



### What is Kienböck's Disease?

Bones have a blood supply that nourishes and maintains the structure of the bone and contributes to the stability of the cartilage surface of the bone. The wrist joint is a complex joint formed by two rows of small bones that are called the **Carpal** bones. A critical one of these is the **Lunate** bone as it is the central bone forming the joint with forearm bones. When the blood supply of the **Lunate** fails, the bone can collapse and fracture and the overlying cartilage deteriorates and progresses to arthritis.



#### What causes it?

The cause of **Kienböck's Disease** is not known. It can be associated with a mismatch in the length of your forearm bones with **Ulna** bone in the forearm slightly shorter than the **Radius** as this can lead to a shear stress across the **Lunate** and contribute to the failure of the blood supply.

#### How is it diagnosed?

The diagnosis is usually made based on a history of symptoms of wrist pain, swelling and stiffness, with local tenderness over the **Lunate**. An X-ray may be normal in the early stages of the disease, but with progression the **Lunate** will become more dense on Xray and then collapse or fracture. In advanced cases there may be arthritis obvious on Xray. To confirm or clarify the stage of the disease, your surgeon may organise a CT scan and/or MRI scan to look at the **Lunate** in more detail or even organise a wrist arthroscopy to directly examine the cartilage surfaces of the joint.

#### How is it treated?

The treatment of **Kienböck's Disease** is complex and depends on the condition of the **Lunate** bone and whether arthritis has developed in the joint. In early **Kienböck's Disease**, surgery may be avoided by resting the wrist in a splint to allow the bone to recover. Once established, however, your surgeon may advise you to undergo surgery that aims to relieve the shear stress on the **Lunate** by shortening the radius bone to equalise the length of the forearm bones. Other options include adding a blood supply to the **Lunate** with a bone graft and in cases where arthritis has developed either a wrist fusion or other joint procedures can be used to relieve pain.

#### What can I expect after surgery?

The postoperative treatment depends on the nature of the surgery. Some period of splinting will be required and then hand therapy to recover strength and function. It is likely that there will be some ongoing reduction in the range of wrist motion after surgery.