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PEDro

Physiotherapy Evidence Database

A. PEDro update (1 November 2021)

[PEDro](#) contains 53,008 records. In the 1 November 2021 update you will find:

- 40,814 reports of randomised controlled trials (39,870 of these trials have confirmed ratings of methodological quality using the PEDro scale)
- 11,504 reports of systematic reviews, and
- 690 reports of evidence-based clinical practice guidelines.

For latest guidelines, reviews and trials in physiotherapy visit [Evidence in your inbox](#).

B. DiTA update (1 November 2021)

[DiTA](#) contains 2,262 records. In the 1 November 2021 update you will find:

- 2,031 reports of primary studies, and
- 231 reports of systematic reviews.

For the latest primary studies and systematic reviews evaluating diagnostic tests in physiotherapy visit [Evidence in your inbox](#).

C. PEDro now contains 53,000+ reports of trials, reviews and guidelines

We are pleased to announce that PEDro has just achieved a new milestone. There are now 53,000+ reports of trials, reviews and guidelines indexed on PEDro.



D. Welcoming new reporting guidelines for systematic reviews in exercise, rehabilitation and sports – PERSiST

Transparent, accurate and comprehensive reporting of systematic reviews helps clinicians and policy-makers to implement the review findings into practice. This can be facilitated by helping the authors of systematic reviews to clearly report why the review was done, what they did, and what they found.

Some great minds have been working to improve the reporting of systematic reviews over the past quarter of a century. Initial efforts resulted in the publication of the [QUOROM Statement](#) (the acronym for QUality Of Reporting Of Meta-analysis) in 1999. This was a 21-item checklist to describe the preferred way to report the abstract, introduction, methods, results, and discussion sections and a template for illustrating the flow of trials through the review. A new and improved version of the QUOROM Statement, called PRISMA (short for Preferred Reporting Items for Systematic reviews and Meta-Analyses), was published in

2009. The [PRISMA 2009 Statement](#) consisted of a 27-item checklist and a four-phase flow diagram. An updated version of the [PRISMA Statement](#) was released in 2020. This updated version incorporated many of the innovations in the conduct of systematic reviews that had occurred since the release of PRISMA 2009. The recommendations in the PRISMA 2020 Statement have been widely adopted and [endorsed by many medical journals](#).

As review methodology advances, [several extensions of the PRISMA Statement](#) have been developed to facilitate the reporting of systematic reviews. These extensions are targeted to specific aspects of systematic reviews (eg, scoping reviews) or related to professional disciplines. The latest extension provides implementation guidance in the fields of sport and exercise medicine, musculoskeletal rehabilitation, and sports science and is called PERSiST (the Prisma in Exercise, Rehabilitation, Sport medicine and SporTs science). PERSiST is intended to support systematic reviewers to implement PRISMA 2020 guidance in their systematic reviews in the sport and exercise medicine, musculoskeletal rehabilitation, and sports science fields. This is achieved by presenting at least one exemplar illustrating excellent reporting for each of the 27 PRISMA 2020 Statement items.

[Ardern CL, et al. Implementing the 27 PRISMA 2020 Statement items for systematic reviews in the sport and exercise medicine, musculoskeletal rehabilitation and sports science fields: the PERSiST \(implementing Prisma in Exercise, Rehabilitation, Sport medicine and SporTs science\) guidance. Br J Sports Med 2021 Oct 8:Epub ahead of print.](#)

E. Systematic review found that exercise reduces pain more than no treatment in adults with chronic non-specific low back pain

Low back pain is the leading cause of disability globally and results in enormous direct healthcare and lost productivity costs. Despite a large amount of research, there remains uncertainty about the best treatment approach for people with chronic non-specific low back pain. This systematic review aimed to estimate the effects of exercise therapy compared to control on pain and functional limitations in people with chronic non-specific low back pain.

Guided by a prospectively registered protocol, sensitive searches were performed in seven databases (including Cochrane CENTRAL, Medline and PEDro) and two trial registries to identify randomised controlled trials evaluating exercise therapy for people with low back pain (date of search: 27 April 2018). The population is adults with non-specific low back pain of more than 12 weeks' duration. Trials that recruited participants with symptoms or signs consistent with radiculopathy (eg, leg pain) were included if back pain was their main complaint. Exercise therapy was classified as strengthening, stretching, core strengthening, flexibility/mobilising, aerobic, functional restoration, McKenzie therapy, yoga, mixed, and other. The comparator could be no treatment (including no or minimal

treatment, usual care or placebo), other conservative treatments (including education, manual therapy, electrotherapy, psychological therapy, non-exercise physiotherapy, back school, relaxation, anti-inflammatory medication) or another type of exercise therapy. However, comparisons between different types of exercise therapy were not undertaken in this review. The primary outcomes were pain and functional limitations measured on any scale, and data were re-scaled to a 0-to-100-point scale (where 0 is no pain or functional limitations) for the analyses. A 15-point difference in pain and a 10-point difference in functional limitations were pre-specified to be clinically important. If outcomes were evaluated at multiple time points, data from the earliest time point after randomisation was used in the primary analyses. Two independent reviewers selected trials for inclusion and evaluated trial quality, and disagreements were resolved by discussion or by arbitration from a third reviewer. Data were extracted by one reviewer and checked by at least one other reviewer. Trial quality was evaluated using version 1.0 of the Cochrane risk of bias tool. The Grades of Recommendation, Assessment, Development and Evaluation (GRADE) approach was used to evaluate certainty of evidence. Meta-analysis was used to pool trials and calculate the mean between-group difference, and the associated 95% confidence interval (CI), for pain and functional limitations. Separate comparisons were performed for trials using no treatment and other conservative treatments as comparators.

249 trials (24,486 participants) were included in the review. Most trials were conducted in Europe (122 trials), Asia (38), North America (33) and the Middle East (24). The average age of participants was 44 years and 59% were women. At baseline, participants reported a mean pain intensity of 51 points and functional limitations of 38 points. 142 trials compared exercise therapy to no treatment or other conservative care. 151 trials compared the effects of two or more different types of exercise therapy. Most exercise therapy involved a mixed type of exercise (110 trial groups). The most common specific types of exercise therapy were core strengthening (131) and Pilates (29), general strengthening (57), stretching (51), and aerobic (41).

Compared to no treatment (including no or minimal treatment, usual care or placebo), exercise therapy reduced pain by a mean of 15 points (95% CI 18 lower to 12 lower; 35 trials; 2,746 participants; moderate certainty) and reduced functional limitations by a mean of 7 points (95% CI 8 lower to 5 lower; 38 trials; 2,942 participants; moderate certainty). This difference in pain was considered to be clinically important based on pre-specified criteria, but the difference in functional limitations was not.

Compared to other conservative care, exercise therapy reduced pain by a mean of 9 points (95% CI 13 lower to 6 lower; 64 trials; 6,295 participants; low certainty) and functional limitations by a mean of 4 points (95% CI 6 lower to 2 lower; 52 trials; 6,004 participants; moderate certainty). These differences were not considered to be clinically important.

Exercise therapy most likely reduces pain when compared to no treatment (including no or minimal treatment, usual care or placebo) in people with chronic non-specific low back

pain. The impact of exercise therapy on functional limitations when compared to no treatment and on pain and functional limitations when compared to other conservative care are probably small.

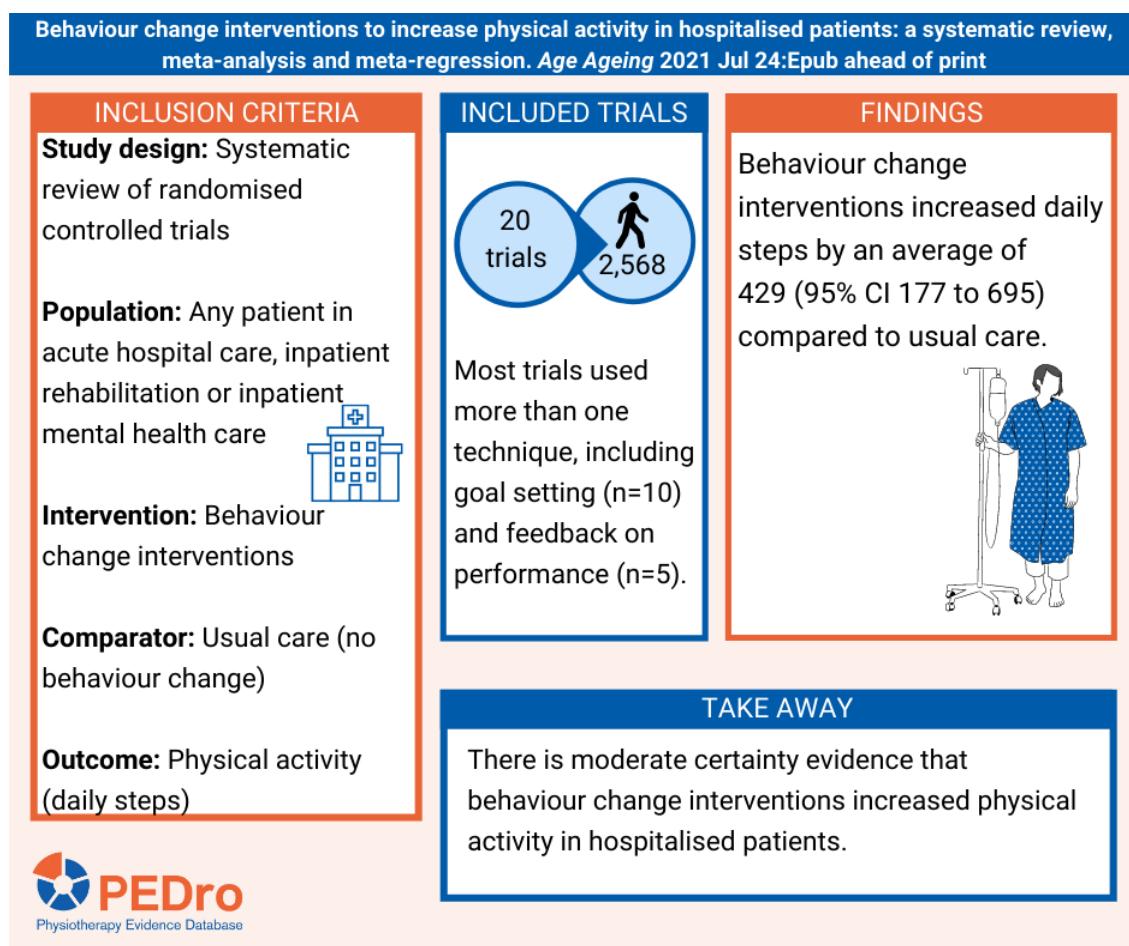
Hayden JA, et al. Exercise therapy for chronic low back pain. *Cochrane Database Syst Rev* 2021;Issue 9

[Read more on PEDro.](#)

F. Infographic for systematic review that found that behaviour change interventions increase physical activity during admission in hospitalised patients

Last month we summarised the [systematic review by Taylor et al.](#) The review concluded that behaviour change interventions increase physical activity during admission in hospitalised patients.

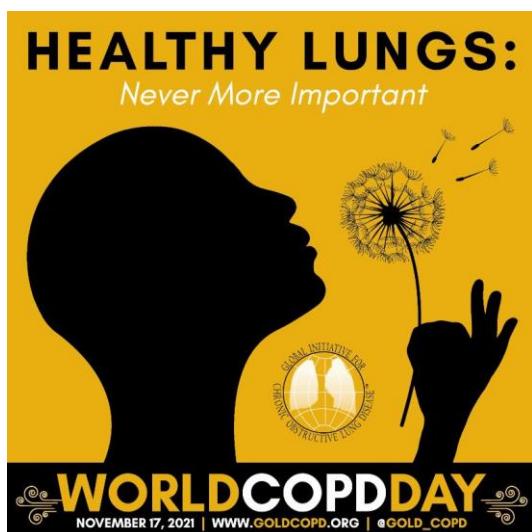
Some suggestions for applying this evidence into practice are this infographic.



Taylor NF, et al. Behaviour change interventions to increase physical activity in hospitalised patients: a systematic review, meta-analysis and meta-regression. *Age Ageing* 2021 Jul 24:Epub ahead of print

[Read more on PEDro.](#)

G. #WorldCOPDDay



November 17 marks World COPD Day. This year's theme, "Healthy Lungs - Never More Important", aims to highlight the burden of chronic obstructive pulmonary disease (COPD) and the importance of keeping our lungs healthy.

To keep up to date with the latest evidence about physiotherapy for people with COPD, subscribe to the [PEDro Evidence in your inbox](#) feeds for cardiothoracics or chronic respiratory disease.

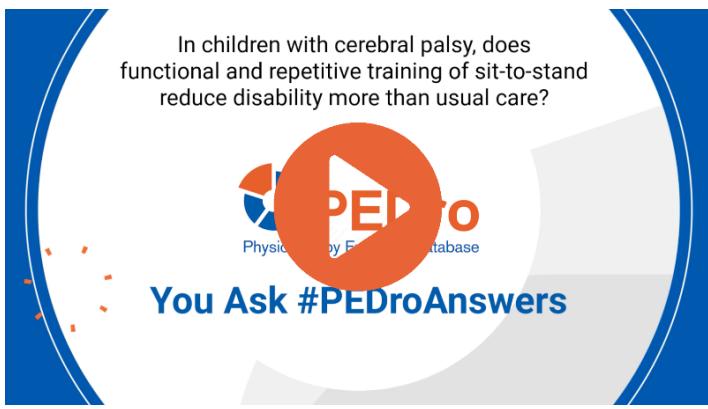
H. Tenth video of PEDro Advanced Search for the "You Ask #PEDroAnswers" campaign

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

The tenth question to be answered is "In children with cerebral palsy, does functional and repetitive training of sit-to-stand reduce disability more than usual care?"

The Search terms are:

- skill training (Therapy)
- cerebral palsy (Topic)
- stand* (Title Only).



[English](#)

You can watch all 10 search videos for the “You Ask #PEDroAnswers” campaign at <https://pedro.org.au/english/learn/you-ask-pedro-answers/>.

I. “You Ask #PEDroAnswers” search tip #10 - Access full text using links in PEDro

Throughout 2021 we have been sharing some tips on how to use the PEDro Advanced Search. The tenth tip is “Access full text using links in PEDro”.

Access to full-text copies of research articles is essential for translating research into practice. Full-text articles are needed to appraise the quality and applicability of research for a clinical question. They are also needed for a detailed description of the intervention. Access to full-text articles is crucial for all health professionals trying to provide evidenced-based care.

When a PEDro search locates an article of interest, clicking on the title hyperlink brings up its “Detailed Search Results” page. We have recently estimated the percentage of articles in PEDro that have free full-text access via these links. Access to free full text was available for 60% (95% confidence interval 53% to 67%) of the articles sampled. This is higher than the free full-text access that was available via PubMed (47%, 95% confidence interval 40% to 54%).

We provide up to 5 links to full text for each article in PEDro. The number of links will depend on whether the article is indexed in PubMed or PubMed Central, if the article has a DOI number, and if the journal has a website. These links may be to free full text, or you may need a subscription to the journal or to pay to view the article. Access to free full text is determined by the journal publishers. The links to full text in PEDro are listed in order of likelihood for accessing free full text. With links at the top of the list being more likely to link to free full text than the links at the end of the list. The links are:

1. PubMed Central

PubMed Central is a free full-text archive of biomedical journal literature produced by the United States National Institutes of Health's National Library of Medicine. It contains over 6 million full-text articles that have been published in journals that have an agreement with PubMed Central to archive their content. Clicking on the "PubMed Central" link on the PEDro "Detailed Search Results" page will take you directly to the article in PubMed Central. You may be able to view the full-text article on this website or open the article in Portable Document Format (PDF) by clicking on a link.

2. DOI

This is the acronym for Digital Object Identifier, a unique alphanumeric string assigned by the International DOI Foundation to identify content and provide a persistent link to its location on the internet. Clicking on the "DOI" link on the PEDro "Detailed Search Results" page will take you directly to the article on the journal's website. Not all journals will allow you to access full text free of charge. In this case you may be asked to login or to pay to access the article. If a subscription is required, you may be able to access the article via your local medical library.

3. PubMed

Produced by the United States National Institutes of Health's National Library of Medicine, PubMed is a free database containing over 33 million citations and abstracts of biomedical literature. The "PubMed" link on the PEDro "Detailed Search Results" page will take you to the PubMed entry for the article. This PubMed entry may contain links to full text from other sources.

4. PDF locator

Some search engines on the internet are designed to find free PDF documents. In PEDro we have created a link that uses PDFSearchEngine.net to search for PDF copies of the article. Clicking on the "PDF locator" link on the PEDro "Detailed Search Results" page will take you to the search results generated by PDFSearchEngine. These results are ranked for relevance using a built-in algorithm. You will need to scan down the list of search results to see if a link to full text is available for your article of interest. We suggest that you look at the first two pages of search results.

5. Publisher

The last option for accessing full text is via the website of the journal using the "publisher" hyperlink on the PEDro "Detailed Search Results" page. Accessing full text will require additional navigation through the journal website in order to locate the issue that your target article is published in. Not all journals will allow you to access full text free of charge. In this case you may be asked to login or to pay to access the article.

J. Training in evidence-based practice may reduce barriers to implementation

Competency in evidence-based practice can be enhanced with training, especially when training is multifaceted, clinically integrated, and includes an assessment component. However, training programs incompletely address the five steps of evidence-based practice (ask, acquire, appraise, apply, assess), with a disproportionate focus on appraising the evidence. To address the incomplete coverage of the five steps in evidence-based practice in training programs, a [set of core competencies has been established](#).

Traditional classroom teaching, where participants listen to lectures in face-to-face sessions and complete homework after the class, is the most common educational style used in evidence-based practice training programs. A flipped classroom approach, where participants watch pre-recorded lectures before attending face-to-face sessions that focus on practical tasks, may be superior to traditional teaching methods for health professional education.

A recent single-group, pre-post study aimed to quantify knowledge, skills and barriers for evidence-based practice in physiotherapy clinicians. The study also evaluated the impact of a flipped classroom training program that addresses the core competencies for the teaching of evidence-based practice.

Physiotherapists from a large health district in Sydney, Australia were invited to participate. The primary outcome was the Assessing Competency in Evidence-based Medicine scale (range 0-15; 15 is high knowledge and skill) to quantify knowledge and skills. The secondary outcomes were the four subscales of the BARRIERS scale (range 1-4; 4 is high barrier) to quantify barriers. Outcomes were collected at baseline and after a 3-month evidence-based practice training program. Training involved a flipped classroom approach that addressed the core competencies for teaching evidence-based practice. The study was prospectively registered and the training program was fully reported using the TIDieR checklist.

104 physiotherapists completed baseline data and 94 completed post-training data. At baseline, they had a reasonable level of knowledge and skill in evidence-based practice, scoring an average of 9.5 out of 15 on the Assessing Competency in Evidence-based Medicine scale. The largest barriers were in the Presentation and Setting subscales of the BARRIERS scale (both had a mean score of 2.6 out of 4), with “insufficient time on the job to implement new ideas”, “physiotherapist does not have time to read research” and “physiotherapist does not feel capable of evaluating the quality of the research” being the greatest barriers.

The training program did not change knowledge and skills (mean change 0.1; 95%

confidence interval -0.2 to 0.5) but did reduce barriers by -0.1 (-0.2 to 0.0; Setting subscale) to -0.2 (-0.3 to -0.1; Healthcare Provider subscale). An exploratory analysis suggested that this reduction in barriers was particularly evident in the subgroup of participants who had previously received university-based training in evidence-based practice.

Physiotherapists have knowledge and skill in evidence-based practice that is comparable to other allied health professionals, medical students and medical doctors, but experience barriers to applying these skills into practice. A comprehensive training program that used the flipped classroom approach did not change knowledge and skills, but did reduce barriers. More research is needed to develop and test the outcome measures and training program in order to embed evidence-based practice into clinical practice.

[Harrison L, et al. Knowledge, skills and barriers to evidence-based practice and the impact of a flipped classroom training program for physiotherapists: an observational study. Physiother Theory Pract 2021 Oct 27:Epub ahead of print](#)

K. Next PEDro and DiTA updates (December 2021)

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

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