Autism Spectrum Disorders Physical Therapy

 Name

 Professor

Course

Date

Autism Spectrum Disorders Physical Therapy

Autism spectrum disorders are often accompanied by some physical disabilities. Valagussa et al. (2020), find that 20% of autism spectrum disorder patients exhibit signs of tip-toe behavior. This is attached to a reduction in ankle joints' range of motion. The range of motion (ROM) in joint mobility is a quantified process used to identify the complex joint motions of the ankle in understanding tip-toe walking (Cho et al., 2016). As such, in engaging physical therapy treatment for patients with autism spectrum disorder, the range of motion has to be measured. This is coupled with passive range of motion exercises that focus on the preservation of flexibility and increasing mobility of the joints. Stiffness is reduced and progress of the physical ability is reduced.

Hypotonia is a common occurrence in autism patients. Hypotonia is a decreased muscle tone that causes flaccid or floppy joint movements. Gabis et al. (2021), notes that hypotonia requires early intervention with a focus on improving body posture and increasing coordination to compensate for the floppy joint movements. This allows for increased strength and stability which includes a range of activities to be conducted daily. The process begins with some simple warm-up activities which work to improve the endurance of the muscles and attain more stable body postures. Some common exercises include arm wrestling, tug of war, and crawling activities.

1. What is an early physical disability markers that note the presence of autism spectrum disorders?
2. Low muscle tone development
3. Delayed mobility
4. Early mobility

An early physical disability marker is low muscle tone development (Gabis et al., 2021). In understanding the physical therapy strategies for engaging autism spectrum patients exhibiting hypotonia and tip-toe walking, there is a need to find out the efficacy of the early markers. Autism spectrum disorder presents with various conditions or symptoms which are unique to various patients. However, there is a need to understand some early common markers which may offer a better understanding of the condition. Gabis et al. (2021) screened children with autism spectrum disorder for 18 to 24 months. The findings reveal that early evaluation is a key aspect of improving developmental concerns. In the early evaluation, low muscle tone development is found to be a key indicator that can offer a reliable and consistent marker for early diagnosis (Gabis et al., 2020). This indication offers a red flag that can be used to engage and develop associations of important symptoms in the diagnosis of autism spectrum disorders.

1. What are the physiological components that affect tiptoe walking?
2. Shortening of Gastrocnemius (GM) and soleus (SM) muscles
3. Elongation of Gastrocnemius (GM) and soleus (SM) muscles
4. Angle of the ankle

The Shortening of Gastrocnemius (GM) and soleus (SM) muscles is a physiological component that affects tiptoe walking (Valagussa et al., 2020). There is a need to understand the relationship of mutually exclusive clinical markers for tip-toe walking. This is an important element as Valagussa et al. (2020) note that motor deficits are lacking as a key indicator of autism spectrum disorders in the diagnostic criteria. As such, developing an understanding of various motor deficits can offer a breakthrough in understanding the development of autism spectrum disorders. A key way of attaining this information is by having a physical examination of various physical developments in autism spectrum disorder patients to have a better understanding. The gastrocnemius (GM) and soleus (SM) muscles are key target muscles that can be targeted in understanding tiptoe walking difficulties. Valagussa et al. (2020) find that shortening of the GM and SM are linked to tiptoe behavior severity. As such, this offers a diagnostic criterion in which there is an opportunity for developing measures of reliable information for early diagnosis and use as clinical markers for physical disability and autism spectrum disorders.

References

Cho, K. H., Jeon, Y., Lee, H. (2016). Range of Motion of the Ankle According to Pushing Force, Gender and Knee Position. *Annals of Rehabilitation Medicine 40*(2):271. DOI:10.5535/arm.2016.40.2.271

Gabis, L. V., Shaham, M., Attia, O. L., Shefer, S., Rosenan, R., Gabis, T., Daloya, M. (2021). The Weak Link: Hypotonia in Infancy and Autism Early Identification. *Frontiers in Neurology, 12*: 612674. DOI: 10.3389/fneur.2021.612674

Valagussa, G., Trentin, L., Balatti, V., Piscitelli, D. (2020). Relationship between tip-toe behavior and soleus - gastrocnemius muscle lengths in individuals with autism spectrum disorders. *Journal of Orthopaedics 21*(September–October):444-448. DOI:10.1016/j.jor.2020.08.013