Interpod
The Evolution and Reinvention of the Orthotic

interpod
Defining Orthoses

Interpod

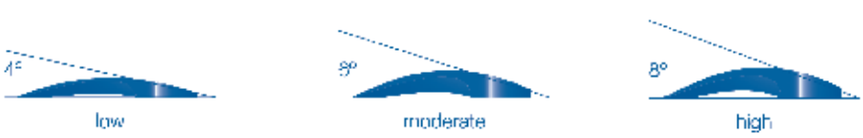
Defining Orthoses

Interpod is an innovative Australian company defining and reinventing prefabricated foot orthoses. Established in 2001 by podiatrists, our mission is to provide a complete range of foot orthoses making prescription easier and faster with outstanding patient outcomes.

Unique Orthotic Design Features

Making the correct diagnosis and prescribing the best solution for your patient is vital to your practice. Our unique features are designed to provide a wide range of treatment options, while also providing ease and flexibility of prescription.

- Three distinct orthotic materials for customised prescription
- Three arch heights - Low, Moderate, and High
- Rearfoot Wedge to resist excessive pronation forces
- Windlass features to facilitate supination



Corporate Responsibility

As a global company, we are conscious of the impact our business has on the environment. All Interpod products are offset by investment in accredited projects with a renewable energy component through Climate Positive.

Windlass Enhancement

The Evolution and Reinvention of the Orthotic

The Windlass Mechanism is a sequence of events whereby the plantar fascial is pulled tight, thereby raising the arch and supinating the foot - resulting in a solid lever for toe off.

Interpod Orthoses enhance the Windlass Mechanism

All of our orthotic designs have features to facilitate the Windlass Mechanism and are supported by independent research. These features include:

The Plantar Fascial Groove

Decreases arch irritation
Facilitates the Windlass Mechanism

Rear Foot Wedge

Offloads the medial column to facilitate Windlass
Inverts rear foot – improves biomechanical function and reduces the need for otherwise excessive arch height

1st Ray Cut Out and Cuboid Notch

Aids the 1st Ray to plantar flex consequently enhancing the Windlass Mechanism

Interpod Windlass features

Interpod

Product Guide and Specifications

Modular EVA

Flexibility and ease of prescription - includes all three levels of support in one pack

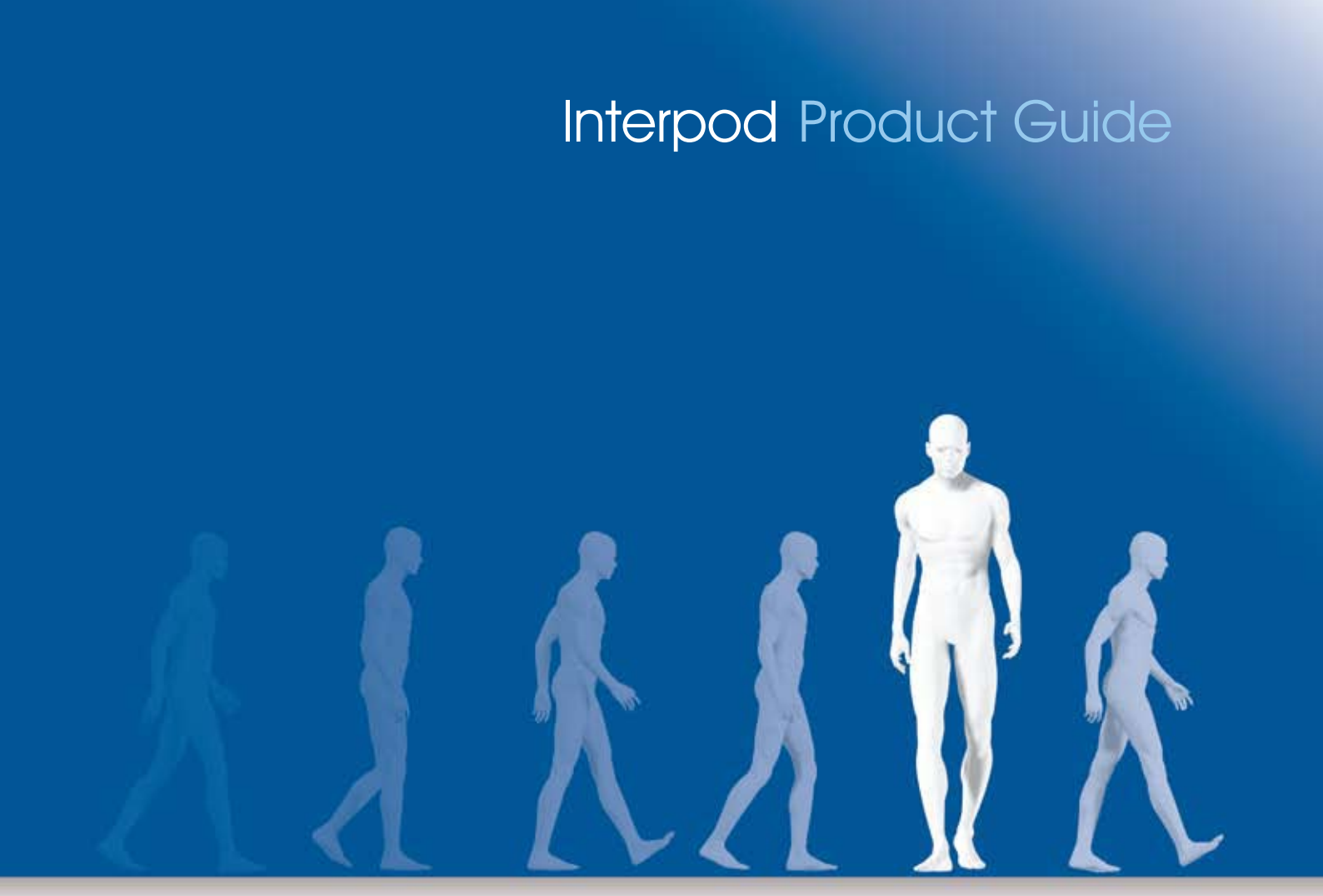
Flex Polypropylene

Closest orthotic to a custom made device with three levels of support for long term treatment

Soft Polyurethane

Superior shock absorbing control for patients requiring added cushioning

Interpod Product Guide



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Modular EVA

Our Revolutionary Adjustable Orthotic

Inclusive of 3 arch heights

NEW

The Modular's level of support can be adjusted to low, moderate or high, simply by choosing the most appropriate insert that pushes into the base orthotic allowing for immediate and easy prescription. The insert runs the entire length of the orthotic from the rearfoot to the forefoot, providing an even arch profile while maximising patient comfort and support. One pack consists of base Orthotic plus three arch inserts.

Features

- Choice of 3 base inserts: low, moderate or high
- Rear Foot Wedge
- Cuboid Notch
- Plantar Fascial Groove
- First Ray Cut Out
- First Ray Declination

Advantages of EVA

- Immediate ease of adjusting the level of support; low, moderate or high
- Easy to grind
- Easy to attach additions with contact glue
- Accommodates a range of footwear - patient is able to adjust Orthotic level (low, moderate or high) to preferred shoe style (tight or spacious footwear)

The Modular is ideal as an initial treatment option to determine the level of support required by the patient prior to using a more durable custom or Interpod Flex Orthotic.

Flex Polypropylene

Flex ¾ Length
3 arch heights

The Flex is the closest option available in comparison to custom-made orthoses. It is available in three arch heights with additional full length Neoprene covers and is made from durable Polypropylene.

Independent research concluded that; ***"There is no difference between custom-made foot orthoses and Interpod pre-fabricated foot orthoses for patient comfort and fit to footwear."***

Features

- Adjustable full length Neoprene covers
- Rear Foot Wedge
- Cuboid Notch
- Plantar Fascial Groove
- Shank Independent

Advantages of Polypropylene

- Very easy to grind & adjust
- Easy to attach additions with contact glue
- Heat mouldable
- Extreme durability
- Shank independent
- Various cover options can be adhered to shell
- Flexible shell provides comfort and shock attenuation
- Thin, light and slim fit for comfort in all shoes

The Interpod Flex orthotic is the preferred choice when a durable long-term treatment option is required.

Soft Polyurethane

Soft Full Length 3 arch heights

Our Soft range of orthoses is made from Polyurethane which is 50% more shock absorbing than EVA. Full-length Soft orthoses are available in three arch heights – low, moderate and high. They are also available in ¾ and children's sizes.

Applications

Patients with reduced fibro-fatty padding under the metatarsals

Patients seeking extra support with added shock absorption and comfort

Features

Shock absorbing polyurethane

Rear Foot Wedge

Cuboid Notch

Plantar Fascial Groove

Moisture diffusion

Advantages of Polyurethane

Superior Shock absorbing capacity

Full length provides excellent forefoot padding

Low compression adds to shock absorbing durability

Soft ¾ Length

Soft Slim Tech

Our Soft orthotic range is the orthotic of choice for patients requiring superior shock absorption, comfort and cushioning. It is suitable for a range of clients requiring support and improved shock absorption - athletes, hikers, children or the elderly.

Diabetic Orthotic Medical Grade PORON® 96

Why prescribe an Interpod Soft Diabetic orthotic?

3mm thick Open Cell Urethane - PORON® 96 - has been proven to significantly reduce vertical pressure and sets a new level of advanced underfoot comfort technology

The diabetic orthotic gains its advantage over other foot orthoses due to the superior 6⁰ rear foot and mid foot support, offloading weight from the heel and forefoot

The polyurethane base is a proven superior shock absorbing material capable of reducing and transferring unwanted pressure from prominent bony structures

Features

- Shock absorbing Polyurethane base
- Rear Foot Wedge
- Cuboid Notch
- Plantar Fascial Groove

A comprehensive report on Interpod Diabetic Orthoses was completed in The Diabetic Foot Journal Vol 10 No 3 2007. This report outlines how insoles are commonly prescribed to offload the mechanical stress transmitted to the plantar tissues of the foot. Traditionally, the custom-made total contact insole (TCI) is favoured over its prefabricated counterpart. The introduction of a new prefabricated diabetic insole (Interpod Pty Ltd) designed to modify foot biomechanics may offer an instant, low-cost, clinically effective alternative.

For full report details go to www.interpod.com.au

Interpod Size Chart

Adult size chart

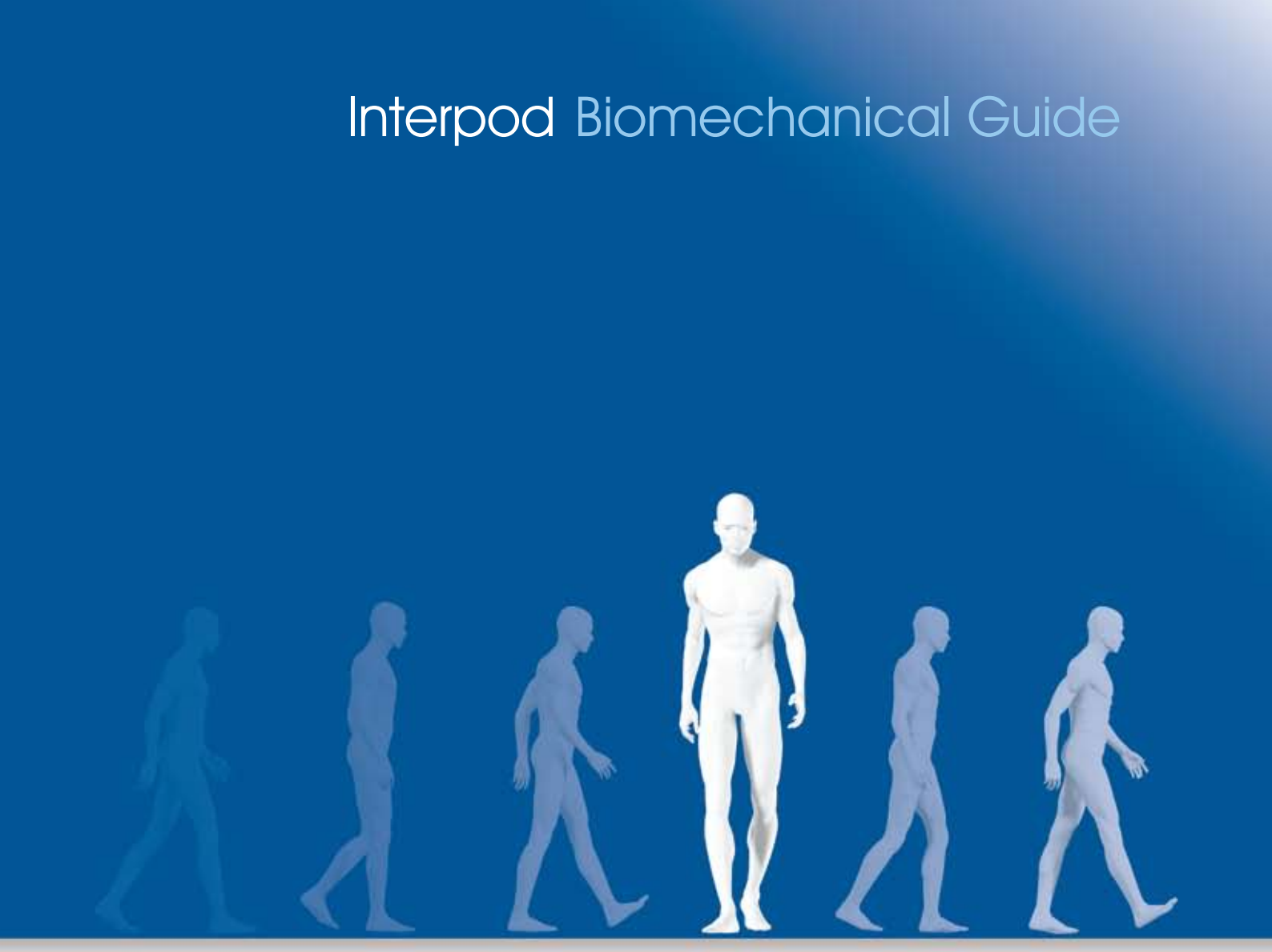
Interpod	Women			Men		
	UK	Europe	USA/AUS	UK	Europe	USA/AUS
XS	2-3	35-36	4-5	2-3	35-36	3-4
S	3-4	37-38	5-6	3-4	37-38	4-5
M	5-6	39-40	7-8	5-6	39-40	6-7
L	6-7	41-42	9-10	7-8	41-42	8-9
XL	9-11	43-44	11-12	9-10	43-44	10-11
XXL	11-12	45-48	12-13	11-12	45-48	12-13

Children's size chart

Interpod	Children's		
	UK	Europe	USA/AUS
K-XS	9-10	27-28	10-11
K-S	10-12	29-30	11-12
K-M	12-1	31-32	13-2
K-L	1-2	33-34	2-3

Interpod Pty Ltd. PO Box 500, Brighton, VIC 3186 Australia.
Phone: +61 3 9591 9600 Fax: +61 3 8677 3318
email: info@interpod.com.au **www.interpod.com.au**

Interpod Biomechanical Guide



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Interpod Biomechanical examinations to aid with orthotic prescription

The following biomechanical tests will help practitioners maximise patient outcomes.

Jack's Test - Hubsher Manoeuvre

The Hubscher Manoeuvre, or Jack's Test is a method of evaluating the flexibility of a pes cavus. It is also used to determine the timing and force needed to initiate Windlass.

Jack's Test

The test is performed with the patient weight bearing while the clinician dorsiflexes the hallux and watches for the formation of an arch

A positive result - arch formation - results from the flatfoot being flexible

A negative result - lack of arch formation - results from the flatfoot being rigid

The clinician should also note how soon after dorsiflexion of the Hallux the arch forms and the tibia externally rotates. If arch formation is delayed this implies an inefficient Windlass system

Orthotic Adjustment

If the test shows delayed timing, add padding under the Hallux and/or use a heel raise

If the test shows high force for flexion of the Hallux, then use a 1st Ray Cut Out

Subtalar Joint Location Test

The Subtalar joint axis position can vary between individuals. The location of the Subtalar Joint Axis determines the amount of force necessary to invert the foot.

The Subtalar Joint Axis Location Test

With the patient in a prone position, the leg is rotated so that the foot is vertical

Pressure is put on the plantar surface of the calcaneus to invert and evert the foot along a medial/lateral line near the calcaneous

The point at which the foot does not invert or evert is considered to be the location of the STJ axis

This process is repeated along the foot to obtain several points so a line can be drawn on the plantar aspect of the foot, representing the axis

The location of the axis influences the results of the Supination Test

Interpod Biomechanical examinations to aid with orthotic prescription ...cont

The following biomechanical tests will help practitioners maximise patient outcomes.

Supination Resistance Test

This test assists to determine the amount of support required by an orthotic. The measurement is subjective and assigned an arbitrary score - high, moderate or low. Generally, the higher the force necessary to invert the foot (high Supination Resistance Test), the greater the amount of rearfoot wedging and medial arch height required. This is a subjective test, which requires practice to gain experience for the different levels of force needed to supinate a foot.

The Supination Resistance Test

The patient is asked to stand in their normal angle and base of gait, two fingers are placed under the talonavicular joint and the amount of force that is needed to supinate the foot is estimated.

Orthotic Implications

A high supination resistance score indicates the use of a HIGH arch orthotic

A moderate supination resistance score indicates the use of a MODERATE arch orthotic

A low supination resistance score indicates the use of a LOW arch orthotic

Forefoot Stability Test

The Forefoot Stability Test is used in context with other biomechanical events occurring within the rearfoot and forefoot. These results relate to the efficiency of propulsion as determined by theories like the High Gear and Low Gear Concept, or the timing of the Windlass onset (delayed or immediate). The results are then used to assist in the modification of an orthotic - using additions such as forefoot varus or valgus posts to reduce the tendency (based on Bojsen- Mollors theory) to use low gear axis during propulsion.

The Forefoot Stability Test

The patient stands in normal base of gait and then rises up on to their toes

From the front, observe the initial direction of movement of the dorsal midfoot area

As the patient rises the dorsal midfoot either moves medially, straight up or laterally

Straight up movement is considered 'normal'

Orthotic Implications

If the test shows lateral movement, then a lateral bar addition and/or 1st Ray Cut Out can be added

If test shows medial movement, then a forefoot varus post can be added

ROM of the Ankle Joint

The patient stands facing a wall and dorsiflexes the ankle of their ipsilateral leg while flexing the knee until they cannot dorsiflex further without lifting the heel from the ground

Subtalar joint position is controlled by maintaining the centre of the heel - position the toe and knee in the same sagittal plane by use of reference lines on the ground and wall

The patient progressively adjusts the distance of their foot from the wall so that their knee contacts the wall at the point of maximum ankle joint dorsiflexion

At this point the horizontal distance from the end of the hallux to the wall is measured. The normal mean value is ~130mm (for an adult of average height).

An alternative is to place a gravity inclinometer along the anterior tibial border and measure the angle the tibia makes from vertical. This technique is not affected by the height of the individual. The normal mean value is ~45 degrees.

Restricted ROM of the ankle has been associated with a number of lower limb injuries.

Orthotic Implications

A lack of ROM in the ankle joint often means that orthotic therapy will not be tolerated by the patient. This is because pronation consists of dorsiflexion.

If orthoses are given to the patient they generally need to be a low arch.

Navicular Drift and Drop Test

Navicular Drift and Drop Test provides an indication as to whether a patient can tolerate orthotic treatment. If the amount of movement in the sagittal plane is greater than that in the transverse plane the patient will tolerate orthotic therapy.

Navicular Drop - Sagittal

With the patient in a normal base of gait, place the foot into subtalar joint neutral position

The plantar excursion of the navicular in the sagittal plane is measured as the foot moves into resting position (10 mm or less considered normal -Brody, 1982)

Navicular Drift - Transverse

With the patient in normal base of gait, place the foot into subtalar joint neutral position

The medial excursion of navicular in the sagittal plane is measured as the foot moves into resting position

Orthotic Implications

If the majority of movement is in the sagittal plane, then orthoses can be prescribed - therapy is generally tolerated.

If the majority of movement is in the transverse plane, then orthoses are seldom tolerated. If orthoses are given, they would have a low arch and a high heel cup to prevent excessive lateral movement.

The purpose of a biomechanical examination is to determine if patient symptoms are mechanical in nature or whether they are caused by other factors such as illness.

The results of a biomechanical exam can be used to highlight the pathomechanics of patient symptoms. In addition, they can be used to determine the most appropriate orthotic and possible orthotic additions if required.

Orthotic Prescription Method

When patient symptoms are biomechanical in nature, the **Interpod 4 Step Orthotic Prescription Guide** can be utilised to prescribe the most suitable orthotic.

Step 1 Complete a comprehensive biomechanical exam to determine:

Orthotic material type – Modular/Flex/Soft

Level of control (arch height – low/moderate/high)

Orthotic features, additions and adjustments (refer to the back page)

Step 2 Consider patient shoe type(s)

Dress shoes and tight fitting shoes have limited fitting options

Certain patients may require more than one pair of orthoses for particular footwear

Step 3 Check orthotic effectiveness

Re-check with tests: Lunge test, Jack's test

Find full test explanations at www.interpod.com.au

Step 4 Patient advice

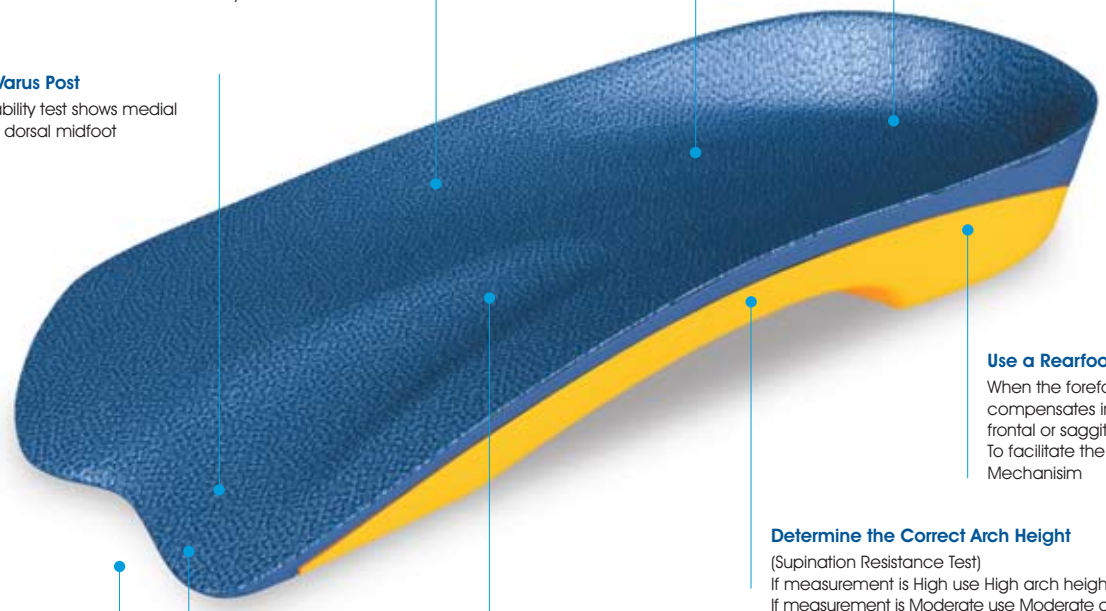
Footwear

Wearing-in and adjusting

Review

A copy of the Interpod DVD (available from distributors) and prescription form can be downloaded from our website **www.interpod.com.au**

Customised Prescription and Orthotic additions Guide



Choose either Flex shell, EVA or Soft base

Use Modular or Flex if the test shows normal forefoot mobility
Use Soft if the test shows a stiff forefoot

Use a Heel Raise

If the video analysis shows high gear propulsion with asymmetrical heel off
If Jack's Test shows delayed timing
If a functional forefoot drop exists

Use a Lateral Bar

When the video analysis shows Low Gear Propulsion
Fore foot stability test shows lateral

Use a Forefoot Varus Post

When forefoot stability test shows medial movement in the dorsal midfoot

Use a Rearfoot Wedge

When the forefoot compensates in the frontal or saggital plane
To facilitate the Windlass Mechanisim

Determine the Correct Arch Height

(Supination Resistance Test)
If measurement is High use High arch height
If measurement is Moderate use Moderate arch height
If measurement is Low use Low arch height

Use a Plantar Facial Groove

When the plantar fascia is prominent
To facilitate the Windlass Mechanisim

Add Padding to the Hallux

If Jack's test shows delayed timing

Use a 1st Ray Cut Out

When the video analysis shows Low Gear Propulsion
Forefoot stability test shows lateral movement
Jack's Test shows high force
Functional Hallux limitus exists
Forefoot Supinatus exists

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Interpod Pty Ltd. PO Box 500, Brighton, VIC 3186 Australia.
Phone: +61 3 9591 9600 Fax: +61 3 8677 3318
email: info@interpod.com.au **www.interpod.com.au**