

[IMAGE]

## **When Food Affects Function**

### **Revealing the hidden connection between food, allergies and autism.**

By Diana Fatayerji, MS, PhD

Most parents know that what they feed their children can affect them in many ways, whether it's their mood, energy or physical health. For example, caffeine can increase energy (at least in the short term), while food dyes and additives can cause hyperactivity, skin problems and asthma.

For those with autistic children, there's new evidence that food and nutrition could play a significant role in providing support for some of the symptoms of autism, which include social withdrawal, repetitive behavior, communication difficulties, anxiety and hyperactivity.

#### **Foods That Influence Autistic Behavior**

The inability to break down certain components of our food is known to affect brain development and behavior. The foods typically associated with this are gluten; the protein in wheat, oat, spelt, kamut, rye and barley; and casein (the protein in milk products).

While most of us use enzymes to break down these proteins into peptides and then amino acids, individuals who lack these enzymes - in particular, children with autism - cannot completely digest gluten and casein. Research has shown that avoiding foods containing these proteins may significantly improve symptoms associated with autism.

image - Copyright â Stock Photo / Register Mark In autistic children, peptides produced as a result of breaking down gluten and casein are eliminated harmlessly in the urine, where large amounts of these peptides are found. Although most of the peptides exit the body, incomplete digestion can allow some of them to spill into the blood and, subsequently, the brain. Once in the brain, the peptides affect brain development and behavior, making them responsible for some autistic symptoms.

Along with disrupting normal brain activity, these peptides can have opiate-like effects similar to morphine, producing feelings of well-being and relaxation. As a result, autistic children can become "addicted" to

gluten and casein. They may find it difficult to stop eating culprit foods such as wheat and dairy.

If the opiate-peptide theory were correct, we would expect to see an improvement in autistic symptoms with removal of the peptides. One way to remove the opiate-like peptides is through elimination of gluten and casein in the diet - an approach that looks promising for autism.

Various studies on the effects of following a gluten- and casein-free diet have been published over the past 12 years. In all but one study, a gluten- and casein-free diet was found to be beneficial in reducing autistic behavior and increasing social and communication skills. When gluten and casein were reintroduced to the diet, autistic traits became worse.

### **Allergies Also Play a Role**

In addition to the peptide effect, there is often an accompanying inflammatory or allergic reaction to gluten and casein that can exacerbate the situation. This reaction compromises the integrity or permeability of the intestinal tract.

When the intestines become more permeable, there's a resulting increase in the amount of opiate-like peptides that are able to enter the bloodstream and brain. The more peptides present in the brain, the more severe the effects.

For this reason, it is important to identify and correct any factors that may affect intestinal permeability, such as gastrointestinal problems, food allergies, or poor digestion and absorption. It is estimated that more than 50 percent of autistic children experience these problems.

image - Copyright â Stock Photo / Register Mark To maximize the benefits of a gluten- and casein-free diet, it is necessary to correct intestinal permeability. Food allergies, parasites, infections and poor sulphation, which is important in detoxification and maintaining gut lining, shouldn't be ignored. If these additional factors are not addressed, improvements in autistic symptoms may be slow and the gluten- and casein-free diet may be prematurely abandoned.

### **Enzyme and Probiotic Support**

Support for intestinal integrity and permeability can involve treatment for food allergies, toxicity and intestinal parasites. A nutritional program to support the entire digestive tract is important and may include

digestive enzymes, probiotics, healing herbs and amino acids.

Individuals suffering from food allergies often are unable to completely digest their foods. Digestive enzymes, which help break down and digest the proteins, fats, carbohydrates and fiber in the diet, can help with this problem.

There also are specialized digestive enzymes that specifically break down the opiate-like peptides from gluten and casein. Although not intended to enable sensitive individuals to continue eating gluten and casein, they are designed to speed up the process of peptide elimination from the body.

A good-quality probiotic supplement, beneficial to the health of the colon, also can improve autistic symptoms. Probiotics are friendly bacteria in the colon that live in balance with us, helping protect against unhealthful invaders such as toxins and allergens.

Overall, there is strong evidence to support the use of a gluten- and casein-free diet in autistic children. Thousands of families have reported mild to dramatic improvements by following a gluten- and casein-free diet, and the benefits are becoming recognized in the medical community.

### **Gluten- and Casein-Free Eating**

image - Copyright â Stock Photo / Register Mark All family members and caregivers must support the decision to follow a gluten- and casein-free diet. Improvements are often slow, so be patient. Allow at least six months to determine if the diet is successful. Improvements are quicker when integrity and permeability of the intestinal tract are addressed. Here are a few resources to help gluten- and casein-free dieters (Your doctor can provide you with more information, including additional resources):

- Authentic Foods, [www.authenticfoods.com](http://www.authenticfoods.com). Manufacturer of bean and specialty flours, baking mixes, cake mixes and coating mixes, xanthan gum and natural flavors. Manufactured in a gluten-free environment.
- ENER-G Foods, Inc., [www.ener-g.com](http://www.ener-g.com). Offers breads, donuts, cakes, cookies, English muffins, pizza shells and soups.
- Gluten-Free Pantry, [www.glutenfree.com](http://www.glutenfree.com). Gourmet gluten-free baking mixes. Bread, bagel, brownie, cookie and piecrust mixes.
- Mr. Spice Health Foods, [www.mrspice.com](http://www.mrspice.com). Sauces that are gluten-free.

- *Special Diets for Special Kids* by Lisa Lewis PhD. Gluten and dairy-free cookbook.
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**Diana Fatayerji, MS, PhD**, is a clinical nutritionist who has been in private practice for nearly 10 years. She utilizes enzymes, nutritional supplements and other natural therapies to treat patients with a variety of health conditions, including hormone imbalances, allergies and digestive issues.

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