

Pyramidal sign

A pyramidal sign could be indicative of certain patterns or abnormalities in the pyramidal tracts of the brain. [Pyramidal tracts](#) are responsible for motor function, and abnormalities in these tracts can be associated with neurological conditions.

The [pyramidal signs](#) in the lower extremity can be divided into three groups: (1) Babinski's group characterized by dorsiflexion of the great toe, (2) pyramidal signs marked by plantar flexion of the toes (e.g. Rossolimo's sign), and (3) synkinetic movements such as Strümpell's phenomenon. Puusepp's sign described by the Estonian neurologist and neurosurgeon Ludvig Puusepp belongs to none of these three groups. Its elicitation does not differ from that of Babinski's sign. The response, however, is different and consists of a tonic slow abduction of the little toe. We showed its relevance based on clinical examination of six patients: four females aged 29, 50, 43, and 57 years and two males aged 42 and 49 years. The diagnoses were as follows: a new relapse of multiple sclerosis, a secondary progressive multiple sclerosis, a left middle cerebral artery stroke, lumbago resulting in L3-L4 fusion surgery, an amyotrophic lateral sclerosis, and a left intracerebral hemorrhage respectively. Puusepp's sign was the only electable pyramidal sign in all the patients but two. The 50-year-old female patient revealed on neurological examination Babinski's sign on the left side and Puusepp's sign on the right side. The testing of pyramidal signs in the 57-year-old woman displayed a bilateral Strümpell's sign and a left Puusepp's sign. These six cases showed that although rarely recognized in the clinical practice Puusepp's sign contributed to establishing the diagnosis of a central motor neuron involvement in the case of an absent Babinski's sign. Thus, its testing does not differ from that of Babinski's sign which requires only a little attention from the examiner but provides an important piece of clinical information ¹⁾.

¹⁾

Tacik P, Krasnianski M, Zierz S. Puusepp's sign—clinical significance of a forgotten pyramidal sign. Clin Neurol Neurosurg. 2009 Dec;111(10):919-21. doi: 10.1016/j.clineuro.2009.08.003. Epub 2009 Sep 9. PMID: 19744771.

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Last update: **2024/06/07 02:56**

