OSTEOARTHRITIS:

Separating fact from fiction

Osteoarthritis is the most prevalent long-term condition in the Western world. One in eight people worldwide have it and it's the most common reason for visiting a GP. **Kris Tynan** separates the fact from the fiction.

Osteoarthritis (OA) is commonly thought of as an old person's disease and, while it is true that 50% of those over 60 and almost all of those in their 80s have a degree of OA, it is increasingly showing up in those of working age in their 40s, 50s and 60s. This often has a massive effect on these people's ability to work and causes problems to the economy in addition to the personal burden to them and their families.

Misperceptions abound in the OA space. The goal of this article is to highlight the myths and to present the facts as we now know them given years of robust research into this area.

Commonly held beliefs about OA are as follows:

- It's a degenerative 'wear and tear' disease that will progressively get worse over time.
- Imaging (X-ray or MRI) will give an accurate picture of the extent of the damage and will reflect the amount of pain experienced.
- A knee or hip joint replacement is inevitable and will 'fix the problem'.
- Using your knee/hip (i.e., exercising when you have OA) will wear it out still further and cause tissue damage, increasing pain levels and disability.

So, let's go ahead and unpack these inaccuracies.

What is OA?

OA is a disease that affects mainly the knee and hip joints but also the spine, ankles and hands.

Our previous understanding that it was primarily a condition of the meniscus getting thinner resulting in a 'bone-on-bone' situation has been replaced. It is now well established that it is a disease of the WHOLE joint, not just one aspect of it. Damage to structures like the synovial lining, the cartilage, the ligaments, tendons and muscles, as well as the bones themselves, can all contribute to stiff, swollen and painful joints.

Risk factors

Among the risk factors that increase your chances of ending up with OA is included a hereditary element (particularly in the hands) but also being significantly overweight or, in the case of knees, sustaining an ACL injury. Research shows, in fact, that someone suffering a significant ACL injury has a 50% chance of developing OA in the five to 10 years following the injury.

While there is not a lot to be done about your genes, maintaining a normal weight is very much a modifiable risk factor that can reduce the risk of developing the disease and is a key management tool once OA has been diagnosed. The research indicates that just a 5-10% reduction in weight can result in as much as a 50% reduction in pain. That is a significantly better outcome than many pharmaceuticals provide with none of the adverse side-effects and with the added benefit in relation to other conditions like diabetes. Of course, popping a pill is a lot easier than losing weight – but that is another story!

With regard to reducing the risk of sustaining an ACL injury, particularly in sports like football, rugby, netball and basketball, sporting codes have developed simple training protocols that can be incorporated into all training sessions for these high-risk sports. The most notable of these is the FIFA 11 programme but there are others for rugby and netball. The take-home message here is to ensure anyone you know who plays any sport with an increased risk of ACL injury has a coach who adopts these conditioning drills into their sessions. You can google 'FIFA 11' for a multitude of videos on the programme.

Imaging – helpful or harmful?

The next myth to debunk is that of imaging. It has been standard practice to routinely send a patient off for an x-ray when OA is suspected. But does an MRI or X-ray tell the true story and is it, in fact, very helpful? The research says not. Imaging can be a very poor predictor of how much pain or loss of function a person experiences. You can have the most horrible looking knee on x-ray but actually only experience mild to moderate pain symptoms. Or the reverse can be true – you are really suffering but the imaging doesn't reflect this ... so is it all in your head? Do you just need to harden up? Or are you more sensitive to pain for some reason? The correct answer is of course the latter. As we discover more about pain and its management, the more we understand that, in the cases of chronic (AKA long-term or persistent) pain, there is more at play than just a pathological or injury issue. The pain gateways to our brain are stuck on open and the pain dial is turned up, much like a smoke alarm that is going off when there is no fire.[1]

Surgery is the answer

To address the belief that a joint replacement is inevitable and will 'solve the problem', an appreciation of the management pyramid is required.

THE OA MANAGEMENT PYRAMID

At the base of the pyramid is education, exercise and weight control for ALL with OA. Education topics include areas such as medication, pain management, nutrition, sleep, relaxation, wellbeing and alternative therapies.

SOME people will benefit from medications, aids and treatment by a therapist (e.g., physiotherapist, podiatrist, osteopath).

Only a **FEW** – approximately 10% – will need surgery. At the right time for the right person, joint surgery can be life changing but research tells us that one in 10 hip replacement patients are not happy with the outcome and an even higher number of knee replacement patients – one in four – had unsatisfactory outcomes after 12 months following surgery and wished they had never gone under the knife! These are not great stats and need to be known by patients so they can make an informed decision on whether or not to use an exercise and lifestyle modification pathway as an alternative to surgery.

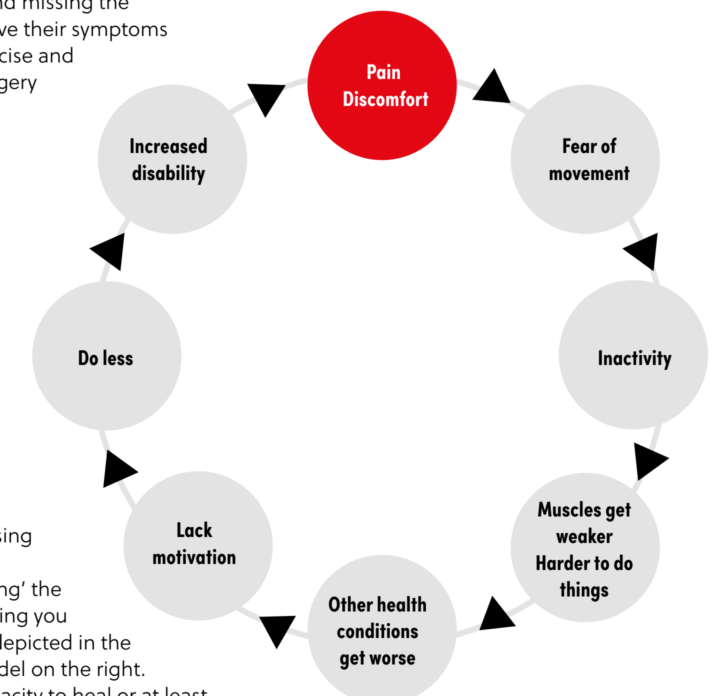
> "Research indicates a 5-10% reduction in weight can result in as much as a 50% reduction in pain"

We are conditioned to the medical model of 'something is broken or damaged so medicine should be able to fix it', rather than doing the hard yards to self-manage the issue with exercise and other interventions. This is a huge challenge to many people who spend a lot of time in the twilight zone of just waiting for surgery and missing the opportunity to improve their symptoms with meaningful exercise and possibly avoiding surgery altogether.

Does pain equal damage?

The final inaccurate belief is that pain means damage. This is certainly true when putting your hand on a hot plate – if you don't take it off quickly, you will cause considerable damage. But chronic OA pain is different. You will not cause further damage by using the joint. In fact, not moving and 'protecting' the joint is the WORST thing you can do as is so aptly depicted in the simple pain cycle model on the right.

Joints have the capacity to heal or at least improve themselves but only with a good supply of nutrients and a flow of synovial fluid, which is stimulated by the action of loading and unloading the joint. The metaphor of a sponge being squeezed is useful to visualise this. Learning how much discomfort should be tolerated when exercising painful joints is a key part of the education element that should be available to all with OA. *fp*



Recommendations for further information

- Fitness professionals in the UK who are interested in facilitating programmes for people with OA should look into https://escape-pain.org/. This site also has great resources.
- Professor David Hunter from Sydney University is one of the world's leading experts on OA and any podcast he speaks on is worth a listen. Here is one link but if you google you will find many more. https://www.youtube.com/watch?v=dQE2fIKCQUk
- Tame the Beast – time to rethink persistent pain: https://www.youtube.com/watch?v=ikUzvSph7Z4]

Other recommended sites:

- https://versusarthritis.org/ (UK site)
- https://www.myjointpain.org.au/ (Aus site)
- https://www.arthritis.org.nz/ (NZ site)
- https://oarsi.org/education/patients

KRIS TYNAN is an NZ exercise professional who specialises in exercise for older adults and people with long-term conditions. She has worked with Arthritis NZ and the Mobility Action Programme (MAP) to educate and inform both fitness professionals and members of the public, debunking myths and encouraging appropriate exercise for those with OA.

For references visit fitpro.com/references