



# Enhancing Mealtimes for Children with Autism: Feeding Challenges and Strategies

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*Parents and caregivers of children on the autism spectrum often experience challenges in feeding their children and promoting healthy eating. The objective of this guide is to provide science-based information and practical guidance to caregivers regarding how to support children with autism who are facing feeding challenges during mealtime.*

## What Is Autism?

Autism Spectrum Disorder (ASD) is a neurological condition that is typically characterized by deficits in communication and social interaction, and accompanied by restricted or repetitive behaviors. According to the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders, the main characteristics of autism include deficiencies in social communications and understanding relationships with others. In addition, children with autism tend to have restricted and repetitive patterns of behavior, activities, and highly fixated interests. This means that their behavior is inflexibly linked to routine and is usually ritualized. For example, a child who is expecting the regular teacher in the classroom may feel anxious and distraught when there is a substitute teacher. Or, a child who is used to eating chicken cooked in a certain way may refuse to eat and inappropriately fuss over a chicken meal that looks different.

The prevalence of children diagnosed with autism has dramatically increased from less than 1 percent in the year 2000 to 1.5 percent in 2010. According to Autism Speaks, about one in 68 children (one in 42 boys and one in 189 girls) is diagnosed with ASD. Research finds that children with ASD are five times more likely to develop persistent feeding problems compared with their typically developing peers. Food selectivity—wanting only certain types of food—is found to be the most noted feeding challenge among children with ASD. The growing number of children being diagnosed with ASD and the higher prevalence of chronic feeding problems in this population warrant the need for interventions and tools to help parents and other caregivers in providing adequate nutrition and supporting children's healthy eating. To do this, we must first recognize the challenges parents of children with autism might face regarding mealtime and feeding.

## Mealtime and Feeding Challenges for Caregivers of Children with Autism

Many caregivers experience different challenges in raising their children with autism, including difficulties around feeding. Children with autism have been described as having limited food preferences and “picky” eating habits. These conditions make it more challenging for caregivers to ensure that these children eat well and have a



nutritionally balanced diet. Below are additional challenges children with autism and their families may face:

- Children with autism might have difficulty expressing their food preferences and their feelings during mealtime due to potential language delays or impairments.
- They might have difficulties with sensory processing, making it a challenge for them to take in, process, and respond to the sensory information in their environment. All children learn through their senses such as smelling, tasting, listening, and touching. Some research suggests that 70 percent of children diagnosed with ASD have sensory processing disorders, which means that typical levels of sensory input are perceived as being too much or too little. This can create stress and anxiety for children who are challenged in processing their environment and trying to learn and make meaning of it. For example, children with ASD may be hypersensitive to the smell of an unfamiliar food or might refuse to eat dinner with a new houseguest. This difficulty in sensory processing can lead to development of ritualistic or repetitive behaviors. For example, these children might only eat the same type of food or only drink from a particular cup. They might experience stress and anxiety when their typical mealtime routine is disrupted or when mealtime does not go as they expect. They might also be very selective and display strong negative reactions (e.g., meltdowns) against certain foods. This tendency for selectivity makes accepting new foods or foods with different tastes or textures a challenge for them. Therefore, the family needs to plan mealtimes and the foods offered.
- In addition to behavioral problems, children with autism might experience physiological conditions such as lactose intolerance, gut issues (e.g., vomiting,

diarrhea, constipation), and oral motor problems (e.g., chewing difficulty). Precautions need to be taken in what food is prepared, given these considerations.

- Many children diagnosed on the autism spectrum find it challenging to self-regulate their caloric intake. Instead of sensing internal signals of hunger, they might rely on the amount of time they spent at the table or the mere presence of food to indicate that they should eat or stop eating. Thus, they may eat food they see on the table even if they are not hungry; or, when they believe they have been at the table for too long, they might think they have eaten enough even if they have not. These patterns can result in either eating too much or too little.

- The aforementioned conditions may make children with autism more susceptible to either weight loss or malnutrition, or excessive weight gain and obesity.

Finding solutions to mealtime challenges for children with autism is as varied as the potential challenges presented; there is not one solution. As mentioned, autism is a type of spectrum disorder. This means that each child will experience different challenges and will respond differently to intervention strategies. Thus, different solutions will need to be applied to different cases. The following strategies may help parents have better feeding experiences with their children:

### *Explore Food Textures*

One consistent theme in food selectivity relates to food **textures**. It is possible that sensory sensitivity experienced by children with ASD may add to their difficulty with food texture and food selectivity. The following are some potential solutions for texture sensitivities:

- **Give children foods that match their texture preferences, rather than focusing on preferred flavors.** For example, it is recommended that children with ASD eat more fish as they tend to lack Omega-3 fatty acids due to faster breakdown of the acids than the general population. However, if the child dislikes the texture of fish, try substituting foods that match the child's texture preference, such as fish burgers, or ground walnuts or flaxseeds on yogurt and salad.
- **Slowly introduce foods with new textures over time.** For example, give the child a small bite of new food to see if the child likes the texture or smell. If the child does not completely refuse it, continue providing it in slightly larger quantities over time to help the child develop an acceptance or preference for it.

## Introduce Children to New Foods Gradually

Gradually introducing a child to a new food can expand diet variety, and parents are encouraged to involve the child in the food selection process. The website ChooseMyPlate.gov from the U.S. Department of Agriculture (USDA) suggests that when assembling a meal, there should be choices of healthy foods from all five food groups: grains, protein, fruits, vegetables, and dairy. When eating a healthy, balanced meal becomes part of the child's routine, it will help establish a foundation for safe and healthy eating behaviors and increase the predictability that children with autism like.

The following is an example of adding in new foods slowly.

**Monday:** Introduce mango by providing a whole mango for the child to touch and smell while showing a photo of mango with the word “mango” clearly labeled.

**Tuesday:** Provide the child with a few slices of mango and a picture card of mango. If the child accepts the mango, add the mango card to the pile of food the child likes.

**Wednesday–Thursday:** Introduce a new fruit or vegetable using the same steps. Also, revisit the mango card to see if the child recognizes it and wants to eat more.

**Friday:** Continue introducing one new food every two days using the same routine. Keep revisiting the cards of previous foods to see if the child prefers certain foods over others.

Typically developing children may have to try a new food 10 or more times over several months before deciding whether they like it. A child with ASD likely will take considerably longer to gain familiarity with a particular food due to the new experiences that come with the action (e.g., new taste, smell, image, etc.). The most important points to remember when introducing new foods are to be patient and to determine what the child enjoys and dislikes. Avoid introducing too many foods at once, which might overwhelm the child. Take into account “the rule of 3,” which means offering only three foods at a time—two that the child already likes, and one that the child has not tried or did not like before.

If the child refuses to try a certain food, keep offering different foods. It is best to avoid spending a lot of time on a food that the child does not like, particularly if the rejection comes from smell or texture as opposed to just

| Picture | Activity                      | Check When Complete      |
|---------|-------------------------------|--------------------------|
|         | Wake up at 7:30 am            | <input type="checkbox"/> |
|         | Eat breakfast                 | <input type="checkbox"/> |
|         | Get dressed and brush teeth   | <input type="checkbox"/> |
|         | Playtime or errands           | <input type="checkbox"/> |
|         | Eat lunch                     | <input type="checkbox"/> |
|         | Story time and nap            | <input type="checkbox"/> |
|         | Playtime                      | <input type="checkbox"/> |
|         | Eat dinner                    | <input type="checkbox"/> |
|         | Take a bath and brush teeth   | <input type="checkbox"/> |
|         | Story time and in bed by 8 pm | <input type="checkbox"/> |

taste. In addition to taste, texture and smell are important for children with autism. For example, if the child likes the texture of a raw apple, try introducing cooked apple. If the child accepts cooked apple, then introduce cooked potato, as they have similar textures. Keep notes on what and how much the child eats, as well as refuses to eat, at mealtime. Make notes of strategies used and the child's behavior during mealtimes. Refer to these notes to continue offering foods that the child eats and to use strategies that work. These notes might also be helpful when seeking guidance from primary care physicians.

### *Include Non-Preferred Foods with Preferred Foods*

Caregivers can simultaneously present a preferred and non-preferred food to increase the range of food that children eat. For example, small bits of broccoli can be mixed in the child's favorite soup.

### *Create a Specific Routine*

As mentioned, children with autism tend to engage in repetitive behaviors. Rather than attempting to correct these behaviors by only removing undesirable habits, parents should establish new practices that are more



beneficial. This can be accomplished by having a specific place for meals, such as a child-sized table or high chair, and consistent times for meals every day. Further, a statement such as “It’s time to eat” or a brief song could signal that it is mealtime. This could help with the transition from another activity to a meal. Mealtime could begin with a bite or two of preferred food to encourage eating immediately, followed by non-preferred foods as explained in suggestions 3 or 4, and then offer another bite or two of preferred food to encourage meal completion. Conclude with access to a preferred activity or choices of preferred activities (e.g. reading a book, drawing, coloring or going for a walk, playing a game) to reinforce eating a meal.

#### *Use Positive Reinforcement*

Positive reinforcement is crucial to feeding time and is important for encouraging the mealtime behaviors we want to see. When a child tries new food, offer specific praise. For example, a parent could say, “Sarah, I like how you just tried that piece of broccoli!” Being specific helps children understand what we liked that they did, and increases the chance they will engage in that behavior again to gain our positive attention. Rewarding them with extra time on activities that they enjoy, such as playing educational games on the computer or a tablet after they have tried new foods, could also help encourage more of that behavior.

#### *Keep Mealtimes Focused and Reduce Distractions*

A good recommendation is to keep mealtime comfortable and supportive. Specifically, try using a high chair or child-sized table to ensure that the child is comfortable during mealtime. Keep distractions minimal, such as turning



off the television or setting the toys aside while eating.

#### *Use Augmented and Alternative Communication*

Even if some children with autism are classified as “nonspeaking” due to language delays, they still use some types of sounds, speech, or nonverbal communication for certain purposes. In these cases, research supports the use of Augmented and Alternative Communication (AAC) to help children convey their thoughts and emotions. AAC can vary from hand gestures (such as pointing), signs, pictures, and alternative communication devices. Parents and caregivers might worry that AAC will reduce the child’s motivation to speak, but there is significant evidence to suggest the opposite.

Research has shown that AAC does not interfere with speech; rather, it increases the child’s ability to learn speech. Using AAC also advances children’s communication skills because it gives them as much control as possible, allowing them the freedom to express themselves more accurately and more quickly. For example, during feeding time, a child might point at something to indicate that he or she wants to know what it is, but is struggling to find a word for it. Caregivers can help by verbalizing and labeling the items. This way, children will learn the right words and use them in conversation. Also, different hand gestures can mean different things with practice. For example, having children put their hands on their tummy can signify they are hungry or would like some more, while crossing both arms can mean full or stop.



Alternatively, caregivers might use flash cards and print pictures of healthy foods from which children could select the food they like to eat. This link from the National Heart, Lung, and Blood Institute includes pictures of different foods, as well as guidance to teach children about healthy and unhealthy foods: <https://www.nhlbi.nih.gov/health/educational/wecan/downloads/gswflashcards.pdf>

If the child likes using tablets or smartphones, there are many apps that can be downloaded and used for communication. Simply search “AAC Communicator” online to see the listing of apps, their ratings, and reviews. Free apps such as LetMeTalk, CoughDrop, and JABTalk are great examples based on their diverse range of pictures and symbols. It is important to note, however, that the AAC strategy is not meant to replace verbal speech and should only be used as a tool to bridge nonverbal and speech communication.

### **Strategies beyond the Table**

There are also strategies outside of mealtimes that can improve the mealtime experience.

#### *Have a sleeping routine*

Eighty percent of children with autism experience sleeping problems. Sleeping is a very important aspect of human functioning, and lack of sleep can cause irritability, slowed development, slowed cognition, fatigue, and might also cause gastrointestinal disturbances. The cause of sleeping difficulties among children with autism is not very well understood, but there are strategies to help regulate a child's sleeping schedule.

- Establish a bedtime routine (e.g., brushing teeth, putting on pajamas, and reading a book every night before bed)
- Have regular sleeping and waking times every day
- Avoid caffeine and naps late in the afternoon
- Sleeping should take place in area that is dark, quiet, and comfortable for the child

#### *Introduce Smaller Amounts of Food with Frequent Meals and Snacks*

Instead of providing three large meals, as is typical, smaller and more frequent portions with five to six scheduled meals and snacks may be provided for children with autism. This way, their intake is spread throughout the day, and they may feel full and less irritable. Additionally, if the child rejects a specific food, it is only a small amount that is rejected instead of an entire meal. However, it is important to set a schedule to offer the frequent meals and snacks and avoid all day snacking.

#### *Use Positive Role Modeling*

Be a positive role model by leading the way with all activities. When introducing a meal, eat it with them and say something positive about the food. For example, parents could say that they like the texture of the food in their mouth, or that they are really enjoying the food's savory taste. Children tend to imitate adults who are around them, so it is important to show positive behaviors for them to



model. If the child has older siblings, try to get them involved with being a positive role model as well.

### *Work Together with All Caregivers and Support Each Other*

Raising a child with autism requires a lot of patience, preparation, and intentionality, especially considering the challenges with routines, such as the ones outlined in this article related to eating. Research has shown mothers of young children diagnosed with autism are more likely to experience stress and depressive symptoms than mothers raising typically developing children. There are numerous benefits when fathers participate actively in caregiving activities with their children, such as reading books, singing songs, bathing, feeding, or responding to the child's cry. Father's involvement can boost mom's mental health, reduce stress, and promote the child's ability to learn new words and communicate. Parents can also seek additional support from other caregivers (e.g., child care providers, teachers, other family members). Research has shown that caregivers who are more coordinated and less conflicted during mealtime experience reduced stress and fewer disruptive mealtime behaviors. Therefore, it is critical that parents and caregivers discuss their approach and practices for feeding children to prevent conflicts at mealtime and to have agreed-upon strategies to address conflicts. Be open to new ideas and try a wide variety of strategies to find what works best for oneself, the child, and the family.

### **Summary**

In this article, we discussed some of the challenges that children with autism and their parents typically face regard-

ing the difficulties of mealtime. We also outlined strategies and solutions to common mealtime issues. However, we must remember that there is no one-size-fits-all approach to feeding children with autism. Since autism occurs on a spectrum, there are different levels and severities of autism. Therefore, we implement different strategies that are sensitive and responsive to the child's specific needs. The key is to be patient, supportive, and open-minded in trying and implementing strategies that can help promote a positive and healthy mealtime experience of the children and the family.

Below are additional resources that provide information on feeding children with autism:

- Online applications for smartphones and tablets such as LetMeTalk, CoughDrop, and JABTalk
- Autism Speaks Autism Treatment Network (2014). *Parent's Guide to Exploring Feeding Behavior in Autism presented by Autism Speaks ATN/AIR-P*.  
[https://www.autismspeaks.org/sites/default/files/docs/sciencedocs/atn/feeding\\_guide.pdf](https://www.autismspeaks.org/sites/default/files/docs/sciencedocs/atn/feeding_guide.pdf)
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- Nath, S. (2016). *Feeding Problems in Children with Autism*. *Interactive Autism Network at Kennedy Krieger Institute*.  
<https://iancommunity.org/ssc/feeding-problems-children-autism>
- U.S. Department of Health and Human Services, National Heart, Lung and Blood Institute. (2013). *We can! Go, Slow, and Whoa foods*. <https://www.nhlbi.nih.gov/health/educational/wecan/downloads/gswflashcards.pdf>
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<https://www.iidc.indiana.edu/pages/mealtime-and-children-on-the-autism-spectrum-beyond-picky-fussy-and-fads>

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