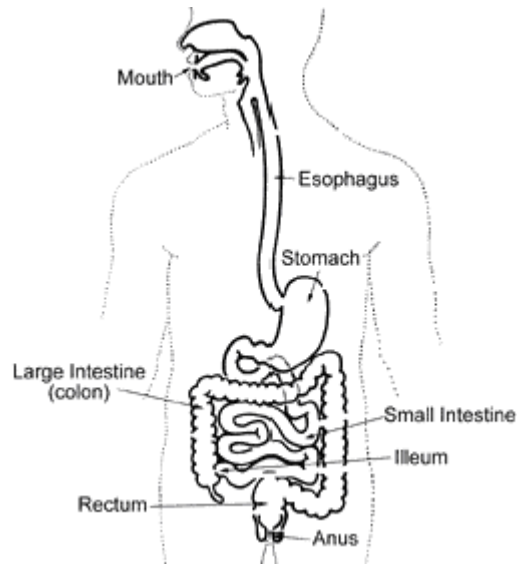


The Small Intestine (Small Bowel)

The small intestine is a muscular organ located between the stomach and large intestine, and where majority of nutrients are absorbed. The small intestine consists of three parts: duodenum, jejunum, and ileum. In the duodenum, food is processed and broken down to prepare for absorption. The jejunum is responsible for absorbing many of the nutrients the body needs for growth and energy. The ileum absorbs nutrients and water, and connects to the ileocecal valve that controls the flow of fluid from the small to the large intestine.



The small intestine performs many vital functions for growth and development. Some of these functions are:

- 1) To help break down food in order to provide the body with energy to help it grow
- 2) Responsible for the absorption of minerals, including iron, calcium, phosphorus, zinc, vitamin B12, and bile salts
- 3) Responsible for the break down of salts, nutrients, and water

Common Disorders

Many children are born with disorders where the intestine does not work properly. Some of these disorders include:

- Gastroschisis
- Necrotizing enterocolitis (NEC)
- Ischemic bowel
- Midgut volvulus
- Intestinal atresia
- Autoimmune enteropathy
- Intussusception

- Hirschprung's disease
- Massive abdominal trauma
- Microvillus inclusion disease.

With these disorders, children may need surgery and have a large portion of the intestine removed. Therefore, the child will only have a part of the small intestine remaining. This condition is called Short Bowel Syndrome (SBS).

Often children with this disorder have a difficult time maintaining their growth and development because their remaining intestine may not function properly. This can lead to feeding intolerance, including excessive diarrhea and vomiting, poor growth, frequent infections, and fatigue. Intravenous nutrition is commonly needed to help maintain normal growth. This intravenous nutrition is called Total Parenteral Nutrition (TPN).

Intestinal Transplantation

Indications for Transplantation

Some children with intestinal failure are successfully rehabilitated and do not need transplant. However, some children with intestinal failure, even with intense medical and surgical care from intestinal specialists, can not meet the metabolic needs of their body and transplantation may be necessary. Indications for transplant include:

- Recurrent infections
- Loss of central venous access
- Irreversible liver disease
- Lifelong TPN dependency

Listing for Transplantation

During the transplant evaluation process, your child's intestine and liver will be studied thoroughly. After several tests, the IRP team will determine if your child's liver is healthy enough to support a new intestine. If this is the case, your child will be listed for an "isolated-intestinal transplant." However, if your child's liver has irreversible scarring, or cirrhosis, and would not be able to support a new intestine, he/she will be listed for a combined intestine-liver transplant.

Once your child has been listed for transplantation, the waiting process can be a long one. It is important to stay in close contact with the IRP/Transplant team and notify them of any changes in your child's health. While listed, your child may resume with his/her daily routine and activities at home. Once an organ has been accepted for your child, you will receive a call to bring your child to the hospital.