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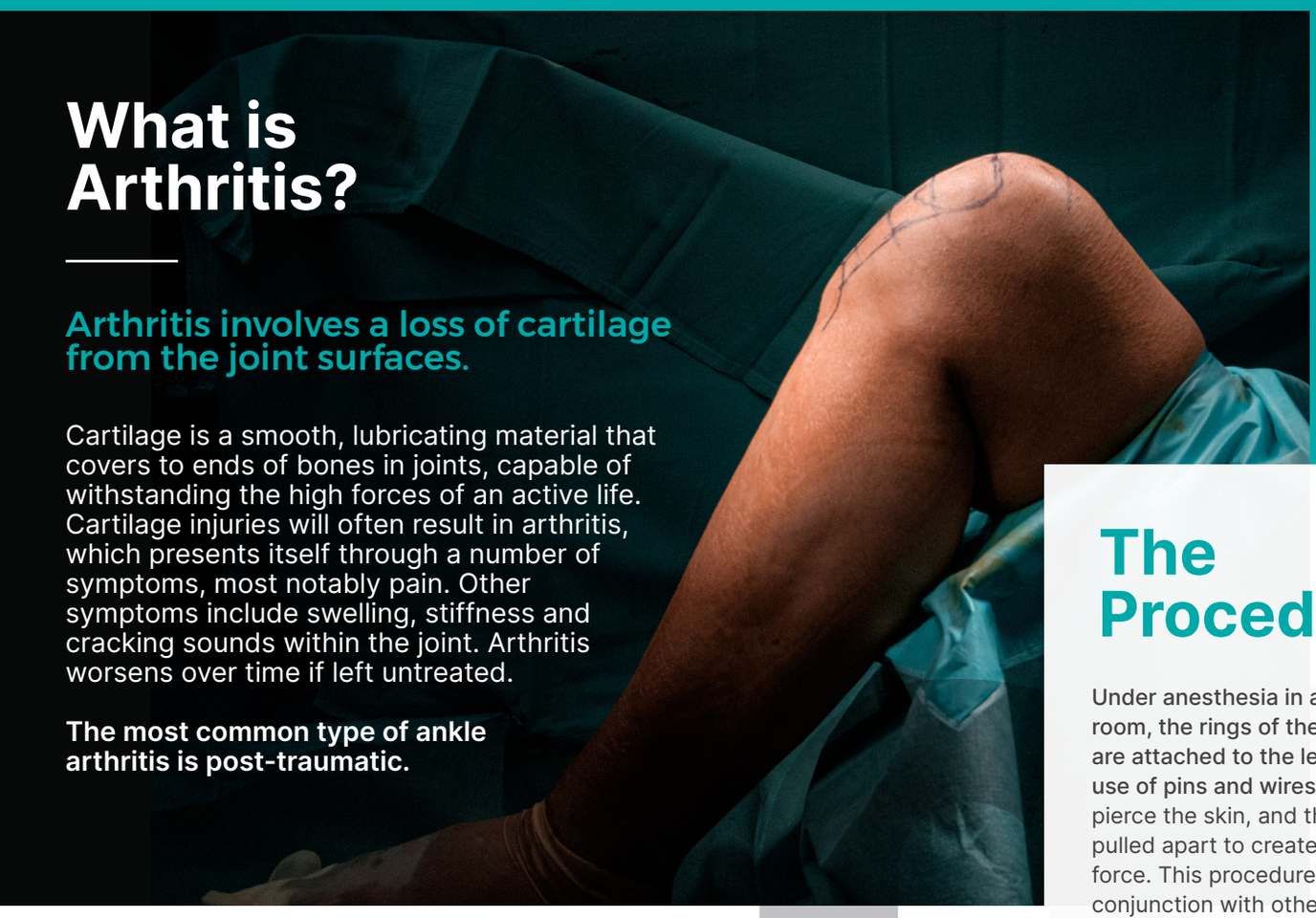
DISTRACTION
ARTHROPLASTY



What is Arthritis?

Arthritis involves a loss of cartilage from the joint surfaces.

Cartilage is a smooth, lubricating material that covers to ends of bones in joints, capable of withstanding the high forces of an active life. Cartilage injuries will often result in arthritis, which presents itself through a number of symptoms, most notably pain. Other symptoms include swelling, stiffness and cracking sounds within the joint. Arthritis worsens over time if left untreated.

The most common type of ankle arthritis is post-traumatic.

What is Distraction Arthroplasty?

Distraction arthroplasty is a minimally-invasive surgery relying on an external fixator frame to unload the joint mechanically.

By pulling the joint surfaces apart, the cartilage can regenerate through natural processes, and the bone underneath the cartilage is able to heal. The fixator frame is attached to the bones of the ankle-joint and remains assembled around the leg during treatment. This frame will typically be attached for between **8 and 12 weeks.** Distraction arthroplasty is most suitable for young, active patients as it enables patients to resume an active life after treatment. It is a joint restorative method and provides more mobility than traditional methods, such as ankle replacement and ankle fusion.

The Procedure

Under anesthesia in an operating room, the rings of the circular frame are attached to the leg through the use of pins and wires. The pins pierce the skin, and the rings are pulled apart to create a distraction force. This procedure may be done in conjunction with other treatments, including microfracture and lavage—microfracture works by making small holes in the joint space to encourage bone and cartilage formation. Lavage involves cleaning the joint area and removal of any debris. Additional procedures may be required to realign the joint. This includes calcaneal osteotomy or supra malleolar osteotomy. These procedures will be timed with frame application and removal after treatment. It is a joint restorative method and provides more mobility than traditional methods like ankle replacement and ankle fusion.

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After Your Surgery

Patients will spend two days in the hospital and will be encouraged to walk on the operated leg after this period with a physical therapist. Pain medication and physical therapy regimes will be prescribed to the patient. Post-surgical check-ups and imaging will be required after surgery, at intervals of **1 week, 4 weeks, 6 weeks, 3 months, 6 months and 1-year post-operation.** External fixator frames can create a confronting change and may be associated with an altered self-image. It is essential to reach out to support groups if help is needed to adapt to this change. External frame removal occurs up to **12 weeks** after surgery, and patients will be put in a walking boot while under anesthesia.
The frame is robust, and movement is encouraged. You can generally shower **after 10 days**. Like any procedure, it is best to be organised so that your mind is distracted and the time passes quickly.

Complications

This includes infection, nerve injury, dvt, chronic regional pain syndrome, and failure ofprocedure.

Basic Pin-site Protocol is as Follows:

Daily showers to wash the leg

Removal of excess blood and crust from the pin-site toensure appropriate drainage

Applying sterile solutions and sterile dressings to the pinsite

Cleaning hands before cleaning pin sites, and avoidingcross contamination between sites

Pin-site Management

One of the key patient responsibilities in this procedure is pin-site management. A separate pin-site handout will be given; however, there are a few key principles to keep in mind. Pin-site management is a daily responsibility for the patient to prevent the onset of infection. Whilst severe infections are uncommon; detrimental outcomes are more likely if basic practices of care are neglected.

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