

# SPORT:

## Injuries and Joint Health

... how they are related and what you can do  
to protect your joints when playing sport



## Do you play a sport?

If your answer is **YES** that's really great.

Playing any kind of sport gives you lots of exercise.

That means you will have benefits such as:

- ◆ increased muscle strength
- ◆ increased endurance
- ◆ better range of movement of your joints
- ◆ improved balance
- ◆ improved bone strength.

Your overall health will be better and you will be able to take on many more physical challenges in life compared to those who don't exercise.

# Preventing injuries

Injuries are very common in sports players. The good news is that there are a number of things you can and should do to make injuries less likely while you are playing your chosen sport.

## Warm up & cool down

- ◆ Warm up is extremely important before a game; do it for about 20 minutes:
- ◆ Running is very good - vary your movements by running backwards and forwards, circling a partner, moving your hips sideways, and bumping shoulders with a partner.
- ◆ Do planking on your front and on your sides.
- ◆ Stretch your hamstrings.
- ◆ Do squats and vertical jumps.
- ◆ Finish off by doing some more running.



- ◆ Cool down after your activity, by doing an easy version of your warm up, and include some gentle lengthy stretches.



## Other things you need to do

- ◆ Wear the right shoes which provide support for your arches and will not slip on the playing surface.
- ◆ Use appropriate safety equipment such as helmet, mouthguard and pads, and tape vulnerable joints if needed.
- ◆ Drink plenty of liquids.
- ◆ Play a variety of other sports for fun in order to ensure that all parts of your body are fit not just the muscles you use most in your main sport.
- ◆ Don't exert yourself too much or you can damage your muscles and joints. Gradually increase the intensity and length of time you train.

# But ... injuries do happen

- ◆ After any injury, even a minor one, it is *extremely important that it has healed properly before you play again*. Make sure you have no pain when playing and have regained your strength, balance and flexibility.
- ◆ *Seek professional help early when there is pain and/or swelling.*
- ◆ *Guided rehabilitation is the key!*
- ◆ More serious injuries may damage various parts of your body such as knees, ankles, head, back or muscles.



- ◆ Any injury to a joint e.g. knee or ankle, whether a torn ligament, a fracture, a dislocation or a direct blow, can cause damage to the **cartilage** in the joint.
- ◆ Cartilage is non-bony tissue such as inside the tip of your nose. In a joint it forms a protective surface between the two ends of the bones which reduces friction. Without the cartilage the ends of the bones will get damaged very easily.
- ◆ Cartilage is like a sponge, needing fluid exchange, within the joint capsule, to stay nourished. Exercise stimulates both the production of fluid and its movement in and out of the cartilage keeping it healthy.

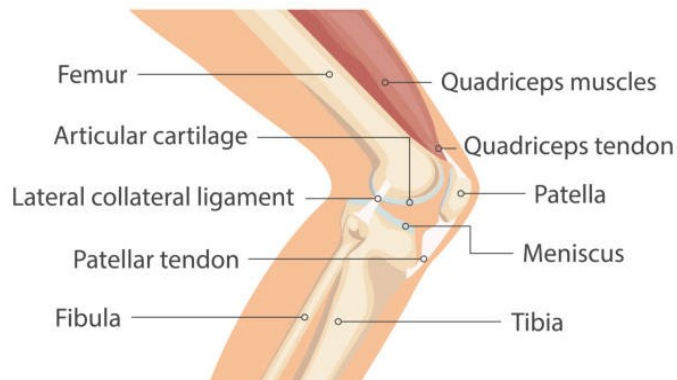
*“Motion is lotion!”*

- ◆ Damage to your joints while playing sport may eventually lead to **arthritis**.

## What is arthritis?

- ◆ Arthritis refers to diseases causing painful **inflammation** and **stiffness** of the joints.
- ◆ The most common kind of arthritis caused by sports injuries is **osteoarthritis**.
- ◆ Look on the diagram below for the articular cartilage. It is a thin lining on the ends of the femur, tibia and fibula where they meet.
- ◆ Look on the diagram above for the articular cartilage. It is a thin lining on the ends of the femur, tibia and fibula where they meet.
- ◆ Osteoarthritis occurs when there is **degeneration** of the this **cartilage** which protects the ends of the bones where they meet. The bones can then damage each other. Sometimes bony spurs grow. This can all be very painful. There is no blood supply to cartilage so it is very difficult for it to repair itself.

# Anatomy of the knee



- ◆ Sports which involve jumping and landing on your feet are most likely to cause osteoarthritis. Contact sports can also cause problems. Knees are commonly affected but other joints can be as well.
- ◆ It may take years for arthritis to develop after joint injury but the possibility is still there, well before symptoms appear.

## References:

---

Arthritis Society Canada

<https://arthritis.ca/living-well/2019/sports-injuries-and-osteoarthritis-is-there-a-link>

The Orthopaedic and Sports Medicine Institute

<https://www.osmifw.com/sports-medicine/understanding-arthritis-in-athletes/>

FIFA 11+ warm up

<https://newcastlesportsmedicine.com.au/wp-content/uploads/2017/08/3.-11-poster.pdf>

Better Health Channel - Victorian Govt

<https://www.betterhealth.vic.gov.au/health/healthyliving/sports-injuries#prevention-of-sports-injuries>

Melbourne university - my knee exercises

<https://healthsciences.unimelb.edu.au/departments/physiotherapy/chesm/patient-resources/my-knee-exercise>

---

## Content endorsed by Darwin physiotherapists

Thanks to:

Jaye Whatley B.Sc. (Physiotherapy)

Jessica Menzies

Bachelor of Physiotherapy (Honours)

Masters of Sports Physiotherapy