

Infant Dietary Protein Intolerance

What is dietary protein intolerance?

Dietary protein intolerance (DPI) is when a child cannot properly digest specific proteins in the foods they eat.

The most common proteins that cause this problem are in cow's milk and soy foods.

DPI is common in children, especially babies, and may run in families. In the United States, 2% to 7% of babies under age 1 have DPI. It is also called food protein-induced colitis.

Is dietary protein intolerance a food allergy?

DPI is not a true food allergy because it is not triggered by specific allergy cells. It is more likely due to an immune or metabolic reaction that is not well understood.

DPI is sometimes incorrectly called a "cow's milk allergy," eosinophilic gastrointestinal disease (EGIDs), or allergic colitis.

What are the symptoms in my child?

DPI symptoms vary depending on the child. Your child may appear healthy and grow normally but have stools that contain mucus or water or traces of blood. Other symptoms may include irritability, nausea or disgust at sight or smell of food, frequent vomiting, or diarrhea. If your child has symptoms of DPI and weight loss, talk to your child's primary healthcare provider. Your child may need to visit a gastroenterologist (GI) doctor.

How is it diagnosed?

Diagnosis is often based on signs and symptoms. There is no laboratory test to confirm DPI. Allergy testing is often not helpful to finding the food or protein trigger.

Blood work, stool studies or skin testing may be done to rule out other conditions.

Can an endoscopy help diagnose DPI?

In most cases, endoscopy is not needed. Endoscopy is a procedure done by a gastroenterologist, where they can examine the digestive tract and take small samples of the lining in the digestive system. These samples are then placed under a microscope to look for inflammation, allergy cells, and signs of bleeding or irritation. These findings can be seen with many other conditions so are not helpful to making a diagnosis of DPI. An endoscopy is recommended when patients have significant weight loss, persistent bleeding, difficulty swallowing, severe abdominal pain, and persistent vomiting or diarrhea.

To Learn More

- Gastroenterology
206-987-2521
- Ask your child's healthcare provider
- seattlechildrens.org

Free Interpreter Services

- In the hospital, ask your nurse.
- From outside the hospital, call the toll-free Family Interpreting Line, 1-866-583-1527. Tell the interpreter the name or extension you need.

What is the treatment for DPI?

There is no medicine to cure DPI, but your child's symptoms will gradually improve with time. Most children will completely outgrow their intolerance by age 1 year, but for some it is as little as 6 months and others may take as long as 2 years.

- Most babies with DPI are totally healthy and their only symptom is blood in the stool. Some doctors do not recommend any diet changes in these children and the blood gradually disappears, usually by age 1.
- Your child's DPI may be best controlled by changing your child's diet. This means removing some protein foods completely from their diet or your diet. If the proper protein is removed from the diet, there should be a gradual improvement in your baby's symptoms. For infants this often means:
 - Being breastfed by a mother who follows a strict milk-free and soy-free diet or
 - Drinking a formula that contains only broken-down proteins

It can take up to 4 to 8 weeks for the proteins to be entirely eliminated from the body, and your child may continue to have symptoms during this time.

After your child outgrows their intolerance, they will be able to eat a regular diet. We usually recommend trying to eat protein foods that were removed in 6 to 12 months to see if your child is able to tolerate the food.

What is milk protein intolerance vs. lactose intolerance?

These conditions are often confused because their names are quite similar.

- Milk protein intolerance is the most common type of dietary protein intolerance (DPI) described above.
- Lactose intolerance is very different than DPI and is not common in children under age 5. It occurs when a person's intestine does not make enough of an enzyme called lactase, which helps digest lactose (a natural sugar in milk). If lactose is not broken down it becomes food for the normal bacteria that live in the intestine. When these bacteria break down the lactose, they produce gas and a small amount of acid. The gas and acid may cause symptoms of pain, bloating, excess gas, nausea, and diarrhea.