

Orthotic Prescription Workflow

A Step-by-Step Clinical Decision Framework

Orthotic prescription is a clinical reasoning process, not a formula. This reference provides a structured step-by-step framework — from initial assessment findings through to final prescription decisions — to support consistent, evidence-informed prescribing. It is particularly useful for consolidating assessment data into a coherent prescription when multiple findings are present.

1 The 5-Stage Prescription Framework

Clinical Guidance

Use this framework sequentially. Each stage informs the next — do not skip to prescription without completing assessment and reasoning stages.

Stage	Action	Key Questions to Answer
1	Identify the primary complaint and activity demands	What is the patient's main symptom? What activities are affected? What are their footwear constraints and lifestyle demands?
2	Perform and record static assessment	What are the RCSP, NCSP, forefoot relationship, ADF, FPI-6, supination resistance, and LLD findings? (See M7 — Static Clinical Measurements)
3	Perform and record dynamic assessment	What gait deviations are present? Is there abductory twist, early heel rise, hip drop, forefoot abduction? (See M9 — Gait Analysis Reference)
4	Identify the primary biomechanical driver	What is the single most important mechanical factor contributing to the patient's symptoms? (e.g. excessive rearfoot pronation; equinus; lateral overload)
5	Build the prescription from driver → modification → material	Which modifications address the primary driver? What shell and top cover best match the clinical demands? Are there secondary drivers requiring additional modifications?

2 Identifying the Primary Biomechanical Driver

Aspect	Detail
Why identify ONE primary driver	Trying to address every finding simultaneously produces a complex, over-modified orthosis that is difficult to troubleshoot and may have competing mechanical effects. Start with the dominant driver; add secondary modifications conservatively.
Pronation-driven presentations	RCSP $>4^{\circ}$ eversion; FPI $\geq +7$; abductory twist on gait; medial heel wear pattern; navicular drop on single-leg stance. → Primary action: rearfoot medial control (posting/skive), arch support.
Supination/cavus-driven	RCSP inverted; FPI ≤ 0 ; lateral heel/forefoot wear; rigid high arch; peroneal loading. → Primary action: lateral accommodation, cushioning, lateral wedging.
Equinus-driven	ADF $<10^{\circ}$ knee straight; early heel rise on gait; forefoot overloading; metatarsalgia with tight calf. → Primary action: heel raise; address soft tissue; forefoot offloading.
Forefoot-driven (structural)	Forefoot varus/valgus deformity on NWB assessment; forefoot compensation pattern on gait. → Primary action: forefoot posting to accommodate deformity.
Load/activity-driven	Normal biomechanics but high training load, inadequate cushioning, or sport-specific demands. → Primary action: material and top cover selection; met dome; shock absorption.

3 Prescription Decision Table

Use the primary driver identified in Stage 4 to enter this table. Then layer secondary modifications as needed — but always assess the cumulative mechanical effect. See M14 (Combining Modifications) for guidance on combinations.

Primary Driver	Shell Choice	Key Rearfoot Modification	Key Forefoot Modification	Top Cover Priority
Excessive rearfoot pronation	Semi-rigid polypropylene	Medial rearfoot post (2–4°) ± medial heel skive	Forefoot varus post if forefoot varus present	PPT or Poron full/sulcus length
Severe hypermobile flat foot (PTTD)	Rigid polypropylene	Medial heel skive + deep heel cup + medial flange	Forefoot valgus post	PPT or Poron full length
Pes cavus / rigid supinated foot	Semi-rigid to soft EVA	Lateral rearfoot post ± lateral heel skive	Forefoot valgus post	Poron full length + Plastazote top
Equinus (gastrocnemius)	Semi-rigid	Heel raise 6–8mm (bilateral)	Met dome if forefoot overloaded	Poron heel cushion + PPT forefoot

Primary Driver	Shell Choice	Key Rearfoot Modification	Key Forefoot Modification	Top Cover Priority
Functional hallux limitus	Semi-rigid	Medial rearfoot post if pronated	Reverse Morton's / kinetic wedge	Standard PPT or Poron sulcus
Hallux rigidus (structural)	Semi-rigid to rigid	As per rearfoot assessment	Morton's extension (full 1st ray)	Standard sulcus or full length
Generalised metatarsalgia	Semi-rigid	As per rearfoot findings	Met dome proximal to heads + Poron topping	Poron met pad + PPT forefoot
Insertional Achilles tendinopathy	Semi-rigid	Heel raise 8–12mm (bilateral)	None unless forefoot deformity	Minimal — avoid posterior heel cup irritation
Leg length discrepancy	Semi-rigid	Heel raise to short limb (50–75% LLD)	As per forefoot findings	Standard
Paediatric flat foot (symptomatic)	Co-polymer / Subortholen	Conservative medial post $\leq 4^\circ$	Light forefoot post if indicated	PPT or EVA full length

4 Common Prescribing Errors

OVER-CORRECTING

Prescribing the maximum correction because findings are significant. Start at 50–75% of the measured deformity and titrate at review. Over-correction causes new symptoms and poor compliance.

TREATING THE DIAGNOSIS, NOT THE BIOMECHANICS

The same diagnosis (e.g. plantar fasciitis) may require different prescriptions depending on the individual biomechanical driver. Assessment findings should always direct the prescription.

IGNORING FOOTWEAR

An orthosis that cannot fit the patient's usual footwear will not be worn. Assess footwear before prescribing — shell type, length, and top cover must all be footwear-compatible.

ADDRESSING EVERY FINDING

A prescription with 6 modifications is rarely better than one with 2–3 targeted ones. Each addition changes the overall mechanical environment — keep it purposeful.

NO BASELINE OUTCOME MEASURE

Without a pre-prescription baseline (e.g. pain score, functional scale), you cannot objectively assess whether the orthosis is working at review.

5 Quick Prescription Checklist

Pre-Prescription Checklist — confirm before finalising

Work through each item below before signing off on a prescription. Complete all fields at assessment to ensure nothing is missed.

Item	Confirmed
Primary biomechanical driver identified from assessment findings	
Footwear assessed and compatible with prescription	
Shell type matches required control level and footwear	
Posting/skive direction confirmed against RCSP and FPI findings	
Forefoot relationship assessed and accommodated if required	
ADF assessed — heel raise included if equinus present	
Supination resistance noted — control level proportionate	
LLD checked — heel raise to short limb if $\geq 5\text{mm}$	
Top cover material matched to clinical needs (cushioning vs control vs diabetes)	
Patient expectations discussed and realistic outcome communicated	
Baseline outcome measure recorded	

The best orthotic prescription is the one that is worn. A well-reasoned, footwear-compatible, comfortably fitted orthosis with modest corrections will always outperform a technically 'perfect' prescription the patient leaves in a drawer.