

## **CALORIES, CALORIES, AND MORE CALORIES – THE ANSWER FOR ESOPHAGEAL CANCER PATIENTS**

**One of the most significant problems an esophageal cancer (EC) patient will face are physical difficulties in eating that limit their ability to take in sufficient calories to nourish and to heal the body. The very location of this cancer, involving the part of the body that transfers food from the mouth to the stomach, presents a structural, often painful, barrier. Medical procedures such as chemotherapy, radiation and/or surgery will make eating, drinking, and swallowing very difficult. Removal of the esophagus, termed an esophagectomy, may require a long adjustment period for the EC patient to adapt to comfortable food intake. Not surprisingly, many patients will lose motivation to eat, especially when treatment side effects are added to the typical cancer related problems that limit appetite, alter taste and lead to tolerance of only small volumes of food.**

**It is important to remember that calories do count and that everything you eat should be as calorie rich as possible. Protein and carbohydrates are not particularly energy dense, delivering only 4 calories per gram. Fat has over twice the calorie content, 9 calories per gram of weight. Esophageal cancer patients must learn that the low calorie, low fat diets, so familiar to most of us, will no longer be adequate when volumes are limited due to severe side effects of EC and cancer therapies. Some diet restrictions that were once recommended may be set aside during this treatment and recovery period. Be sure to check with your oncologist or primary care doctor to determine your current diet recommendations.**

**The information in the booklet by Colleen Gill, MS, RD, CSO was not specifically written for esophageal cancer patients, but for all patients with eating difficulties. Similarly, the booklets provided by American Cancer Society and National Cancer Institute were written to help all patients with cancer, not just EC patients. It is important to remember this as you read these sources. Much of the content, however, deals with universal problems in eating and will be especially useful for esophageal cancer patients.**

**Colleen Gill has kindly agreed to let us distribute her booklet to all esophageal cancer patients and families in the Esophageal Cancer Awareness Association and to information centers in hospitals and clinics where EC patients are being treated. We, the Board of Directors of Esophageal Cancer Awareness Association, are indebted to her for this source of valuable information.**

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## **SPECIAL EATING PROBLEMS FOR SOME ESOPHAGEAL CANCER PATIENTS**

### **“Dumping Syndrome”, an Esophagectomy Related Problem**

**“ Dumping Syndrome” can result from an esophagectomy, a surgery that removes part or all of the esophagus, portions of the vagus nerve, and usually part of the stomach. Without the vagus nerve, the pyloric valve that regulates the passage of food out of the stomach and into the small intestine is unable to relax to let food go through. To solve this problem, the surgeon cuts the muscle of the pyloric valve during the esophagectomy. This will allow mostly undigested food to pass rapidly from the stomach into the first part of the small intestine, the duodenum. Dumping Syndrome often has two phases. The first phase occurs between fifteen and thirty minutes after a meal. One theory as to why the first phase of dumping may occur is that the large mass of mostly undigested food is “hyperosmolar”. This means that large concentrations of undigested sugars, proteins and fat molecules are present without sufficient fluid to dilute them to normal levels. The body tries to correct this by absorbing fluid from the surrounding tissues and blood. This rapid absorption of fluid may lead to cramping, nausea, diarrhea, belching, increased heart rate, sweating, light-headedness and sometimes fainting.**

**The second phase may happen between ninety minutes and three hours after eating and results from abnormal insulin levels. The concentrated sugar molecules in the poorly digested food may result in excess secretion of insulin. Excess insulin will lower blood sugar levels. If blood sugar levels become too low, increased heart rate, heart palpitations, sweating, light-headedness and sometimes fainting may occur.**

**What can be done to stop or decrease the severity of these symptoms?**

- 1. Eat many small meals – six or more! This will avoid overloading the new, much smaller stomach.**
- 2. Avoid foods rich in simple sugars –sugar sweetened desserts, candies, etc. Simple sugar is especially problematic in the first phase of dumping described above.**
- 3. Limit bulky foods like salads and bread products.**
- 4. Fluids should be limited at mealtimes. Fluids are important, but drink them between meals to avoid pushing stomach contents through too rapidly.**
- 5. Be prepared for diarrhea – know the location of a bathroom, if you’re away from home.**
- 6. Keep a list of what you eat and the relative amounts for several weeks to months after esophagectomy. Record any symptoms that follow. You will begin to see a pattern of what particular foods bother you and learn to avoid them. Every one is affected differently.**
- 7. Several prescription medications are available and often useful. Ask your physician or internist.**

**With time, experience, and knowledge of foods to avoid, many esophagectomy patients will find that “dumping” episodes decrease and may even become infrequent to rare.**

(The preceding information was written by Richard Stienmier, M.D., an esophageal cancer patient who has personally experienced many of the problems related to an esophagectomy)

## **STRATEGIES TO DELIVER NUTRIENTS TO ESOPHAGEAL CANCER PATIENTS**

Depending upon the types of surgery and other medical procedures for esophageal cancer, many EC patients may find that they must be fed through tubes leading directly into the digestive tract or into the bloodstream. The most common types of these feeding tubes are G-tubes (gastrostomy), J-tubes (jejunostomy tubes), N-tubes (nasal tubes); all deliver formula via the tube, a method called enteral nutrition. TPN, or total parental nutrition, is delivered directly into the blood stream. Because of increased infection risks, TPN is only considered when the digestive tract is not working. Definitions of these terms can be found on pages 78-79 of the booklet, *Nutrition for the Person with Cancer*, by the American Cancer Society, 2003 (Call 1-800-227-2345 for free copy).

Detailed information about these feeding devices is best provided by medical specialists in the facility where the patient is being treated. These are the professionals who are most familiar with and knowledgeable about the specific tube feeding process. However, we also want to emphasize how important it is for both patient and caregivers to learn as much as possible about the type of tube feeding and the process. Fully understanding how to properly tube feed is critical, helping you reach goals for nutrition and hydration will speed healing and recovery, while limiting loss of muscle and weight and avoiding readmissions for dehydration.

## **COMMERCIAL NUTRITIONAL SUPPLEMENTS**

Nutrition supplements on the market come in many different varieties: powders, puddings, canned and bottled liquids. They are available in a variety of flavors and concentrations, including juice like supplements as well as the more common “milk-like” options. Many are on display in pharmacies and groceries. Others can be ordered from any pharmacy. The containers show a variety of recipes and methods to introduce the supplement into the patient’s diet, whether by drinking them directly or through the feeding tube. Most manufacturers also show recipes on their internet web sites.

Some of the more popular nationally marketed supplements include Scandishakes (considered to have the best taste by many), Boost, Ensure, Nutren 20, Carnation Instant Breakfast VHC, Resource Fruit Breeze and Enlive. It is recommended that any initial purchase be a small one, until the patient knows how he/she will tolerate the taste and texture. If this occurs, keep trying various brands.

## **Resources Online:**

Diet after Esophagectomy, U. Pittsburg Medical Center

<http://www.upmc.com/healthatoz/patienteducation/g/pages/dietafteranesophagectomy.aspx>

Easy to Chew Diet, Anti Dumping Diet, GI stents

<http://www.medicine.virginia.edu/clinical/departments/medicine/divisions/digestive-health/nutrition-support-team/nutrition/patientedu-page>

Support for People with Head and Neck Cancer

<http://www.spohnc.org/>