



CONDITION

# What is Kienbocks Disease?

*This is a relatively rare condition in which the blood supply of the lunate bone in the wrist is reduced. This can result in part, or all, of the bone very gradually dying and collapsing over time. Eventually this collapse can lead to arthritis in the joints nearby.*

## Normal Wrist Xray



## Wrist Xray showing early Kienbocks Disease



### Who gets Kienbocks Disease?

This condition is most frequent in young adults. There is sometimes a history of an injury to the wrist. It seems to be more frequent in patients whose ulna is rather short compared to the radius. This is called 'negative ulnar variance' (see picture above).

### What symptoms does Kienbocks Disease give?

The symptoms usually gradually increase over time. There is a variable amount of pain in the wrist, usually in the middle at the back. It can feel as if the pain goes up and down the forearm and into the hand. Over time the wrist gets less flexible than the other side (stiff) and the grip weakens. Sometimes there is swelling in the wrist.

### How is the diagnosis of Kienbocks Disease made?

It is important to get a clear history from the patient and examine the wrist very carefully. Sometimes the problem can be seen on a simple Xray. A magnetic resonance imaging (MRI) scan picks up very early changes in the lunate, even when the Xrays are normal, and is the most sensitive test for this condition.

### What treatment is available for Kienbocks Disease?

There is no cure for Kienbocks Disease. Treatment depends on how advanced the condition is when it comes to light. As the condition is relatively rare there is little evidence to guide doctors as to what is really the best option at each stage. Painkillers, splints and steroid injections can all help relieve symptoms to some extent at all stages.

Surgery is often also considered. Early on, when the lunate bone is still a good shape, two options are commonly recommended:

1. A vascularised bone graft - a wedge of bone from the end of the radius rotated into the lunate with its attached blood vessel still in place. This aims to directly import a new blood supply and bone into the lunate.
2. Shortening the radius bone - cutting a section out of the end of the radius to make it shorter and holding the remaining bone together with a plate and screws. This aims to even up the load on the lunate.

Once the lunate has started to collapse a radial shortening might still be considered. An alternative would be to take out the lunate and make the scaphoid join onto the capitate (fusion) to stop the rest of the wrist collapsing into the hole left where the lunate was.

Once arthritis has set in around the lunate the options are more limited but include a proximal row carpectomy (taking out the three bones in the first row of the wrist), a total wrist fusion (joining all the wrist bones together) or a wrist replacement.

### What is the long term outcome for patients with Kienbocks Disease?

Few long term studies of this rare condition are available for us to know what happens to patients with this disease if no surgery is undertaken. That makes it very difficult to know whether or not surgery designed to halt the progression of the disease has really made any difference to what would have happened anyway.

Small studies do suggest that the options mentioned above for the early stages of the disease may relieve pain in a good percentage of patients, at least in the short to medium term.

Surgery to relieve pain in the late stages of the disease is effective but usually at the expense of lost wrist motion. Your hand surgeon can advise you further.