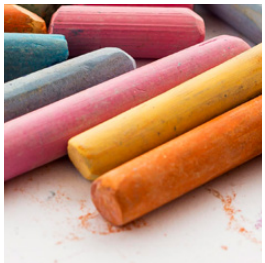
Parent's Guide to Managing Pica in Children with Autism



autism speaks
ATN
AUTISM TREATMENT NETWORK

AIRP
Autism Intervention Research Network on Physical Health

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Purpose Statement: This tool kit is a guide for parents who have children who eat non-food items (pica). It will help parents learn about pica – what it is, why it happens, who to go to for help, and ways to try and prevent it.

What is Pica?

Pica is the repeated eating of things that are not food. It is a common eating problem in children with autism. Children with pica often eat things like paper, plants, plastic or stones. Some children swallow objects quickly. Other children hold items in their mouths and only swallow them occasionally.

Mouthing and swallowing non-food items is common behavior in many babies and toddlers. They do this as a way to explore and learn. Most children outgrow the behavior by 18 months of age. A child is labeled as having pica only when eating non-food items continues after this age.

Common things children with pica mouth or eat:

- Chalk
- Cigarette butts
- Clay
- Clothing or thread
- Coins
- Dirt
- Feces
- Hair
- Large amounts of ice
- Paint chips
- Paper
- Plants or grass
- Plaster
- Rocks, pebbles or wood chips
- Rock salt
- Rubber bands
- Shampoo
- Toys (Legos, Play Doh, Magnetix, figurines and many more)

Why is pica a problem?

Most children with pica are healthy. This is because many items that children with pica eat are passed in the stool without problems. However, pica can cause certain health problems that parents should know about. When non-food items are eaten in large amounts, they can cause blockages in the stomach. Certain things like glass and rubber bands can cause damage to the stomach and intestines. Other health problems from pica include:

- High lead levels in the blood from eating items containing lead (e.g., paint chips, etc.)
- Nutrition problems
- Poisoning due to ingestion of common household items such as cleaning products
- Infections in the mouth, stomach or intestines
- Wearing down of the teeth

Children with pica may develop problem behaviors (such as anger or aggression) if they are stopped when trying to get wanted items.

Why do children with autism and other developmental disabilities have pica?

Several common causes of pica have been identified:

- The most common cause is **sensory feedback** (also called automatic reinforcement). These children eat non-food items to get a pleasurable or enjoyable feeling.
- Some children have **difficulty telling food from non-food items**. Some eat non-food items because they believe the items are food.
- Another cause might be **low levels of iron or zinc**. Children with this problem may be helped with vitamin supplements. These children also might require behavioral treatment.

Pica is not usually caused by:

- Effort to get attention
- Lack of ability to communicate needs

Treatment is more successful when children with pica have a medical and behavioral assessment. Medical tests can help show if your child has a nutritional need or medical problems caused by pica. Behavioral assessments can help you understand the causes of pica and decide the best way to respond to related problem behaviors (such as aggression or running away).

Signs of pica in a child:

- The child often puts items such as small toys in mouth.
- He or she searches for items to eat or put in mouth.
- Non-food items are found in the child's bowel movement (e.g., string, pebbles or plastic).
- The child eats food from the floor, trash can or other odd places.
- He or she has problems telling food from non-food items (e.g., takes a bite out of a cardboard coaster when dining out).
- People who spend lots of time with the child such as his or her teacher or babysitter report concerns about pica.

If you see one or more of these signs, seek a medical and behavioral assessment. Consider trying the interventions below which do not require professional help.

Where can I go for help?

The following people will be able to provide useful information about pica:

- Behavior analyst with skills in functional behavioral assessment and the development of behavioral intervention plans
- Psychologist with skills in Applied Behavior Analysis (ABA), autism and behavioral functional assessment
- Developmental/behavioral pediatrician
- Dietitian or nutritionist
- Pediatrician or other primary care provider

THINGS PARENTS CAN DO

Some initial steps you can take:

1) Keep a **list of the items** your child eats or mouths. Share this list with your child's doctors, teachers or other caregivers.

2) Keep **track** of how often your **child displays pica behavior** in a notebook.

3) Keep a list of the **places and situations** where your child puts things in his/her mouth.

4) Keep **non-food items** your child frequently attempts to eat out of his or her sight. Move items to a safe location such as the basement.

5) Put **locks** on cabinets, closets or doors that contain possible pica objects.

6) **Vacuum or sweep floors daily** to reduce items on the floor that your child might eat.

7) **Enrich your child's environment**. During down times, provide access to things your child likes to do that do not include pica items.

8) **Teach danger awareness skills**. Have your child practice identifying things that are non-edible or dangerous.

Things parents can do with some coaching and feedback from professionals:

1) **Blocking:** Blocking is when an adult puts his or her hand on top of the child's hands to "block" them from putting an item in his or her mouth. This can reduce pica for many children. How and when you block is important, though. This is why parents should get help if this is needed. Other things to think about include:
   - Use the least amount of force necessary to prevent your child from placing the item in his/her mouth.
   - Try to block before your child gets the item near his or her mouth.
   - Remember that at the start, many children may have a negative response such as aggression or tantrums. You may need help on how to manage these behaviors

2) **Skill-building:** Teaching your child how to identify food from non-food items can lessen pica. This is usually done using rewards and pictures (called discrimination training). To do this:
   - Have your child sit at a table with a plate on a colored placemat.
   - Put a few non-food items on the table.
   - Put a favorite food on your child's plate.
   - Reward your child for eating from the plate and not putting the non-food items in his/her mouth.

3) **Snack scheduling:** Make a snack available on a set schedule (every 30 minutes or hour). Tell your child that he/she can have a snack but don't try to make him/her eat it. More frequent snacks might provide your child with other options besides non-food items.

4) **Reward schedule:** Give a reward such as a toy for not eating non-food items for a period of time.

5) **Teach different behaviors** such as picking up pica items and throwing them away or returning them to their place. Break the skill down into steps and help your child practice each step.

6) **Attend to health issues related to pica:**
   - Talk to your child's doctor or nurse about having his/her iron and zinc status tested. Low levels of these nutrients can contribute to pica. (ADD LINK to Provider Tool Kit)
   - Provide vitamins or supplements if advised by your child's doctor or nurse.
   - Talk to your child's doctor or nurse about testing for lead. Children with pica should have their lead levels tested regularly.
   - See a nutritionist if your child is on a special diet or is very picky.
   - Make sure your child sees a dentist regularly.
   - Make sure your regular dentist, doctors and nurses know your child has pica.
   - If your child has new health problems, make sure the doctors and nurses caring for him or her know about the pica.

Treatments that require professional help

Some children have pica that cannot be helped by the treatments described above. Sometimes this is because the child's pica is very frequent. Other times the child has a lot of medical difficulties or many behavior problems that need to be treated. In these cases, families need special help. You likely need a professional who has high level skills in working with children with disabilities, pica and other behavior problems. The types of treatments that might be used with the help of this professional include:

- Brief physical restraint (i.e., holding a child's hands to their sides for a short period of time)
- Overcorrection (i.e., using physical assistance to help a child pick-up pica items)

These interventions require a complete behavioral assessment and on-going treatment planning by a child's parents and his/her professional team. They require parent consent and should be shown to parents prior to their use.

For more information on behavior supports for children with autism, see the Autism Speaks Challenging Behaviors Tool Kit
http://www.autismspeaks.org/family-services/tool-kits/challenging-behaviors-tool-kit

Resources

The Autism Speaks Family Services Department offers resources, tool kits, and support to help manage the day-to-day challenges of living with autism www.autismspeaks.org/family-services. If you are interested in speaking with a member of the Autism Speaks Family Services Team contact the Autism Response Team (ART) at 888-AUTISM2 (288-4762), or by email at familyservices@autismspeaks.org.

ART en español: 888-772-9050.

Suggested Readings for Parents

Ali, Z. (2001). Pica in people with intellectual disability: A literature review of aetiology, epidemiology and complications. *Journal of Intellectual & Developmental Disability, 26, 205–215.***

Glasberg, B. A. (2008). Functional behavior assessments for people with autism. Woodbine Press, ISBN: **http://www.woodbinehouse.com**.

McAdam, D. B., Sherman, J. A., Sheldon, J. B., & Napolitano, D. A. (2004). Behavioral interventions to reduce the pica of persons with developmental disabilities. *Behavior Modification, 28, 45–72.***

Napolitano, D. A. & McAdam, D. B (2012) Problem Behavior. In Tristram Smith (Ed). Making Inclusion Work for Students with Autism Spectrum Disorders: An Evidence-Based Guide. The Guilford Press. ISBN-13: 978-1606239322. **http://www.guilford.com**.

Pace, G. M., & Toyer, E. A. (2000). The effect of a vitamin supplement on the pica of a child with severe mental retardation. *Journal of Applied Behavior Analysis, 33, 619–622.***

Stiegler, L. N. (2005). Understanding pica behavior: A review for clinical and education professionals. *Focus on Autism and Other Developmental Disabilities, 20, 27–38.***

Thompson, T. (2009). Freedom from meltdowns. Dr. Thompson's solutions for children with autism. Paul H. Brookes Publishers, ISBN: 978-1-55766-986-5. **http://products.brookespublishing.com**.

Online general nutrition information: **http://www.choosemyplate.gov/**

**Technical article that might require support from professionals

Acknowledgments

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