

## **FOOD FOR THOUGHT**

### **Mealtime Strategies For Students With Special Needs**

*“No single activity is as critical to the health, education, and happiness of students with disabilities as feeding. In the best instances, meals combine nutrition needed for survival and growth, opportunities for experiencing social interactions, and a chance for students with disabilities to become independent” (Lowman, 1999)*

The skills of eating and drinking are often taken for granted because they are typically accomplished with very little conscious thought. In fact, these are very complex processes that require adequate oral motor control combined with precise timing and coordination of breathing.

Difficulties in feeding skills not only affect growth, but also impact learning, communication and social interaction. Assisting a student who frequently coughs, splutters, and gags during a meal can be very stressful for a care provider, not to mention stressful for the student him/herself.

Many students with cerebral palsy and other developmental disabilities have some type of nutritional problem including gastro-esophageal reflux and significant oral-motor dis-coordination. These problems can lead to inadequate nutritional intake. Students with feeding difficulties require specific input and strategies to improve their nutritional intake and developmental growth. The following strategies are general suggestions to consider. *A Speech-Language Pathologist and/or Occupational Therapist to will need develop a specific program to meet the student's unique needs.*

### **POSITIONING**

There is a close relationship between a student's body position and oral motor skills. Students with feeding difficulties may have difficulty with controlling their head, neck and trunk against gravity. Excessive head and neck flexion or extension affects swallowing and may increase the risk of aspiration. Stability and control of the trunk, arms, legs, and head allows for greater control of the oral structures used when eating/drinking. Proper postural alignment also helps preserve an open airway.

Prior to mealtimes, a review of the student's positioning is recommended. General guidelines include:

- Use positions that facilitate the comfort and safety of the student and the care provider. Prior to, and during feeding, the student should be as relaxed as possible.
- A sitting position as upright as possible, with feet support, is preferred.
- If a student must be reclined for feeding, bring the student's head forward to a neutral position with a slight chin tuck.
- Check that the student's hips are well stabilized and back, in order that the head, arms and truck can be brought forward.

- Check to establish that the trunk is stable.
- Look for symmetry of the trunk and limbs.
- The student's arms should be supported and stabilized.



The student is well supported in her chair. A chin tuck position generally facilitates swallowing.

As alternatives to feeding in the typical position of sitting, the side lying position or supported standing can provide a stable base of support. These two alternate positions need to be assessed collaboratively with appropriate therapists, other medical personnel and the student's family.

## FOOD TEXTURE AND CONSISTENCY

Textured food is important in a student's diet because chewing this type of food helps promote bone and muscle growth in the oral/facial structures. A diet with a variety of textures provides the student with good oral stimulation. Some students who are lacking varied texture in their diet may put inappropriate material in their mouth, over stuff, grind their teeth, etc., because their sensory system craves this input. However, not all students are able to safely manage eating a varied texture diet. *Your local therapists will be able to identify these students and make the appropriate and safe texture recommendations.*

Foods selected can range from chewable solids to smooth purees. Many students can have difficulty with dry and sticky foods. In this case, a high moisture content and/or a more slippery texture is often helpful. *Dietitians can provide valuable input regarding the preparation of foods to meet the student's oral motor skills.*

### Food Considerations

- The temperature, texture, smell and taste of foods can elicit changes in postural tone, abnormal oral motor movements and gagging.
- Bland foods are often preferred by young students.
- Students who under-react to sensory input will often respond better to foods prepared with herbs and spices.
- Students who over-react to sensory input will often respond better when sour or bitter tastes are removed from their diet.

- Students with feeding difficulties are often able to handle thicker foods and liquids more efficiently than thin ones. Adding commercial thickeners and/or natural thickeners to foods and liquids can be beneficial.
- Chewable foods which break apart into firm and diffuse pieces are often more difficult to manage than those that tend to mat together when chewed. For example, cooked hamburger meat might be more difficult to manage than roast chicken.
- Students who have some chewing abilities, but poor lateralization of the tongue, may require food to be placed between the teeth (molars), as this often stimulates the tongue to move to the side of the mouth.
- Sweet foods tend to create more saliva and should be reduced for a student with moderate to severe drooling.
- Sweet tastes are often preferred, and caution should be used so that students do not become dependent on these types of foods.
- Foods with more than one consistency are difficult for some students to manage, as they require the student to break down each part separately. For example, soup with vegetables or meats require more coordination, as the student must coordinate between swallowing the liquid and the chewing of the solids.
- For some students, larger pieces of food can often be handled more easily and safely because they stimulate chewing, as opposed to smaller pieces, which can trigger gagging, coughing and/or choking.
- Chewy, gummy or crisp foods can be used to stimulate chewing, particularly when placed between the molar surfaces.
- Milk may increase the amount of mucous and/or saliva that is produced. This can result in more coughing or choking. Clear meat juices or broth can reduce thick mucous production. Carbonated drinks are also effective with some students.
- Finger foods can be made safer by: removing pits from fruits; removing bones from fish; slicing hotdogs and grapes lengthwise; spreading peanut butter on crackers or bread; cooking hard vegetables.
- The following foods should not be given to the typically developing student before four years of age, as they can cause choking: popcorn; fish with hard bones; chewing gum; celery; raisins; peanut butter on a spoon; hard or sticky candies; raw carrots; grapes; wieners; seeds or nuts.

**Techniques for altering the texture of a student's diet include:**

- Add a new texture to an already preferred texture.
- Use commercial or natural thickening agents when the texture is too runny.
- Combine two preferred foods into one new food.
- Use a food grinder to gradually increase textures.
- Use foods that are easily dissolved with saliva, such as graham crackers, when transitioning from soft foods to those with more texture.
- When introducing a new food or texture, try placing the food on the molars. Placing the food on the chewing surfaces allows the student to have more oral motor control of the food in the mouth.

## **FOOD PRESENTATION**

### **Placement**

Many students with feeding difficulties will have difficulty clearing the spoon with their upper lip. Slow removal of the spoon often facilitates more active movement of the upper lip. Another option is the side placement of food onto the chewing surfaces. Stretching of the corner of the lips with the spoon is another method to encourage more active upper lip movement.

### **Volume**

The volume and overall presentation of food can have an impact on the student's appetite. Too large a helping can be overwhelming and discouraging for the student. Avoid mixing foods together, unless necessary.

### **Visual Presentation**

Food should look attractive and appetizing. Avoid mixing foods together, unless necessary. The use of colorful plates and bowls can increase the student's interest in eating. For students with visual discrimination difficulty, place the food on a plate or bowl that has a contrasting colour.

## **BOLUS SIZE AND RHYTHM**

Bolus size refers to the amount of food given at any one time. Bolus size varies for each student. Determining the correct bolus size should be based on an assessment by a therapist. Too large a bolus can increase the risk of coughing and potential aspiration. Too small a bolus can provide insufficient sensory information for the student in order to promote good control in the mouth and safe swallowing. Selection of a proper utensil can often facilitate the use of the correct bolus size for the student.

Timing can have a significant influence on the student's feeding skills. There is often an ideal time for the presentation of the next bolus and typically this can be discovered through careful observation of the student during mealtimes. Most students are very responsive to a predictable rhythm. Having background music with a steady one-second per beat can sometimes help to facilitate rhythm. Baroque and some folk music are examples of music with a good rhythm.

## **LENGTH OF THE MEAL**

Students with feeding difficulties often require longer to complete a meal. It is not uncommon for these students to take 30-60 minutes to finish. Some students with special needs expend a great deal of energy eating and drinking. Close monitoring of their program and caloric intake is critical to ensure adequate weight gain and good health. If a meal takes longer than 30 minutes to complete, it may be better to break the meal into two separate events so that the student isn't overly fatigued.

Some students can be at greater risk for aspiration as they become fatigued during a meal. For these students, a nutrient dense diet and some commercial products might be most appropriate in order to ensure the student has adequate intake when the length of the mealtime has been reduced.

## ADAPTIVE EQUIPMENT

Adaptive equipment refers to the tools that are modified to enable the student to achieve independence (e.g., spoons, chairs, tables, cups, plates, etc). Not all students require adaptive equipment. For those who do, adaptive equipment can have a significant impact on the meal. There are many commercially available adaptive devices and equipment on the market designed to increase independent feeding for individuals with disabilities, such as:

- Enlarged or built up handles for easier grip.
- Extended or lengthened handles for students with restricted range of motion.
- Bent handles for students with limited motion patterns.
- Utensil cuff for a student with limited or no grasp.
- Small-diameter glasses for students with limited grasp.
- Cups with handles large enough to insert fingers (or hand) through for students with poor grasp.
- Friction or nonskid surface for a student using only one hand or for students who have uncontrolled movements (e.g., dycem matting).
- Scoop dish or plate guard for a student using only one hand or who has uncontrolled movements to keep food on the plate.



A spoon with a built up handle and curved shape helps this student have more control with grasping and lifting it to her mouth.

## COMMUNICATION

Mealtimes are ripe with opportunities for improving a student's communication. For most students, mealtimes are highly motivating and there is a natural turn taking that occurs between the student and the care provider. Choice making at mealtimes can allow the student to feel in control. When the student feels in control, they are more willing to try new techniques and new foods.

## ENJOYABLE MEALTIMES

Most students enjoy mealtimes because the reinforcement is immediate and the student is able to receive one-to-one interaction with the care provider. An enjoyable mealtime involves a trusting and respectful relationship between the student and the care provider. Here are some guidelines for helping mealtimes to be a pleasant experience:

- Watch and listen to the student; coordinate the presentation of food with his/her breathing and movement.
- Provide appropriate positioning and lighting so that the student has a clear view of the food.
- Use a smooth predictable pace while feeding.
- Use a verbal or tactile "ready" signal. Then, wait, observe, and reinforce any signal of readiness on the student's part.
- Minimize any distractions and interruptions.
- Peer interaction is a common motivator for improved eating.

## REFERENCES

Lowman, D., Murphy, S., The Educator's Guide To Feeding Students With Disabilities, Paul H. Brooks Publishing, 1999.

## MEALTIME PROGRAM

The following is an outline for a mealtime program. It can also act as a checklist for the care provider during each mealtime. This outline can be modified to meet your team's specific needs.

### Mealtime Program

**Name:**

**Date Written:**

**Allergies:**

**Diet/Textures:**

**Length Of Meal:**

**Position Of Child:**

**Position Of Care Provider:**

**Method(s) Of Communication:**

**Utensils/Adaptive Equipment:**

**Method/Procedure:**

1. Drinking
2. Spoon
3. Finger Food