

FOOD PROTEIN INDUCED ENTEROCOLITIS SYNDROME (FPIES)

FPIES typically affects children under the age of one year. Symptoms of vomiting and bloody diarrhea can lead to dehydration and/or shock after consumption of certain foods.

FPIES is caused by an immune reaction triggered by common foods and is not an IgE-mediated food allergy. FPIES may be confused with food allergies since the reaction occurs after consumption of certain foods. Most children with FPIES usually do not make IgE antibodies against the trigger foods. Therefore, allergy tests are not useful. 10% of milk-induced FPIES can develop IgE-mediated milk allergy, however.

Symptoms of FPIES:

Symptoms of FPIES of severe vomiting and lethargy most often occur within 1-4 hours of eating the trigger food. Diarrhea can occur within 24 hours. A child can quickly become dehydrated and may have low blood pressure. The child often requires emergency room care and it is common for children to be misdiagnosed as having gastroenteritis or sepsis. When symptoms are chronic, FPIES can lead to weight loss and poor growth.

While FPIES can mimic food allergies, symptoms typically consist of gastrointestinal symptoms only. Food IgE-mediated allergies commonly result in symptoms of hives, swelling of the face, respiratory symptoms such as coughing and/or wheezing. Allergy symptoms occur more quickly than the symptoms seen in FPIES, most often within a few minutes of eating the trigger food, rather than hours.

Foods that cause FPIES:

There are a variety of foods that have been reported to trigger FPIES. **High risk foods** include milk, soy, rice, oats and poultry. Also sweet potatoes, peas, banana, egg and fish can be a trigger. **Moderate risk foods** that trigger FPIES include squash, carrot, white potato, green beans, apple, pear, orange, beef, grits, corn, wheat, barley, peanut and other legumes. **Low risk foods** triggering FPIES include broccoli, cauliflower, parsnip, turnip, pumpkin, blueberry, strawberry, plum, watermelon, lamb, peach and quinoa. Many infants with FPIES will react to both milk and soy. If FPIES is triggered by solid foods, it is usually rice or oats. Reactions often occur within the first several feedings of the culprit food.

It is rare for children over the age of 1 to develop new onset FPIES to a newly introduced food. The exception is fish and shellfish which can cause FPIES even in older children and adults.

Diagnosing FPIES:

It is common for FPIES to go undiagnosed for weeks to months and the symptoms are often misdiagnosed as the stomach flu (viral gastroenteritis), sepsis or even food allergies. Allergy tests are usually negative and classically low hypoallergenic foods such as rice, oat and poultry are often overlooked as a possible cause. Therefore, the diagnosis of FPIES is usually made on a clinical basis since there is no diagnostic test available to confirm the diagnosis.

Treatment:

Avoidance of trigger foods is the mainstay of treatment. If a child has FPIES caused by a cow milk based infant formula, soy formula should also be avoided given that a child will experience reactions to both foods about 50% of the time. If possible, exclusive breast feeding is recommended and should resolve the problem. Sometimes the breast-feeding mother has to avoid the food as well.

If infant formulas are used, amino acid formulas which are special nonallergenic formulas may be recommended by your doctor. If solid foods are a trigger, avoidance of these foods are necessary.

Once symptoms do occur, treatment should be sought in an emergency room given the severity of the symptoms. Intravenous fluids can be required for acute treatment of FPIES. Injectable epinephrine is frequently given although it has **little or no** benefit for the treatment of FPIES.

At what age does FPIES resolve?

Typically, FPIES resolves by age 3 years. Parents should not attempt to determine if the child can tolerate the food at home. An allergist may choose to perform an oral food challenge under close medical supervision usually in a hospital. It is recommended that these oral food challenges be performed with an IV catheter in place so intravenous fluids could be administered if needed.

Source: Nowak-Wegrzyn a. et al, Journal of Allergy & Clinical Immunology, 2017; 139: pp 1,111-1,126.

www.fpiesuniversity.org (International FPIES National Support Group)

Disclaimer: The information contained in this pamphlet is for educational purposes only and should not be used as a substitute for personal care by a licensed physician. Please see your physician for diagnosis and treatment of any concerning symptoms or medical conditions.