

When the damage is done to your cartilage

Sometimes, as hard as we try, we cannot avoid injury. One kind of injury happens in the joints to a firm, smooth tissue called cartilage that covers the ends of bones.

Dr Mohd Rusdi Abdullah, consultant orthopaedic surgeon subspecialized in arthroscopy & sports surgery at Subang Jaya Medical Centre, explains, “The cartilage cushions and provides a smooth, lubricated surface for joint motion. Injury to the cartilage may be due to a single strong impact from falling, a sports accident or repetitive minor injuries.

“It can also occur through wear and tear due to ageing and from being overweight. On top of that, a prolonged period of immobility such as that experienced by stroke patients or an infection can weaken or damage the cartilage.

“Cartilage does not receive blood supply. Instead, nutrients are supplied to it via joint fluid. Damage to the cartilage takes longer to heal compared to other types of tissue that receive direct blood supply.”

The categories of injury

Dr Rusdi says that doctors can judge the seriousness of injuries based on the size, grade, depth and location of the cartilage lesion.

The severity of cartilage injury is classified into:

- **Grade 1** – Superficial lesions, fissures, cracks and indentations
- **Grade 2** – Lesion extending down to < 50% of cartilage depth
- **Grade 3** – Lesion extending down > 50 % of cartilage depth
- **Grade 4** – Full-thickness cartilage lesion that exposes the underlying bone.

For those aged below 35, cartilage injuries are commonly attributed to falls, road traffic accidents and sports injuries.

However, other age groups can be affected by the same mechanisms based on their lifestyles and choice of activities.

As for those aged 50 and above, cartilage injury is mainly due to degeneration – a wear-and-tear process where cartilage breaks down as we age.

“In severe osteoarthritis, which usually affects the elderly, the cartilage damage can be so extensive and widespread that it can cause severe impairment in function,” says Dr Rusdi.

Fixing the issue

If your cartilage has recently sustained some damage, you have several options.

Recommended first-line self-care measures include protecting the joint from further injury with a support brace and resting, bandaging and elevating it as well as regularly treating it with ice packs.

A timely visit to the doctor or orthopaedic specialist is also advised for early intervention and accurate treatment.

If ignored and left untreated, the injury can progress into irreversible joint damage (osteoarthritis), with the onset depending on age, level of activity and presence of ligament or meniscus damage.

In a mild cartilage injury, non-operative treatments such as wearing shoes with good support, avoiding strenuous activity to the affected joint, and taking glucosamine and chondroitin sulphate supplements are recommended.

Besides that, hyaluronic acid injections can be administered to alleviate symptoms and protect the joint from further damage.

Activities such as cycling and swimming, which exert minimal impact on the joint, are also good for the cartilage. Jumping, twisting or any other high-impact activity to the joint should not be engaged in as these will only worsen the injury.

For more severe injuries or if non-operative methods are ineffective, arthroscopic keyhole surgery or a mini open surgery will be suggested.

There are a few surgical treatment options available based on the size and location of the defect, patient's age and activity level.

“Among these options are shaving and smoothing the injured area, scraping and creating holes to stimulate new cartilage growth, transferring cartilage plugs, implanting cartilage cells, grafting synthetic scaffolds and resurfacing or replacing the cartilage surface with a graft or implant,” says Dr Rusdi.

For more information, call 03-5639 1212.