The fear of developing knee OA after a traumatic knee injury - and how to prevent it?

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INTRODUCTION

If you have ever had a traumatic knee injury, you might be at a higher risk of developing osteoarthritis (OA) earlier in life than someone who has not had an injury.[1] In fact, you might even need to get surgery to replace the joint.[2] The upside is that knowing this connection between knee injuries and OA gives healthcare providers and patients a chance to prevent or delay the onset of post-traumatic osteoarthritis (PTOA).[3] Unfortunately, until recently there were limited recommendations and research on how to prevent PTOA, so patients at risk might not get the care they need. That is why a group of physiotherapists, doctors, scientists and patients from around the world (called OPTINKEE) created a set of recommendations to help people take care of their knees and prevent PTOA.[3] Having had anterior cruciate ligament injuries and working in healthcare ourselves, we are personally and professionally invested in this work. Below we would like to share our stories and how we think the OPTIKNEE recommendations might be useful for patients like us.

INJURY

Patient A: At age 16 (now 11 years ago), during competitive football (soccer) my knee twisted in a strange way and I heard a loud snap. An orthopaedic surgeon confirmed a completely torn ACL and an MRI revealed an additional meniscal tear. A physiotherapist helped me train and strengthen my legs so I was ready to undergo an ACL reconstruction with partial meniscectomy. This was followed by a rehabilitation period that felt like forever! About a year after injury, I briefly returned to playing football. However, my knee never quite felt the same and had limited range of motion, and I was unable to return to my pre-injury level of performance.

Patient B: I also experienced a non-contact knee injury while playing football. As a physiotherapist, I was quite sure that I had ruptured my ACL and MCL and my colleagues confirmed the diagnosis. At the time of my injury, I was slowly stepping away from playing football and trying new sports like ice hockey. I decided to pursue non-operative management and completed 6 months of strength training before I underwent arthroscopic surgery to remove a pseudo cyclops lesion. Thankfully, the surgery was minor and I recovered quickly. After more rehabilitation and using a knee brace, I was back on the ice playing hockey and back in the mountains snowboarding about a year after my injury!

CURRENT SYMPTOMS AND THE FEAR OF OA

Patient A: 11 years after my injury, I no longer play football but regularly participate in activities like racket sports that don't cause significant issues with my knee. Running, however, causes pain, stiffness, and slight swelling. I wasn't informed of the increased risk for knee osteoarthritis until later in life, which has caused some concern about further deterioration and uncertainty about outcomes. Despite knowing that symptoms are more clinically relevant, I have requested a knee X-ray (figure 1) to assess for radiographic OA.

Patient B: Similarly, I traded in my football boots for hockey skates, cycling shoes, and gym trainers! In the first year after my injury, my knee would sometimes feel unstable but, over time and with rehabilitation, much of that resolved. Now after 5 years, the only symptom I occasionally experience is anterior knee pain which often flares up when I've been too sedentary. I attribute my successful recovery to finding other ways to stay physically active and becoming stronger than I have ever been before! I am aware of my increased risk of developing OA, so I've made a conscious effort to prioritize exercise in my weekly schedule.

HOW TO PREVENT OA?

As patients, we would really like to prevent the onset of severe OA and the possibility of an arthroplasty later in life. Currently, we try to maintain an active lifestyle, prevent weight gain and preserve lower body strength. However, this approach is not based on hard evidence which leads to feelings of uncertainty and a feeling you are heading for an inevitable outcome without anyone guiding you on what (and what not) to do.

The OPTINKEE recommendations[3] on patient education, self-management strategies and exercises aimed at reducing modifiable risk factors for re-injury and PTOA stood out for us. Even though it might be a hard conversation to have, we strongly believe that clinicians (eg, physiotherapists, doctors, surgeons) should be honest about our risk of re-injury or developing PTOA. Understanding the long-term implications of a knee injury might be a hard pill to swallow initially, but, if we are not fully aware of them, we (as patients)

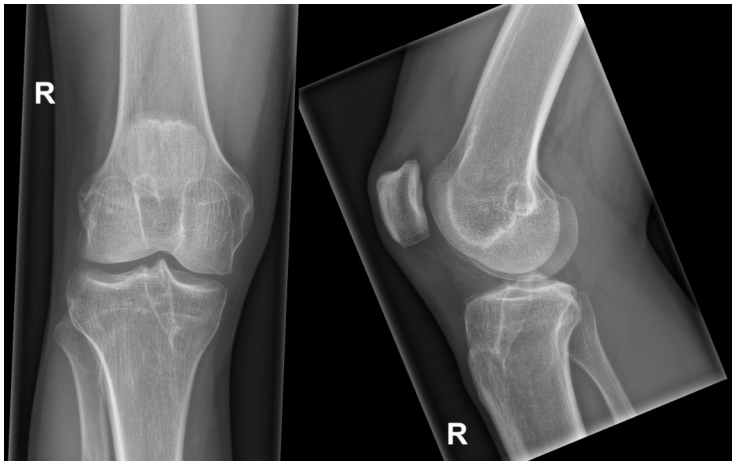

Figure 1 Radiographic evaluation of the knee 10 years after anterior cruciate ligament reconstruction (patient A).

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do not have the opportunity to modify our lifestyle and manage potential risks. Providing us with this knowledge empowers us to take control of our own health and well-being.

Of course, education around re-injury and PTOA must be paired with strategies aimed at managing symptoms, maintaining strength and promoting long-term health. These strategies should be tailored to individual patients to have the greatest impact. For instance, understanding a patient's exercise preferences, access to gym equipment or space, and their weekly routine can aid in devising effective strength maintenance programmes. Collaborating with patients to create strategies that promote long-term health will encourage us to stay strong and active for many years to come.

Although the focus of rehabilitation is often returning to sports and activities, it is equally important to consider the big picture. We urge clinicians to follow the recommended OPTIKNEE interventions,[3] especially around education, self-management and tailored exercises, to promote happy, healthy and active lifestyles. To provide comprehensive care, our perspective—the patient's perspective—should always be key.

Take home points

⇒ Patients with traumatic knee injuries may be unaware of their risk for PTOA and how to improve their long-term knee health. This can lead to feelings of uncertainty and insecurity.
⇒ Patients at risk for PTOA would greatly benefit from person-centred interventions that promote physical activity soon after injury and throughout the lifespan.
⇒ The OPTINKEE recommendations provide a useful framework to optimise knee health and prevent osteoarthritisOA after a traumatic knee injury.

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