

Venous Thromboembolism Risk and Thromboprophylaxis in Diabetes Foot Total Contact Casting: Consensus Recommendations from the Consensus on Assessment and Safety in Total Contact Casting and Venous Thromboembolism in the Diabetes Foot (CAST-VTE-DF) Expert Panel

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BACKGROUND

- > Total contact casting (TCC) is the gold standard non-removable, knee-high cast for offloading diabetes foot ulceration (DFU) and Charcot Neuroarthropathy (CN).
- > Post-trauma/fracture lower-limb casts carry 9-40% deep vein thrombosis (DVT) risk; routine thromboprophylaxis is established practice.
- > Venous thromboembolism (VTE) risk in diabetes foot disease (DFD)-TCC is poorly characterised.
- > No international guideline (IWGDF, NICE, EWMA, ADA) addresses this population.

METHODS

- > CAST-VTE-DF Expert Panel convened: vascular medicine, haematology, podiatry, orthopaedics, diabetology and orthotics.
- > Published evidence was synthesised and discussed to develop pragmatic, consensus-based recommendations.

KEY EVIDENCE: VTE IN DIABETIC FOOT TCC

0 - 0.7%

Symptomatic VTE in TCC for DFD (primary studies)

9 - 40%

DVT risk in post-trauma/fracture lower-limb casts

950+

Patients across 6 primary studies and 2 systematic reviews

Study (Year)	N	Design	VTE Rate (TCC)
Kozhikunnath et al. 2024	549	Retrospective	0.36%
Tonge et al. 2019	143 episodes	Retrospective	0.7%
Doherty et al. 2022	53 episodes	Retrospective	0%
Ha Van et al. 2003	42 patients	Prospective	0%
Tsai et al. 2025 (review)	178 episodes	Systematic review	0.74%



CONCLUSIONS

- > Symptomatic VTE in ambulatory TCC for DFD is low (0-0.7%), comparable to background ambulatory rates.
- > Evidence is limited and largely retrospective; silent DVT is likely under-detected.
- > No validated VTE risk stratification tool exists for the DFD-TCC population.

EXPERT PANEL RECOMMENDATIONS (CAST-VTE-DF)

Recommendation 1: DFU / CN
Routine thromboprophylaxis for neuropathic DFU or CN in ambulatory care, absent additional **major VTE risk factors** is not recommended

Recommendation 2: Routine pharmacological thromboprophylaxis is not recommended solely on the basis of prolonged casting duration, in the absence of additional major risk factors for VTE.

Recommendation 3: Post-surgical TCC
Post-surgical or trauma TCC: follow established orthopaedic guidelines (e.g. BOFAS or national equivalent).

Recommendation 4: High-risk Groups
Consider selective prophylaxis: prior VTE, active cancer, pregnancy, bilateral TCC with restricted mobility. Assess bleeding risk.

General Recommendation: All Patients
Individualised VTE/bleeding risk assessment at TCC initiation. Patient education on DVT/primary embolism (PE) signs. Mobility and hydration advice.