

Failure to Thrive

What is Failure to Thrive?

Failure to thrive (FTT) is a phrase that is traditionally used to describe children who have fallen short of their expected growth and development. In our general practice, FTT is commonly used for any child who fails to gain weight or height according to standard medical growth charts. FTT occurs when your child is either not receiving adequate calories or is unable to properly use the calories that are given, resulting in failure to grow or gain weight over a period of time. Using standard growth charts, a child's weight or height below the 3rd percentile for age or a progressive decrease in the rate of gain of weight or height would be considered as FTT.

How Common is FTT?

About 1% of all children admitted to any hospital and 3 to 5% of all children admitted to a Children's Hospital have failure to thrive. About 10% of clinic visits in urban and rural outpatient settings are for concerns about growth and development. Up to 16% of 0-4 year olds of low income families are "stunted."

Why Does FTT Happen?

Failure to thrive happens for many reasons, but the causes can be divided into three categories: poor intake, poor utilization, or increased calorie requirements.

Among the conditions that can cause your child to have inadequate calories for normal growth (decreased intake of calories) include:

- refusal to eat from chronic medical problems, such as
 - kidney disease, cancer, congenital heart disease, metabolic disorders, liver disease, HIV infection, or gastroesophageal reflux with esophagitis
- having a restrictive or fad diet
- dilute formula preparation
- poor milk supply for breastfeeding moms (due to the mother being exhausted, under stress or in a poor nutritional state)



- physical abnormalities that cause difficulty swallowing, such as neurological disorders including cerebral palsy, trauma to the mouth, congenital abnormalities, or disorders with motility or movement of the upper gastrointestinal tract
- poverty can lead to inadequate access to food.
- Conditions that can cause an increased loss of calories include the following:
- illnesses that can cause persistent vomiting such as intestinal obstructions or a brain tumor
- conditions associated with malabsorption, usually with diarrhea which can be foul smelling and oily, such as from cystic fibrosis, allergies, celiac disease, inflammatory bowel disease or parasite infestations or other intestinal infections.
- diabetes mellitus (usually includes weight loss, increased urination, and increased thirst and drinking),
- other metabolic conditions

Other children may have an increased requirement for calories because of a chronic infection, hyperthyroidism, congenital heart disease or chronic lung problems.

When children develop failure to thrive from an underlying medical condition, it is often referred to as organic FTT. Organic FTT refers to growth failure that results from acute or chronic medical problems such as listed above. Non-organic FTT is applied to children who have growth problems but do not have a specific underlying disease or medical condition.

Up to 80% of all children with FTT have non-organic type FTT. Non-organic FTT most commonly occurs in situations where there is inadequate food intake or there is a lack of environmental stimuli. Examples of non-organic FTT include lack of food intake due to an inability to afford an appropriate formula, problems with feeding techniques, improperly prepared formula (overdiluting the formula), or an inadequate supply of breast milk (due to the mother being exhausted, under stress or in a poor nutritional state).

How does your health care provider know that your child is failing to thrive?

Weight is the best indicator of nutritional status and your child's weight should be monitored at each clinic visit. Obtaining your child's height is also important; however a single measurement of height is less valuable for the diagnosis of FTT than several height measurements over time (linear growth). Linear growth may be affected in children with malnutrition, but this usually indicates a prolonged period of poor nutrition.

Most children with non-organic FTT present with growth failure in the first year of life, and usually come to medical attention by 6 months of age. In children with organic FTT, the time of presentation is more variable and is dependent on the child's underlying medical condition. When FTT is recognized, your doctor will talk with you about your child's symptoms, obtain a dietary history and perform a physical examination.

What are the investigations for FTT?

Your doctor may request that you provide food records for your child and will likely involve a dietician to assess your child's food intake and nutrition needs. Often, as a first step, an appropriate diet will be instituted with the help of a dietician to make certain that adequate calories are provided to allow for "catch-up" growth for your child.

In the event of difficulties with breastfeeding, a lactation specialist may be asked to help. It may be necessary to involve other specialists to assess the developmental stage of your child and/or your child's feeding skills. If your child continues to have FTT, your physician may admit your child to the hospital for further monitoring and investigation. Sometimes an infant or child with failure to thrive will be hospitalized for observation to help determine the nature of the problem and to begin dietary therapy.

Your physician will often tailor any blood tests or other laboratory studies according to your child's symptoms, physical findings and response to initial therapy.

How is Failure to Thrive treated?

Treatment of failure to thrive depends upon the age of the child, the associated symptoms and the underlying

reason for the poor growth. The overall goal of treatment is to provide adequate calories and any other support necessary to promote the growth of your child. If your child has organic failure to thrive, additional therapy may be needed to treat the underlying medical condition. For example, intestinal disorders may cause poor absorption (malabsorption) of the diet and lead to failure to thrive. In this instance, a special diet may be necessary.

Failure to thrive may also develop in twins or triplets, simply because multiple births are more difficult to care for and more demanding to feed. A baby born prematurely is more likely to have failure to thrive because many of the body functions necessary for the proper ingestion and digestion of the diet are immature at birth. Lung problems or heart disease, especially in

very young infants, can make feedings more difficult and lead to poor calorie intake and failure to thrive.

You should call your child's healthcare provider if any of the following occur:

- Increased amounts of vomiting or persistent projectile (forceful) vomiting.
- Vomiting of fluid that is green in color, or looks like coffee grounds or blood.
- If your child experiences any difficulty breathing associated with the vomiting or spitting.
- Pain related to eating, or food refusal causing weight loss or poor weight gain
- If your child develops trouble swallowing or painful swallowing.

→ Locate a Pediatric Gastroenterologist

IMPORTANT REMINDER: This information from the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition (NASPGHAN) is intended only to provide general educational information as a definitive basis for diagnosis or treatment in any particular case. It is very important that you consult your doctor about your specific condition.



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