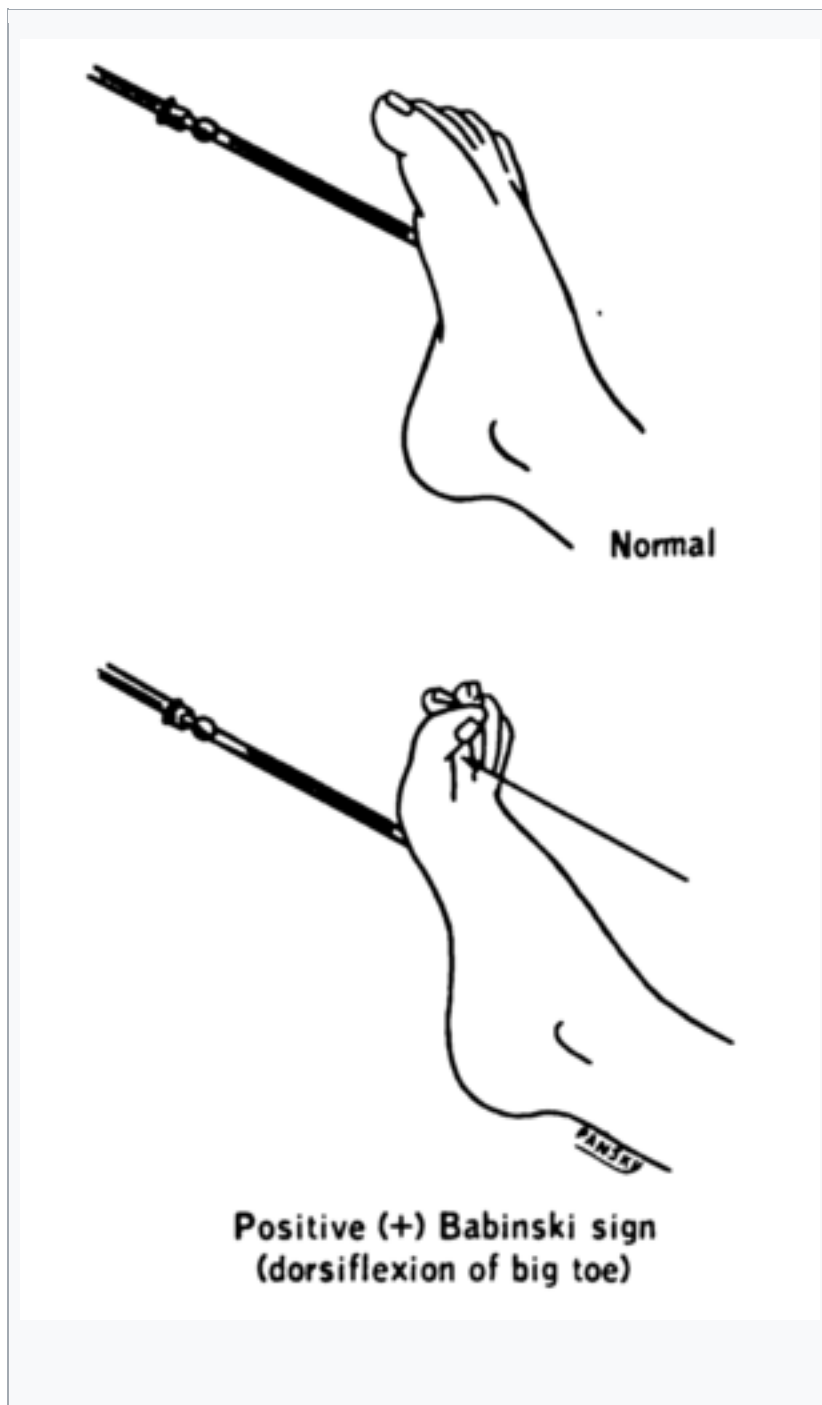


## Plantar Reflex/Babinski



The **plantar reflex** is elicited when the sole of the foot is stimulated with a blunt instrument. The presence of the Babinski component of the plantar reflex after the age of one to two years is a retained primitive reflex. If it is not integrated, it can compromise the development of crawling and our stability in standing. The lower body of the human being must assume the role of our stability; our sense of 'grounded-ness'. Our lower body 'stands up for' us, helps us 'takes a stance', to be our foundation, freeing the upper body for creativity, relationship skills, and exploration. When the lower body is not stable and integrated due to several factors, including a retained Babinski reflex, we might have a great deal of stress in the upper body, which tends to take over the defensive and stabilizing role of the lower body. Shoulders may become tight. The rib cage may be rigid, even barrel-like.

While any of the above issues can be attributed to a number of immature neurodevelopmental factors, a retained Babinski reflex can be a contributor.

The plantar reflex has two forms:

- 1.) In healthy development after age two, the stimulation of the foot should cause a flexion of the toes downward or curling in. This is called a plantar grasp reflex.
- 2.) If we stroke the foot and the toes extend up and out, this is the Babinski response and is unhealthy after the age of one to two years. This is what is called a 'retained Babinski reflex'.

Recognized signs of a retained Babinski reflex are:

- Toe walking
- Issues with proprioceptive and vestibular systems
- Muscles in the back of the legs are affected, altering gait
- Trouble with balance
- Gravitational insecurity
- Trouble with vestibular, visual, and sensory systems

Reflex integration programs use two kinds of activities to integrate this reflex. One is to brush along the line of the stimulation area – up the outside of the foot from the heel to the little toe and across the pad under the toes. The second intervention is to assign the client to pick up small items with their toes.

Once again, as we discuss these reflexes, we need to clarify that nature itself has designed a plan for the full integration of all reflexes without the need of what would seem like intelligent, but what are, in fact, artificial approaches. At any time in the course of an NDM program, it is not harmful and can be supportive to use these tools. However, the integration of these reflexes is a natural process when the child is given the opportunity, or in the case of an impaired central nervous system, strongly encouraged to go through the developmental sequence, which provides overlapping opportunities for reflex integration in the way that nature intended.

As with all reflexes, these are integrated as part of the developmental sequence. The activities we include in a program of neurodevelopmental movement assignments that can help this process include the **Toe Flicks**, which are one of the three **Infant Patterns**. The toe dig aspect of **Crawling**, itself, is an integrator of the Babinski reflexes. And when the toe dig is not available, the **Pre-Crawl Toe Pushes** that encourage toe dig are another facilitator of Babinski reflex integration.