What Is Food Protein-Induced Enterocolitis Syndrome?

Food Protein Induced Enterocolitis Syndrome (FPIES) is an allergic reaction in the gastrointestinal system. The most common triggers are milk and soy, but any food (even those thought to be hypoallergenic e.g. rice, oat) can cause an FPIES reaction. FPIES typically starts within the first year of life.

Unlike most food allergies, the FPIES reactions are delayed and usually begin about 2 hours after ingestion of the causative food. FPIES reactions are characterized by profuse vomiting and diarrhea. In about 20% of cases the child will have such an extreme reaction to a food that they will go into shock and need to be taken quickly to the Emergency Room for immediate treatment. About 75% will have acute episodes on diagnosis. The other 25% children will have more chronic symptoms, which resolve within 1 week after avoiding the food.

Diagnosis
Unlike common food allergies, standard skin testing and blood testing for specific IgE are routinely negative in these patients. Therefore, a careful history and physical examination is the key for diagnosis.

During an acute episode, laboratory findings can include an elevated white blood count with increased neutrophils and eosinophils, elevated platelet count, anemia (low red blood cell count) or low albumin may occur, particularly in chronic cases. In acute severe episodes, patients can develop methemoglobinemia.

Natural History
FPIES typically presents before 6 months of age in formula-fed infants with repetitive emesis, diarrhea, dehydration, and lethargy 1 to 5 hours after ingesting the offending food. The most common offending food is cow's milk followed by soy, and rice. Other foods have been reported including oats, barley, chicken, turkey, egg white, green pea, peanut, sweet potato, white potato, fruit protein, fish, and mollusks. But, FPIES is possible with any food.

In 60-90% of affected children, FPIES is outgrown in the first 3 years of life. However, there are individual children that have FPIES continued into adulthood.

Treatment
For acute FPIES, treatment with intravenous hydration is often needed. There is no curative therapy at the current time. Strict avoidance of the offending food is the basic treatment. A hypoallergenic diet can be an amino acid elemental formula or an extensively hydrolysed casein or whey formula.