

## Nutritional Components

- **Carbohydrates & Fat**

Medium-chain triglycerides are sometimes given as they are more water soluble than long-chain triglycerides and better absorbed in the presence of bile acid or pancreatic insufficiency. However, because patients with SBS typically have normal pancreatic and biliary function, the rationale for this approach is questionable.

- **Protein**

Several enteral feeding formulations are available commercially, and can be selected based on individual patient characteristics. Breast milk or semi-elemental diets (e.g.: hydrolysate formulas such as Pregestimil, Alimentum, or Nutramigen) may be used initially.

- **Fiber**

Fiber supplementation may decrease the watery nature of stools which can be helpful if frequent stooling causes perianal skin breakdown. However, fiber also may exacerbate small bowel bacterial overgrowth, which is often present and can be problematic in some SBS patients

- **Omega-3 Fatty Acids**

- **Glutamine**

- **Vitamins & Trace Elements**



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SBS Foundation

*Educational Series*

## *Enteral Nutrition*



Short  
Bowel  
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*Empowering patients to live fuller  
lives, creating a lifeline of hope.*

## Introduction

Enteral nutrition support refers to the provision of calories, protein, electrolytes, vitamins, minerals, trace elements, and fluids via an intestinal route. Enteral nutrition is most commonly delivered into the stomach (gastric feeding). However, it can also be administered into more distal parts of the gastrointestinal tract.

Gastric feeding is typically delivered via an orogastric or nasogastric tube. Such tubes are available in two varieties:

1. Feeding tubes are small, flexible, often have a weighted end, and may require a stylet for insertion. They can be inserted through the nose or sometimes the mouth. A feeding tube's position should be confirmed radiographically before it is used, because it is frequently misplaced into an airway.
2. Gastrostomy tubes can be inserted percutaneous during surgery or during an endoscopy. A surgical gastrostomy tube can be inserted laparoscopically or by an open surgical approach.
3. To initiate enteral nutrition, appropriate access must be obtained and the prescription needs to be determined. The prescription includes the formula tolerated, its compensation, delivery method, and delivery rate.



## Formulations

Common differences between formulas include osmolarity, caloric density, and amount of fat and carbohydrates per calorie, as well as electrolyte, vitamin, and mineral content. In addition, there may be differences related to whether they contain whole protein or predigested, fiber and if disease-specific nutrients are present or absent. Standard enteral nutrition provides sufficient nourishment for most critically ill patients if given with caloric adequacy, although concentrated and predigested enteral nutrition may be preferable for selected patients.



## Complications and Causes

### Aspiration

- Backrest Elevation
- Surgical/Percutaneous Feeding
- Motility Agents

### Diarrhea

Diarrhea is commonly associated with feeding intolerance and/or concomitant administration of medications that can cause diarrhea (i.e. antibiotics, proton pump inhibitors)

### Metabolic Disorders

Hyperglycemia, micronutrient deficiencies, and re-feeding syndrome

### Mechanical

- Device Malfunctions
- Tube Clogging
- Pump Failure

