



It is time to change the view about knee osteoarthritis

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Knee osteoarthritis (OA) can result in significant pain and functional limitation. The cause of these impairments is often attributed specifically to structural damage at the joint. In particular, a person with knee OA might undergo diagnostic imaging (e.g. x-rays and scans) and subsequently be informed that the cartilage is 'worn and torn', and there is 'bone on bone' contact. This diagnosis can lead people to believe that little can be done to manage the problem unless the damage is "fixed."

Furthermore, treatments with limited benefit and potential risks are often offered as a primary intervention to manage pain, such as opioid medications, cortisone injections, and arthroscopic surgery. However, this approach to managing knee OA is in contrast to best-practice guidelines, which recommend interventions such as education, graduated strengthening exercise and weight loss as first-line treatment.

There is an enormous amount of research that supports education, exercise and weight loss as an effective strategy for reducing pain and improving function, as well as reducing the need for medication and surgery. However, common misconceptions about knee OA such as "Exercise is harmful" and "A mechanical problem requires a mechanical fix," can become a barrier for patients to accept these guideline-recommended treatment options.

People's beliefs about their joints can have a significant impact on how they use their body. There is generally a weak relationship between the severity of OA changes on an x-ray or MRI scan (e.g. degeneration, meniscal tears) and symptoms (pain, stiffness and activity limitation). However, there is a common belief that the symptoms of OA are solely due to joint damage caused by 'wear and tear'. This belief can result in concerns that weight-bearing activities such as walking, squatting, and climbing stairs will increase joint damage.



Consequently, this can have a substantial impact on participation levels on physical, social and work activities, as well as emotional wellbeing. As such, a person living with OA knee might disregard exercise-based interventions in the false belief that it is pointless and would further damage their joints, and that a knee replacement is inevitable.

Contrary to popular belief, the latest research tells us that knee OA is a 'whole person condition', in which several interacting factors can influence a person's pain experience, including:

- *Biological* - inflammation, thigh muscle weakness and findings on the scan;
- *Beliefs and emotions* - low confidence, unhelpful beliefs, stress, depressed mood;
- *Social context* - work, isolation; and
- *Lifestyle* - poor sleep, low or excessive levels of physical activity, poor diet.

These factors can cause changes to the body's nervous system and chemistry, making the knee joint very sensitive, swollen, stiff and sore.

It is often unhelpful to overprotect the joint by reducing the use of the sore knee as this can create unnecessary tension and joint sensitivity, leading to more pain. For example, a person with knee OA who keeps fit, active, strong, confident, socially engaged and has a healthy body weight, may have very little pain or activity limitation.

In contrast, another person with the same degree of knee OA changes on an X-ray who is sedentary, overweight, lacking confidence, physically deconditioned, socially isolated and with depressed mood, may present with high levels of pain and activity limitation. The differentiating factors between these two cases are not the degree of joint damage on a scan; it is other factors that influence the health of the person and their knee joint. The good news is that many of these factors can be modified with the right care and support.

In a recent editorial published in the British Journal of Sports Medicine, international leaders in the musculoskeletal field called for a change in the understanding and treating of knee OA.

They called for the management of OA to be centred around the person, their health and their goals.

Treatments to improve joint health should target modifiable factors that influence a person's pain experience. These factors include a person's understanding of their condition, muscle strength, confidence to move and load the knee, levels of physical activity, sleep, mood and stress levels, as well as weight management.

Patients should be educated about knee health (see Figure 1) and reassured that while exercise may initially result in an increase in pain, it is not usually harmful or dangerous.

They should also be encouraged to: undertake graduated exercise, participate in regular physical activity, and aim for a healthy body weight. Targeting these factors can improve function and reduce pain, and reduce the need for medication, injections and surgery. This can help patients build a positive mindset towards their condition, adopt a healthier lifestyle and develop confidence in actively managing pain.

This approach to the management of OA knee can be facilitated either in an individualised manner with a physiotherapist or in a group environment. Group rehabilitation programs such as GLA:D™ (Good Life with Arthritis: Denmark) developed by researchers in Denmark showed a reduction in pain by 35%, a decrease in the need for medication; and continued improvement in function and physical-activity level one year after commencing the program.

GLA:D™ is a physiotherapy treatment consisting of two group education sessions, and 12 group exercise-therapy sessions for people with OA. This program is available across many cities in Australia at www.gladaustralia.com.au, including Perth. The Arthritis Foundation (AOWA) also offer a range of affordable exercise classes based on land and in warm water (see page 24 for further details).

If guideline-recommendations for person-centred management are widely adopted, elective knee replacement for treatment of OA knee can be preserved for patients with advanced OA, who have tried and not responded to a sufficient dose of high quality nonsurgical care. Furthermore, participating in guideline-recommended treatment options yields an opportunity to gain greater benefit from knee replacement, for example by being stronger, fitter and healthier.

To support this shift in view about knee OA, changes need to occur at the:

- Public level (i.e. mass media campaigns);
- Health system level (eg. funding, and better reimbursement for exercise, education and weight loss programs); and
- Clinician level (eg. provision of guideline-recommended care).

Ultimately, the consumer (person living with OA knee) is the most important person in the health care journey and should be at the centre of care.

As a consumer, you can play an active role in managing your knee OA by having a better understanding of your condition and the options to manage it.

That way, you will be able to make a well-informed decision with your healthcare professional about the best treatment for you.

The following infographic is a good place to start.

WHAT SHOULD YOU KNOW ABOUT JOINT HEALTH?

MYTHS

- ✗ Degree of arthritis on a scan predicts your pain and disability levels
- ✗ Rest is helpful
- ✗ Only surgery will fix it
- ✗ Exercise is dangerous
- ✗ Pain = damage

FACTS

- ✓ Scans are poorly related to pain and disability
- ✓ Rest and avoidance makes pain worse
- ✓ Graded exercise is safe and helps
- ✓ 20% of people do not get any pain relief from joint replacement
- ✓ Pain ≠ damage



WHAT IS LOW VALUE CARE (passive treatments)

- ✗ Massage
- ✗ Needles
- ✗ Rollers
- ✗ Tens
- ✗ Ultrasound
- ✗ Laser
- ✗ Interferential
- ✗ Opioids
- ✗ Imaging
- ✗ Arthroscopy
- ✗ Injections
- ✗ Relying on common supplements
- ✗ Joint replacement for inappropriate candidates
- ✗ Low dose poorly targeted exercise

WHAT IS HIGH VALUE CARE (active treatments)

- ✓ Evidence based education
 - ✓ Exercise (movement control, fitness, weight bearing/strength)
 - ✓ Referral when indicated
 - ✓ Lifestyle change (physical activity, weight loss)
- *Joint replacement for appropriate candidates, after high value nonsurgical approaches have been trialled

