p>Outcome: Any acute sudden onset musculoskeletal injury that occurred without physical contact with another player or object on the field</p>		

Alternate

Lemes IR, et al. Do exercise-based prevention programmes reduce non-contact musculoskeletal injuries in football (soccer)? A systematic review and meta-analysis with 13,355 athletes and more than 1 million exposure hours. *Br J Sports Med* 2021 May 17:Epub ahead of print

[Read more on PEDro.](#)

E. Systematic review found that exercise prehabilitation increases preoperative functional capacity and decreases postoperative hospital length of stay in people undergoing surgery for abdominal cancer

Prehabilitation aims to promote physical and psychological health and address modifiable risk factors prior to surgery to improve postoperative outcomes. There are conflicting results regarding the effectiveness of prehabilitation in patients with cancer awaiting surgery, and the optimal approach to delivering prehabilitation is unclear. This systematic review aimed to estimate the effects of exercise prehabilitation compared to standard care on postoperative outcomes in adults undergoing surgery for abdominal cancer.

Guided by a prospectively registered protocol, citation tracking and sensitive searches were conducted in 5 databases (including Medline and PEDro) to identify (pseudo-)randomised controlled trials that investigated the effects of exercise prehabilitation for adults scheduled to undergo abdominal surgery for cancer. Exercise prehabilitation could involve any form of exercise (including whole body or respiratory exercise) plus education and be delivered either as a stand-alone intervention (ie, unimodal) or included within a framework of multimodal interventions (ie, with nutritional or psychological interventions). The comparator was not exposed to a prehabilitation program, like standard care or no intervention. The outcomes included functional capacity (eg, 6-Minute Walk Test), cardiorespiratory fitness (eg, VO₂peak), postoperative complications, hospital length of stay, hospital re-admission, and postoperative mortality, but the primary outcome was not identified. The Consensus Exercise Reporting Template was used to extract information about the interventions. Risk of bias of the included trials was evaluated using version 2 of the Cochrane risk of bias tool. Two reviewers independently selected trials for inclusion, extracted data and evaluated risk of bias. Disagreements were resolved by consensus or by arbitration from a third reviewer. Meta-analyses were performed for each outcome, calculating the mean differences (when data were reported for the same scale), standardised mean differences (when data were reported using different scales) or odds ratios (for dichotomous variables) and their associated 95% confidence intervals (CI). Certainty of evidence was evaluated using the Grading of Recommendations, Assessment, Development and Evaluations (GRADE) approach. Three subgroup comparisons were pre-planned: low vs. high functional capacity at baseline; shorter vs. longer prehabilitation programs; and, unimodal vs. multimodal programs.

21 trials (1,640 participants) were included in the meta-analysis. Most trials were from Canada (5) or the United Kingdom (5). The type of cancer was colorectal (7 trials), gastro-oesophageal (4), urological (4), other specific cancer (3) or a variety of cancers (3). 9 trials evaluated unimodal exercise prehabilitation and 12 were multimodal. Exercise involved aerobic and strength training (9 trials), aerobic training (5), aerobic, strength and respiratory training (4), respiratory training (2) or education (1). Intervention was commonly provided in a home-based setting by physiotherapists. The frequency and duration of programs generally ranged from five sessions over 1 week to three times/week for 8 weeks.

Compared to standard care, prehabilitation increased preoperative functional capacity by 34 metres on the 6-Minute Walk Test (95% CI 19 to 49; 522 participants; 8 trials; moderate certainty) and reduced postoperative hospital length of stay by a mean of 3.7 days (0.9 to 6.4; 458 participants; 4 trials; moderate certainty). In contrast, there was no difference between standard care and prehabilitation for preoperative cardiorespiratory fitness (mean difference for VO₂peak 1.7 ml/min/kg; -0.0 to 3.5; 121 participants; 3 trials; low certainty), postoperative complications (odds ratio 0.81, 95% CI 0.55 to 1.18; 917 participants; 16 trials; low certainty), hospital re-admission (odds ratio 1.07, 0.61 to 1.90; 464 participants;

6 trials; moderate certainty), and postoperative mortality (odds ratio 0.95; 95% CI 0.43 to 2.09; 901 participants; 7 trials; low certainty).

Subgroup comparison was possible for unimodal vs. multimodal programs for functional capacity (6-Minute Walk Test). Compared to standard care, multimodal programs increased the distance walked in 6 minutes by a mean of 33 metres (95% CI 18 to 49; 464 participants; 6 trials) compared to 52 metres (-13 to 116; 58 participants; 2 trials) for unimodal programs. However, this finding should be interpreted with caution because of the small number of participants and trials available for unimodal programs.

Exercise prehabilitation, particularly multimodal approaches, improves preoperative functional capacity and reduces postoperative hospital length of stay in people undergoing surgery for abdominal cancer.

Waterland JL, et al. Efficacy of prehabilitation including exercise on postoperative outcomes following abdominal cancer surgery: a systematic review and meta-analysis. *Front Surg* 2021;8:628848

[Read more on PEDro.](#)

F. Meet the people behind PEDro

Since 1999 PEDro has been providing rapid access to the best research evaluating the effects of physiotherapy interventions. PEDro is coordinated by a small group of physiotherapists who form the PEDro Steering Committee. During 2021 some of the founding members are passing the baton to a new generation of PEDro leaders. We extend our sincere gratitude to Rob Herbert and Chris Maher, who have both decided to come off the Committee. Both have contributed with dedication, tenacity, and great foresight. Words cannot express how inspiring it has been to work closely with these two giants of the physiotherapy profession.

In this post we will reacquaint you with the continuing members of the PEDro Steering Committee (Cathie Sherrington, Anne Moseley, Mark Elkins and Steve Kamper). It is with great pleasure that we will also introduce our new members (Adrian Traeger, Natalie Collins, Chris Williams and Zoe Michaleff).



Professor Catherine Sherrington
[Institute for Musculoskeletal Health at the University of Sydney and Sydney Local Health District](#)

PhD, MPH, BAppSc(Physiother), FACP, FAHMS

Cathie leads the Physical Activity, Ageing and Disability theme within the Institute for Musculoskeletal Health.

Her research focuses on physical activity interventions to prevent falls and enhance mobility in older people and people with physical disabilities. She is one of the founders of PEDro.



Associate Professor Anne Moseley
[Institute for Musculoskeletal Health at the University of Sydney and Sydney Local Health District](#)

PhD, GradDipAppSc(ExSpSci), BAppSc(Physiother)

Anne is Principal Research Fellow within the Institute for Musculoskeletal Health. Her research centres on evidence-based practice and waste in research.

She is one of the founders of PEDro, and is responsible for the management of the PEDro resource. In 2019 Anne received the Mildred Elson Award, the highest honour that World Physiotherapy can bestow, for her contribution to evidence-based practice through her work with PEDro.



Clinical Associate Professor Mark Elkins

[The University of Sydney](#)

PhD, MHSc, BA, BPhty

Mark teaches research methods to clinicians and mentors workplace-based research in the Sydney Local Health District. His personal research interests include: physical and pharmacological therapies in respiratory disease; co-ordinating these therapies to maximise

the overall effect; and improving the understanding and application of published research by clinicians. He is also a Clinical Associate Professor in the Sydney Medical School and the Scientific Editor of Journal of Physiotherapy.



Professor Steven Kamper

[School of Health Sciences, University of Sydney and Nepean Blue Mountains Local Health District](#)

PhD, BAppSc(Physio), BSc(Hons)

Steve's role as Professor of Allied Health is to train and support clinicians to conduct research as part of their clinical activities. The aim is to produce practice-relevant research embedded in day-to-day

healthcare delivery. His research blends perspectives from the clinical treatment of pain with public health approaches to lifestyle-related health behaviours, in children and adults.



Dr Adrian Traeger

[Institute for Musculoskeletal Health at the University of Sydney and Sydney Local Health District](#)

PhD, MPhty, BSc(Hons)

Adrian is an National Health and Medical Research Council (Australia) Early Career Fellow at The University of Sydney. His research interests include clinical management of back pain, patient education, and overuse of healthcare.



Dr Natalie Collins

[School of Health and Rehabilitation Sciences, The University of Queensland](#)

PhD, MSportsPhysio, BPhy(Hons)

Natalie is an Australian Physiotherapy Association Sports and Exercise Physiotherapist and Senior Lecturer in Physiotherapy at The University of Queensland. Her research centres around improving the lives of people with

patellofemoral pain conditions, including adolescents and young adults with patellofemoral pain, and older adults with patellofemoral osteoarthritis.



Associate Professor Christopher Williams

[Hunter New England Population Health and School of Medicine and Public Health, University of Newcastle](#)

PhD, MPhysio, BExSpSc

Chris is an Australian National Health and Medical Research Council Investigator Fellow (Emerging Leader 2) at the University of Newcastle and with Hunter New England and Mid North Coast Local

Health Districts. His research focuses on testing treatment and implementation strategies to support people, from children to the elderly, and health services to manage painful conditions and associated chronic disease risks.



Dr Zoe Michaleff

[Institute for Evidence Based Healthcare, Bond University](#)

PhD, BAppSc(Physiotherapy)

Zoe is a post-doctoral research fellow at the Institute for Evidence Based Healthcare, Bond University. Her research focuses on evidence-based diagnosis, prognosis, and sustainable management of health conditions across the life course.

She aims to support healthcare professional's journey as they navigate the evidence maze from research users to research participants and eventually research leaders. Zoe is also passionate about making evidence-based information more accessible and useable by patients.

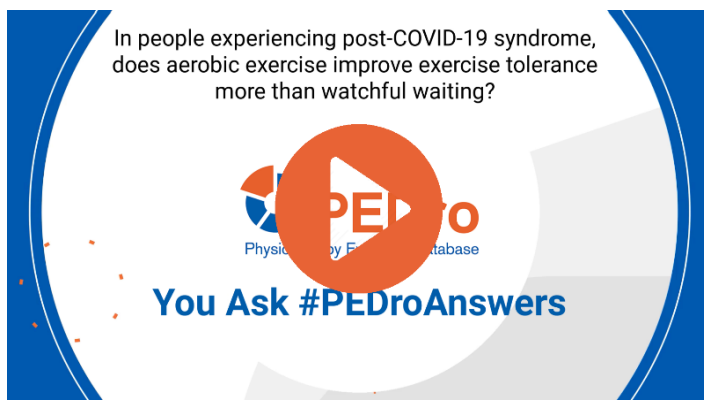
G. Seventh video of PEDro Advanced Search for the “You Ask #PEDroAnswers” campaign

Each month in 2021 we will share short videos illustrating how to use the PEDro Advanced Search to find the best research to answer clinical questions submitted by PEDro users.

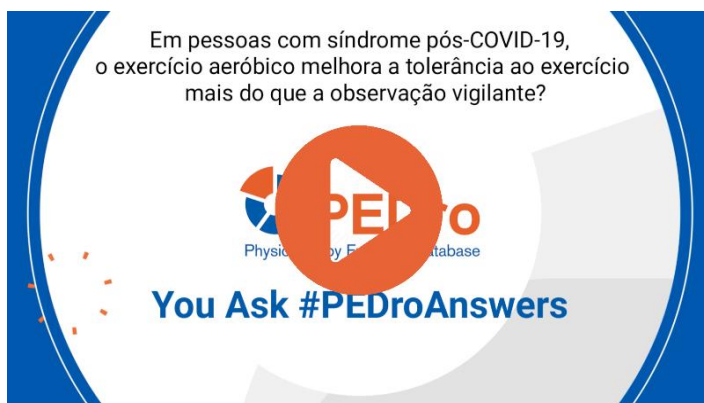
The seventh question to be answered is “In people experiencing post-COVID-19 syndrome, does aerobic exercise improve exercise tolerance more than watchful waiting?”

The Search terms are:

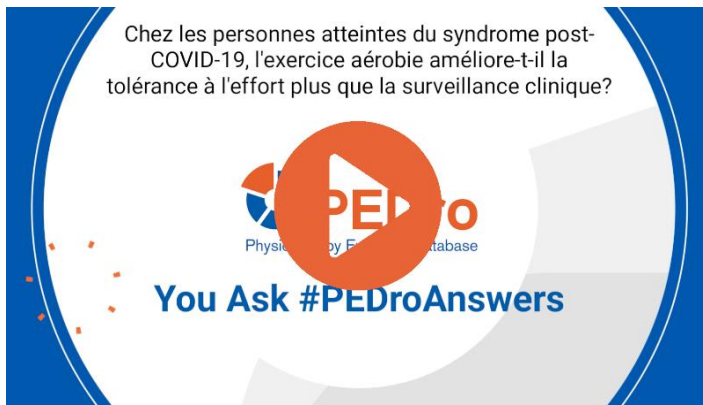
- COVID* (Title Only)
- fitness training (Therapy).



[English](#)



[Portuguese](#)



[French](#)

PEDro acknowledges the contributions of: Ana Helena Salles from Faculdade de Ciências Médicas de Minas Gerais, Brazil who translated and recorded the Portuguese version; and, Elodie Louvion and Matthieu Guémann from the [Société Française de Physiothérapie](#) who translated and recorded the French version.

You can submit your question for the “You Ask #PEDroAnswers” campaign at <https://pedro.org.au/english/learn/you-ask-pedro-answers/>.

H. “You Ask #PEDroAnswers” search tip #7 - If you get too many search results ...

Throughout 2021 we will be sharing some tips on how to use the PEDro Advanced Search. The seventh tip is “If you get too many search results ...”.

After asking a question that contains all the PICO components, a good starting place for your search is to enter terms for the Patient and Intervention components of the question ([see tip 1](#)). However, in some cases this can lead to too many articles in the search results. In this blog we will suggest some strategies for narrowing down the number of articles if you get too many search results.

Let’s use this PICO question as an example: In people with subacromial shoulder pain, does resistance exercise reduce pain more than massage? One starting point for the search to answer this question would be to type shoulder pain into the Abstract and Title field and select strength training in the Therapy drop down list. If you do this you get over 400 articles, which is too many to read to answer the clinical question.

When you get too many articles in your search results, three strategies that can make your search more precise are:

1. Make a search term more specific

For our search we used a very broad term for the Patient (shoulder pain). One strategy to

reduce the number of articles in the search results is to make the term for the Patient more precise. A particular type of shoulder pain was included in the question, pain in the subacromial region. We could replace shoulder pain with subacromial shoulder pain in the Abstract and Title field. This would reduce the number of search results to around 65 articles.

Phrase searching (where two or more words are combined into a single term by placing the words between double quotation marks) is another strategy to make a term like shoulder pain more specific. Changing shoulder pain to "shoulder pain" will reduce to number of search results to around 180 articles. A detailed explanation about phrase searching is in [tip 5](#).

2. Change the field you use to enter a search term

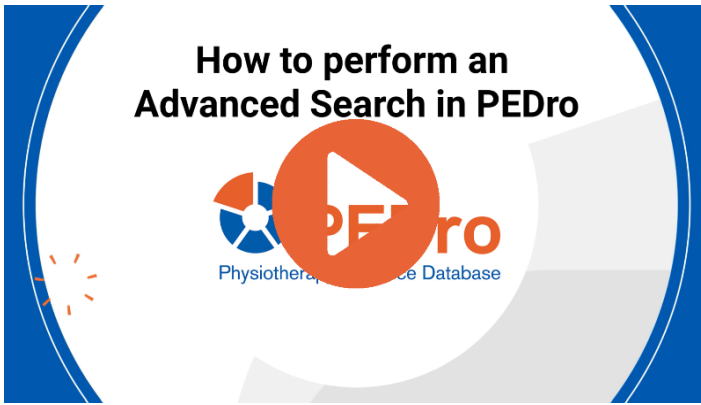
We could also make the search more precise by using a different field to enter a search term. If we type subacromial shoulder pain in the Title Only field instead of in the Abstract and Title field, the number of search results is reduced to about 10 articles.

You do need to carefully select which field(s) to use as, in some cases, changing where you enter the term might increase the number of search results. For example, removing shoulder pain from the Abstract and Title field and selecting upper arm, shoulder or shoulder girdle from the Body Part drop down list would increase the number of articles in the search results to over 900. Generally, typing terms in the Abstract and Title or Title Only fields retrieve less search results than using the drop down lists.

3. Add a term for another PICO component

We could add a term for another PICO component to our original strategy (typing shoulder pain into the Abstract and Title field and selecting strength training in the Therapy drop down list) in order to reduce the number of articles in the search results. A term for the Comparator component could be added by typing shoulder pain massage into the Abstract and Title field. This would reduce the number of search results to around 14 articles.

You need to carefully select which PICO components to use in the search in order to use terms that are uniquely associated with the question being asked. In our example we avoided using a term for the Outcome (for example, selecting pain in the Problem drop down list) because this is an outcome used in many research articles and is likely to produce a large number of search results.



[We've recently revised the PEDro video tutorial on how to do an Advanced Search.](#)

I. Call for questions from physiotherapists working in gerontology, neurology or neurotrauma for “You Ask #PEDroAnswers” campaign

This month we invite physiotherapists to submit a clinical question related to gerontology, neurology or neurotrauma to the “You Ask #PEDroAnswers” campaign. You can submit a question using a form on the [PEDro web-site](#), tag us in a Tweet ([@PEDro_database](#)), or on [Facebook](#) by commenting on a “You Ask #PEDroAnswers” post or by sending us your question via Messenger.

To keep up to date with the latest evidence, subscribe to the PEDro [Evidence in your inbox](#) feeds for gerontology, neurology or neurotrauma.

J. Next PEDro and DiTA updates (September 2021)

The next [PEDro](#) and [DiTA](#) updates are on Monday 6 September 2021.

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