

Hallux Rigidus

Notes:

Risks and Complications

As a guide 90–95% of patients will derive significant benefit and will be happy with the surgical result. Less than 5–10% will develop a complication that may require further intervention. These include: wound healing problems, infection, damage to nerves and blood vessels, incomplete relief of symptoms, and in the case of arthrodesis, failure of the bones to knit together, requiring further surgery.

Recovery times

Hospital stay	1 night
Rest and elevation	7 days
Suture removal	2 weeks
Crutches required	7 days
Postoperative shoe	4 weeks
Weight bearing	as tolerated

Time off work

– Seated	2–3 weeks
– Standing	4–5 weeks
Walking well	3 months
Swelling settles	3–6 months

Final Result

Good	3 months
Better	6 months
Best	12 months

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Hallux Rigidus (HR) refers to stiffness (rigidus) of the joint at the base of the great toe (hallux). This joint is called the great toe metatarsophalangeal joint (MTPJ). The usual cause of HR is arthritis or wear and tear of the smooth cartilage that lines the joint. HR may be caused by a previous injury to the great toe or it may be part of a general medical condition e.g. gout. Often the cause is unknown – it just develops, particularly as people get older. It is probably of little surprise that this joint is prone to arthritis as forces up to twice the body weight passes through the great toe MTPJ during walking.

HR presents with stiffness and pain in the great toe MTPJ. If the symptoms are severe, it may limit walking distance, and compromise work and recreational activities. Bony spurs (osteophytes) develop around the great toe MTPJ and can cause pain by rubbing against tight fitting shoes. In an attempt to off-load the painful great toe, some people will preferentially walk on the outer border of the foot, causing transfer pain to the lesser toes.

What can be done for HR?

Non Operative Treatment

The main aims are to relieve pain and decrease loading and movement through the great toe MTPJ. In its mildest form, HR may not need operative treatment. Simple lifestyle and activity modifications, weight loss, the use of a walking aid, taking pain killers (panadol and anti-inflammatories) and wearing appropriate shoe wear and orthotics (stiff insoles or shoes with a rocker bottom) can all be helpful. High heels and shoes with a narrow toe box should be avoided. Finally, a cortisone injection may offer relief of inflammation but as with most treatments, the degree and extent of relief varies from patient to patient.

Operative Treatment

Surgery is considered when the above measures fail. There are 3 main surgical options to relieve pain and improve quality of life. These include joint debridement +/- osteotomy, arthrodesis or fusion of the MTPJ and interposition arthroplasty. The best option for an individual patient depends on many factors including the severity of arthritis, the age and functional demands of the patient and the presence of arthritis in adjacent joints. The final choice is a joint decision between surgeon and patient.

1. Joint debridement +/- osteotomy

If the HR is mild, affecting only the upper part of the joint, this upper portion may be trimmed and the joint washed out. This is often combined with a realignment procedure (Moberg osteotomy) of the bone at the base of the great toe. This combination can provide long lasting pain relief with improved movement of the great toe in the appropriate patient. In 10–20% of patients, the arthritis is progressive and symptoms may return to a point where further procedures may be required.

2. MTPJ arthrodesis (fusion)

This is the 'gold standard' procedure for moderate to severe arthritis. The remaining cartilage in the joint is removed, the bones on either side of the joint are fused together and held with screws or a plate.



MTPJ arthrodesis (fusion)

95% of patients will derive good pain relief with this and it is the procedure of choice for active individuals. However, the joint is stiffened and this limits the wearing of high heels. There is a small risk of developing arthritis in the next joint along the big toe but this is rarely troublesome.

3. Soft tissue interposition arthroplasty

This can be considered if the arthritis is moderate to severe, but there remains a reasonable range of movement of the joint and the individual still wishes to wear a shoe with a modest heel. Cartilage is removed only from the base of the big toe (only from one side of the joint) and the resulting gap in the joint is filled with surrounding soft tissue or with a hamstring tendon graft taken close to the knee. This has the advantage of preserving some movement in the joint, however the extent of pain relief although still significant, is less reliable compared to arthrodesis.