Intrinsic vs Extrinsic Posting

Mechanical Differences, Clinical Applications and Prescription Decisions

Posting refers to the addition of wedging material to alter the angle of the orthotic's contact surface relative to the ground. Posts can be built into the shell (intrinsic) or added beneath it (extrinsic). The distinction has significant implications for mechanical effect, shoe fit, durability, and clinical outcomes. Understanding when to use each — and why — is fundamental to accurate prescribing.

1 Definitions

Term	Definition
Intrinsic Post	Wedging incorporated into the shell of the orthotic itself during fabrication — typically achieved by grinding or casting the shell at an angle. The orthotic surface angle is altered without adding bulk beneath the device.
Extrinsic Post	A separate wedge of material (EVA, polypropylene, rubber) attached to the underside (ground surface) of the orthotic shell after fabrication. Adds a physically elevated component beneath the shell.
Rearfoot Post	Post applied to the heel section of the orthotic — influences calcaneal position and STJ moments at heel contact and midstance.
Forefoot Post	Post applied to the forefoot section — influences midtarsal joint position and loading in late stance and propulsion.
Full-length Post	Post that extends the entire length of the orthotic — combines rearfoot and forefoot effects.

2 Intrinsic vs Extrinsic: Mechanical Comparison

Feature	Intrinsic Post	Extrinsic Post
Mechanism of action	Shell surface angled during fabrication — contact surface built into device geometry	Additional wedge material attached beneath shell — physical elevation of one side
Bulk / Profile	Low profile — no added thickness to underside	Adds thickness to underside — increases overall device height
Shoe accommodation	Better tolerated in low-profile and slim footwear	Requires additional footwear depth — may not fit all shoes

Mechanical precision	Highly precise — angle fixed in fabrication; cannot be modified post-fabrication	Adjustable — extrinsic post can be replaced, adjusted, or removed after issue
Durability	High — integral to shell; does not delaminate	Moderate — adhesive bond may fail with prolonged use; may compress
Cost	Higher — requires additional fabrication time	Lower — post material is inexpensive; lab time minimal
Adjustability	None post-fabrication without grinding/re-casting	High — can be replaced or altered at follow-up
Ground contact feel	Shell contacts ground directly — may be noisier on some surfaces	Post material (EVA/rubber) provides some additional cushioning and grip
Maximum post angle	Limited by shell geometry — typically ≤6–8°	Can achieve higher angles — up to 10–15° depending on clinical need
Best use case	Final/definitive prescription when assessment findings are well established and post angle is confirmed	Trialling post angles; adjustable prescriptions; budget; initial orthotic devices

3 Rearfoot Posting: Clinical Guide

Post Direction	Mechanical Effect	Indicated For	Typical Angle Range
Rearfoot Varus (Medial post)	Supinatory STJ moment; resists calcaneal eversion	Excessive rearfoot pronation, PTTD, MTSS, plantar fasciitis in pronated foot	2–6° typical; up to 8° in severe cases
Rearfoot Valgus (Lateral post)	Pronatory STJ moment; resists calcaneal inversion	Pes cavus, lateral instability, peroneal tendinopathy	2–6°
Neutral rearfoot post	Stabilises calcaneus in neutral without medial/lateral correction	When forefoot correction alone is needed; neutral STJ position confirmed	0° — platform only

4 Forefoot Posting: Clinical Guide

Post Direction	Mechanical Effect	Indicated For	Typical Angle Range
Forefoot Varus (Medial post)	Accommodates forefoot varus deformity; reduces compensatory STJ pronation in late stance	Forefoot varus deformity, hallux valgus, FHL (adjunct), 1st ray overload	2–6° depending on deformity magnitude
Forefoot Valgus (Lateral post)	Accommodates forefoot valgus; reduces compensatory STJ supination	Forefoot valgus deformity, lateral metatarsalgia, peroneal loading, pes cavus	2–6°

Extrinsic full-forefoot	Elevates entire forefoot relative to rearfoot	Equinus; ankle dorsiflexion restriction; combined forefoot posting requirement	As clinically indicated

5 Posting Angle: Practical Guidance

STARTING CONSERVATIVELY

Begin with the minimum effective angle — typically 2–4°. Over-posting is a common prescribing error and can transfer load and symptoms to other structures. Reassess at 4–6 weeks and adjust if needed.

COMBINING REARFOOT AND FOREFOOT POSTS

When both are prescribed, consider the cumulative effect carefully. A medial rearfoot post combined with a forefoot varus post both add supinatory moments — the combined effect can be excessive in a moderately pronated foot. Start with one and add the second at review if needed.

INTRINSIC FOR DEFINITIVE / EXTRINSIC FOR TRIALLING

Use extrinsic posting when the optimal angle is uncertain or when follow-up adjustment is anticipated. Once the prescription is confirmed and stable, intrinsic posting in a definitive device is more durable and lower profile.

Posting angle should be determined by clinical measurement — particularly the forefoot-to-rearfoot relationship in non-weightbearing and the degree of compensatory STJ pronation/supination. Post to the deformity, not beyond it — the goal is accommodation and offloading, not overcorrection.