

Plantar flexion and flexion synergy in brain death



An 18-year-old man with anaplastic oligoastrocytoma was pronounced brain dead based on absent confounding factors, absent brainstem reflexes, apnea with CO₂ challenge, and isoelectric EEG. Plantar flexion, triple flexion response, and undulation toes were noted bilaterally and remained for 32 hours during organ procurement.

Although in our experience toes and legs in patients declared brain dead are mostly immobile after noxious stimulation or plantar stimulation, one study noted retained flexion reflexes in more than 50% of patients.¹ Corticoreticular disconnection may leave disorganized fragments of unisegmental (undulating toes and plantar flexion²) or polysegmental (triple flexion response) spinal reflexes.

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Supplemental data at
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