Foam Impression Box Guide

Step-by-step technique for capturing foam box impressions for bespoke orthotic manufacture

High-quality foam impressions are an excellent and accessible way to capture foot shape and position for bespoke orthotic manufacture — provided the technique is consistent and well documented. This guide sets out a practical workflow for producing impressions that are accurate, repeatable, and interpretable alongside your prescription.

1. Prepare the Environment and Materials

Area	Preparation steps
Set up the space	Stable chair or plinth, hips and knees at approximately 90 degrees. Foam boxes in front of the patient. Pen, prescription form, and tape measure to hand.
Prepare the materials	Boxes in good condition — no dents or prior impressions. Foam evenly seated and free from cracks. Label each box with patient/clinic identifier and Left or Right before you start.
Prepare the patient	Shoes and socks removed, trousers rolled above ankle. Skin clean and dry — remove excess cream or lotion. Briefly explain the process: painless, you will guide the position, they should relax and not push down themselves.

2. Choose and Document the Capture Position

Position	Description	Notes
Standard — lightly loaded seated	Hips and knees at approximately 90 degrees, foam box placed under the knee of the foot being cast	Recommended for most cases — you control load rather than asking the patient to step down
Non-weight-bearing	Patient supine or seated with lower leg supported and foot free	Use where maximum control of posture is needed — marked deformity, post-surgical, or paediatric

Record on your prescription form: position used, e.g. 'seated, lightly loaded', and any deliberate corrections applied, e.g. 'hindfoot guided towards neutral to tolerance'.

3. Position the Foot Over the Box

Step	Guidance
Box placement	Centre of heel to land in the rear third of the box, with enough length for all toes in the front
Foot alignment	Hold heel with one hand and forefoot with the other. Keep the foot roughly straight relative to the box unless specific rotation is intended.
Reference posture	Guide towards subtalar-neutral-inspired posture or your chosen reference position, without forcing extremes. Ask the patient to relax the leg and avoid actively pushing down.

4. Create the Impression

Technique step	Detail
Heel contact	Bring the heel into contact with the foam and press vertically through the heel using your hand and/or controlled pressure through the knee
Forefoot and toes	Once heel is seated, guide the forefoot so metatarsal heads and toes sink into the foam. Hold for a few seconds, then lift straight up.
Aim for	Heel, midfoot, and forefoot clearly imprinted. Toes fully captured and separated, not overlapping. Toe nails not cutting through the foam surface.
Avoid	Excessive rocking or twisting while foot is in the foam. Patient actively stamping or pushing — this can distort the impression and drive the heel too deep.

5. Check Impression Quality

Area	What to look for
Heel	Clear, centred, with a defined cup region. No tearing or distortion.
Arch	Continuous medial arch contour. No obvious steps or sharp edges suggesting a sudden shift during capture.
Forefoot and toes	All metatarsal heads and toes clearly represented. Not truncated at the edge of the box.
Depth	Foot sufficiently deep that contours are clear, but not so deep that heel or toes are close to the bottom of the foam.

Area	What to look for
If distorted	Repeat the capture in a new box. A twisted, too-shallow, or multi-heel-outline impression should not be sent — it will not produce a clinically useful device.

6. Label, Secure, and Send

Task	Guidance
Label each box	Clinic ID and patient code (avoid full names in transit), side (Left/Right), date of impression, any special notes e.g. 'high cavus' or 'significant valgus, partial correction only'
Clinical documentation	Record in notes and on prescription form: position, reference posture used, any limitations (e.g. patient unable to tolerate full correction), footwear the orthoses must fit
Packing and transit	Replace lids securely. Pack in a sturdy outer carton with padding to prevent crushing. Include prescription form or cross-reference clearly with electronic submission. Ensure boxes are not stacked directly on the foam impressions.

7. Link Impressions to Your Clinical Reasoning

A high-quality impression is only useful when paired with clear clinical context. With every pair of boxes, please include:

Field	What to include
Diagnosis	Primary condition and main pain area(s)
Key structural and functional findings	Rearfoot/forefoot alignment, ROM limits, hypermobility, any significant structural considerations
Activity and footwear constraints	Activity level and specific footwear the devices must fit, e.g. safety boots, walking shoes, football boots, dress shoes
Primary treatment goals	E.g. reduce morning heel pain, support tibialis posterior for 6–8 km walking, improve lateral stability for 5-a-side — so the device reflects your clinical reasoning, not just the foot shape

Questions about technique or impression quality? Contact us before sending — we are happy to review photos or discuss specific cases. info@mmpodiatry.com | www.mmpodiatry.com