

NON ORAL TO ORAL FEEDING

...AND THEN THE BIG QUESTION:
HOW DO WE GET TO EATING?

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A LONG AND SLOW JOURNEY

- Feeding and eating are important activities that allow individuals to maintain adequate nutrition.
- “Feeding” is the term for offering nutrition to someone who is not able to eat independently.
- “Eating” refers to the act of taking food independently.

Both feeding and eating are social activities that may reflect important aspects of a person’s culture. They are also activities that people take for granted. Both are very complex processes that involve the use and coordination of many muscles.

ORAL FEEDING

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❖ Oral Feeding: *The process of taking food by mouth*

* *Stage 1: Oral Phase*

Food is chewed, then moved to the back of the mouth towards the throat (pharynx), where a swallow is triggered.

**Stage 2: Pharyngeal Phase*

Muscles here will close off the airway and direct the food to the esophagus: the tube that leads to the stomach.

NON ORAL FEEDING

❖ Tube Feeding: Food can be taken through a 'NG' or Naso Gastric tube, that goes from the nose to the stomach or small intestine.

More serious or long term feeding problems require a 'G-Tube' or Gastrostomy Tube that is put directly into the stomach through surgery.

❖ Parenteral Feeding: This feeding occurs through an intravenous line and is used for a short time.

LET GRAVITY HELP THE SWALLOW!

SAFE SWALLOW: When ALL food enters the esophagus, and none enters the airway or lungs.

*Stage 3: Esophageal Phase
Food enters the stomach for
... processing!



HOW DOES FEEDING DEVELOP?

- Young infants generally receive all their nutrition from liquid form. As they grow, they are introduced to smooth pureed solid food. Gradually they are able to handle thicker puree foods that are easy to chew. By the age of 2, children are typically able to eat foods similar in texture and quality to adult diets, with some modifications for safety (chopped meat for example).
- Introduce new food one at a time with AT LEAST 3 days in between, to make sure the baby is not allergic to it.
- The progression of food types is related to the child's developing abilities to co-ordinate the muscles that are used for chewing, swallowing and breathing.

WHEN 'FEEDING' DOES NOT PROGRESS TO 'EATING'

- The sensory aspects of eating, which includes taste, temperature and texture, is an important part of the transition from feeding to eating.
- Most pediatricians advise parents to introduce solids between 4 and 6 months of age.
- Parents and caregivers really need to focus on *developmental readiness* when starting solids.
- The 'tongue thrust' reflex which causes babies' tongue to 'eject' anything put in their mouths, usually disappears between 4 and 6 months of age.

TRANSITION TIME!

- Moving from non-oral to food should be done after the pediatrician / G.I. doctor recommend the change. **Proceed S-L-O-W-L-Y!!**
- Introduce semi-solid food on a finger, NUK brush, P&Q, toothbrush, paci or small toy?
- Continue oral stimulation during tube feeding, so the feeling of fullness is paired with oral awareness.
- Adjust tube feedings so that their volume and timing mimics an oral feeding pattern of: 3 main meals and 2 snacks.
- Reinforce the 'social' aspect of eating, by feeding during family mealtime.
- Separate oral and tube feeding
- Establish what time the baby is hungriest, and introduce oral feeding

Transition continued..

- Give oral feeding as a snack: if the baby eats it, wait and give the tube feeding as the 'main meal' at a later time. If the baby does not accept the 'snack' remove it, wait, and feed the baby at the next 'meal' time.
- DON'T tube feed directly after the baby refuses the oral feeding. The child will learn to refuse oral food, because his feeling of fullness will follow the tube feeling.
- Tube feeding should not be terminated abruptly.
- Tube feeding should be reduced gradually with the participation of the Pediatrician and Dietician, who will monitor the bowel activity and weight changes.

DEVELOPOMENTAL MILESTONES INDICATE THE **RIGHT TIME TO GIVE SOLIDS A TRY**

- ✓ **Your baby should be sitting up, able to hold his/head up, and be interested in exploring things with his/her mouth.**
- If the baby was *intubated* for a long time, more than 4 weeks, it can pose problems with feeding, as the baby becomes aversive to things in his mouth.
- Stimulation of the mouth in oral hygiene, suctioning, tube insertion and medical examinations are generally aversive activities. When more pleasurable stimulation is delayed, the child develops the belief that anything that approaches the mouth is unpleasant.
- The typical infant receives continuous bombardment of varied oral stimulation through sucking on fingers, (parent's or his own), blankies, stuffed animals, toothbrushes, Pacifiers (you know how I feel about them!!), toys, food and other objects.
- If oral feeding was partially successful prior to intubation, the skills may be lost and the baby's mouth can become more sensitive and the oral experiences more aversive.

INTU...WHAT? WHERE?

- INTUBATION: Placement of a tube into an external or internal 'orifice' of the body:

- * *Nasogastric Intubation (N.G. Tube)*

Insertion of a plastic tube through the nose, past the throat, GAG, slide along the pharyngeal wall, past the pharynx, into the stomach.

- * *Fiber Optic Intubation*

This is done to facilitate insertion of an endotracheal tube through the mouth or nose, and into the trachea (wind pipe).

- * *Endotracheal Intubation (ET Tube)*

This is used in general anesthesia, Intensive Care, Emergency Medicine, for airway management and mechanical ventilation. The tube is inserted into a person's trachea to ensure the airway is not closed off, and air can reach the lungs (alert: Dx: Tracheomalacia).

- * *Video Laryngoscope*

A scope designed to visualize the larynx using video technology is inserted to determine the integrity of the larynx and prepare it for intubation.

YUK! ANY ALTERNATIVES?

- Positive Airway Pressure (P.A.P), or Continuous Positive Airway pressure (C.P.A.P)

PAP/CPAP is a method of respiratory ventilation used in patients with 'sleep apnea', patients with respiratory failure and newborn infants.

This type of ventilation can prevent the need for endotracheal ventilation through intubation.

ASSESSMENT

- When a child is referred for a Feeding Assessment, an Occupational or Speech Therapist will conduct the 'evaluation'.

- Components of the Feeding Assessment:

The child: Oral motor function, muscle tone, posture, feeding behavior, sensory response

The physical environment: Positioning options, utensils

The social environment: Parent – child interaction

The demands of the feeding task: Volume of food, type of food, how fast the child was fed

THEN WHAT?

- ❑ VFSS: Video Fluoroscopic Swallow Study
 - This study will be requested to further visualize the safety of the pharyngeal phase of the swallow.
- ❑ Oral Motor Treatment
 - The primary goal of O/M Therapy is the development of appropriate use of the mouth, respiratory and phonatory systems
 - Food and liquid may be introduced to provide smells, taste and temperatures, and to elicit specific oral movements: Lip closure? Tongue retraction? Sucking? Lateral chewing?
- ❑ Feeding Therapy
 - The primary goal of feeding therapy is ORAL FEEDING. The mechanics of sucking, swallowing and chewing is key.
 - Activities to enhance positive interaction and communication with the parent during this phase are a must.

INTERVENTION

- *EARLY REFERRAL* and *Oral Motor Treatment* initiated close to the introduction of tube feeding can prevent oral hyper-sensitivity and aversive reactions.
- By stimulating sucking and swallowing movements in the course of play interactions, one may prevent 'forgetting' of these patterns.
- Success of the intervention is measured by the child's ability to enjoy the mouth and use it for exploration.
- Success is also measured by the growth of vocalizations and sound play interaction with others.

SEVERE FEEDING PROBLEMS

Characteristics of severe difficulty with feeding:

- ✓ Hyperextension
- ✓ Respiratory difficulties
- ✓ Disorganized sucking patterns
- ✓ Swallowing disorders
- ✓ Gastro esophageal reflux
- ✓ Abnormal or aversive response to oral stimulation

FINICKY? MAYBE NOT!

- Be realistic: Children under 10 eat with their fingers and have difficulty swallowing meats!
- Sometimes 'finicky' eaters have food intolerances such as lactose, wheat, gluten, soy or they may have undeveloped taste buds because of intubation, medications or acid reflux!
- Check child's medication for 'hidden' lactose: 25% of OC prescription medications are made with lactose!

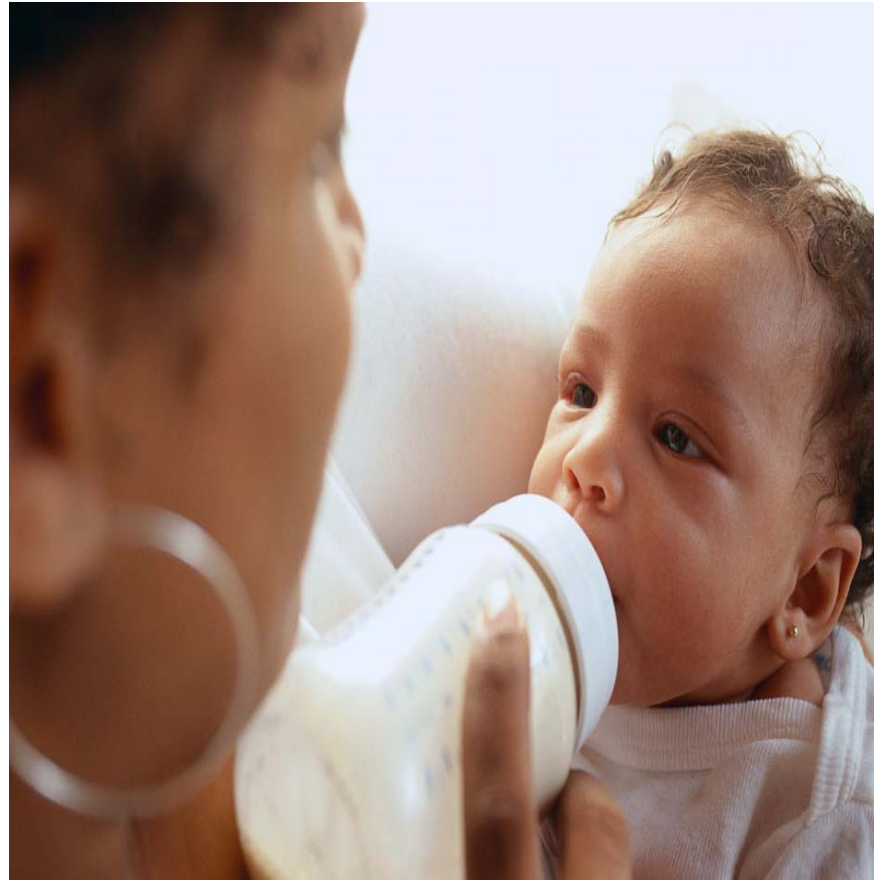


DID YOU KNOW?

- Studies conducted through Children's Hospitals in this country concur that:
 - * An estimated 30 to 50 MILLION Americans (adults and children) are lactose intolerant, compared to only 2% of Europeans.
 - * 80% of African Americans are lactose intolerant
 - * 90% of Asian Americans are lactose intolerant **WOW!!**

'HOME'...WORK!

- ✓ Create a calm environment for feeding time
- ✓ Do not place demands on the baby as this may lead to power struggles
- ✓ Find a warm and comfortable position
- ✓ Support the head of the baby
- ✓ Use touch
- ✓ Stimulate sucking with a paci during tube feeding time



STRATEGIES THAT HELP TRANSITION TO FOOD VARIETY

- Do not fill up the child with liquids prior to a meal, don't take the 'edge' off
- Don't 'give in' and offer 'junk food'
- Combine preferred food with new food
- Start with familiar foods and alter their temperature or taste: warm applesauce, yogurt with cinnamon
- Offer 'new' food consistently, prepare it in different ways and offer it to the child when he is hungriest
- Use an electric toothbrush on young kids to 'wake up' their mouth. Consider brushing teeth prior to mealtime
- Have child help with meal planning, shopping, preparing and serving food
- Give the child the option to choose between two nutritious snacks



Be Patient and Consistent

THANK YOU

THE END