

## THE ISKD NAIL

This is a fully implantable intramedullary nail that has only recently become available in Australia. It was developed and extensively tested in the United States.

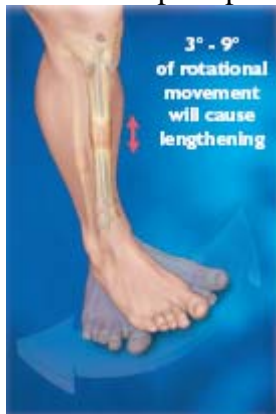
Implantable lengthening devices are desirable because they **avoid an external fixateur** and this causes **less pain** and allows **better range of motion**. There is also a **lower risk of infection** because there are no pins or wires penetrating the skin – these can become infected.

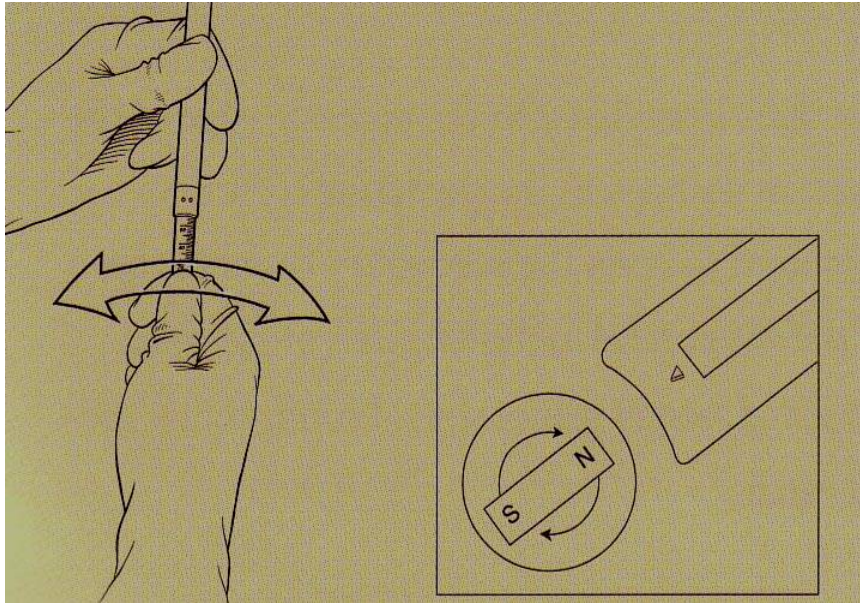
The nail is most suitable for **pure lengthening**. It has limited capacity to allow correction of other deformities simultaneously with length.



**ISKD** stands for **Intramedullary Skeletal Kinetic Distractor** and it can be used in the femur or the tibia.

It works on a ratcheting mechanism that relies on small rotational movements that occur with normal mobilizing post-operatively and the amount that is lengthened is determined pre-operatively and set at the time of insertion.





The nail is inserted into the femur or tibia after the bone has been reamed to allow passage of the nail and the femur or tibia is surgically cut to allow lengthening.



With mobilizing the bone is lengthened by the nail and the rate of lengthening is monitored by the patient and this is reviewed regularly by the surgeon.



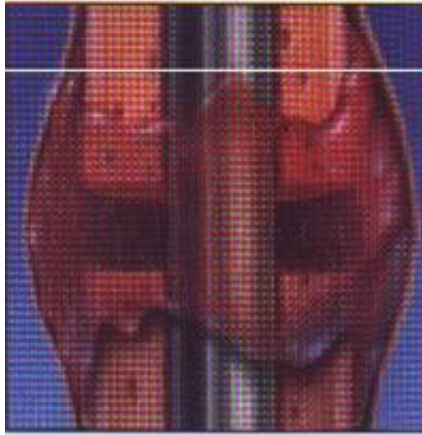
This monitor is placed against the skin and this measures the polarity changes that occur in the magnet of the nail as it lengthens.





The bone that is formed is the same process that occurs during standard leg lengthening with callus distraction.

## Callus Formation



Distraction Phase



Early Consolidation Phase



Once it is out to length weight is increased as the healing progresses.

The nail is generally removed 12 months later once healing has fully matured.

