

# Autism Spectrum Disorder and Diet<sup>1</sup>

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As the caregiver of a child with Autism Spectrum Disorder (ASD), the search for answers about your child's condition may seem endless. Doctors and scientists are working hard to understand the nature of ASD, but there is much work left to be done. Nutrition and diet may affect ASD children in ways that are different from children who don't have ASD. There are thousands of Internet sites about ASD and diet, but much of the information has no scientific proof. Some caregivers, desperate to help their child, have tested different diets with the hope that they will see improvement in ASD symptoms. If you are considering making changes to your child's diet, the information in this publication will help you to understand the potential risks and benefits of these changes.

## Autism Spectrum Disorder

Autism Spectrum Disorder is a term that describes a number of disorders that vary based on severity. Many theories exist about the causes of ASD, but none has enough proof to support their claims. Your ASD child may show traits such as delayed speech, difficulty with non-verbal communication skills, discomfort in social settings, and obsessive, repetitive behavior patterns. He or she also may have a very sensitive sense of taste, touch and smell. Chronic gastrointestinal (GI) problems and intolerances to certain foods are also common features of ASD. These conditions can range from mild to severe, so children with ASD should be treated on a case-by-case basis.

ASD is a fairly new diagnosis, and much about these disorders is still unknown. ASD is thought to be a genetic trait, but the exact cause is still a mystery. Since ASD includes a wide range of characteristics and symptoms, it is challenging for researchers to pinpoint a single genetic source. Some scientists believe that environmental factors may play a role in causing ASD, but this has not been supported by research. Due to the results of one discredited study that became popularized in the media, many people believe that childhood vaccines cause ASD. Many scientists have published results of valid research proving vaccines to be safe.

Standard therapies such as speech therapy, occupational therapy and physical therapy address the behavioral issues of ASD. Parents and caregivers can be trained to encourage positive behaviors when dealing with challenges such as outbursts and disturbing conduct. Various dietary changes have been suggested as a way to improve symptoms associated with ASD, but none is well supported by research. In spite of this, personal accounts of the positive effects of diet on ASD symptoms have inspired many caregivers to experiment with the diet of their ASD children. Scientists have begun to research the effects of diet on ASD, but to date no one dietary approach has been found to significantly improve ASD symptoms.

## Dietary Issues

Diet and nutrition can impact your ASD child in many ways. You might find that your child is sensitive to the

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taste, touch, and smell of food. This is very common in ASD children and can result in pickiness when it comes to eating. Because of this sensitivity, your child might not like the texture of some foods and may reject them. Your ASD child might even limit his intake to only a few foods. When facing these challenges, it may seem impossible to provide good nutrition for your child.

## How can I get my child to eat more foods?

There are strategies that you can use to guide your child toward more food options. For example, if you present food in a way that appeals to your ASD child, it may give him a more positive feeling about eating it. This may mean arranging foods in a specific way on the plate, or offering the food in different forms, such as raw, baked, steamed, pureed, or cooked. Another option is to offer dips and sauces that your child already enjoys along with a food that is not familiar or preferred. Try introducing new foods that are similar in some way to foods that your child already likes. For example, if your child likes strawberry ice cream, you could offer a smoothie made with real strawberries and low-fat yogurt. You can use the foods that your child likes as a guide toward other healthy options that are similar in flavor, color, or texture.

It may take time, patience, and frequent exposure to the same food before your child accepts or grows fond of a food. Remember to allow your child to get used to new foods in stages. The first stage might be to look at or touch a new food. Seeing, smelling and feeling the food might make your child more comfortable with the idea of tasting it too. It is important not to become frustrated. Creating a power struggle with your child will only make things worse, and you and your child will end up even more frustrated.

## What if my child has gastrointestinal issues?

GI problems such as chronic stomach pain, constipation, diarrhea, gas and reflux are common in ASD children. While scientists debate the causes, caregivers need to find ways to manage their children's symptoms. If your ASD child is able to communicate well, he may be able to tell you when he feels sick. If he has trouble expressing himself, his symptoms might lead to changes in behavior. Signs that suggest your child may not feel well include sleep disturbance and aggression. Your child also might hold or point to his stomach more often. If you think your child has GI problems, consult your doctor so that you can discuss tests and treatment options.

## Food Intolerances

A food intolerance is a negative reaction to a normal food. Food intolerances often result in stomach pain, bloating and/or diarrhea. It is important to note that **a food intolerance is not the same as a food allergy**—a food allergy causes a more extreme reaction from the body's immune system, which may even result in death; a food intolerance is solely a digestive system response.

Some scientists believe that chronic GI tract symptoms among ASD children are caused by food intolerances and abnormal digestion. The theory is that the intestines of ASD children do not function normally. The incomplete breakdown of certain proteins causes abnormal substances to form that enter the blood stream. It is possible that certain behaviors observed in ASD children may be caused by these substances entering the brain. This is basis for ASD diets that eliminate foods that are not well tolerated.

## How do I know if my child has an intolerance?

If you suspect that your child has a food intolerance, it is important to discuss this with your doctor who may recommend removing certain foods from your child's diet. First, your doctor or a registered dietitian might ask you to keep a detailed log of the foods that your child eats for a certain period of time. With this information, he or she can try to narrow down which food or foods might be causing the problem. After target foods are identified, they are removed from the diet one at a time, and changes in symptoms are analyzed. You might find that many of the tested foods were not the problem. If this happens, you can move on to another target food and try again. This can be a long process, but it can have positive results.

## Gluten-free and Casein-free Diet

### What are gluten and casein?

- Gluten is a protein in wheat, barley and rye.
- Casein is a protein in dairy products.

The gluten-free and casein-free diet (GFCF diet) is one of the most common diet approaches parents use for their ASD children. The GFCF diet is free of all products that contain gluten or casein.

Use of the GFCF diet to treat ASD is based on the food intolerance theory. Although many parents are hopeful that these dietary changes will lead to improvements in ASD

symptoms, more research is needed to determine whether the GFCG diet is effective.

If you would like to put your child on the GFCF diet, there are some things that you should know. First, this diet has not been proven to be a safe and effective treatment for ASD. Second, since gluten and casein are very common in the typical American diet, it is difficult to remove them from your child's diet. These proteins are found in many processed foods and are listed on nutrition labels under several different names. They are "hidden" in many products that otherwise seem gluten- or casein-free. You will need to read nutrition labels and plan meals carefully. For more information about reading labels, see the USDA's *Food Allergies and Intolerances Resource List for Consumers* at <http://www.nal.usda.gov/fnic/pubs/bibs/allergy.pdf>.

The GFCF diet may make it difficult to eat away from home. If your child is placed on this diet, you will need to talk to friends and family members who may feed your child. In addition, you will need to discuss the diet change with your child's school. Before starting this diet, it is best to discuss your plans with your doctor and a registered dietitian to be sure that your child is getting the right nutrition for normal growth and development.

## Supplementation

Some research suggests that using certain nutritional supplements may reduce ASD symptoms. More research is needed to determine if these supplements are effective. Many vitamins and other nutrients have been tested as treatment options, but their use is not supported by scientific evidence. Some vitamins can be harmful when taken in large doses, so use caution if you plan to add them to your child's diet. Again, before making these changes to your child's diet, consult your doctor and a registered dietitian. They can work with you to make sure that your child will not be at risk for negative reactions or overdoses.

If your child is a picky eater, he might not be eating a wide variety of foods, so a multivitamin could be a good addition to his diet. Children's multivitamin supplements are regulated to make sure that the doses are appropriate for your child. As long as multivitamins are taken as directed, your child could benefit, but drastic changes in symptoms are unlikely. If you are trying the GFCF diet with your child, he may not be getting enough of the nutrients that are found in wheat and dairy foods. In addition to adding a multivitamin, talk to your doctor and registered dietitian about a calcium supplement and calcium and vitamin D-fortified foods.

## Issues with Special Diets

Several issues can arise when trying to change your child's diet. The picky-eating habits your ASD child might have may make dietary changes difficult. Special diets can also be costly and inconvenient, so it is important to assess if the changes would fit into your life and budget. While many parents claim that a certain diet worked for their ASD child, you might find that your child does not experience the same results. Testing different diets and supplements takes time and considerable effort, and it really is best to discuss changes with your doctor and a registered dietitian to make sure that your child is getting the right nutrition.

## Things to Consider

- Talk to your doctor and a registered dietitian.
- Discuss diet changes with school staff and other caregivers.
- Consider the time, effort, and money involved with trying different diets.

## The Bottom Line

It's natural for you to be eager to find ways to improve your child's ASD symptoms. But before making any changes, consider the advice of your doctor and a registered dietitian and evaluate what is best for your child and your personal situation. Even if you don't plan to try any of these dietary treatments, focusing on nutrition is still important.

## Learn More

To learn more about nutrition options for your ASD child, use the resources listed below:

- Cooperative Extension Family and Consumer Sciences (FCS) Educator (look in the blue pages of your telephone book). Florida Extension offices are listed online by UF/IFAS at <http://solutionsforyourlife.ufl.edu> or <http://SolutionsForYourLife.com/map>.
- For referral to a registered dietitian (RD) in your area you can call the Florida Dietetic Association at (850) 386-8850 or check the yellow pages of your phone book. You can also find a registered dietitian in your area by visiting the Academy of Nutrition and Dietetics RD Finder at <http://www.eatright.org/programs/rdfinder/>.

## Recommended Websites

- For a research-based and easy-to-use food guide for children, visit [ChooseMyPlate.gov](http://ChooseMyPlate.gov).
- For the American Academy of Pediatrics guide to ASD, visit <http://aappolicy.aappublications.org/cgi/reprint/pediatrics;120/5/1183.pdf>.

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