

# Toe Walking in ASD/ADHD

## Information for Parents and school staff

**Possible causation:** The cause of Toe walking is not fully known; however, the following factors can influence its development or persistence based on the theory that the root could be from a sensory processing disorder:

- Impaired tactile or touch processing (atypical response to touch sensations on bottom of foot)—could have a low threshold for hypersensitivity indicating intolerance for touch sensation/input;
- Impaired joint pressure or proprioception (sensing the body's position in space and joint awareness)—processing or the body's awareness of position in space could have a high threshold, needing atypical or above average levels of sensory input;
- Delayed vestibular processing (maintaining balance)—could be linked with atypical postural control or instability of the body's posture system, and difficulty performing developmental tasks such as hopping on one foot, squatting, standing with feet on floor, alternating climbing or descending stairs;
- Impaired motor control (control of body movements, large and small)—could be impacting balance and developmental skill development;
- Limited, specific muscle length and joint flexibility of the leg and intrinsic foot Muscles—could enhance the degree of tightness of the downward position from the feet to the hips.

Another aspect to consider is the integration of primitive reflexes. Children with poor integration of primitive reflexes, especially the tonic labyrinthine reflex, can demonstrate toe walking as a sign.

The retention of reflexes can also indicate an immature or neurological system that is under stress. The stress can activate the sympathetic nervous system, making the child function in a “fight or flight” state. A primary sign of the fight or flight state of arousal is toe walking. Other signs of this heightened state of arousal are increased respiration, decreased attention, increased visual scanning, and agitation.

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## Sensory Strategy

Provide a **Sensory Strategy Plan** to apply appropriate pressure and touch stimulation to the balls of the feet to help the individual meet the need for sensory input, achieving improved tolerance for tactually stimulating and weight-bearing activities. This might be accomplished by sensory strategies such as massage, deep joint input into the toes, and ankles, and/or use of vibration.

Activities such as jumping on a mini-trampoline, hopping on two or one foot, sitting and bouncing on a ball

- Use a weighted belt to provide input from the hips to the ankles to attempt to give input into the balls of the feet and lower the heel of the foot.

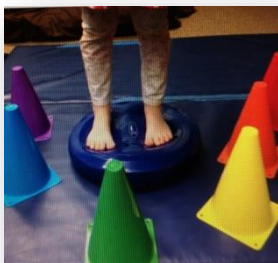


- Use a specialized brush to brush the soles of the feet with joint compressions.

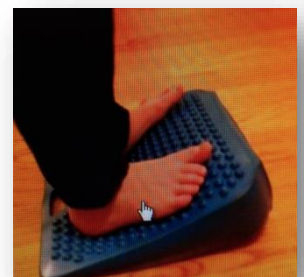
- Recommend the use of seamless socks or have the individual wear his or her socks with the inside seams facing outwards.

## **Do Animal Activities:**

- Walk like a crab or bear with all fours on the ground.



- Try and walk like a penguin, heels down and toes up.
- Sit on a scooter board and move the scooter across the floor using bare feet.
- Walk up a slide



- Have child stand supported/unsupported without shoes on dynamic surface. The dyna-disc, incline wedge, and wobble board are all great tools!

- **Climb up a slide**



Encourage barefoot walking in the grass and sand. Indoors, try setting up an obstacle course with blankets of different textures. Make art using the feet with paint and paper. Use joint compression to wake up the ankles.