

Knee Osteoarthritis Myths and Best Practice in Physiotherapy



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Potential Conflicts Of Interest

Anthony Teoli is the President & Founder of InfoPhysiotherapy, an educational website that provides free and paid online lectures and courses for physiotherapists worldwide.

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Knee Osteoarthritis Myths

Fact or Fiction?



FACT OR FICTION?

“Knee OA is just wear and tear”



FACT OR FICTION?

“Knee osteoarthritis is a disease of the elderly”



FACT OR FICTION?

“Knee osteoarthritis can be prevented”



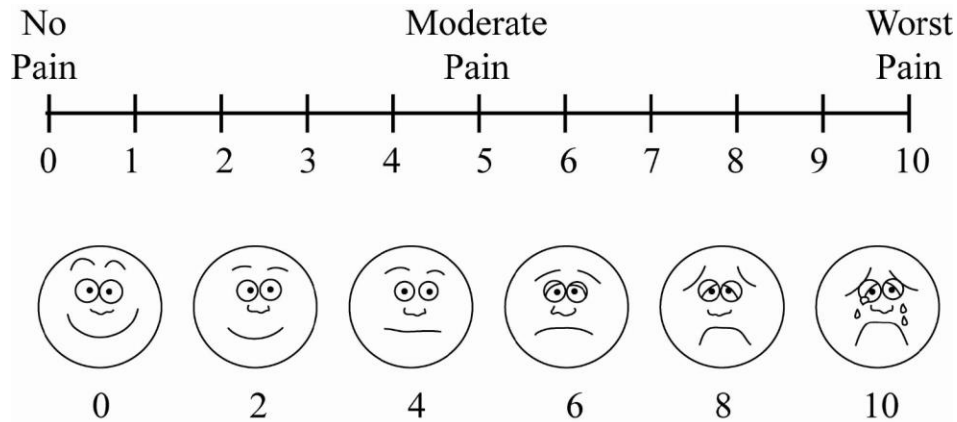
FACT OR FICTION?

“The clinical diagnosis of knee osteoarthritis can be made without a radiograph”



FACT OR FICTION?

“Individuals with osteoarthritis report higher levels of pain”



FACT OR FICTION?

“Loading is bad for the knee”



FACT OR FICTION?

“Running Causes Knee OA”

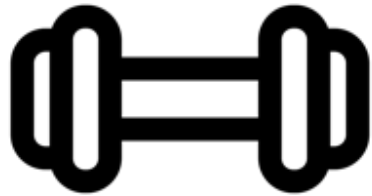


Knee Osteoarthritis Myths

Fact or Fiction?

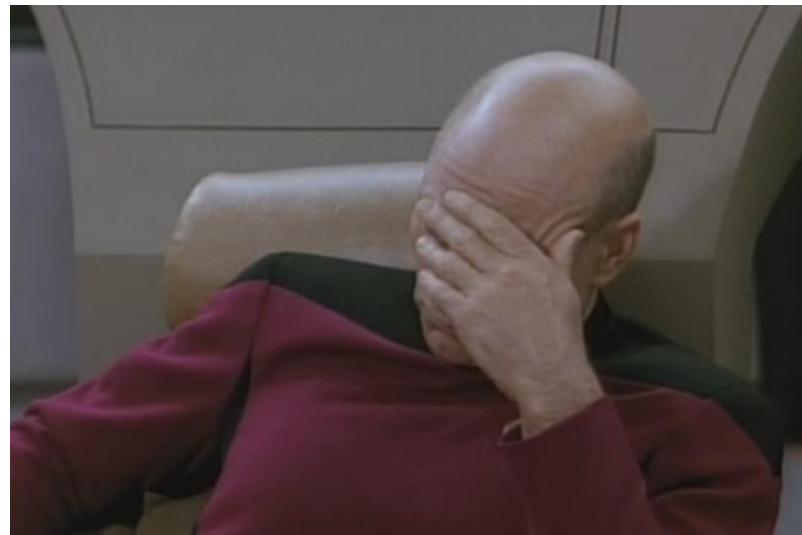


Knee Osteoarthritis Best Practice in Physiotherapy



Evidence-Based Practice in the Management of Painful Knee OA Is SUB-OPTIMAL!

A recent systematic review demonstrated that **only 36% of patients with OA** received appropriate non-pharmacological care according to the guidelines.



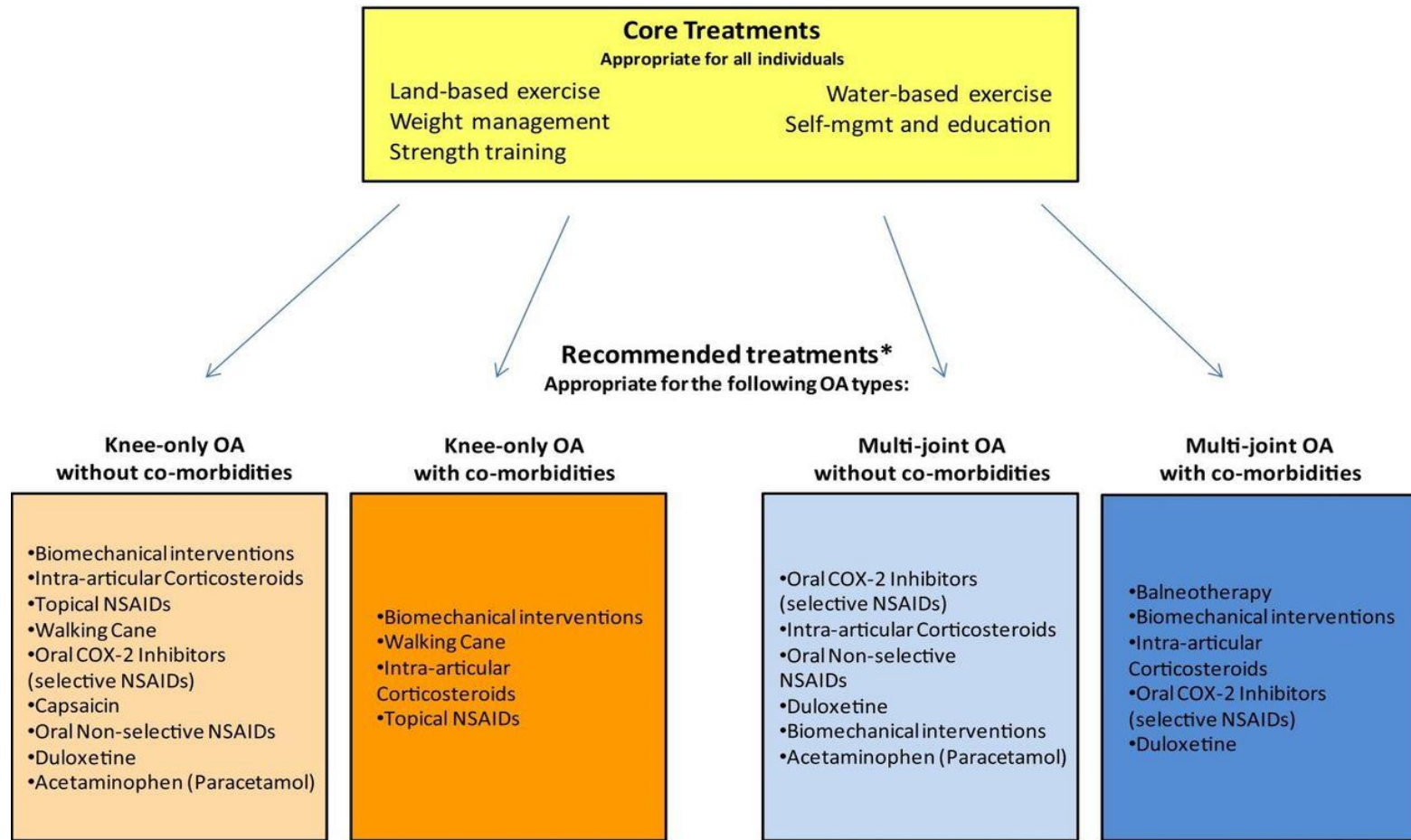


Figure 1 - McAlindon et al., 2014

Evidence for Exercise in Knee OA

“As of **2002**, sufficient evidence had accumulated to show **significant benefit of exercise over no exercise in patients with osteoarthritis**, and **further trials are unlikely to overturn this result**.”

An approach combining exercises to increase strength, flexibility, and aerobic capacity is likely to be **most effective** in the management of lower limb osteoarthritis.”

Exercise is the **ONLY** intervention for patients with painful knee OA whose efficacy is supported by:

- More than 50 randomized, controlled trials (Fransen et al., 2015)

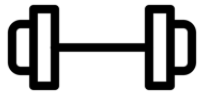
AND

- Strongly recommended by several best-practice guidelines
 - ACR - Hochberg et al., 2012
 - EULAR - Fernandes et al., 2013
 - OARSI - McAlindon et al., 2014
 - National Institute for Health & Care Excellence (NICE), 2014
 - Ottawa Panel Clinical Practice Guidelines - Brosseau et al., 2017

GUYS...I THINK WE'RE ONTO

SOMETHING HERE

What Type of Exercise or Physical Activity is Best?



What Exercise or Physical Activity Is Recommended in the Management of Knee OA?

Tai Chi

SR - Lauche et al., 2013
SR - Kong et al., 2016
CPG - Brosseau et al., 2017



Yoga

SR - Kan et al., 2016
CPG - Brosseau et al., 2017



Cycling

RCT - Salacinski et al., 2016
RCT - Lund et al., 2017
CPG - Brosseau et al., 2017



Walking

CPG - Loew et al., 2012
CPG - Fernandes et al., 2013
CPG - Brosseau et al., 2017



Aquatic Exercise

SR - Bartels et al., 2016
CPG - Fernandes et al., 2013
CPG - McAlindon et al., 2014



Strength Training

SR - Jansen et al., 2011
SR - Fransen et al., 2015
CPG - McAlindon et al., 2014



Neuromuscular Training

Ageberg et al., 2013
RCT - Bennel et al., 2014
RCT - Villadsen et al., 2014
Skou et al., 2017



REMEMBER

**The best exercises are those
that get done!**



Is exercise appropriate for all individuals with knee OA?



YES!

Exercise is appropriate for all individuals with knee OA. It is also feasible and effective in patients at all severity levels of OA, even in those with moderate to severe OA eligible for total knee and total hip replacement.

Will all individuals with knee OA respond to or get better with exercise?



NO!

Although exercise is strongly recommended as part of the first-line treatment for patients with knee OA, not every patient will respond or get better with exercise. Other interventions may need to be considered to best manage the patient's pain and help improve physical function and quality of life.

The authors identified four different trajectories in a cohort of 171 participants with symptomatic knee OA

**Lower Pain Level-Early
Improvement (43%)**

- ❑ Lower initial WOMAC pain scores
- ❑ Decline in pain that plateaued after 5 weeks

**Higher Pain Level-Delayed
Improvement (15%)**

- ❑ Higher initial WOMAC pain scores
- ❑ Small improvement through 4-5 weeks
- ❑ Large improvement after 5-11 weeks of intervention

**Moderate Pain Level-Early
Improvement (32%)**

- ❑ Moderate initial WOMAC pain scores
- ❑ Decline in pain over 5 weeks

Higher-No Improvement (10%)

- ❑ Higher initial WOMAC pain scores
- ❑ No improvement throughout intervention

Clinical Relevance?

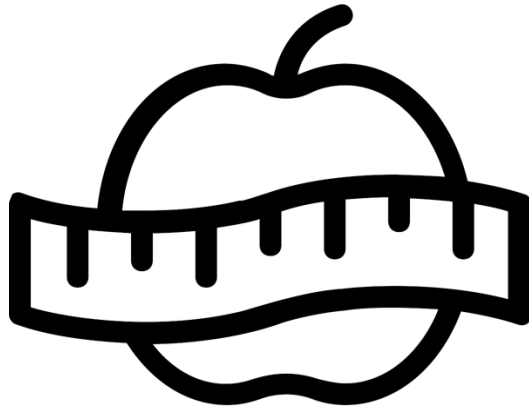
- ❑ Large amount of **heterogeneity** with regards to trajectories of pain and function in response to 12 weeks of exercise interventions among adults with symptomatic knee OA.
- ❑ Simply put, **no two patients will respond the same way to any one intervention, including exercise.**

Clinical Relevance?

- ❑ 10% of patients did not improve with exercise.
Need to find out **WHY**. Was it due to:
 - Exercise adherence?
 - Psychosocial factors?
 - Perceptions & beliefs?

- ❑ 15% of patients had delayed improvement
 - Important for **managing patient expectations**
 - **It is a process** that can take time before an improvement is seen. Does not occur overnight.

Weight Management & Knee OA



Why Weight Loss?

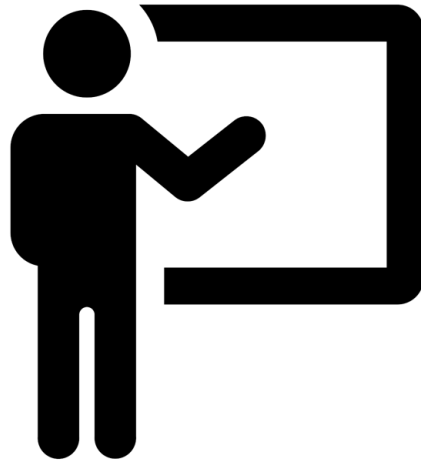
- ❑ Being overweight or obese is a modifiable risk factor for knee OA initiation and progression.
- ❑ Those who are obese tend to have total knee arthroplasty at an earlier age, with worse post-operative outcomes (Xu et al., 2018)

Why Weight Loss?

Weight loss has the potential to:

- ❑ Reduce the risk (Felson et al., 2004) and progression of knee OA (Gersing et al., 2017)
- ❑ Reduce peak knee load (Aaboe et al., 2011)
- ❑ Improve pain and function (Messier et al., 2004, Messier et al., 2013; Christensen et al., 2007)
- ❑ Reduce inflammatory mediators (Messier et al., 2013)

Patient education is crucial in the management of knee OA!



Patient Education

- ❑ What is knee OA?
- ❑ Identify and address perceptions of disease and beliefs
- ❑ Discuss importance of exercise, diet and weight management
- ❑ Explain quantification of mechanical stress and proper dosing of physical activity/exercise
- ❑ Reassure, reassure, reassure!
- ❑ Discuss/manage expectations, goals, etc.
- ❑ Discuss treatment plan

We need to be mindful of the words we use when explaining osteoarthritis to our patients!



Words Matter!

**“Degenerative or
chronic disease”**



Perceived to have no
treatment or
prevention.



Words Matter!

**“It’s a normal part of aging.
It’s just wear and tear”**



Dismissive in nature. Tend to
link getting older with
inevitably poor prognosis.



Words Matter!

“Bone on bone”



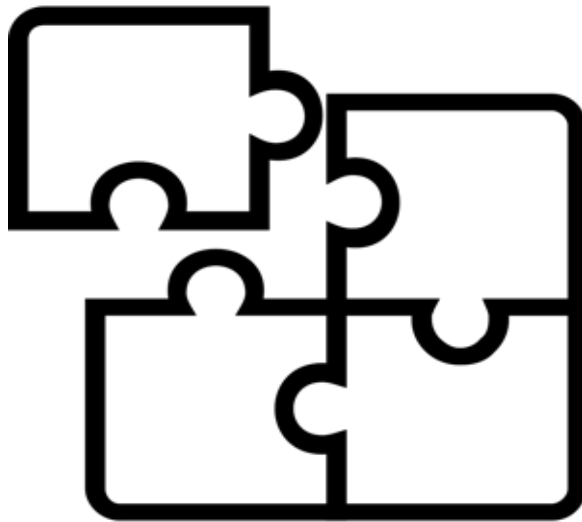
Provides an inaccurate depiction of what is occurring at the knee joint with movement. Highly nocebic, may ↑ fear avoidance.



Words Matter!

- ❑ Illness perceptions are associated with, and predict future disability
- ❑ Patients' cognitive representations of their illness determine their emotional responses and guide coping strategies
- ❑ Crucial to help the patient improve understanding of the disease, benefits of exercise, importance of exercise adherence, etc.

Putting It All Together



Take-Home Messages

- ❑ Knee OA is a complex, multifactorial disease.
- ❑ Knee OA is a disease of the whole person. it is not just “wear and tear”, nor is it just a simple consequence of aging.
- ❑ Not all patients with radiographic knee OA will experience knee pain, and many of them will not progress to require surgery.

Take-Home Messages

- ❑ Obesity and previous joint injury are important risk factors for knee OA initiation and progression.
- ❑ Educating patients about the importance of addressing modifiable risk factors is crucial for disease prevention.

Take-Home Messages

- ❑ Addressing knee OA perceptions and beliefs, fear-avoidance behaviours, and patient expectations is key to optimizing rehabilitation.
- ❑ **Words matter!** Be mindful of the words you choose to use when educating your patients about their knee OA.

Take-Home Messages

- ❑ Exercise, weight management, self-management and patient education are **first line treatment** for patients with knee OA.
- ❑ Exercise is appropriate for individuals at all severity levels of OA.
- ❑ Manual therapy, medications and/or injections are considered second-line treatment and are adjuncts to the core treatments above.



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Questions?



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