This brochure shows you samples of footwear modifications. The modifications can be done on other footwear as well. Their visual impact and function may change depending on which footwear you chose.

Always send us a pair even if you only want a modification unilaterally. Please note that we cannot always insert the modification into the midsole. If you would like it specifically into the midsole and no other way, please make that clear at the time of placing your order.

For all shoe modifications it is important that you make sure that the shoes are suitable and fit your patient. We do not guarantee the fit of the shoe nor do we guarantee the medical or treatment outcome as we do not see your patient. This is your judgement based on your assessment. We can remodify any footwear to your requirements at additional costs. However, should any material we attached become loose, we will reattach it within the first 6 months unless it falls under normal wear and tear. Ask for the newest price list prior to ordering any modification.

Footwear that is too worn out may not be suitable for modification or could attract extra repair costs.

Please call us on 02 9972 4488 for any further information.

**The shoe is modified attaching a medial buttress or arch fill.** This is used to increase the medial support of an existing footwear. It provides more medial stability and can be used for sever pes planus, posterior tibialis deficiency and other foot issues that require stronger medial support. The original outsole pattern will change as a new outsole is added. Upon request we can also just attach the medial buttress, but in such a case the connection to the outsole is more easily loose and increases the risk of separating from the footwear. If this modification is only done unilaterally, we recommend to change the outsole on the other side to match to assure equal thread and slip resistance on both shoes.

**The shoe is modified attaching a lateral buttress.** This is used to increase the lateral support of an existing footwear. It provides more lateral stability and can be used for sever lateral ankle instability, calcaneal varus and other foot issues that require stronger lateral support. The original outsole pattern will change as a new outsole is added. Upon request we can also just attach the lateral buttress, but in such a case the connection to the outsole is more easily loose and increases the risk of separating from the footwear. If this modification is only done unilaterally, we recommend to change the outsole on the other side to match to assure equal thread and slip resistance on both shoes.

**This is a heel only lift.** The lift is inserted into the midsole matching the midsole colour and if available we will try to match the colour as closely as possible. If the footwear is suitable for the insertion into the midsole, we prefer to do that as it has a lower visual impact and keeps the original outsole in place. The heel only lift can be used for relief on the achilles tendon and in which case it may need to be done bilaterally to avoid a leg length discrepancy. It can also be used for leg length discrepancy adjustments where a heel only lift is suitable or to compensate an equino foot. There is a limit on how much a heel only lift can be done before the shoe has not enough toe spring left to do a heel only lift.
The metatarsal rocker like item no. S005 with the extra forefoot padding. A common area of complaint is pain in the metatarsal area. A metatarsal rockerbar can be used to offload metatarsal heads. Additionally we inserted 5 to 6 mm of orthotic foam for extra comfort into the outsole. The foam is then covered with a thin outsole material. This can be combined with orthotic inserts to maximise its performance. Depending on the shoe construction the heel may need to be adjusted to keep the footwear balanced.

This is a rocker bottom modification inserted into the midsole. It has a small stable mid-stance area. It is useful for rigid foot and ankle joints or if foot and ankle movement causes pain. It can be more effective if combined with a rigid carbon insole or if you ask us to stiffen the outsole additionally to the rocker bottom. If applied unilaterally, there is a need to adjust the other side to avoid unintended shoe raise on one side over the other in one pair of shoes.

Shoe raise (heel and sole) for leg length discrepancies. Typically we raise the sole by about 50% of heel raise amount depending on the overall balance of the footwear. The lift will then be tapered down towards the tip of the toes to keep a reasonable toe spring. Upon request that can be varied and in which case please let us know how much you like under the heel, under the ball of the foot and at the tip of the toes. Heights are measured from the inside of the shoe in the middle of the heel and ball area.

Shoe raise (heel and sole) for leg length discrepancies. Where heel and sole are raised almost the same amount. The raise is then tapered off to the tip of the toe to allow better roll through of the footwear. This may need to be considered if for example ankle joint rigidity does not allow for a more plantar flexed foot or other reasons where the plantar flexion of the foot is to be kept to a minimum. The thicker the sole the stiffer the sole.

The metatarsal rocker inserted into the midsole. This is particularly useful to offload metatarsal head but also to help with rigid metatarsal joints. It is designed to load the weight bearing area of the foot proximal to the metatarsal heads so that there is less time spent on them from touchdown to roll through process. This modification provides a stable mid-stance. It is recommended to modify a shoe bilaterally or at least adjust the other side to avoid unintended shoe raises or uneven walking pattern.

Item No. S0040

Item No. S0041

Item No. S0050

Item No. S0051

Item No. S0060
The hallux rigidus rocker has an architecture similar to the metatarsal rocker with the additional indent plantar to the hallux. The indent will reduce upwards pressure from the ground during the roll through process of ambulation. This is also suitable to the hallux flexus, hallux limitus and to reduce plantar pressure on the hallux. In painful joints additional rigidity may need to be added to the midsole.

The medial shoe wedge (heel and sole) is used to change the foot and ankle alignment. Further it reduces internal pressure on the lateral knee joint compartment. It may not be suitable for people who may be prone to inversion ankle sprains or instabilities towards the lateral side. It can also be done to reinstate the neutral alignment of distorted footwear separately to typical heel and sole repairs. This modification can be done unilaterally but depending on the midsole thickness and construction the other shoe may need to be adjusted to keep the overall heel centre height the same. It is less effective for shoes with narrow heels and soles.

The lateral shoe wedge (heel and sole) is used to change the foot and ankle alignment. Further it reduces internal pressure on the medial knee joint compartment. It may not be suitable for people who may be prone to eversion ankle sprains or instabilities towards the medial side. It can also be done to reinstate the neutral alignment of distorted footwear separately to typical heel and sole repairs. This modification can be done unilaterally but depending on the midsole thickness and construction the other shoe may need to be adjusted to keep the overall heel centre height the same. It is less effective for shoes with narrow heels and soles.

MBT modification. The MBT is suitable for shoe raises, however due to the nature of the MBT and in trying to keep the original function of the MBT, the modification will need to be done in a particular way. The raise is inserted into the midsole. This keeps the original MBT outsole working as close as possible to the unmodified side including the heel sensor function and the rocker sole function. However should the heel sensor be too soft for a particular person, they can be replaced with firmer material.

This shoe is re-lasted. That means the shoe (A) or the sole (B) is made wider – in both cases on the medial arch area. This is useful if the shoe will need to have a wider sole base not only on the outside but also on the inside of the footwear. The footwear is spread to accommodate a condition such as a rigid pes planus, a prominent bony deformity, or simply a foot that is very wide in the midfoot. To a limited extent that can be used for the forefoot as well to accommodate a hallux valgus or tailors bunion – quintus varus. The footwear will get a little shorter and loses some depth in this process. The footwear will often require a new outsole and it is recommended to adjust the other side by adding the same new outsole.
Foot orthoses. This is a total contact orthoses or custom moulded foot orthoses. It is accommodative and made using soft tri laminate material (Plastazote, PPT, EVA) as well as EVA cork. It is suitable for sensitive feet. The material will self mould on the surface plantar to the foot which will make it more comfortable after a little usage. The orthoses requires extra depth inside footwear.

The S.A.C.H. (Solid Ankle Cushion Heel). A softer material replacing a portion of the posterior heel base in the shoe. SACH heels reduce shock at heel strike and compensate for the absence of ankle motion and has shown to improve results in ankle fusion if combined with metatarsal rocker bar.

The Orthopaedic Stiletto Well not quite, but we recognise the need to look as good as you can. This is a modification aimed at increasing the comfort of fashion shoes. It aims at reducing pressure on the foot by supporting the medial longitudinal and metatarsal arches on the inside of the shoe. The inside modification is barely visible once covered. A common area of complaint is pain in the metatarsal area and additional to the internal modification we inserted 4 mm of orthotic foam for extra comfort into the outsole. The foam is then covered with a thin outsole material. The outsole will become only a few millimetres thicker. This style of footwear is not suitable for a number of medical issues and is generally not recommended by us.

Medial longitudinal and metatarsal arch support. Inserted in to the inside of a shoe with little room. It aims at reducing pressure on the foot by supporting the medial longitudinal and metatarsal arches on the inside of the shoe. The inside modification is barely visible once covered. A common area of complaint is pain in the metatarsal area and this internal modification increases comfort. This style of footwear is not suitable for a number of medical issues and is generally not recommended by us.

The butterfly rocker bar with forefoot padding. The butterfly rocker bar with forefoot padding on shoes with heels. A common area of complaint is pain in the metatarsal area we inserted 4 mm of orthotic foam for extra comfort into the outsole. The foam is then covered with a thin outsole material. The outsole will become only a few millimetres thicker. This style of footwear is not suitable for a number of medical issues and is generally not recommended by us.

This picture shows the Pelometer, an instrument we use to measure the thickness difference of shoe soles. The probes are lowered onto the inside of the footwear and the display near the probe shows the value, while the display in the middle shows the difference. We use that during the process of footwear modification, in particular shoe or heel raises to assure that the modification is accurate. You can see the Pelometer has 2 probes that measure the thickness of the sole or heel at that particular location inside the footwear including all layers like insoles, socks etc that are inside the footwear. We think this to be the most accurate way. Typically for shoe raises we measure in the middle of the heel where the calcaneus has its centre inside the footwear as well as in the middle of the sole where metatarsal head 3 would be touching the insole. For heel raise only lifts it is done accordingly. We consider the original footwear function and balance. With MBTs for example the lift is measured under the pivot ridge of the MBT to assure its intended function is unchanged.

The S.A.C.H. (Solid Ankle Cushion Heel).

Item No. OR001

The Orthopaedic Stiletto.

Item No. OR002

Medial longitudinal and metatarsal arch support.

Item No. OR002+SO120

The butterfly rocker bar with forefoot padding.

Item No. S0120

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