



## A. PEDro update (2 March 2020)

PEDro contains 46,285 records. In the 2 March 2020 update you will find:

- 36,076 reports of randomised controlled trials (35,206 of these trials have confirmed ratings of methodological quality using the PEDro scale)
- 9,538 reports of systematic reviews, and
- 671 reports of evidence-based clinical practice guidelines.

PEDro was updated on 2 March 2020. For latest guidelines, reviews and trials in physiotherapy visit [Evidence in your inbox](#).

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## B. PEDro update (2 March 2020)

DiTA contains 1,669 records. In the 2 March 2020 update you will find:

- 1,515 reports of primary studies, and
- 76 reports of systematic reviews.

DiTA was updated on 2 March 2020. For the latest primary studies and systematic reviews evaluating diagnostic tests in physiotherapy visit [Evidence in your inbox](#).

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## C. PEDro indexes 46,000+ reports



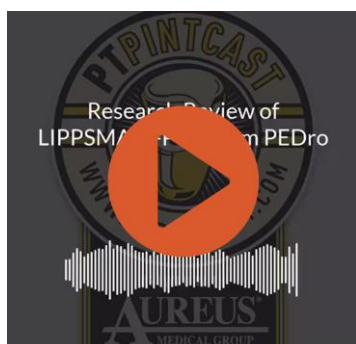
We are pleased to announce that PEDro has just achieved a new milestone for the amount of evidence. There are now 46,000+ reports of trials, reviews and guidelines indexed on [PEDro](#).

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## D. Podcasts now available for the PEDro Top 5 Trials from 2014-2019

Last year we announced the [PEDro Top 5 Trials from 2014-2019](#). The trials were nominated by PEDro users, and an independent panel of international trialists judged the nominations received.

PEDro has partnered with [PT Pintcast](#) to produce podcasts with the lead authors of the PEDro Top 5 Trials. The last of the podcasts is now available!



[Preoperative physiotherapy for the prevention of respiratory complications after upper abdominal surgery: pragmatic, double blinded, multicentre randomised controlled trial](#)

Boden I, Skinner EH, Browning L, Reeve J, Anderson L, Hill C, Robertson IK, Story D, Denehy L  
*BMJ* 2018 Jan 24;360:j5916

Many thanks to Jimmy McKay and the team from [PT Pintcast](#) for producing these podcasts.

Congratulations once again to the teams who produced the PEDro Top 5 Trials. Your contributions to physiotherapy are highly valued and appreciated.

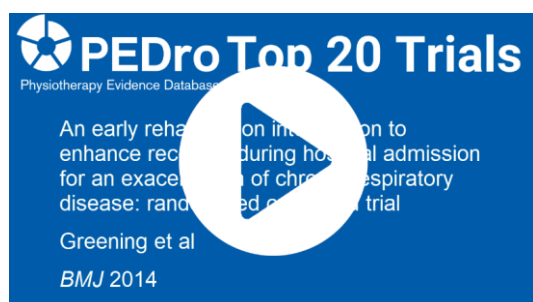
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## E. Videos for the PEDro Top 20 Trials

Back in 2014 when PEDro was celebrating its 14th anniversary we decided to identify the [15 most important physiotherapy trials](#). We added 5 more trials to this list to celebrate [PEDro's 20th anniversary in 2019](#). Collectively these trials will be called the PEDro Top 20 Trials.

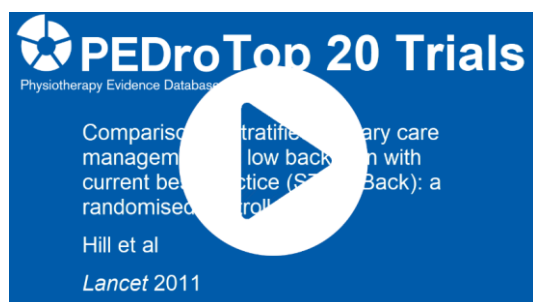
We have made short videos to summarise [17 of the trials](#).

We have produced videos for the last three of the PEDro Top 20 Trials.



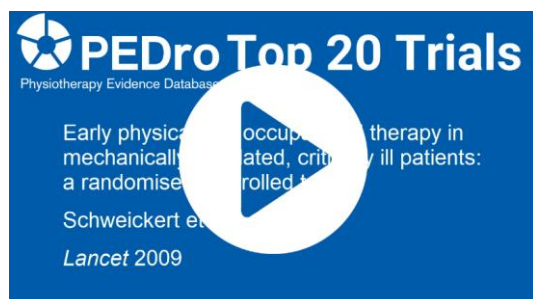
[An early rehabilitation intervention to enhance recovery during hospital admission for an exacerbation of chronic respiratory disease: randomised controlled trial](#)

Greening NJ, Williams JEA, Hussain SF, Harvey-Dunstan TC, Bankart MJ, Chaplin EJ, Vincent EE, Chimera R, Morgan MD, Singh SJ, Steiner MC  
*BMJ* 2014;349:g4315



[Comparison of stratified primary care management for low back pain with current best practice \(STarT Back\): a randomised controlled trial](#)

Hill JC, Whitehurst DG, Lewis M, Bryan S, Dunn KM, Foster NE, Konstantinou K, Main CJ, Mason E, Somerville S, Sowden G, Vohora K, Hay EM  
*Lancet* 2011;378(9802):1560-71



[Early physical and occupational therapy in mechanically ventilated, critically ill patients: a randomised controlled trial](#)

Schweickert WD, Pohlman MC, Pohlman AS, Nigos C, Pawlik AJ, Esbrook CL, Spears L, Miller M, Franczyk M, Deprizio D, Schmidt GA, Bowman A, Barr R, McCallister KE, Hall JB, Kress JP  
*Lancet* 2009;373(9678):1874-82

## F. PEDro social media highlights from 2019

We found the four social media posts that PEDro users most engaged with in 2019. In case you missed the posts, we provide a brief description and links to the original posts below.

- A summary of the PREVENT trial which found that adding intensive patient education to first-line care was no better at improving pain outcomes compared to a placebo in adults with acute low back pain. Read more on [PEDro](#).
  - A summary of a systematic review that identified 11 consistent recommendations in evidence-based clinical practice guidelines for musculoskeletal pain. Read more on [PEDro](#).
  - Discussion about the time to move from significance testing to estimation for randomised controlled trials. Read more on [PEDro](#).
  - The launch of DiTA (for Diagnostic Test Accuracy), produced by the PEDro partnership. Read more on [PEDro](#).
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## G. Journal clubs are a great way to translate research into practice

Journal clubs are a continuing professional development activity where health professionals meet to appraise and discuss research articles. These discussions aim to facilitate the translation of research evidence into clinical practice. A Cochrane review has concluded that educational meetings, like journal clubs, can improve professional practice and healthcare outcomes for patients (Forsetlund et al 2009). Increasing knowledge and skills in evidence-based practice may also occur through participation in journal club discussions (Ilic et al 2020).

The four elements of a journal club are:

1. Select and read a research article (or articles) that address an evidence-practice gap or highlight new findings. Participants may share in this selection process and should read the article prior to attending the journal club.
2. Summarise the important points of the article (paying particular attention to the methods used, the main results, and the strengths and weaknesses) at the start of the journal club.
3. Discuss the implications of the results. Participants decide whether implementation of the evidence would have a positive influence on clinical practice and explore possible barriers and facilitators.

4. Devise strategies to implement the evidence into practice. For example, plans for audit and feedback to quantify current and future practice.

A key factor for the success of a journal club is forming a group of participants with shared or complementary interests who feel a sense of ownership of the club. Involving researchers, academics or statisticians may assist with building research knowledge and skills. The group could be comprised of a single profession or be multidisciplinary. It could occur in your workplace or outside work with your like-minded peers. With developments in electronic communication (eg, video conferencing), distance is no longer a barrier. Everyone can be involved, from students to professors. When the opportunity arises, you could involve guest speakers to add expert comment.

Two journal club formats in allied health (including physiotherapy) have been evaluated in a cluster randomised controlled trial (Wenke et al 2018). A TREAT (Tailoring Research Evidence And Theory) format was compared to a standard format. While there was no difference in evidence-based practice skills, attitudes, knowledge and practice between the two formats, a qualitative evaluation (Wenke et al 2019) identified some key factors that contribute to the sustainability of journal clubs. These factors were:

- building research knowledge and skills
- organising access to research experts
- having an expectation from management that staff will attend
- developing a team culture that values evidence-based practice
- ensuring a close application to practice, and
- the participants having ownership of the journal club.

Some key elements of a journal club that are commonly recommended (including in the TREAT format) are:

1. Establishing a group of participants who have similar interests.
2. Having an overarching goal and purpose for the journal club.
3. Running the journal club regularly at the same time on a regular day, so that it becomes a fixture.
4. Circulating the article (or articles) prior to meeting, with sufficient lead time for participants to read the article(s).
5. Collaborating with researchers or academics for mentoring and support.
6. Having a facilitator to help choose the articles and guide discussion.
7. Using structured appraisal tools to evaluate the article(s).
8. Adhering to principles of adult learning and using multi-faceted learning strategies.
9. Putting evidence in the context of clinical practice and evaluating knowledge uptake informally or formally.
10. Providing enticing refreshments.

We encourage PEDro users to get involved in a journal club (or review and refine your existing journal club) to help translate evidence into practice.

Articles cited in this blog:

Forsetlund L, et al. [Continuing education meetings and workshops: effects on professional practice and health care outcomes](#). *Cochrane Database Syst Rev* 2009;Issue 2

Ilic D, et al. [The use of journal clubs to teach evidence-based medicine to health professionals: a systematic review and meta-analysis](#). *J Evid Based Med* 2020 Jan 17:Epub ahead of print

Wenke RJ, et al. [The effectiveness and feasibility of TREAT \(Tailoring Research Evidence And Theory\) journal clubs in allied health: a randomised controlled trial](#). *BMC Med Educ* 2018;18(104):Epub

Wenke R, et al. [Factors that influence the sustainability of structured allied health journal clubs: a qualitative study](#). *BMC Med Educ* 2019;19(6):Epub

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## **H. The PEDro World-Wide Journal Club will be launched in April 2020**

We are pleased to announce a new PEDro initiative for 2020. Starting in April, PEDro will be hosting a World-Wide Journal Club. The purpose of this journal club is to encourage the global physiotherapy community to read trials, reviews and guidelines that have important implications for clinical practice. We hope that facilitating discussion of this research will help physiotherapists to implement the results into their clinical practice.

The PEDro World-Wide Journal Club will include four resources:

1. A research article that addresses an important evidence-practice gap.
2. A summary of the important points of the article (paying particular attention to the methods used, the main results, and the strengths and weaknesses), usually in video format.
3. A panel discussion about the implications for clinical practice that explores possible barriers and facilitators.
4. Links to resources to support the discussion and to help in the implementation of new clinical practice.

Those interested in being involved, can use these resources as the basis for running a local journal club with their peers.

Three to four PEDro World-Wide Journal Clubs are planned for 2020. The first club will focus on constraint induced movement therapy after stroke and start in April. We invite all

physiotherapists working in neurology to be involved in this club. If you are interested in being involved in this important initiative, you can start preparing by inviting a group of your peers to be involved in your local discussion and read the EXCITE trial:

Wolf SL, Winstein CJ, Miller JP, Taub E, Uswatte G, Morris D, Giuliani C, Light KE, Nichols-Larsen D, for the EXCITE Investigators. [Effect of constraint-induced movement therapy on upper extremity function 3 to 9 months after stroke: the EXCITE randomized clinical trial](#). *JAMA* 2006;296(17):2095-104

More details will be available in the April issue of the PEDro Newsletter.

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## I. PEDro celebrates World Down Syndrome Day on 21 March 2020

21 March 2020 is [World Down Syndrome Day](#). This year's theme is ***We Decide***, a campaign encouraging all people with Down Syndrome to participate fully in decision making that affects their lives. Physiotherapists who work with children and adults with Down Syndrome can play a role in empowering and advocating for effective and meaningful participation in health-related decision making.

Physiotherapists can also make a difference to the lives of those with Down Syndrome by working with individuals and families to encourage development of motor skills, independence in activities of daily living, as well as participation in physical activity. They can help address issues such as motor incoordination, muscle weakness, impaired ventilation, and reduced exercise tolerance.

There is a growing body of clinical research to guide the physiotherapy management of people with Down Syndrome. PEDro currently indexes over 80 trials and systematic reviews evaluating physiotherapy treatment for people with Down Syndrome. You can explore some recent systematic reviews regarding interventions to improve balance, strength, aerobic fitness, and physical activity participation:

- Hassan NM, et al. [Effectiveness of interventions to increase physical activity in individuals with intellectual disabilities: a systematic review of randomised controlled trials](#). *J Intellect Disabil Res* 2019;63(2):168-91
- Ruiz-Gonzalez L, et al. [Physical therapy in Down Syndrome: systematic review and meta-analysis](#). *J Intellect Disabil Res* 2019;63(8):1041-67
- Maiano C, et al. [Do exercise interventions improve balance for children and adolescents with Down Syndrome? A systematic review](#). *Phys Ther* 2019;99(5):507-18

Some high-quality randomised controlled trials evaluating physiotherapy treatments for Down Syndrome that are indexed in PEDro include:


- Eid MA. [Effect of whole-body vibration training on standing balance and muscle strength in children with Down Syndrome](#). *Am J Phys Med Rehabil* 2015;94(8):633-643
- Shields N, et al. [A community-based strength training programme increases muscle strength and physical activity in young people with Down Syndrome: a randomised controlled trial](#). *Res Dev Disabil* 2013;34(12):4385-94
- Khalili MA, et al. [Aerobic exercise improves lung function in children with intellectual disability: a randomised trial](#). *J Physiother* 2009;55(3):171-5

To keep up-to-date with the latest trials, reviews and guidelines evaluating physiotherapy interventions for people with Down Syndrome subscribe to the paediatrics feed of PEDro's [Evidence in your inbox](#). Subscription is free.

## J. Infographic for systematic review that found exercise reduces the rate of falls in people 60 years and older living in the community

Last month we summarised the [Sherrington et al systematic review](#). The review concluded that exercise interventions reduce the rate of falls by 23% in community dwelling individuals aged over 60 years of age compared to control.

Some suggestions for providing the most effective programs are in this infographic.



A systematic review of 108 randomised controlled trials found that exercise reduces the rate of falls in older people living in the community

**What programs were effective?**

### Effective programs:

- Include exercises that primarily focus on balance and functional activities
- Are led by health professionals, such as a physiotherapist
- Are delivered in a group-based or individual setting
- Involve individuals aged over 60 years
- Involve individuals with any baseline risk of falling

**CITATION** Sherrington C et al. Exercise for preventing falls in older people living in the community: an abridged Cochrane systematic review. *Br J Sports Med* 2019 Dec 2;Epub ahead of print





Sherrington C et al. Exercise for preventing falls in older people living in the community: an abridged Cochrane systematic review. *Br J Sports Med* 2019 Dec 2:Epub ahead of print

Read more on [PEDro](#).

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## **K. Systematic review found that exercise improves maternal cardiorespiratory fitness and health during pregnancy**

Prenatal exercise reduces the serious complications of pregnancy (eg, gestational diabetes, preeclampsia, hypertension) without increasing the risk of having a miscarriage, preterm delivery or low birth weight baby. While pregnant women are encouraged to exercise, the impact of prenatal exercise on cardiorespiratory fitness has not been synthesised. The aim of this systematic review was to assess the effects of prenatal exercise on maternal cardiorespiratory fitness and health compared to not exercising.

Sensitive searches of eight databases were used to locate randomised controlled trials involving pregnant women (at any stage of pregnancy) undertaking an exercise program that started post-conception and lasted for at least 1 week compared to no exercise intervention. The main outcomes were cardiorespiratory fitness (maximal aerobic capacity, submaximal aerobic capacity, aerobic capacity at anaerobic threshold) and cardiorespiratory health (resting heart rate and blood pressure). Two independent reviewers selected trials and extracted the data. Trial quality was evaluated with the Cochrane risk of bias tool and the Grading of Recommendations, Assessment, Development and Evaluation (GRADE) tool was used to determine the certainty of the evidence. Meta-analyses were performed for each outcome and are reported as mean difference (95% confidence interval). Five subgroup analyses were prespecified: (1) with vs. without diabetes; (2) pre-pregnancy body mass index  $\geq 25$  kg/m<sup>2</sup> vs.  $< 25$  kg/m<sup>2</sup>; (3) previously inactive vs. previously active; (4) exercise dose and timing; and, (5) type of test for cardiorespiratory fitness.

26 trials (2,292 participants) were included in the review. Exercise was 2-7 days/week, for 15-60 minutes/session, and started 6-32 weeks into the pregnancy. Exercise modalities included walking, stationary cycling, strength training, aerobics and combined exercises.

There was high certainty evidence that exercise increased absolute maximum aerobic capacity (0.25 L/min (0.11 to 0.39), 3 trials, 77 participants) and relative submaximal aerobic capacity (0.61 mL/kg/min (0.17 to 1.04), 3 trials, 177 participants) compared to not exercising. There was low certainty evidence that exercise increased relative maximal aerobic capacity (2.77 mL/kg/min (0.32 to 5.21), 5 trials, 430 participants) but did not change aerobic capacity at the anaerobic threshold (1.22 mL/kg/min (-0.83 to 3.28), 2 trials, 116 participants). There was high certainty evidence that exercise reduced resting

heart rate (-1.7 bpm (-3.2 to -0.2), 9 trials, 637 participants) and low quality evidence that exercise decreased resting systolic blood pressure (-2.1 mmHg (-3.7 to -0.5), 16 trials, 1,672 participants) and resting diastolic blood pressure (-1.8 mmHg (-2.9 to -0.6), 15 trials, 1,624 participants) compared to not exercising.

The subgroup analyses indicated that trials with an exercise duration of <20 weeks had greater reductions in resting diastolic blood pressure than those lasting >20 weeks (-2.9 vs. -0.9 mmHg) and trials that initiated exercise <16 weeks gestational age had smaller reductions in resting diastolic blood pressure than those starting at 16-20 weeks or >20 weeks (-0.9 vs. -2.8 vs. -3.9 mmHg). The other subgroup analyses were inconclusive due to the low number of studies analysed in each category.

Exercise interventions initiated after conception improve maternal cardiorespiratory fitness and health.

Cai C, et al. Prenatal exercise and cardiorespiratory health and fitness: a meta-analysis. *Med Sci Sports Exerc* 2020 Jan 17: Epub ahead of print

Read more on [PEDro](#).

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## **L. Support for PEDro comes from industry, physiotherapy organisations and individuals**

Support for PEDro comes from industry partners around the globe. The [Australian Physiotherapy Association](#) is our Foundation Partner. The [Motor Accident Insurance Commission](#), [Transport Accident Commission](#), [Chartered Society of Physiotherapy](#), and [Cerebral Palsy Alliance](#) are Partners. Our [Association Partners](#) for 2019 were World Confederation for Physical Therapy Member Organisations from 38 countries.

We also thank the individual physiotherapists who have made a donation to PEDro during 2019.

But PEDro is facing significant financial challenges. We need more partners to help us continue the work we do and keep PEDro free and accessible around the world. From private practices to hospitals, government departments and universities, we can tailor a sponsorship package to suit any organisation. If your organisation would like to invest in the future of physiotherapy, please [contact us](#).

Another way we can pay for PEDro and keep it free is through [donations from users](#). You can choose an amount that suits your budget. We truly appreciate your help.

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## M. Next PEDro and DiTA updates (April 2020)

The next PEDro and DiTA updates are on Monday 6 April 2020.

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