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ORTHOPAEDIC SURGEON

Hallux Arthrodesis

A Patient Information Guide — Big Toe Joint Fusion

What Is Hallux Arthrodesis?

Hallux arthrodesis is a surgical procedure that permanently fuses the metatarsophalangeal (MTP) joint of the big toe — the large joint at the base of the toe where it meets the foot. By eliminating movement at this painful, worn joint, the procedure reliably and durably eliminates pain and restores a normal, confident walking pattern.

It is Dr Maritz's preferred procedure for advanced big toe joint disease. When performed correctly and in the right patient, hallux arthrodesis consistently delivers outstanding outcomes: return to normal gait, freedom from pain, and the ability to resume activities — including sport — that the patient had given up. Despite the word “fusion” sounding daunting, the results are both functional and liberating.





When Is This Surgery Recommended?

Hallux arthrodesis is the treatment of choice when the MTP joint has reached a stage of damage or deformity that cannot be adequately addressed by simpler measures. The most common reasons Dr Maritz recommends it are:

Reasons for Requiring a Hallux Fusion

- **Hallux valgus with arthritis** – Bunions, especially if severe can develop arthritis within the joint
- **Primary hallux Rigidus** — Arthritis within the joint without an obvious cause. Most common in females
- **Failed Previous Bunion Surgery** – Unfortunately the older techniques to correct bunions have a high recurrence rate in later years
- **Neuromuscular conditions** such as Charcot Marie Tooth Disease

Pre-operative weight-bearing X-rays are used to assess the degree of joint destruction and deformity, and to plan the precise correction needed:



Weight-bearing X-ray — note the joint destruction



What Results Can You Expect?

Hallux arthrodesis has an excellent and well-documented track record. Patients are often surprised by how much they are able to do after the joint is fused — and how natural their foot feels. Published data from large outcome studies show:

Functional Outcomes After Hallux Arthrodesis

- **Normal walking gait restored in 82% of patients**
- Return to sport achieved in 93% of patients — three-quarters returning to their previous level of activity
- 75% of patients able to wear fashionable or dress shoes post-operatively
- 45% of patients achieving a single-leg calf raise (toe rise) — a demanding functional test
- High overall patient satisfaction, with the majority describing their outcome as good or excellent

An important reassurance: Fusing the big toe MTP joint does not prevent normal walking. The ankle, midfoot, and remaining toe joints compensate naturally. Most patients describe their gait as feeling “normal” within a few months of recovery, and many are unable to tell the difference from their other foot.

The Operation

Hallux arthrodesis is performed under a light general anesthesia, as a day procedure. The hallux MTP joint is accessed through a small incision, and prepares the joint surfaces are prepared for fusion.

The bones are held together with a small plate designed for this procedure specifically. This keeps the bones rigidly still to facilitate the fusion between bones to occur.





Recovery

Recovery from hallux arthrodesis follows a structured, predictable timeline. The bone takes approximately 10–12 weeks to fuse solidly, and this guides the progression through each phase.

Recovery Insights

Weeks 0–6: Protected Weight-Bearing

You will leave theatre in a padded post-operative dressing. For the first six weeks you will walk in a flat, stiff-soled post-operative shoe that protects the toe from bending while allowing heel-to-flat weight-bearing. You may walk on the flat of the foot but must not push off through the toe.

- Keep the foot elevated as much as possible — particularly for the first two weeks — to manage swelling
- First wound review at 10–14 days
- You must continue with the flat postop shoe for the full 6 weeks

Weeks 6–12: Transition to Normal Footwear

Once early bone consolidation occurs, you will transition to a wide, comfortable flat shoe. You may begin walking more normally, gradually increasing the push-off load through the toe as comfort allows. Formal physiotherapy begins in this phase, focusing on gait retraining, calf strength, and balance.

Months 3–6: Return to Full Activity

By three months, most patients are walking comfortably in normal footwear. From this point, activities are progressively expanded:

- Low-impact sport (cycling, swimming) from 3 months
- Running and impact sport from 4–6 months, once gait is confirmed as normal
- Return to full unrestricted sport typically by 5–6 months

Swelling in the foot can persist for up to a year — this is normal and does not always indicate a problem.

⚠ Do not attempt to wear high heels, pointed shoes, or stiff-soled athletic shoes during the first three months. The fusion requires consistent, appropriate mechanical load as it consolidates — excessive bending stress risks non-union. Dr Maritz will guide the transition to different footwear types at each follow-up appointment.



Risks and Possible Complications

Hallux arthrodesis is a well-established procedure with a reliable track record. As with all surgery, there are risks to be aware of:

- Non-union — the bones fail to fuse together; occurs in approximately 2% of cases and is more common in smokers, diabetics, and those with poor bone quality. If it occurs, revision surgery with bone grafting may be required. This is the most important reason to comply with instructions in the early post-operative period
- Malunion — the bone fuses but in a suboptimal position
- Infection — this is rare but best prevented by not interfering with the applied bandages and wounds. Follow instructions carefully in the postoperative period.
- Interphalangeal joint stress — the smaller joint in the toe may develop stiffness or arthritis over time. Again, this is rare.
- Hardware prominence or discomfort — the plate can occasionally be felt or cause irritation through footwear; implant removal is straightforward once the fusion is solid if needed

⚠ Smoking significantly impairs bone healing and substantially increases non-union risk. Dr Maritz strongly advises all patients to stop smoking for at least six weeks before and after surgery.

Hallux arthrodesis, when carefully performed and appropriately rehabilitated, is one of the most reliable and satisfying procedures in foot and ankle surgery. Dr Maritz and his team are committed to guiding you through every step of the process, from your first consultation to your return to full activity.