

Article 3274

Overview

Hyperalimentation is a procedure in which nutrients and vitamins are given to a person in liquid form through a vein. It is only given to someone who cannot get nutrients through the intestinal tract.

Who is a candidate for the procedure?

Hyperalimentation is used for people with health problems that prevent them from absorbing enough nutrients through their intestines. It is also used when a person is severely malnourished and cannot take in food by mouth. Hyperalimentation might be used:

- » before surgery if the person is malnourished. This can be caused by:
- » congenital abnormalities causing disorders of the gastrointestinal (GI) tract, such as esophageal atresia
- » esophageal stricture, which is a narrowing of the esophagus
- » esophageal cancer or stomach cancer
- » swallowing difficulties
- » after surgery if a person is not recovering as quickly as expected or has complications relating to the surgery.

This can be caused by:

- » prolonged ileus, when the intestines are not awake or functioning
- » short bowel syndrome, which occurs after someone has large amount of small intestines removed
- » a fistula, an abnormal passageway between two internal organs, or leading from an internal organ to the surface of the body
- » peritonitis, a severe infection in the abdominal cavity
- » if a person has inflammatory bowel disease, including:
 - » severe gastroenteritis
 - » Crohn's disease
 - » ulcerative colitis
 - » extensive diverticulitis
- » if a person cannot eat or is unable to absorb nutrients from food. This may be caused by:
 - » cancer of the GI tract, such as colon cancer
 - » chemotherapy or radiation therapy
 - » major trauma, such as a motor vehicle accident
 - » massive burns
 - » coma
 - » an eating disorder called anorexia nervosa

How is the procedure performed?

A central line is a special intravenous or IV line that is inserted through the chest and threaded into one of the large veins that lie close to the heart. A central line, rather than an IV line in an arm, must be used for this procedure because the solution is highly concentrated. The hyperalimentation solution is tailored to the needs of the person, and contains:

- » glucose, or sugar
- » amino acids, the digested form of proteins
- » electrolytes, such as potassium and sodium
- » vitamins
- » fat emulsion

What happens right after the procedure?

Hyperalimentation uses a pump to closely regulate the amount of solution given. The person may receive it at a constant rate, or only for several hours at night. Close monitoring is needed. The healthcare provider must check the person's weight, blood sugars, and electrolytes levels in the blood. The provider must check the site of the central line often for signs of infection.

What happens later at home?

A nutritional support team will be involved with the use of hyperalimentation. The person's nutritional status is studied and his or her nutritional needs calculated. The solution is changed when the persons needs change. For instance, if a person is taking in food or fluids by mouth, he or she will need fewer calories from the solution. The family will be taught how to administer the hyperalimentation and care for the person if he or she is to receive care at home.

What are the potential complications after the procedure?

Complications of hyperalimentation may include:

- » too much glucose in the blood
- » too little glucose in the blood
- » infection
- » nausea and headache
- » catheter dislodgement
- » formation of gallbladder stones or sludge