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THE DEVELOPING MIND

Boone Fetter Clinic: Diagnostic, Clinical & Research Center for Autism, other Neurodevelopmental & Behavioral Disorders



“If you are a parent of a “picky eater,” coping with mealtimes can be stressful.”

– Full story on page 3

A Message from Kathi



In each issue of the The Developing Mind, experts at Children’s Hospital Los Angeles respond to issues and questions called in to the Autism Warm Line by parents and providers like you. Because it is sometimes difficult to find a trustworthy source for answers to complex questions about your child’s health and development, we provide this newsletter to bring you up-to-date information from specialists and researchers at Children’s Hospital. In our sixth issue, we address how to manage oral health in children with ASD, share findings from a research study on air pollution and risk for autism spectrum disorders (ASD) and discuss “picky eating” or food selectivity. For more information about the clinic or if you have a question about your child’s development, please call the Autism Warm Line at 323-361-6102.

- Kathi Smith, RN, MN

In This Edition:

- 2 Oral Health for Children with Autism: An Interview with Dr. José Polido**
- 3 Food Selectivity and Sensory Sensitivity in Children with Autism Spectrum Disorders - by Sharon A. Cermak, EdD**
- 4 Research Highlight – Heather Volk, PhD: Proximity to Freeway is Associated with Autism**



To make an appointment call the Autism Warm Phone Line: 323.361.6102
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Oral Health for Children with Autism: An Interview with Dr. José Polido

José C. Polido, DDS, MS, is head of the Division of Dentistry and Orthodontics at Children's Hospital Los Angeles, and is associate professor of Clinical Dentistry at the Herman Ostrow School of Dentistry of the University of Southern California. Dr. Polido's experience includes access to care for children with special health care needs, including developmental disabilities. He is also a Diplomat of the American Board of Pediatric Dentistry.



Dr. José Polido

Do children with autism have more oral health concerns than other children?

"Autism spectrum disorders (ASD) can present a lot of challenges for children and their families that make it difficult to practice good oral health care and have a healthy mouth and teeth. Brushing teeth is a very important activity for maintaining healthy teeth, but children with autism often have difficulty handling a toothbrush, visiting the dentist or developing a regular tooth-brushing routine. For most, these are behavioral issues rather than anything biological or structural on the teeth. This means that it is totally possible for a child

with autism to have good oral health and nice healthy teeth."

Do children with autism spectrum disorders have trouble visiting the dentist?

"This really depends on the age and behavior of each child. For all children, regardless of disability, the first few visits to the dentist can be upsetting. Particularly for children with autism, the bright lights, strange noises and busy environment of a dentist office can be frightening, or at least cause some anxiety. It can be difficult for them to listen to the dentist, sit in the examination chair or let someone look inside their mouth. In some cases, the child is picking up on their parent's anxiety or nervousness. If the parent is nervous about the visit because they are concerned about how their child is going to react, this can add to the child's anxiety.

"Of course, communication between the dentist and child can be a major challenge. We try to use a 'tell-show-do' approach, where we explain each procedure (such as looking into the child's mouth) before it occurs, show a picture of the procedure and tools we are going to use, and then demonstrate how it will work. This approach helps a child feel more calm and safe in the dentist's office."

What can a family do to prepare for a visit to the dentist?

"To prepare for a visit to the dentist, get familiar with the dentist's environment before actually going in for an examination. It is helpful to visit the office before an appointment in order to meet the staff and maybe sit in the examination chair. You can also help prepare your child by showing them pictures of a dental office and tools, and explaining what will happen during the visit. That way, when you do go in for an examination, you will both know what to expect and be more comfortable.

"Also, it's really important to know your child's complete dental and medical history, since this information will help the dentist provide the best care possible. Let the dentist know ahead of time about your child's condition, so that they can schedule a little more time for the visit."



What are the sedation options available?

"In general, the sedation options are the same as for any child, and mostly depend on the procedure that is needed and the child's behavior. Some dentists will use nitrous oxide gas to help the child feel less anxious. There are different anesthetic options as well to control pain and the doctor should discuss these with the parent to decide what is best. Often there is no rush to have a dental procedure unless it is an emergency situation. Take the time to talk to your dentist and consider different options for your child."

What can parents do to help prevent cavities?

"Regular tooth brushing is very important for all children. Initially, this means that parents should learn how to really brush their child's teeth effectively, create a daily routine and encourage the child to start brushing his or her own teeth. This can be hard for children with developmental disabilities like autism, which may impair their dexterity. One important tip: when

(continued on page 4)

Food Selectivity and Sensory Sensitivity in Children with Autism Spectrum Disorders

Sharon A. Cermak, EdD, is a professor in the Division of Science and Occupational Therapy at the University of Southern California (USC). She has a doctorate in Special Education from Boston University and expertise in the areas of dyspraxia/developmental coordination disorder, autism spectrum disorders and sensory processing. One of Dr. Cermak's areas of research is children with autism, studying factors such as diet, activity and obesity.

Dr. Cermak looked at the results of these studies to try to determine their impact on nutritional adequacy in children with ASD. She found enough evidence in the research to conclude that both food selectivity and sensory issues are significant problems for many children with ASD but that their impact on nutritional adequacy depends on the individual child.

that families are often referred to a registered dietician first. An occupational therapist can be consulted to determine if sensory issues are a concern. If so, an occupational therapist can use sensory integration techniques to improve a child's acceptance of a wider range of textures or sensations from foods. Modifying the environment by methods such as dimming the lights or playing soft music were recommended in one study. Finally, a family may choose to work with a behavioral psychologist to develop strategies to reduce stress at mealtimes. Cermak concludes that the goal of the team should be to work together toward the goal of reducing sensory sensitivity, ensuring adequate nutrition and more pleasant mealtimes for the whole family.



Sharon A. Cermak, EdD

If you are a parent of a “picky eater,” whether they have an autism spectrum disorder (ASD) or not, then coping with mealtimes and a child's limited food repertoire can be stressful. You may wonder how “picky eating,” also known as food selectivity, may be affecting your child's health. In February of 2010, Dr. Cermak and colleagues in nutrition and social work published an article in the Journal of the American Dietetic Association looking at 19 research studies examining picky eating in children with ASD over the past 25 years.

“Picky eating” is not exclusive to children with ASD, but may be more common in this population. Behaviors including food refusal, limited variety of foods and eating-related rituals as well as parental restrictions such as gluten-free and casein-free diets may place individual children at risk.

Children with highly selective eating patterns may benefit from the support of a multidisciplinary team of specialists who can make recommendations based on each individual child. Cermak notes

Glossary

Food selectivity may refer to picky eating, frequent food refusals, limited repertoires of foods, excessive intake of a few foods or selective intake of certain food categories such as carbohydrates. Use of the term varies from study to study.

Sensory sensitivity is also known as sensory defensiveness or tactile defensiveness. Sensory sensitivity may cause an overreaction and negative response to certain experiences of touch that most people would find harmless and may contribute to feeding issues such as difficulty with food textures, temperatures or tastes.

Nutritional adequacy refers to eating a diet with an appropriate amount of calories, and including proteins, fats, carbohydrates and sufficient vitamins and minerals for health.

Research Highlight – Heather Volk, PhD

Researcher from Children’s Hospital Los Angeles and USC Finds Proximity to Freeway is Associated with Autism

Living near a freeway may be associated with an increased risk of autism. “Children born to mothers living within 309 meters of a freeway appeared to be twice as likely to have autism,” says Heather Volk, PhD, MPH, first author on the study published online in the journal *Environmental Health Perspectives*. Dr. Volk, along with a team of researchers from Children’s Hospital Los Angeles, USC and UC Davis, found the association was not altered by adjustment for child gender or ethnicity, maximum education in the home, maternal age or prenatal smoking. This study supports the theory that environmental factors in conjunction with a strong genetic risk may be one possible explanation for the increase in instances of autism in recent years.

While little is known about the role of environmental pollutants on autism, air pollution exposure during pregnancy has been seen to have physical and developmental effects on the fetus in other studies. This study is the first to link exposure to vehicular pollutants with autism risk, though direct measurements of pollutants were not made. The study examined the locations where the children’s families’ lived during each trimester of their mothers’ pregnancies and at the time of the baby’s birth and looked at the proximity of the homes to a major road or freeway. Each participating family was evaluated in

person and all children with autism were assessed using well-validated instruments.

“We expect to find many, perhaps dozens, of environmental factors over the next few years, with each of them probably contributing to a fraction of autism cases. It is highly likely that most of them operate in conjunction with other exposures and/or with genes,” said Irva Hertz-Picciotto, PhD, chief of the Division of Environmental and Occupational Health in the Department of Public Health Sciences at UC Davis, and principal investigator on the CHARGE study.

For more information or to learn how to get involved with autism research at

Children’s Hospital Los Angeles, contact Marcia Higreda at 323-361-8444 or mhigareda@chla.usc.edu.

Heather Volk, PhD, MPH, holds a joint appointment at the Community, Health Outcomes & Intervention Research Program at The Saban Research Institute of Children’s Hospital Los Angeles, the Zilkha Neurogenetic Institute and the Department of Preventative Medicine at USC. Dr. Volk’s research focuses on the environmental and genetic epidemiology of autism and other neurodevelopmental disorders and on gene-environment interaction in complex disease.



Heather Volk, PhD

Oral Health for Children with Autism: An Interview with Dr. José Polido

(continued from page 2)

you are brushing your child’s teeth, position yourself behind them, rather than in front. This will help you to see and reach the teeth better, control brisk head movements and show them the brushing motion in the mirror. Daily routines are important for children with autism, so try to build tooth brushing into their regular daily activities as early as possible.

“I cannot stress enough that the main cause of cavities in children is a sugary diet. It is

very important to limit not only how much sugar your child eats, but also how often. If a child is eating snacks or treats throughout the day, there will always be acid in the mouth eating away at the teeth ... so, give those teeth a break! Also, therapists and teachers sometimes give children candy or sweet snacks as a reward for doing well. If this is the case for your child, ask the teacher to use a treat that has less sugar, like popcorn or carrot sticks. If you can limit the frequency of sugar in your

child’s diet, this will go a long way toward preventing cavities.”

Do you have any other advice for parents?

“The best advice is to bring your child to the dentist ‘early and often.’ The sooner your child gets used to the dentist and develops a regular tooth brushing routine, the better their oral health will be. Maintaining good oral hygiene is a skill they will use throughout their lifetime to stay healthy and happy!”