

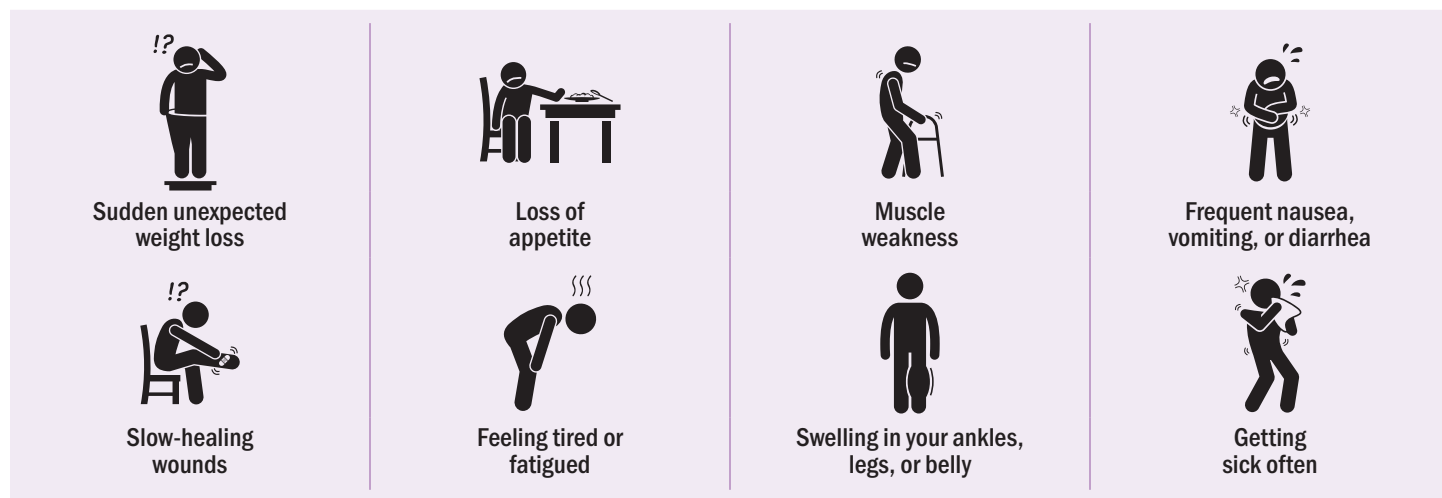
# Blenderized Tube Feeding (Blenderized Enteral Formula) for Adult Patients with Head and Neck Cancer

## Overview: Head and Neck Cancer and Nutrition

- Head and neck cancer includes malignant tumors in or around the throat, larynx, nose, sinuses, and mouth.
- Individuals often need surgery, chemotherapy, and/or radiation therapy.
- This cancer and the treatment modalities have a significant nutritional impact, causing difficulty in maintaining a healthy nutrition status and sometimes requiring enteral nutrition, otherwise known as tube feeding.
- Feeding tubes are often used to help the consumer maintain or gain weight and can be removed once adequate oral intake is resumed. One study reported that about 14% had a feeding tube after treatment, and up to 30% will have a feeding tube during treatment.<sup>1</sup>
- The prevalence of malnutrition associated with head and neck cancer varies across studies, and a wide range of 20–80%. This wide range may be due to differences in tumor location, disease stage, treatment approaches, and how nutrition status is assessed.<sup>2-6</sup>
- Malnutrition is more common in older individuals and those with more advanced cancer.

## Know the Warning Signs of Malnutrition

Malnutrition is not always easy to see, so it is important to keep an eye out for possible signs. The major signs of malnutrition include:



## Why It Matters

Malnutrition is a serious issue that can have dangerous consequences on your well-being. The effects of malnutrition in cancer patients include:

- Loss of weight and muscle
- Higher risk of death
- Longer and more frequent hospital stays
- Higher risk of infections
- Higher risk of bad side effects from cancer treatment
- Higher stress levels
- Higher healthcare costs
- Less independence
- Higher risk of bone fractures



## Nutrition Screening and Assessment

You will undergo:

- Routine malnutrition risk screenings using a valid tool after diagnosis and throughout treatment. This may be done by a nurse or dietitian who will ask about your weight history and food intake.
- A more comprehensive nutrition assessment for those at risk by a trained nutrition professional, such as a registered dietitian nutritionist (RDN).<sup>7</sup>

## Nutritional Goals<sup>8,9</sup>

- Maximize nutrition intake (oral with food and/or nutrition supplements and/or via feeding tube)
- Take in at least 30 calories and 1.2–1.5 grams of protein per kilogram (kg) of body weight
  - » Daily Example: For someone who weighs 160 lbs or 72.7 kg, this equals about 2100–2200 calories and 87–109 grams of protein.
- Work to meet nutrition goals for calories and protein to prevent/limit weight loss and preserve lean body mass (muscle)
- Maintain your weight during the transition from EN to oral intake
- Increase physical activity



## Nutrition Interventions and Support: When/How Your Healthcare Team May Recommend Nutrition Supplements and/or a Feeding Tube<sup>10</sup>

- They should provide nutrition counseling and recommend oral nutrition supplements if appropriate.
- Discuss enteral nutrition or tube feeding if oral intake <60% of estimated energy needs for 7+ days.
- This may include insertion of a gastrostomy tube when enteral nutrition is expected for more than 4 weeks.

### My Healthcare Team is Recommending a Feeding Tube: Why?

Sometimes, despite your best efforts to eat enough, patients like you lose weight during chemotherapy or radiation treatments (CRT) or develop other symptoms that prevent you from eating enough. This can sometimes lead to an interruption in CRT. A feeding tube and intake of feeding formula can aid in weight loss prevention during and after CRT. This tube feeding treatment is also called “enteral nutrition”.

## Questions About Enteral Nutrition or Tube Feeding

### Is the feeding tube permanent?

The feeding tube can just be temporary and may be removed after you no longer need it.

### Can I eat by mouth if I have a feeding tube?

If it is okay with your doctor for you to swallow and eat, then you can eat with a feeding tube. A feeding tube is a way to supplement oral eating in order to maintain weight.

### Can I put food in my feeding tube?

Yes, a blenderized whole food meal is an option for you to use in feeding tubes. Please see below and discuss with your clinician to see if this is right for you.

### Will I ever be able to eat by mouth again?

Most patients with head and neck cancer should be able to go back to eating by mouth. You will need to discuss with your doctor.

### What kind of tube feeding formulas are available?

There are many types of tube feeding formulas available, including standard commercial formulas, blenderized formulas, and more disease-specific formulas. Your healthcare team, particularly your dietitian, will make suggestions on how to start your tube feeding.

## What is a Blenderized Tube Feeding Formula?



A blenderized tube feeding (BTF) formula is defined as food and liquid pureed enough to be given via an enteral access device (EAD).<sup>11</sup> Two types of BTF are in common usage: formula prepared in a home or hospital blender (Prepared BTF) and formula manufactured with food ingredients or pureed foods (Commercial BTF).<sup>11</sup>

## Benefits of EN Support with BTF in Head and Neck Cancer<sup>12</sup>

Outcomes	Evidence
Improved Weight Gain	BTF was found to be safe and effective in promoting weight gain in adult participants.
Nausea/Vomiting	Reductions in vomiting and nausea in patients changing from commercial enteral formula to BTF.
Bowel Regularity	Diarrhea and constipation both improved with a commercially prepared BTF formula.
Increased Oral Intake	For most patients, oral intake increased over a 6 week period.
Reflux	No reflux with BTF as compared to commercial enteral formula.
Gas/Bloating	Gas/bloating decreased from 50% to 19% with BTF.

## Key Takeaways

- Malnutrition can occur frequently in patients with head and neck cancer.
- Preventing malnutrition is key to preventing interruptions in treatment and prolonging your health.
- Feeding tubes can be temporary and may help prevent weight and muscle loss.
- There are many options for feeding formulas, and BTF is an important one to consider.
- Patients with head and neck cancer should have a nutrition professional screen, assess, and monitor them during their cancer treatment and enteral nutrition program.
- Patients with head and neck cancer often need enteral nutrition support, both during and after treatment.
- BTF can be home blended, baby food based, or commercially prepared.
- BTF has been shown to minimize GI symptoms usually associated with tube feeding, provide adequate nutrients, and can improve quality of life.

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