

# Nutrition in Management of Graft-vs-Host Disease

Sarah Henke RD CNSC  
Clinical Research Dietitian  
January 27, 2021

# Overview

**Graft versus host disease** is a common complication of allogeneic hematopoietic stem cell transplants (SCT)

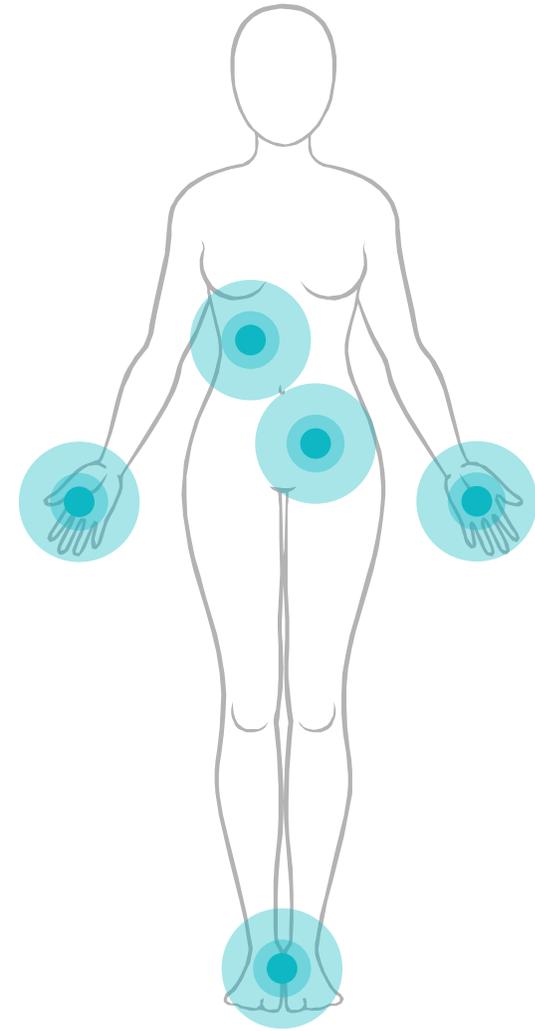
It occurs during the post-transplant period when the new immune system recognizes the patient's tissue as foreign and attacks.

- Acute GVHD
- Chronic GVHD

# Acute GVHD

Usually develops within the first 100 days after transplant and affects the skin, GI tract and the liver.

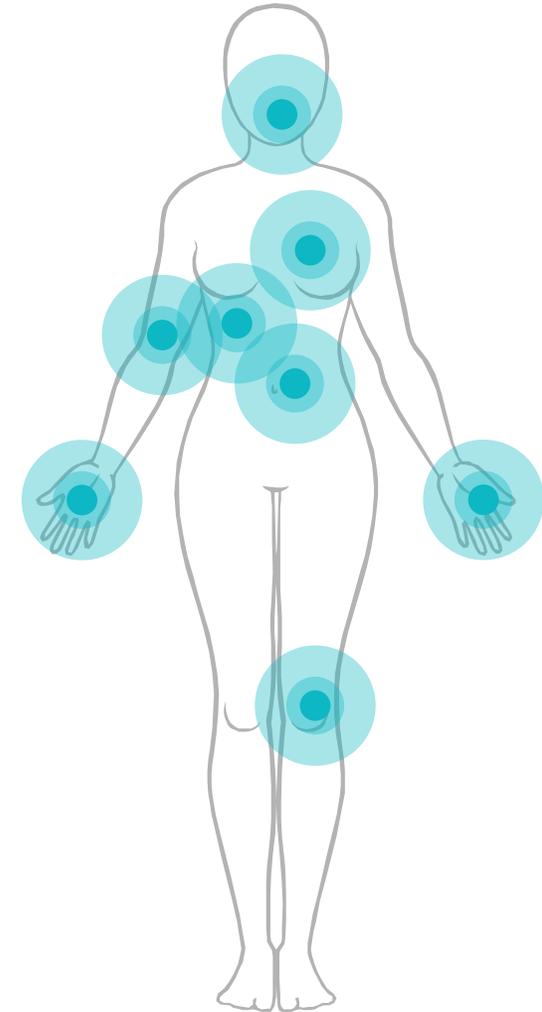
- ▶ **Skin:** rash
- ▶ **GI tract:** nausea, vomiting, abdominal cramps, loss of appetite, diarrhea
- ▶ **Liver:** jaundice, abnormal LFTs



# Chronic GVHD

Occurs anywhere from 3 months to a year after HSCT

- ▶ **Mouth:** dryness, food sensitivities, painful ulcers, gum disease and tooth decay
- ▶ **Skin:** rash
- ▶ **GI tract:** loss of appetite, weight loss, nausea, vomiting, diarrhea, abdominal pain
- ▶ **Lungs:** shortness of breath, chronic cough, wheezing
- ▶ **Liver:** abdominal distension, jaundice
- ▶ **Muscles/Joints:** muscle weakness, cramps, joint stiffness



# Gastrointestinal GVHD

Can cause a number of symptoms that can lead to:

- ▶ Malabsorption
- ▶ Dehydration
- ▶ Weight loss
- ▶ Severe electrolyte disturbances

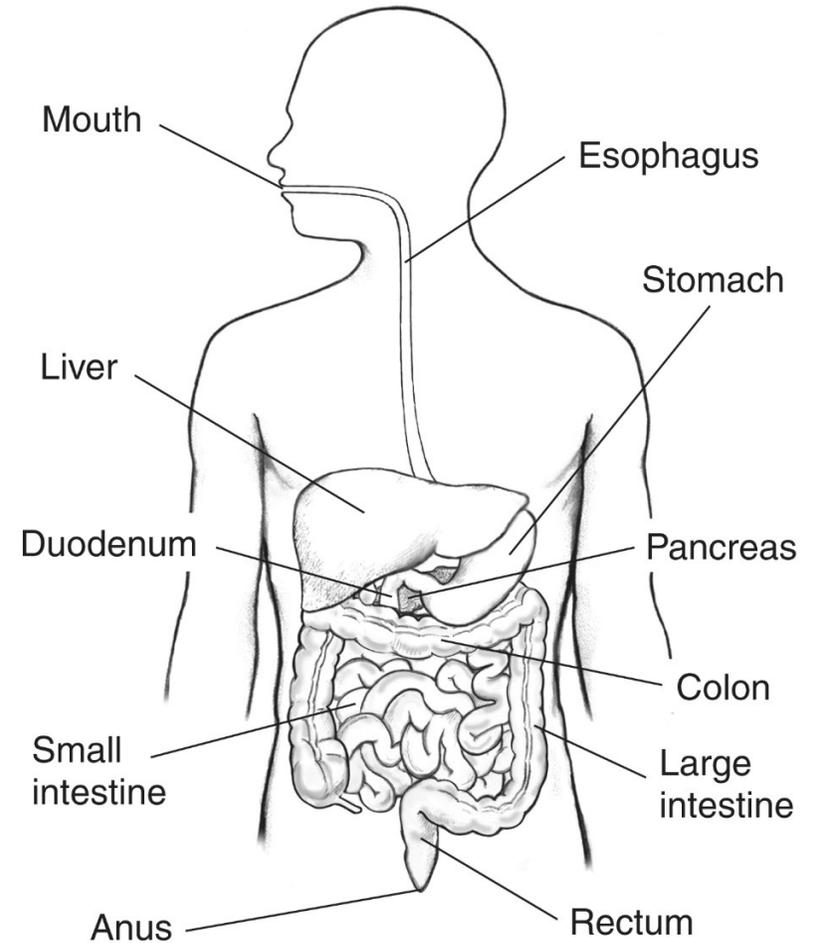


Image: National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health.

# Nutrition Goals:



Minimize  
gastrointestinal  
dysfunction



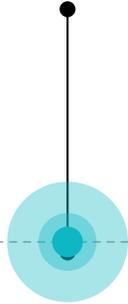
Control  
Symptoms



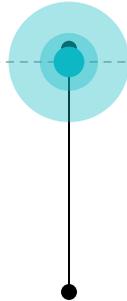
Provide  
Adequate  
Nutrition  
Support

# Nutrition Interventions

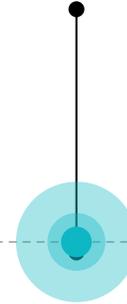
**Diet  
Modification**



**Enteral  
Nutrition**



**Parenteral  
Nutrition**



# Diet Modification

## **Bowel Rest**

Patient is made NPO (nothing by mouth) to promote bowel rest until diarrhea output within goal range (<500 ml/day)

## **Isotonic Clear Liquid Diet**

Liquids that are the same concentration as body fluids and do not contribute to diarrhea.

## **GVHD Progressive Diet**

Reintroduce solid foods that are low in lactose, fat, insoluble fiber and acidity.

# Isotonic Clear Liquid Diet

Fluids that are the same concentration as your body fluids and do not contribute to diarrhea

- ▶ Beef, chicken, vegetable broth
- ▶ Gatorade
- ▶ Diluted juice
- ▶ Jello
- ▶ Decaf tea
- ▶ Water and hard candies permitted in limited amounts

## Progressive Diet – Step 2

Once you tolerate isotonic clears, you will slowly add back in foods that are:

- ▶ Low lactose
- ▶ Low insoluble fiber
- ▶ Low acidity
- ▶ Low fat

# Progressive Diet – Step 2

	Foods to Try <i>Limit to Half Cup Servings</i>	Foods To Avoid
Fruit	Applesauce Ripe bananas Canned fruits (peaches, pears) - drained	All raw fresh fruits (except banana) All canned fruits with skins, seeds, or membranes All dried fruits
Starches	Plain White Bread, Plain White Pasta, Plain White Rice, Plain Mashed Potatoes, Cold Cereals without Milk, Hot Cereals made with water	Whole wheat or bran starches Cereals with added nuts, seeds or dried fruits
Vegetables	Tender, well-cooked vegetables such as carrots, green beans, squash	All raw fresh vegetables All cooked vegetables with seeds, skins, membranes
Proteins	Well-cooked lean meats such as cod, chicken breast, tofu that are braised, baked or steamed Eggs Low Fat Yogurt Lactaid or other Lactose Free Milk	Fried foods Full-fat dairy Dairy that has not been treated to reduce lactose concentration

## Progressive Diet – Step 3

Once you tolerate foods on Step 2 you will slowly add back in foods to return to a regular diet

- ▶ Add one food or beverage back at a time
- ▶ If diarrhea has resolved, try adding back insoluble fiber foods or fat to your meals
- ▶ Try lactose-containing foods such as milk or a mild cheese
- ▶ Try acidic foods like oranges

# Managing Side Effects with Food

## Diarrhea

- ▶ Drink plenty of fluids
- ▶ Small, frequent meals throughout the day
- ▶ Avoid insoluble fiber-containing foods
- ▶ Add soluble fiber-containing foods
- ▶ Avoid greasy, fatty or fried foods

# Managing Side Effects with Food

## Nausea and vomiting

- ▶ Drink small amounts of liquids throughout the day
- ▶ Small, frequent meals
- ▶ Try cold or room temperature foods, avoid hot foods
- ▶ Avoid foods with strong odors

# Managing Side Effects with Food

## Mouth Sores

- ▶ Try numbing mouth with popsicle or ice chips before eating
- ▶ Cook foods until they are soft and tender
- ▶ Mix foods with gravy or sauces to make them easier to chew and swallow
- ▶ Use a straw to direct fluids away from sores
- ▶ Avoid acidic foods

# Overall

- ▶ Diet modification is an important way to control unpleasant side effects of GVHD
- ▶ Emphasize protein and hydration as possible
- ▶ Eventually, you will be able to enjoy most foods again.
- ▶ Communicate with your team if your symptoms do not get better

# Questions?

Sarah Henke RD CNSC  
Clinical Research Dietitian  
Sarah.henke@nih.gov