

'Leaky Gut' and the Gluten- / Casein-Free Diet

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Another popular intervention for autism is the gluten-/casein-free diet. Thousands of parents throughout the world have placed their children on this restricted diet and have observed dramatic improvements. As a result, many recipes have been published in specialized cook-books, newsletters, and on the Internet.

Leaky gut.: Many autistic individuals have permeable intestinal tracts, and this is often referred to as leaky gut., There appears to be many reasons for the problem of leaky gut, in autistic individuals, such as a viral infection (e.g., measles), yeast infection (i.e., an overgrowth of candida albicans), and a reduction in phenol sulfur transferase (PST; which lines the intestinal tract and protects it from leakiness). There is also some speculation that heavy metals in the intestinal tract can weaken membranes; and this, in turn, can cause leaky gut.,

As far as treating these potential causes of leaky gut,:

Viral -- There are no drugs that can destroy viruses in the body but there are anti-viral drugs that can 'slow down' the virus.

Candida albicans -- Many children have tested positive to candida albicans overgrowth and have been treated with anti-fungal medications (see section on candida albicans in this issue).

Low levels of PST -- Some parents give their children Epsom salt baths to increase levels of PST.

Children are also receiving metal detoxification procedures to rid their body of excess heavy metals.

Gluten and casein. Gluten is a protein and is contained in foods, such as wheat, barley, rye and oats. Casein is also a protein and is found in dairy products such as milk, ice cream, cheese and yogurt. In the intestinal tract, gluten and casein breakdown into peptides; and these peptides then breakdown into amino acids.

At the present time, we do not know why the gluten-/ casein-free diet helps many autistic individuals. One popular theory is that when gluten and casein are broken down into peptides, they may pass through imperfections in the intestinal tract. These peptides are termed gliadinomorphin (breakdown of the gluten protein) and casomorphin (breakdown of the casein protein). Both peptides act like morphine in the body. They can also pass through the blood-brain barrier and have a negative impact on brain development.

As stated earlier, the most helpful treatment for this problem is to place the child on a gluten- and/or casein-free diet. When placed on a diet, children, especially under 5 years of age, should not go cold turkey. That is, if all gluten/casein food ingredients are suddenly removed from the child's diet, this could lead to withdrawal symptoms, i.e., a worsening of the condition. Lisa Lewis, Ph.D., a parent of an autistic child who is actively involved in disseminating information on the gluten- and casein-free diet, suggests that young children under age six years should be placed on a trial diet for three months to see if there are any improvements; and children who are six years and older should be placed on a trial diet for six months.

Some people suggest that the health status of the child's intestinal tract should be examined first; and if there is evidence of a leaky gut, then the child should be placed on a gluten- and/or casein-free diet. The intestinal permeability test is one way to determine whether a child has a leaky gut. This test involves drinking a sweet-tasting solution and then collecting urine samples afterwards. Most physicians can administer this test. Parents have also sent their child's urine samples to laboratories to test for the presence of abnormal peptides associated with gluten and casein in the urine. However, many people feel that these tests are not necessary and suggest that one should simply place the child on a restricted diet and then observe whether or not there are any improvements in the child.

Resources:

Special Diets for Special Kids (1998) by Lisa S. Lewis

Unraveling the Mystery of Autism and Pervasive Developmental Disorder (2000) by Karyn Seroussi

Autism Network for Dietary Intervention (ANDI):

<http://www.autismndi.com/>

Celiac (wheat) and casein (milk protein) sensitivity. Information packet (P-26, \$11.00) distributed by the Autism Research Institute (<http://www.autism.com/ari/pubs.html#p-26>). The Lewis and Seroussi books can also be ordered from ARI.

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