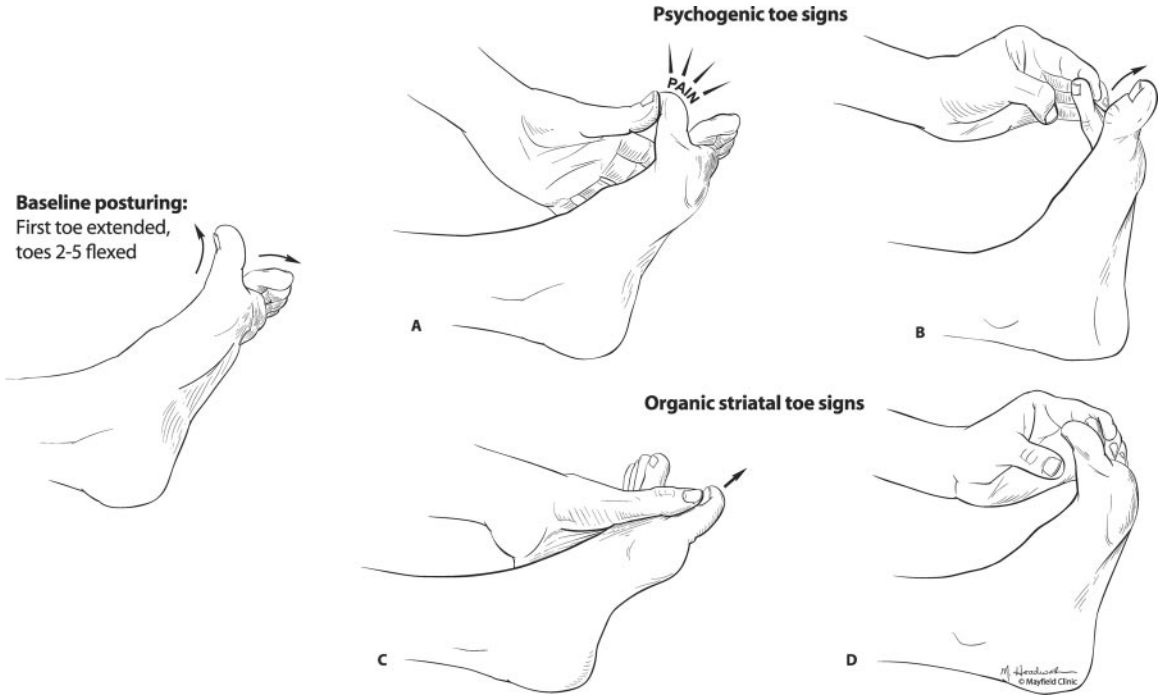
The psychogenic toe signs

Figure An extended first toe can be due to psychogenic or organic (e.g., striatal toe) dystonia



Passive plantar flexion elicits pain and variable resistance (A). Forced dorsiflexion of the second–fifth toes yields spontaneous plantar flexion of the first toe (B). Conversely, in the case of organic striatal toe, there is no pain or resistance to passive plantar flexion (C) and forced dorsiflexion of the other toes does not alter the spontaneous toe extension (D). (Printed with permission from Mayfield Clinic.)

A 13-year-old boy presented with sudden-onset give-away weakness, nonanatomic sensory loss, and posturing of the right foot followed by episodic left leg tremor, relatively unchanged for 14 months prior to this evaluation. The right first toe was fixed in extension; the others in flexion. Although there was resistance to passive plantar flexion, such movement occurred spontaneously upon forced extension of the second–fifth toes (figure; video on the *Neurology*® Web site at www.neurology.org), unlike the behavior seen in organic striatal toe.[1] Fixed posturing and resistance to manipulation are features of psychogenic dystonia.[2] Foot flexion and inversion, without toe extension, appears to be the more common phenotype of psychogenic foot dystonia.

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1. Ashour R, Tintner R, Jankovic J. Striatal deformities of the hand and foot in Parkinson's disease. Lancet Neurol 2005;4:423–431.
2. Schrag A, Trimble M, Quinn N, Bhatia K. The syndrome of fixed dystonia: an evaluation of 103 patients. Brain 2004;127:2360–2372.