



Complex Child E-Magazine

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The Importance of Introducing Tastes by Susan Agrawal

We often remark on how important sight and sound are to young children. We expose them to toys that are brightly colored, have blinking lights, play songs, or make sounds. Thousands of articles have been written about the importance of senses in development, and sight and sound, and to a lesser degree touch, are always emphasized as the senses that provide the most input.

But what about taste and smell? It is clear by watching a newborn baby sucking and mouthing everything in her environment that the mouth is a very important part of development, and one that provides the infant with a great deal of sensory feedback about her environment. Smell is less apparent, but there are hundreds of stories of just-born infants finding the breast to nurse, typically just by smell. Smell and taste are clearly important senses, and ones that are often under-recognized.

This is especially true when it comes to young children with medical problems or neurological issues. Many of these children may not be able to eat orally during their early months and years. This is due to a wide array of problems, including a poor suck, the inability to swallow safely, anatomical conditions such as a recessed jaw or cleft palate, and medical conditions such as heart defects or a history of prematurity. While it is very common to introduce these children to a wide array of sounds, sights, and textures, less emphasis is placed on taste and smell.

Typically, tasting is encouraged in non-eating children as a way to keep them from developing oral aversions that could interfere with eating at a later date. It can also be used in children who already have developed oral aversions to help them overcome their aversions as the first step toward eating. But in young children with neurological or sensory impairments, whose brains are plastic and able to adapt, the development of taste may also be able to augment or partially substitute for other senses that are absent or impaired.

Recent research has shown that sense perception is really in the brain, and if one sense is not functioning properly, another sense can be taught to substitute for it. For example, some blind people have learned to use echolocation to be able to “see” what they are doing. They make a constant clicking sound, effectively bouncing sound waves off of their environment, and allowing them to view their surroundings. Some individuals have become so proficient that they are able to navigate an obstacle course or play sports without adaptation.

The tongue, with its exquisite ability to sense and detect, can work in a similar way. The research of the late neuroscientist Dr. Paul Bach-y-Rita has shown that the tongue can be taught to “see.” Patients are trained with a device that translates video images to the tongue, allowing them to interpret their visual world in a new way. To see a video of this in use, see <http://vision.wicab.com/index.php> It is remarkable to see a blind man use this device to identify numbers or play Tic Tac Toe with his daughter.

Research in this area, especially when it comes to development of children with neurological, visual, or hearing impairments, is still in the early stages. Hopefully in the near future we will be able to determine the exact important of developing taste and how it can influence the growing brain.

Introducing Textures and Tastes

For many young children with medical problems, the mouth has been neglected since providing adequate nutrition, regardless of the route, always trumps sensory development. Some children may only have experiences with negative tastes, such as spit-up or vomit, or negative experiences, such as an NG tube or ventilator, around their mouths. It is important for these children to be exposed to both the textures and tastes of the world around them, just as an infant is through sucking and mouthing her environment.

All children should receive medical clearance before beginning tastes. While tastes usually consist of such a small amount of food or liquid that they are safe for most children, some children with severe aspiration may be restricted to textures only. In addition, if at all possible, children should be evaluated by a speech therapist or occupational therapist who specializes in feeding to help determine an appropriate feeding plan.

Once your child has received medical clearance and been evaluated, it is time to get that tongue working!

If the child is able to put things in his mouth, watch him closely to see what kinds of things he likes to chew on or mouth. Children who cannot get objects to their mouths should have a variety of textures gently introduced into their mouths, including soft and hard toys, bumpy textures, and so forth. This article [<http://www.new-vis.com/fym/papers/p-feed1.htm>] by Suzanne Evans Morris, gives an overview of different types of mouth toys and how they may be useful.

For some children with strong oral aversions or highly reactive gag reflexes, this may be quite difficult. A speech or occupational therapist should be consulted to help overcome these aversions. Often, vibrating probes such as the Z-Vibe, mouth and face massagers, and textured probes may be helpful to overcome oral aversions.

Whatever items your child likes to mouth, whether they are toys, vibrating probes, or a pacifier, should be used to introduce tastes. An older or more mature child may be able to simply use a spoon, but infants and toddlers often have more success if tastes are introduced using a preferred toy, binky, or probe. Try to choose items that your child is most independent with, such as a teether that is particularly easy for him to grasp, or a large rubber spoon he can get in his own mouth.

It is often best to start a session by waking up the mouth, introducing different textures, toys, and objects, including vibration for many children, to the tongue before giving food. Then choose one taste to begin with. For young infants, breastmilk is a great choice. Formula and sugar water may also be used. Children who tend to need a lot of sensory stimuli to react can even be given very potent tastes, such as pickle juice, lemon juice, or salt water. Simply dip the toy, binky, probe, or spoon in the food or liquid so it is lightly coated and place in the child's mouth, or allow the child to mouth the item on his own as he usually would.

Expect some funny faces, which may include total disgust or utter joy. If gagging or a strong negative reaction occurs, you may want to go back to mouthing just a texture (toy, pacifier, probe, or spoon) until the child feels more comfortable with having something in her mouth. If the initial taste repeatedly fails, you may want to try a different taste, since children definitely have their preferences.

Once the child becomes comfortable with the initial taste, which may take one try or 200 tries, you may begin to introduce other tastes. Again dip the toy, pacifier, or spoon into other tastes, trying for a wide range of different tastes, including sweet, sour, bitter, pungent, and so forth. Stage 1 babyfood or the homemade equivalent is a great consistency for dipping and comes in a wide range of flavors. Thin infant cereal is another good option. Fruit flavored flavor sprays that coat a toy or probe with flavor are also available, and may be particularly useful for children with swallowing problems who cannot have any quantity of liquid. Some children, especially those with swallowing problems, may actually do better with thicker textures. Consult your physician and feeding therapist for the textures that are appropriate for your child.

Next Steps

If your child has been cleared to eat orally, you can progress from tastes to larger bites of food, focusing on chewing and swallowing skills. For children who are not able to eat orally for medical reasons, tastes can be continued to keep their sense of taste active and aware, and prepare them for a future time when they may be able to eat orally.

Will introducing tastes help your child's other senses to develop? We really don't know the answer to that question, but any positive sensory input into the developing brain is likely to stimulate connections between neurons, thereby helping your child to reach her fullest potential.