









# THE CAUSE OF DROOLING IN CHILDREN WITH CEREBRAL PALSY: HYPERSALIVATION VERSUS SWALLOWING IMPAIRMENT

single sample while keeping type I error rate low.

## *Recommendations*

Review of the relevant literature indicates that drooling in children with cerebral palsy is not due to hypersalivation (Senner et al., 2004; Tahmassebi & Curzon, 2003; Sochanjwski et al., 1986). The literature further suggests swallowing impairment as a probable cause of drooling in children with cerebral palsy (Senner et al., 2004; Tahmassebi & Curzon, 2003; Sochanjwski et al., 1986; Lespargot et al., 1993). However, throughout the literature there was no concrete evidence to support swallowing alone. Rather, the studies suggest swallowing impairment coupled with oral motor dysfunctions as the cause of drooling in children with cerebral palsy.

Further research is required to precisely determine the cause of drooling in children with cerebral palsy. Future research should target the frequency as well as the different stages of swallowing in children with cerebral palsy. In addition, research should address oral motor functioning in children with cerebral palsy.

## *Conclusions*

Hypersalivation is not a cause of drooling in children with cerebral palsy. Further research is required to determine if swallowing and oral motor function can be linked to drooling in children with cerebral palsy.

## *References*

- Ceriatì, E., De Peppo, F., Ciprandi, G., Marchetti, P., Silveri, M., Rivosecchi, M., (2006). Surgery in disabled children: General gastroenterological aspects. *Acta Paediatrica*, (95) 452, 34-37.
- Lespargot, A. Langevin, M. Muller, S. Guillemont, S. (1993). Swallowing disturbances associated with drooling in cerebral-palsied children. *Developmental Medicine & Child Neurology*, 35, 298-304.
- Marieb, E. N., Mallatt, J., Wilhelm, P. B., (2005). *Human anatomy*. Fourth Edition. San Francisco, CA: Pearson Education, Inc.
- Portney, L.G., & Watkins, M.P. (2000). *Foundations of Clinical Research: Applications to Practice* (2<sup>nd</sup> ed.). Upper

Saddle River, New Jersey: Prentice Hall Health.

- Senner, J. Logemann, J. Zecker, S. Gaebler-Spira, D. (2004). Drooling, saliva production, and swallowing in cerebral palsy. *Developmental Medicine & Child Neurology*, 46, 801-806.
- Sochaniwskyj, A. E. Koheil, R. M. Bablich, K. Milner, M. Kenny, D. (1986). Oral motor functioning, frequency of swallowing and drooling in normal children and in children with cerebral palsy. *Archives of Physical Medicine and Rehabilitation*, 67, 866-874.
- Tahmassebi, J. F. & Curzon, M. E. J. (2003). The cause of drooling in children with cerebral palsy – hypersalivation or swallowing defect? *International Journal of Paediatric Dentistry*, 13, 106-111.