FOREFOOT DEFORMITY CORRECTION SURGERY

BUNIONS
Technically, a bunion only refers to a bump over the inside part of the forefoot, where the big toe meets the foot. However, because this bump is so often associated with a big toe deformity (a hallux valgus deformity), the term bunion is usually used to describe the combination of a hallux valgus deformity associated with a true bunion.

Many factors such as shoe-wear and genetics may contribute to the development of bunions. Bunions usually cause problems because they result in widening at the forefoot and narrowing of the overall foot width at the toes. This makes shoe-wear difficult, and often results in pain and tenderness over the bump on the inside of the forefoot (the true bunion). Furthermore, the overall reduced foot width at the toes results in overcrowding of the toes, and this commonly causes deformities in the smaller (lesser) toes.

LESSER TOE DEFORMITIES
Claw toes (fixed flexion of both toe joints), Hammer toes (fixed flexion of the toe joint closest to the foot), and Mallet toes (fixed flexion of the tip of the toe) are all similar lesser toe deformities that are commonly the result of toe overcrowding and are often associated with a bunion deformity of the big toe. Lesser toe deformities usually start with the second toe and progress sequentially toward the smaller toes. The toes usually deform upwards creating a clawed appearance, and causing problems with rubbing on shoes. Furthermore, as the toes claw upwards the weightbearing end of the forefoot bone (the metatarsal head) is pushed downwards and becomes prominent on the sole of the foot; the prominent metatarsal head often becomes painful (metatarsalgia) and patients with this problem often describe a sensation of walking on stones. A bunionette is a deformity of the little toe that causes a painful bump on the outside part of the forefoot.

NON-OPERATIVE TREATMENT
BUNIONS
Always wear shoes with a wide toe box. Some patients find that this is all that is required to manage their bunion problem. Some patients also find a simple silastic spacer (available from a podiatrist) between the first and second toes helpful in the early stages of a bunion deformity, as this can address the deformity and reduce pressure on the bunion. If the deformity is severe, it may be possible to avoid surgery by making significant shoe-wear modifications such as cutting out the part of the shoe that the bunion is pressing on, or avoiding closed shoes altogether.

LESSER TOE DEFORMITIES
Claw toe and hammer toe deformities are difficult to manage non-operatively without addressing the associated bunion. A wide shoe is important, and a silastic spacer may be useful. Often the only non-operative option is to avoid closed shoes.

Problematic mallet toes are difficult to manage non-operative and may require shoe-wear modifications in consultation with a podiatrist.

Non-operative management of a bunionette deformity usually involves wearing wide or open-toe shoes. A silastic spacer may be useful.

METATARSALGIA
Metatarsalgia refers to pain in the ball of the foot with weightbearing. Patients commonly liken it to walking on stones. It is usually associated with a claw or hammer toe deformity. If the toe deformities themselves are acceptable and the primary complaint is metatarsalgia pain, a shoe insole with a “metatarsal bar” may be helpful. These can be made by a podiatrist, and be aware that they may take many weeks to become comfortable to walk in.
**Operative Treatment**

Bunion surgery typically involves straightening the big toe, removing the bunion bump, and addressing associated lesser toe deformities and any metatarsalgia.

**Bunions**

A typical operation to treat a bunion involves exposing the joint where the big toe meets the foot and excising the bunion bump. The forefoot bone for the big toe (first metatarsal) is then cut and straightened, usually using strong compression screws for fixation. The bone at the base of the first toe (proximal phalanx) is also usually straightened and held in place with a small bone staple. The structures between the big toe and the second toe are then divided through a second incision, and the toe is then realigned. Occasionally a severe bunion deformity is best managed by fusing the joint where the big toe meets the foot.

**Lesser Toe Deformities**

Claw toes and hammer toes are usually managed by excising and fusing the toe joint closest to the foot (proximal interphalangeal joint). Mallet toes may be managed by removing the toenail and/or part of the bone at the tip of the toe so that the toe is straight and doesn’t rub on the ground when walking. A bunionette deformity is usually managed by straightening the forefoot bone for the little toe (fifth metatarsal) in order to realign the little toe. Occasionally the tendons responsible for straightening the toes may need to be adjusted when correcting lesser toe deformities.

**Metatarsalgia**

Metatarsalgia (pain in the ball of the foot with weightbearing) is usually managed by shortening the problematic forefoot bone. This relieves the weight from the bone and allows the toe to sit correctly on the end of the forefoot bone. This operation is commonly performed in conjunction with lesser toe deformity correction since lesser toe deformities and metatarsalgia commonly co-exist.

**After Surgery**

**The First Two Weeks**

During the first two weeks following surgery you must keep your foot elevated as much as possible. Use intermittent ice packs and regular painkillers and anti-inflammatory medications. This helps to minimize swelling and will make your foot more comfortable. Leave the dressings intact and keep them dry. You may walk on your heel using the special shoe you have been given following your surgery (Darco Shoe), but try and walk as little as possible.

**Two to Six Weeks Following Surgery**

Two weeks following surgery you will be seen by Mr Jones and the wound will be reviewed. If the wound is fully healed you can begin to mobilise a little more, so long as you only put weight on the heel and continue to wear the special Darco shoe. Sometimes wires are used to keep the lesser toes straight, and these are usually removed four weeks after surgery. The foot will be bandaged until six weeks following surgery, and you should keep it dry until then.

**Beyond Six Weeks Following Surgery**

After the six week mark following surgery you can get your foot wet and begin to walk without the special Darco shoe. You should make sure you wear loose fitting shoes with a wide toe box, and not wear high heels or narrow shoes, for at least the first three months after you commence walking normally, and preferably on an ongoing basis, as such shoe wear may increase the risk of the deformity recurring.

**Complications of Forefoot Surgery**

All surgery carries risks of complications. Complications in addition to those discussed here may occur.

**Wound Problems**

The foot has inherently poorer blood supply than other parts of the body, and as a result the risk of wound breakdown and/or infection is slightly higher with foot surgery when compared to other surgery. For this reason it is very important to avoid walking and keep the foot elevated as much as possible until the wound has completely healed – usually the first two weeks.

**Loss Of Correction**

Forefoot deformity correction surgery involves surgery to both the bone and the surrounding soft tissues, and it is important that all aspects of the surgery heal properly. For this reason it is important to keep the foot bandaged and only put weight through the heel using the special Darco shoe for the first six weeks following surgery.

**Recurrence of Deformity**

The deformity can recur, even years after an initially excellent result. Although recurrence is a little unpredictable and can be related to factors that cannot be modified, such as tissue elasticity, there are things you can do to reduce the risk. Avoiding wearing shoes with a narrow toe-box, and avoiding high-heels shoes altogether is probably the most important thing you can do to help ensure a lasting correction.

This information is intended for patients of Mr Chris Jones and may not be applicable to patients of other surgeons.

Forefoot Deformity Correction Surgery
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