

MINIMALLY INVASIVE BUNION CORRECTION

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MICA (Minimally Invasive Chevron Akin)

Bunions, otherwise referred to as “Hallux Valgus”, are a common deformity in the community. They are thought to occur due to a muscle imbalance that is often inherited. Inappropriate footwear may exacerbate the condition. Bunions typically worsen with advancing age and can eventually result in significant pain and deformity. The bunion may also be the cause of damage to other parts of your feet, such as the lesser toes.

Pain from a bunion may be related to its size as well as abnormal biomechanics of the joint which it affects. The time to have treatment is when there is significant pain or you have difficulty finding comfortable footwear.

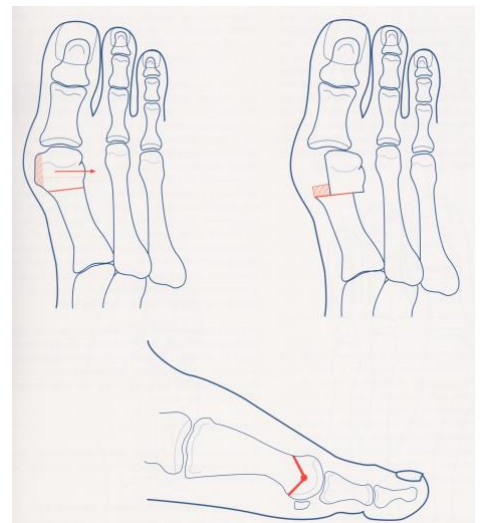
Traditionally, to achieve correction of a bunion with an open procedure a 5-8cm incision is made along the medial or inner aspect of the big toe/foot. With minimally invasive bunion corrective surgery (known as the MICA procedure – *minimally invasive chevron akin*), three to four small incisions are created of around 3mm each in length. Some incisions are used to achieve the bony correction using very fine burrs whilst others are used for placement of screws to maintain the correction. This minimises surgical risk whilst enabling a quicker wound recovery and less scar pronunciation.

CHEVRON PROCEDURE

A Chevron osteotomy is indicated for correction of a mild to moderate hallux valgus deformity. This allows for a small reduction of the angle between the first and second metatarsal bones. It is ideal for bunions that are not particularly pronounced.

The procedure involves using a fine burr to make a V-shaped cut in the distal aspect of the first metatarsal near the metatarsal head. This allows the distal part of the bone to be translated over across in the lateral direction (i.e. towards the second toe). The cut bone is then fixed in this position with two small headless screws inserted percutaneously. The excess bone on the inside of the foot (medial side) may then be resected.

If required, the tight joint capsule on the lateral aspect of the joint can be released to allow for further correction of the bunion.



Images: De Prado M., Ripoll P.L. & Galanó P.†, Minimally Invasive Foot Surgery, 2009, Barcelona, Spain p.73, p.93

AKIN PROCEDURE



The Akin procedure is a medial closing wedge osteotomy of the first proximal phalanx used to correct hallux valgus interphalangeus. With a minimally invasive approach, this wedge cut is made utilising the same fine burr through a separate small incision. Following this osteotomy the bone is then stabilised with one screw inserted percutaneously. This allows for early motion of the joint post operatively.

The Akin procedure is not commonly done on its own. It is usually performed as a component of a larger procedure, in which techniques like a chevron or scarf osteotomy are simultaneously undertaken for the correction of MTP joint angulation and metatarsus primus varus.

COMPLICATIONS

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 failure of the bones to knit together (non union).



POSTOPERATIVE INSTRUCTIONS AND RECOVERY TIMES

Hospital stay	1 night
Rest & elevation (able to walk short distances in post operative shoe)	14 days
Crutches/Frame	1-2 weeks
Time off work	
- Seated	3-4 weeks
- Standing	6-8 weeks
Begin wearing sports shoes (cease the post operative shoe)	4-6 weeks
Driving	4-6 weeks
Running	4-6 months
Foot swelling	6 months
Result times (pain relief & function)	
- Good	3 months
- Better	6 months
- Best	12 months

This brochure is a brief overview of the surgical management of minimally invasive corrective bunion surgery and not designed to be all-inclusive.

If you have any further questions, please do not hesitate to contact your surgeon.