

REDUCING THE RISK OF KNEE OA AFTER KNEE INJURY

What you need to know

What is knee OA?

Knee osteoarthritis, also called knee OA, is a condition where there are changes in the knee joint structures. These changes develop over time with knee OA a very common condition in older adults. Actually, it is so common that it is sometimes considered as part of the normal aging process.

Post-traumatic knee osteoarthritis (PTKOA) is knee OA that develops after a traumatic sudden, or gradual onset knee joint injury. People with a history of knee injury have an increased risk (50/50) of developing early onset knee OA within the following 10 to 15 years after the injury (even if managed surgically). Those with intra-articular changes, for example ACL or meniscal tears, are at higher risk.

What are the symptoms?

Knee OA usually presents with local knee pain that is provoked during activity. Sometimes the knee can become swollen and joint stiffness can be experienced after keeping the knee in one place for some time (e.g. in the morning). However, the stiffness usually subsides quite quickly after movement.

However, not all individuals with knee OA have any symptoms: 15 to 81% of people with OA changes in their knees have symptoms, which means 19 to 85% of individuals experience no symptoms at all.



How knee OA is diagnosed?

Imaging is not needed to diagnose knee OA. Health care professionals can diagnose knee OA using clinical criteria such as a presence of pain, stiffness, crepitus (i.e. popping, clicking and/or cracking sound) and the age of the individual.

How can I reduce my risk?

One can not undo an injury that has already occurred, but one can make good choices following the injury. The key things are,

1. reduce your chances of another injury;
2. stay active and;
3. maintain or aim for healthy weight.

With these actions you can manage your own risk of developing PTKOA or at the very least delay it's onset and reduce the severity and impact it has on your life. In other words, one might not be able to prevent PTKOA, but you can manage it so that it does not prevent you from doing the things that matter to you.

1. Reduce your chances of another injury

It is common to struggle completing your exercises and following all of the advice given to you following your injury. However, try to invest in your future self and stick with the guidance you have been provided. Together with your health care practitioner, make sure that you are ready to return to your sport or to the activity levels you were at prior to your knee injury to prevent the injury from reoccurring. This can reduce your risk for symptomatic PTKOA in the long run.

Strengthen your front thigh muscles (quadriceps) as well as the muscles down the back of your thigh (hamstrings). Having and maintaining strong leg muscles is one of the things you can do to reduce your risk for PTKOA related disability. Staying active helps you to maintain good muscle strength.

In athletic populations it is recommended to participate in evidence-based injury prevention programs on a regular basis. These programs often include full-body dynamic movements such as plyometrics, jumps/hops, bounding, and various running and agility movements as well as strengthening exercises.

2. Stay active in the long term

Aim to maintain adequate levels of regular physical activity in the long-term. Even as situations in life change, one thing should stay as a constant and that is your physical activity. In some situations it may be challenging to stay active, but try to find ways to make active choices. You can engage in any activity you enjoy and can fit it into your lifestyle at any given time, but you should commit to being active in the long-term in one way or another.

Make a longer term plan together with your healthcare practitioner and always seek support if you notice that you are reducing or avoiding being active due to any pain or insecurity related to your knee.

The current guidelines from the World Health Organization (WHO) recommends adults the following weekly level of physical activity:

- Aerobic physical activity:
 - 150 to 300 minutes of moderate-intensity, or;
 - 75–150 minutes of vigorous intensity, or;
 - a combination of vigorous and moderate.
- Strengthening exercises:
 - for all major muscle groups;
 - at moderate or greater intensity;
 - on 2 or more days a week.

WHO also recommends:

- reduce time spent inactive;
- increase time spent active at any intensity (e.g. take the stairs instead of the elevator);
- do aerobic and/or strengthening exercises more than recommended for additional health benefits.

3. Maintain or aim for healthy body weight

Being overweight is associated with knee OA and therefore it is recommended that you try to achieve or maintain a healthy body weight in the long-term. Staying active is important, but in some cases nutritional advice may also be needed. Ask your health care provider where you can get support, if needed.

When do I need to seek help?

If you start noticing that you stop engaging and reduce your physical activity due to your knee, you might benefit from reaching out to a healthcare practitioner such as a physiotherapist.

With symptomatic knee OA, walking and other basic daily activities can become uncomfortable due to joint pain and stiffness and it is common that it may result in further reduction of physical activity, functioning and quality of life. So, seek support and advice with low threshold. For example physiotherapists are able to advise you on how you can stay active and manage symptoms with activity modification and pacing, if needed.



It is never too late to start caring for yourself, but it is good to acknowledge that:

- maintaining weight can be easier than getting rid of weight (especially as you age).
- maintaining muscle strength takes less effort than getting stronger.
- maintaining activity levels can be easier than increasing them.

If you wait until you get symptoms before you start caring for yourself, it will take even more effort.

Your health care practitioners can prepare you with important information, knowledge and tips, but YOU have the key role in managing your knee health in the long term.

Scan QR-code to access article references

