

Therapeutic Casting Problem Solving Guide

| Finding | Notes | Possible Indications |
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| Dorsiflexion Stress Test <ul style="list-style-type: none"> Where does a general DF stress go (on what axis/what joints/tissues) if no corrective force is applied? What is the end feel? | | <ul style="list-style-type: none"> Indicates areas of compromised stability/relative flexibility that may need manual stabilization during cast application in order to direct forces to TC joint |
| TC Axis Test <ul style="list-style-type: none"> Can PROM be performed at the TC joint? (try moving into more PF before saying no) | | <ul style="list-style-type: none"> If no, need to cast toward the transverse plane first, before applying DF stretch Stretch in the restricted direction— inversion/ eversion at the hindfoot |
| <ul style="list-style-type: none"> What is the axis of true TC DF? | | <ul style="list-style-type: none"> Align therapist's body (pelvis, femurs, forearms) so that DF forces are stretching perpendicular to this axis *rotating out of the sagittal plane as needed* |
| <ul style="list-style-type: none"> What structures are limiting further motion? What is the end feel of those structures? | | <ul style="list-style-type: none"> Perform preparatory treatment to fascia, soft tissue, muscle, and joint structures that are identified as the structures limiting movement Direct cast forces at the limiting structures Orthopedic referral as needed |
| Structural findings <ul style="list-style-type: none"> What structural (bony) findings are present (leg, hindfoot, midfoot, forefoot) | | <ul style="list-style-type: none"> Align therapist's body so that PROM occurs in the TC joint Accommodate for coronal plane findings to align for weightbearing Use landmarks proximal to involved area to adjust alignment Orthopedic referral as needed |
| Hindfoot diagnosis group | | |
| <ul style="list-style-type: none"> Neutral Hindfoot | | <ul style="list-style-type: none"> Consider prone casting to increase mechanical advantage of stretch and decrease volitional resistance |
| <ul style="list-style-type: none"> Pronated Hindfoot | | <ul style="list-style-type: none"> Check closely for coronal and transverse plane structural findings Initial casts may need to address transverse plane restrictions Protect fragile medial structures Inversion wrap Inversion heel lock |
| <ul style="list-style-type: none"> Supinated Hindfoot | | <ul style="list-style-type: none"> Manual therapy to release medial structures Eversion wrap Eversion heel lock |

| Gait Diagnosis | | |
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| <ul style="list-style-type: none"> Shank angle within functional limits (toe walking) | | <ul style="list-style-type: none"> Evaluate closely for the driver of the restriction to decrease likelihood of recurrence Goals of posting: hindfoot weightbearing, heel contact at IC, increase step length, time in TS Prescribed shank angle may be in 3-12 degree range |
| <ul style="list-style-type: none"> Excessively inclined shank (crouch) | | <ul style="list-style-type: none"> Goals of posting: hindfoot weightbearing, heel contact at IC, provide a base for the thigh to move from reclined to incline, bring weight line anterior to knee, posterior to hip at mid/quiet stance Prescribed shank angle may be 12-18 degrees PT in casts highly recommended |
| <ul style="list-style-type: none"> Excessively reclined shank (knee hyperextension) | | <ul style="list-style-type: none"> Goals of posting: flexion moment at loading response, weight line posterior to the hip in mid/quiet stance Prescribed shank angle may be 5-12 degrees |
| <ul style="list-style-type: none"> Primary knee extensor insufficiency | | <ul style="list-style-type: none"> Weight line is aligned anterior to knee to maintain knee stability. Goal of posting is a stable surface, not to alter the patient's self-selected weight line Prescribed shank angle may be 0 to -5 degrees (reclined) Shank angle should emulate patient's typical gait pattern Do not post with an anterior shank angle |
| <ul style="list-style-type: none"> Non weightbearing | | <ul style="list-style-type: none"> No post |