

A. Follow PEDro on Instagram

This month PEDro has joined Instagram. The <u>PEDro Instagram</u> will share tips and resources to help you improve your evidence-based practice. Look out for systematic review summaries, tutorials to help improve your evidence-searching skills, and tips to reduce barriers to evidence-based physiotherapy.

We will be sharing Instagram content in English and Portuguese languages.

You can follow <u>@pedro_database</u> for English language content and <u>@pedrinho_database</u> for Portuguese language content.

PEDro will continue to share content on our other platforms:

- monthly newsletter
- blog
- Facebook
- <u>Twitter</u>

B. PEDro update (3 April 2023)

PEDro contains 58,324 records. In the 3 April 2023 update you will find:

- 44,464 Reports of randomised controlled trials (43,482 of these trials have confirmed ratings of methodological quality using the PEDro scale)
- 13,121 reports of systematic reviews, and

739 reports of evidence-based clinical practice guidelines.

For latest guidelines, reviews and trials in physiotherapy visit **Evidence in your inbox**.

C. DiTA update (3 April 2023)

<u>DITA</u> contains 2,406 records. In the 03 04 2023 update you will find:

- · 2,148 reports of primary studies, and
- 258 reports of systematic reviews.

For the latest primary studies and systematic reviews evaluating diagnostic tests in physiotherapy visit *Evidence in your inbox*.

D. Happy WHO World Health Day 2023

The 7th of April is the 75th anniversary of the World Health Organization and this year's theme is 'Health for all'.

Inform your clinical practice with up-to-date evidence. <u>Sign up</u> to receive evidence delivered straight to your inbox.

E. #PEDroTacklesBarriers to evidence-based physiotherapy: success stories (part 2 – physiotherapy team perspective)

The #PEDroTacklesBarriers to evidence-based physiotherapy campaign shared tips on tackling the four biggest barriers to evidence-based physiotherapy – lack of time, language, lack of access, and lack of statistical skills.

The '#PEDroTacklesBarriers to evidence-based physiotherapy' campaign is concluding with success stories showcasing how physiotherapists have overcome different barriers to ensure patients receive evidence-based care.

Last month we covered success stories from an <u>individual clinician perspective in the fields of stroke</u> <u>rehabilitation and oncology</u>. Our final month features how a physiotherapy team implemented evidence-based physiotherapy in their service.

<u>Nicole Stockhill</u> (physiotherapist at Toowoomba Hospital, Australia) presents the changes made to a balance class to bring it in line with evidence-based practice.



The context: Physiotherapists working in the geriatric and adult rehabilitation and stroke services team at Toowoomba Hospital, Australia read the best available evidence for falls prevention.

The evidence: High-quality evidence from a systematic review found that high-challenge balance exercises performed 3 or more hours per week reduces the risk of falls by 39%. High-challenge balance exercises are those where upper limb support is removed, the base of support is reduced and the centre of gravity moves.

The problem: The physiotherapists decided to evaluate their balance class to see if it aligned with this evidence. They found patients performed 2 hours of exercise a week compared to the recommended 3 or more hours and that only 31% of the exercise repetitions involved high-challenge balance exercises.

The barriers to implementation: The class needed an overhaul but there were some barriers to implementing the evidence. These included time to plan the new class and educate staff on the class structure and evidence, additional resources such as minor equipment additions and new home exercise programs which included high-challenge exercises, and time management to ensure physiotherapists could get patients through all the new exercises within an hour session.

The solution: The physiotherapy team tackled many of the barriers by restructuring the class to a circuit class format. Exercise stations with poster instructions allowed exercises to be tailored to individual abilities while maintaining the motivation for exercise gained through a group setting. Patients received goal-oriented instructions and feedback on their performance which improved their motivation to exercise. The result was a high challenge, high volume program which had little-to-no impact on staff requirements, resources and costs.

The outcomes: The average number of repetitions increased from 101 to 894 per class, and the percentage of repetitions involving high-challenge exercise increased from 31% to 100%. This resulted in improved balanced outcomes as assessed by the physiotherapists over time.

<u>Maddie Jaeger</u> (physiotherapist at Toowoomba Hospital, Australia). Maddie shares her experience working in a physiotherapy team that implemented evidence-based care into their balance class service.

Maddie describes the features of the class, how participants coped with the challenges and intensity of the class, the changes in participants' measured outcomes, and their achievement of goals.



The '#PEDroTacklesBarriers to evidence-based physiotherapy' campaign has now concluded. We hope you have enjoyed the strategies and tips shared to help you overcome barriers to evidence-based physiotherapy.

#PEDroTacklesBarriers to evidence-based physiotherapy campaign was supported by <u>World</u>

<u>Physiotherapy</u>, <u>Australian Physiotherapy Association</u>, <u>Società Italiana di Fisioterapia</u>, <u>Société Française</u>

<u>de Physiothérapie</u>, and <u>Koninklijk Nederlands Genootschap voor Fysiotherapie</u>.

PEDro acknowledges Joshua Zadro for coordinating this campaign. We would also like to acknowledge all campaign contributors, translation work from Mariana Nascimento Leite, Junior Vitorino Fandim (Portuguese), Leonardo Pellicciari, Francesco Ferrarello, Michele Marelli, Matteo Paci, Paolo Pillastrini (Italian), Magda Costa Castany, Gael Le Perf, Guillaume Galliou, Matthieu Guémann, Elodie Louvion (French), the PEDro Education and training committee and PEDro production support from Geraldine Wallbank, Courtney West and Anne Moseley.

F. Infographic: systematic review found that exercise training for people with

fibromyalgia may reduce pain and depression and improve health-related quality of life

Last month we summarised the <u>systematic review by Couto et al</u>. The review concluded that exercise training for people with fibromyalgia may reduce pain and depression and improve health-related quality of life, compared to usual care. The certainty of evidence was rated as very low.

Some findings are included in this infographic.

EFFECT OF DIFFERENT TYPES OF EXERCISE IN ADULT SUBJECTS WITH FIBROMYALGIA

Couto N, Monteiro D, Cid L, Bento T Sci Rep. 2022 Jun 20;12(1):10391

WHAT DID THEY DO?

Study design: Systematic review of 18 randomised controlled trials.

Population: Adults with fibromyalgia. Review included 1,184 participants.

Intervention: Land based exercise (aerobic, resistance or stretching).

Comparator: Usual care.

Outcome: Pain, depression, health-related quality of life (HRQoL).



FINDINGS

- All three types of exercise showed significant reductions in pain compared to usual care (SMD=-1.34, 95% CI -1.69 to -0.99, I2=85%).
- Exercise showed significant reductions in depression compared to usual care (SMD=-0.78, 95% CI -1.28 to -0.28, I2=85%).
- Exercise showed significant lower impact of fibromyalgia on HRQoL compared to usual care (SMD=-0.95, 95% CI -1.34 to -0.56, I2=82%).
- Improvements in mental (SMD=0.54 (95% CI 0.23 to 0.84), I2=55%) and physical (SMD=0.80 (95% CI 0.46 to 1.14), I2=62%) components of HRQoL.

Evidence certainty was very low for each outcome.

Note: Adverse events were not reported.

Exercise training for people with fibromyalgia may reduce pain and depression and improve HRQoL, however the certainty of available evidence was very low. Further higher-quality evidence is required.





Couto N, Monteiro D, Cid L, Bento T. Effect of different types of exercise in adult subjects with fibromyalgia: a systematic review and meta-analysis of randomised clinical trials. *Sci Rep.* 2022 Jun 20;12(1):10391. doi: 10.1038/s41598-022-14213-x.

Read more on PEDro.

G. PEDro satellite centres contribute to developing the PEDro and DiTA databases. Meet PEDro Canada (Université de Sherbrooke).

Earlier this year the PEDro Steering committee announced the global expansion of the PEDro and DiTA databases and launched the PEDro satellite centres. The four satellite centres that are currently contributing to the maintenance of the PEDro and DITA databases are PEDro Canada (Université de Sherbrooke), PEDro Norway, PEDro Brazil, PEDro Singapore. The PEDro Steering Committee is grateful for these satellite centres and all volunteers involved.

This month PEDro introduces PEDro Canada (Université de Sherbrooke) and the key people working in the satellite centre.

Who are the key people in your PEDro satellite, and what organisation/s are represented by your satellite?

Professor Yannick Tousignant-Laflamme, Assistant Professor Simon Décary, Mr Christian Longtin at University of Sherbrooke, Quebec, Canada



What is the role of PEDro Canada (Université de Sherbrooke) within PEDro?

PEDro Canada aims to continuously update (living systematic review) of the Diagnostic Test Accuracy database (DiTA). Through a monthly update of the scientific literature, DiTA indexes primary studies and systematic reviews of diagnostic test accuracy studies related to physiotherapy practice.

How did your satellite form?

The PEDro Canada satellite centre was formed after members from PEDro approached us to see if we would be interesting in contributing to the DiTA initiative based our expertise in conducting living systematic reviews. After some discussions, we quickly realized that we shared a common vision for DiTA, and that we were able to contribute significantly to the sustainability and improvement of this project.

What are the benefits of being a satellite for PEDro?

Being a satellite member for PEDro means that we can benefit from the great visibility of PEDro and their dissemination platform which is comprises of active social medias accounts that have reach to a large international audience. Furthermore, as a satellite member of PEDro, we can benefit from their expertise in knowledge mobilization based on their vast experience. This will prove useful in developing new initiatives.

What are potential areas of development for PEDro Canada (Université de Sherbrooke)?

In addition to maintaining the continuous update of DiTA, we also plan to expand this review process to include studies pertaining to prognostic models and create a repertoire of clinically useful prognostic tools and/or models (PiTA: Prognostic Tool dAtabase). We would conduct a living systematic review pertaining to the identification and appraisal of validated prognostic models that aim to predict health outcomes that are relevant to the rehabilitation of painful neuromusculoskeletal disorders. PiTA would be a knowledge mobilization hub to share the evidence with future users (clinicians/researchers/patients) and would potentially support the implementation of prognostic-related tools by clinicians across Canada and internationally.



PEDro Partnership introduces... PEDro Canada (Université de Sherbrooke) Development and operations of the

Diagnostic Testing Accuracy database, DiTA. www.dita.org.au

H. Systematic review found beneficial effects for most types of physical exercise on the severity of motor signs and quality of life for people with Parkinson's Disease

This Cochrane systematic review aimed to estimate the effects of different types of physical exercise compared to another type of exercise, control group or both on the severity of motor signs, quality of life and occurrence of adverse events in people with Parkinson's Disease (PD).

This Cochrane systematic review included randomised controlled trials that assessed physical exercise

interventions for people with PD. Eligible trials were identified from eight electronic databases. Trials were included if they compared one type of physical exercise to another type of exercise, a control, or both. Critical outcomes were; severity of motor signs, reported using the motor scale from the Unified Parkinson Disease Rating Scale (UPDRS-M); quality of life, reported using the Parkinson's Disease Questionnaire 39 (PDQ-39); and occurrence of adverse events, which was measured by the number of participants with any adverse advent. Two reviewers independently identified and selected studies, extracted data, and assessed risk of bias using the Cochrane Risk of Bias 2.0 tool. Confidence in the evidence was evaluated using the CINeMA approach.

The review included 156 randomised controlled trials (7,939 participants) from over 20 countries. Participants had mostly mild to moderate disease, no major cognitive impairment and a mean/median age range between 60 to 74 years. For the outcome severity of motor signs (71 studies; 3196 participants), there is high confidence that dance has a moderate beneficial effect (mean difference (MD) -10.32, 95% confidence interval (CI) -15.54 to -4.96) and low confidence that aqua-based, gait/balance/functional, and multi-domain training might have a moderate beneficial effect (aqua-based: MD -7.77, 95% CI -13.27 to -2.28; gait/balance/functional: MD -7.37, 95% CI -11.39 to -3.35; multi-domain: MD -6.97, 95% CI -10.32 to -3.62). There is low confidence that flexibility training might have a trivial or no effect (MD: 2.01, 95% CI -4.82 to 8.98), and very low confidence and high uncertainty about the effects of strength/resistance training (MD: -6.97, 95% CI -11.93 to -2.01).

For the outcome quality of life (55 studies; 3283 participants), there is moderate confidence that aquabased training probably has a large beneficial effect (MD -14.98, 95% CI -23.26 to -6.52), low confidence that endurance training might have a moderate beneficial effect (MD -9.16, 95% CI -15.68 to -2.82), and that gait/balance/functional and multi-domain training might have a small beneficial effect (gait/balance/functional: MD -5.64, 95% CI -10.04 to -1.23; multi-domain: MD -5.29, 95% CI -9.34 to -1.06). There is very low confidence and high uncertainty about the effects of strength/resistance training and flexibility training (strength/resistance MD: -6.34; 95% CI -12.33 to -0.35; flexibility MD: 1.23, 95% CI -11.45 to 13.92).

There is very uncertain evidence about the effect of physical exercise on increasing the occurrence of adverse events.

Most physical exercise interventions provide beneficial effects on the severity of motor signs and quality of life for people with PD managing mild to moderate disease, with little evidence of differences between interventions. Although evidence for the effect of exercise on the occurrence of adverse events is very uncertain, the interventions included in the review were considered to be relatively safe.

Ernst M, Folkerts A-K, Gollan R, Lieker E, Caro-Valenzuela J, Adams A, Cryns N, Monsef I, Dresen A, Roheger M, Eggers C, Skoetz N, Kalbe E. Physical exercise for people with Parkinson's disease: a systematic review and network meta-analysis. *Cochrane Database of Systematic Reviews* 2023, Issue 1. Art. No.: CD013856. DOI: 10.1002/14651858.CD013856.pub2.

Read more on PEDro.

I. Next PEDro and DiTA updates (May 2023)

The next PEDro and DiTA updates are on 1 May 2023.

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