

## SPECIAL MEDICAL SERVICES - NEUROMOTOR PROGRAM

# THE NEUROMOTOR LINK

## DROOLING IN CHILDREN WITH NEUROMOTOR DISABILITIES

*Each person is unique and therefore must be treated individually. The suggestions here are general guidelines only. As with any health issue, you should discuss the matter with your primary health care provider and do what is best for your child and family.*

Individuals with neuromotor difficulties may have problems with drooling due to a lack of coordination and control of the muscles in and around the face, mouth, head and neck. Drooling can also be the result of a decrease in the frequency of spontaneous swallowing and/or a reduction in the sensory awareness necessary for swallowing. Some medications may make drooling worse by increasing the amount of saliva produced. Drooling can be a problem in about one-third of children with cerebral palsy. The amount of drooling varies from individual to individual. The extent to which drooling is considered to be a problem varies from family to family. Drooling usually disappears by six years of age in children with mild neuromotor involvement and almost always improves as a child grows.

### **REASONS FOR CONCERNS**

Drooling may be of concern due to hygiene issues as it may lead to the spread of germs. The saliva may actually cause damage to some items such as to computer keyboards, books, and furniture. Drooling can be a problem for those who drool a lot as they are at risk to aspirate (breathe the saliva into the airway). People who drool may develop a rash on their face that can be troublesome to treat. One way to help a rash on the face is to wipe away the drool frequently. People who drool can lose a tremendous amount of fluid in their saliva. Often individuals who drool have other feeding and swallowing concerns and may have a problem drinking enough fluid. Not drinking enough may contribute to difficulties with constipation (see elsewhere).

Drooling can lead to the spread of germs and a significant loss of fluid.

### **TREATABLE REASONS FOR DROOLING**

Positional factors need to be evaluated such as seating position. Saliva will be more likely to flow from the mouth if the person's head is held in a forward position. Providing proper seating posture, sometimes with the help of adaptive seating equipment, may help to control the amount of drooling that occurs. Major dental disease will cause more saliva to be present and therefore should be corrected if possible. Orthodontic problems that may interfere with the ability to close the mouth may be causing an increase in drooling. Enlarged tonsils or adenoids may be obstructing the mouth or nose and may contribute to a problem with drooling. Putting hands or other objects in the mouth will increase the amount of saliva produced.

Hand-to-mouth behavior will increase the amount of saliva produced.

### **ORAL MOTOR AND BEHAVIORAL THERAPY OPTIONS**

One of the first methods that will be tried to help children learn to control their saliva is oral motor therapy. A speech therapist or an occupational therapist will develop a therapy program that will provide exercises and activities to improve tongue position and mobility and lip/mouth closure. Other methods may include:

- icing the area to improve oral-motor function and enhance sensory awareness,
- brushing to normalize tone and increase sensory awareness,
- vibration to increase proprioceptive input and facilitate more normal tone, and
- manipulation, such as tapping, stroking and patting, to facilitate normal movement patterns and increase oral awareness and discrimination.

Oral motor therapy is effective in reducing but not eliminating drooling. Behavior modification may be used to increase swallowing, decrease open mouth behavior, or stop “hands-in-mouth” behavior. Children who are 8 years of age or older and who have only a moderate problem with drooling, have good intelligence and are motivated may benefit from biofeedback with behavior modification. This management approach is time-consuming, however, and there may not be much benefit seen.

Oral motor therapy and behavior modification may be helpful.

***MEDICATION OPTIONS***

Often medications are prescribed to help control the amount of drooling. There is no medication that is specifically made to control drooling. The medications that are used are often from the class known as anticholinergics such as Robinul or Levsin. These medications have other side effects besides the desired one of causing a dry mouth. These other side effects primarily include constipation, decrease in appetite, flushing, urinary retention, and difficulty sleeping. Another class of medications that has a side effect of dry mouth is antihistamines, like Benadryl. A side effect of antihistamines is drowsiness. Finally, Cogentin is a medication that is used for Parkinson’s disease and has been helpful for some people who have problems with drooling. A problem with drooling that was initially well controlled with medication may return after a period of continuous medication use due to habituation. Also suddenly stopping a medication may lead to a marked increase in salivary production due to rebound. For this reason when a medication is to be stopped, it should be tapered off gradually.

Medications are very often helpful, but may have unwanted side effects such as constipation or problems sleeping.

***SURGICAL OPTIONS***

Surgery is sometimes performed to help individuals who have problems with persistent drooling of at least a moderate degree who have not responded to other options or those who have profuse drooling. The purpose of one operation is to decrease the amount of saliva produced by removing some salivary glands and another is to make what is still produced easier to swallow by rerouting the ducts to the back of the throat. The major benefit of surgery is a reduction in drooling. The major complication of the surgery is that in some individuals its benefits are only temporary, and they will begin to drool again.

This publication was developed by the Special Medical Services Section for the Neuromotor Program. For more information on drooling or other issues, contact your coordinator:

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