# Diet & Nutrition Supplements **Pre/Probiotics**

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### Conflict of Interest

This speaker has no financial conflicts of interest to disclose.

### Disclaimer

This content is for informational and educational purposes only. It is not intended to be a substitute for professional medical advice, diagnosis, or treatment.

## Objectives

- 1. State diet and nutrition guidelines for ostomates.
- 2. List the types and recommendations for nutrition and vitamin supplements.
- 3. Identify the characteristics and benefits of Pre and Probiotics.

# NUTRITIONAL GOALS



### Individual Goals One Size Does Not Fit All

Although there are common goals, each of you are different.

What you eat and drink may vary based on your body, medical history and current condition.

What you enjoy eating and what you tolerate may vary.

There is not one ostomy diet.

### Common Goals Ranges

#### Calories

1,600 to 3,000 calories/day

#### Protein

Adults: 0.8 grams per kg body weight: 46 – 84 g/day Acute or chronic illnesses: 68 – 105 g/day Severe illnesses, injuries, or malnutrition: 114 - 140 g/day

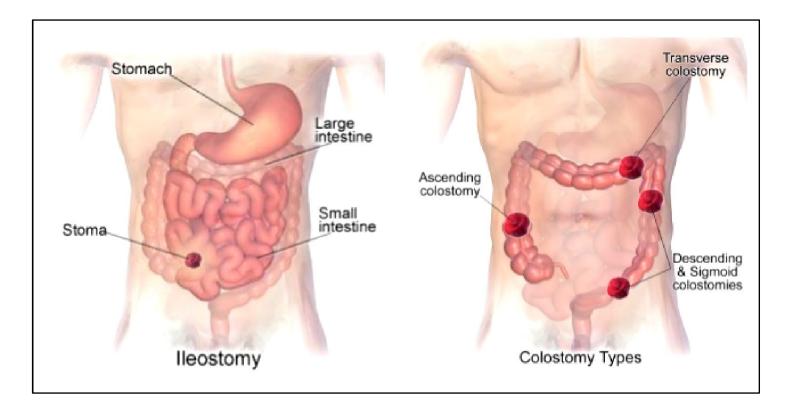
#### Fiber

14 grams for every 1,000 calories

25 – 38 g/day

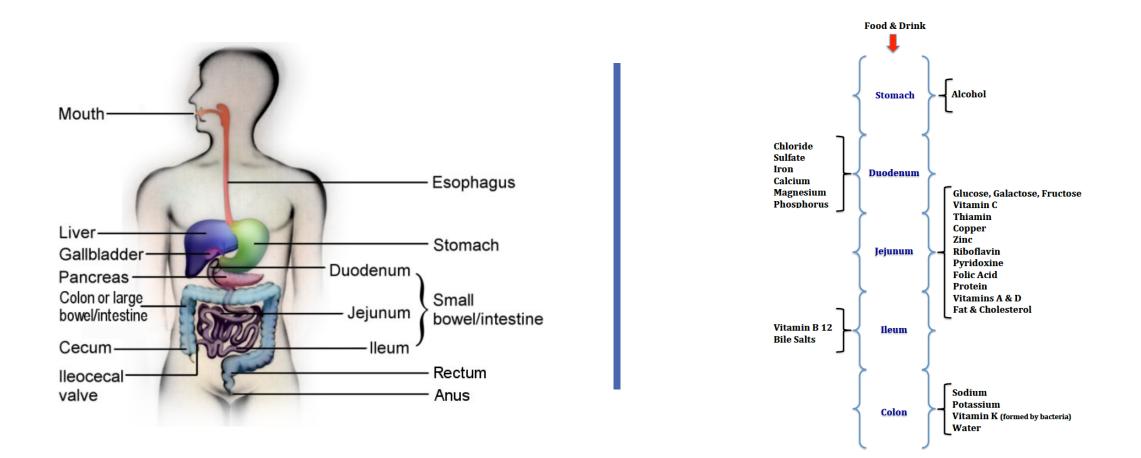
Fluid 8 to 12 cups/day

# **Being Your Best Advocate**



# Learn About Your Body

- Ostomy/Surgery Type
- Anatomy
- Sites of Absorption
- Medical Conditions
- Intolerances
- Allergies
- Products



### Learn About Digestion and Absorption

### Write it Down

### RECORDS

### **FOOD JOURNAL**

Dates of surgeries, hospitalizations

Medications: dose, frequency

Hospitals, office, clinics

Providers: physicians, NP, PA

Ostomy Nurses

Products Types/Numbers

Companies: Home Health, Supplies

What you ate

When you ate

How much you ate

Where you were

What you were doing

Who you were with

How did you feel

### Communicate

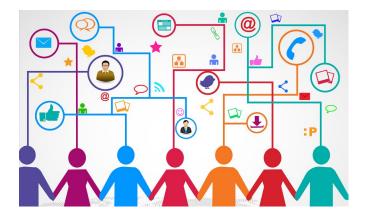
Write it down and keep a copy with you

- Allow others a copy
- Update regularly

Demonstrate

- Repeat, repeat, repeat
- Be patient with how many times you are asked the same question
- Write it on the whiteboard (if in the hospital)

Complete your profile in the patient portal



#### The more you share, the more others can help!

# Food Labels

### The Front of the Label Sells the Product



#### **Common Claims**

- Natural: contains a natural source like apples or rice
- No added sugar: may be naturally high in sugar
- Low-fat: may be naturally low in fat
- High-Fiber: no specified amount
- Multigrain: contains more than one type of grain
- Made with whole grains: no specified amount

### The Back of the Label Tells the Facts

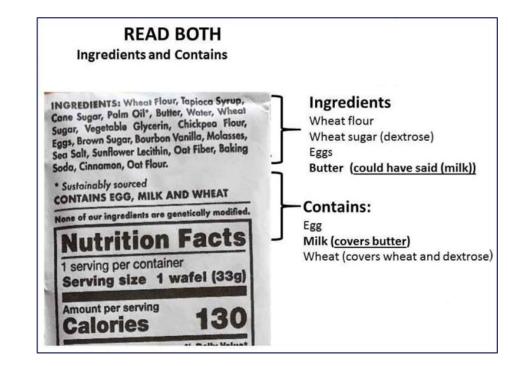
#### Serving Size

- The amount most people typically eat and drink
- Not a recommendation of amount to eat or drink
- Calories
  - 2,000 calories a day is a general guide
- Nutrients
  - Type of Fat, Sodium, Carbohydrates, Protein
  - Vitamins, Minerals, Electrolytes
- Daily Value (%)
  - 5% DV or less is low
  - 20% DV or more is high

8 servings per contain Serving size 2/	er 3 cup (55g
Amount per serving Calories	230
	% Daily Value
Total Fat 8g	109
Saturated Fat 1g	59
<i>Trans</i> Fat 0g	
Cholesterol Omg	09
Sodium 160mg	79
Total Carbohydrate 37	g 139
Dietary Fiber 4g	149
Total Sugars 12g	
Includes 10g Added Sugars	
Protein 3g	
Vitamin D 2mcg	109
Calcium 260mg	
Iron 8mg	45
Potassium 240mg	

## The Back of the Label Tells the Facts

- Ingredients
  - FDA requires listing of all ingredients
  - Listed in order of proportion (high to low)
- Allergens
  - Must appear in parenthesis i.e., flour (wheat)
  - -- OR --
  - In a "contains" statement



Types of Fiber

### Fiber

#### **Types**

• Soluble

• Insoluble

• Soluble/Insoluble (contains both)

#### **Health Benefits**

- Heart Disease Reduces cholesterol
- Weight Management Slows digestion Lower in calories
- Diabetes Management Stabilize blood sugars
- Digestion Normalizes stool frequency and form

## Soluble Fiber

#### Benefit

• Slows GI transit

#### **Food Sources**

- Barley, oatmeal, oat bran
- Cooked beans, lentils, peas, legumes
- Almonds, peanuts, chia and flax seeds
- Fruit (w/o skin): apples, bananas, pears, strawberries
- Cooked vegetables: broccoli, carrots, potatoes, Brussel sprouts



# **Insoluble Fiber**

#### Benefit

• Speed GI transit; promote bowel movements

#### Sources

- Wheat and corn bran
- Flaxseed
- Whole grains
- Vegetables (most) with skins
- Granola, nuts, seeds



### Soluble/Insoluble Fibers

Most foods contain soluble <u>and</u> insoluble fibers.

- Cooked beans
- ➢ Figs
- Prunes
- Plums
- Brussel sprouts

- > Broccoli
- Zucchini
- Sweet potatoes
- Oat bran
- Peanuts

### **Fiber Recommendations**

#### **Daily Intake Range**

- 14 grams for every 1,000 calories
- 25 38 grams

#### **Tips for Increasing Fiber**

- Increase gradually and drink plenty of water
- Mix oats into food such as meatloaf, cookies, mashed potatoes
- Add beans to soups and salads
- Add vegetables to wraps, sandwiches, pasta and stir-fry dishes
- Blend fruits and vegetables into a smoothie
- Top cereal and pancakes with fruit



Fluids

## The Type of Fluid Is As Important as the Amount of Fluid

### Recommend

- Milk (lactose free and low sugar)
- Sports drinks (low sugar)
- Electrolyte replacements
- Juice (diluted/low sugar)
- Vegetable juice
- Coconut water
- Broth

### **Avoid or Limit**

- Sugar/Sweeteners
- Caffeine
- Energy Drinks
- Alcohol

### The Amount of Fluid is Important Too

### Recommendations

- 8 12 cups per day
- 2 3 quarts per day
- Adjust the amount as needed
- Try encouraging containers



### Tallying Fluid Intake

#### Example 1 Goal 12 cups/day

Intake	Tally	
2 cups Decaf Tea	2 cups	
1 cup Juice	1 cup	
1 cup Milk	1 cup	
2 cups Water	2 cups	
1 bottle Sports Drink	2 ½ cups	
2 cups Water	2 cups	
1 cups Decaf Tea	1 cup	
1 cup Water	1 cup	
Total	<b>12</b> ½ cups	

#### Example 2 Goal 10 cups/day

Intake	Tally	
1 cup Regular Coffee	0	
1 cup Juice	1 cup	
1 cup Milk	1 cup	
2 cups Water	2 cups	
1 can Regular Soda	0	
2 cups Soup 2 cups		
1 cup Water	1 cup	
1 cup Wine	0	
Total	7 cups	

## Dehydration



### Dehydration Occurs When

Too much fluid loss Too little fluid intake A combination of both

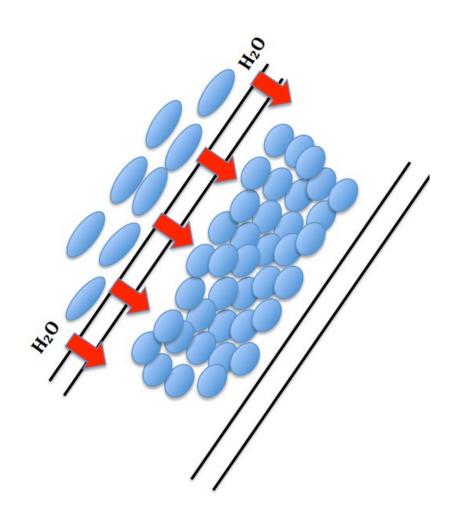
#### **Diarrhea/Excessive Output**

The most common reason a person loses excess water.

#### **Signs of Dehydration**

- Headache
- Dizziness
- Tiredness
- Thirst
- Dark Colored Urine
- Dry and/or Flushed Skin
- Dry Mouth
- Crankiness
- Constipation
- Muscle Cramps
- Fast Heart Rate

Triggers



## **High Output Triggers**

Rich, concentrated foods and drinks can lead to high output and dehydration.

## High Output Triggers

Sweets and Artificial Sweeteners

Lactose Rich Foods and Drinks

**Nutritional Supplements** 

**Carbonated Drinks** 

**Insoluble Fibers** 

Caffeine

Alcohol

### Foods that Thicken Stool

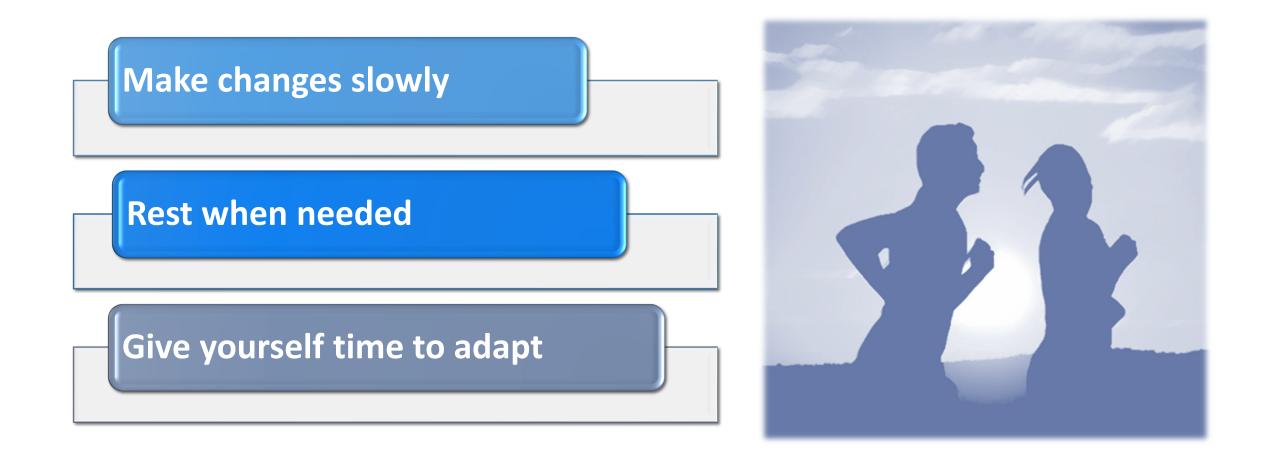


<b>B</b> ananas	
<b>R</b> ice	
<b>A</b> pplesau	ce (unsweetened)
<b>T</b> ea (deca	ffeinated)
Toast (no	t whole grain)
Creamy P	eanut Butter
Cheese (s	mall portions)
Boiled Mi	lk (lactose free)
Marshma	llows
Pasta, Pot	atoes (no skin)

Tips for Decreasing Triggers Avoid what you can Decrease portion sizes Decrease frequency of intake Change from regular to lactose free dairy products Dilute supplements, juices, drinks high in osmolality Mix nutritional supplements with decaf coffee (50/50) Remove the skin from fruits and vegetables

# Managing Change

### Change is a Marathon, Not a Sprint



Make Changes Slowly

#### **Case Study**

78 yr. ostomate made a New Year's resolution to eat more fiber

8 years post colostomy; output regular; semi-formed stool

Typical fiber intake approximately 20 grams per day

Goal: 35 grams/day

Increased fiber from 20 to 35 grams in one day

**Outcome: impaction/blockage** 

**Recommendation:** increase fiber slowly – one new fiber source as tolerated

### Rest When Needed

#### **Resting the Gut**

- When the gut needs a rest, consider a **Low Residue** diet:
  - Reduces the amount of stool
  - Rests the bowel
- Short-term eating plan
  - Post surgery
  - Inflammatory period
  - High output/loose stool

#### Low Residue Foods

White Bread and Rice Well Cooked Vegetables Dairy Products (lactose free if needed) Bananas Cantaloupe Honeydew Watermelon Eggs Fish Poultry

#### Adapting to a surgery or procedure takes time

General guideline is 6 – 8 weeks For some it will be less time and others more time

#### Adapting to a new medication takes time

This may vary based on other changes and medications

#### Adapting to a new eating pattern takes time

This may vary based on other changes, foods, etc.

### Give Yourself Time to Adapt

## Resources



#### EATING WITH AN OSTOMY

A Comprehensive Nutrition Guide for Those Living with an Ostomy





First Edition by Joanna Burgess-Stocks BSN, RN, CWOCN A publication of UOAA, United Ostomy Associations of Americ

### Resources

Wound, Ostomy, and Continence Nurses Society™
United Ostomy Associations of America, Inc.
The Phoenix Ostomy Magazine
Ostomy Support Groups
Ostomy 101, Inc.
Academy of Nutrition and Dietetics
Quality Life Association

**Ostomy Support Groups** 

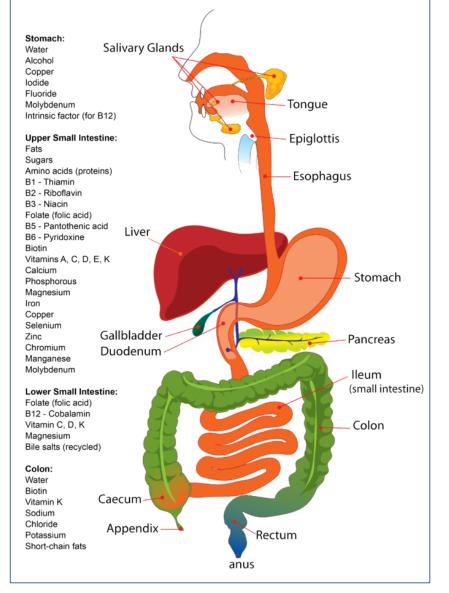
Vitamins Nutrition Supplements Vitamins Nutrition Supplements

- A healthy, balanced diet is the best way to get the nutrition you need
  - However, those living with an ostomy may want to consider taking a supplement
- A multivitamin can help to fill in nutritional gaps
- Single-nutrient vitamins support deficiencies or increased needs
- Chewable, soft-gel, liquid may be better absorbed than gummy, pill or capsule
- Recommend
  - Speaking with a healthcare professional before adding a supplement
  - Testing/labs to determine your need





#### **Digestive Organs & Nutrient Absorption**



### Vitamin Supplements

#### Vitamin B-12

Vitamin B-12 is the most common of nutritional deficiencies for those with an ileostomy. A B-12 deficiency may lead to anemia, nerve or brain damage. Available in an oral form but absorbed better as an injection or nasal spray. The recommended daily intake (RDI) of vitamin B12 is 2.4 micrograms per day.

#### **Folic Acid**

A deficiency may occur in those with an ileostomy. May lead to anemia and loss of nerve function. Typically absorbed in pill form but check to make sure. The recommended daily amount of folate for adults is 400 micrograms (mcg).

#### Potassium

A loss of potassium, along with sodium and water is common to those with an ileostomy. May not be able to increase with diet alone.

Potassium deficiency may lead to fatigue, weakness, shortness of breath, and bloating. Seek immediate care if symptomatic.

Recommended daily intake (RDI) = 4.7 g/d

#### Other

May need other vitamins and minerals.

A discussion with a healthcare professional may help you determine you needs.

### **Nutrition Supplements**

Compliment your diet

Short or long term

Provide carbohydrates, proteins, fats, vitamins and minerals

Some are designed to support certain health conditions

May be high in sugar and/or dairy

Most are "rich" and may trigger increased, liquid output

Can be costly



### **Nutrition Supplements**

Read the label Start with small doses Dilute initially Add to food and beverages Avoid long-term meal replacement Decrease as you increase food



# **Prebiotics/Probiotics**



Food for probiotics and your gut's microorganisms.

**Prebiotics come from some foods:** 

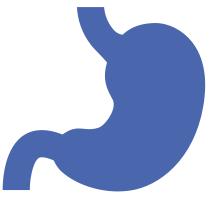
#### **Resistant starches**

Boiled and chilled potatoes, Green bananas, Barley, Oats, Rice, Beans, Legumes Inulin

Asparagus, Burdock root, Chicory root, Dandelion greens, Garlic, Artichokes, Leeks, Onions, Soybeans, Wild yams

#### Pectin

Apples, Apricots, Carrots, Green beans, Peaches, Raspberries, Tomatoes, Potatoes



### Benefits of Prebiotics

#### Wide-ranging and still being discovered:

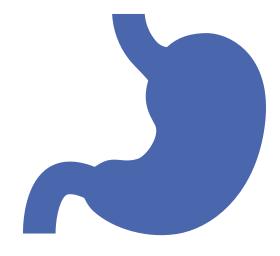
- Help regulate bowel movements
- Regulate mood changes
- Aid in appetite and appetite suppression
- Improve bone density.
- Increase immune system functions
- Enhance anti-inflammatory responses
- Increases good bacteria and decreases bad bacteria

### **Probiotics**

Live microorganisms, which are the "good" bacteria that help keep the "bad" bacteria in your stomach from overgrowing.

When consumed, probiotics will make their way to your intestine, attach to the walls and begin to multiply.

You can get probiotics from supplements and some foods: Yogurt, kefir, sauerkraut, tempeh, and kimchi.



### Benefits of Probiotics

Vary Based on the Strain Reduce Gas, Diarrhea, Bloating & Constipation Improve Digestive Disorders Supports Healthy Weight Improve Anxiety and Mood Support Immune System Response Fight Candida

#### **Unique to Each Person**

May take days to months to see symptom improvements. May have GI side effects initially. Should resolve in a few weeks.

### What to Look for in a Probiotic

- 1. Contains a minimum of 45 billion colony forming units (CFUs) per dose
- 2. Has at least 14 unique probiotic strains
  - Most common: Lactobacillus, Bifidobacteria, Saccharomyces, Streptococcus, Enterococcus, Escherichia, and Bacillus
- 3. Lists the substrain i.e., L. acidophilus La-14<sup>™</sup>
  - Has the trademark <sup>™</sup> or registered symbol <sup>®</sup>
    - Indicates the strain has undergone clinical testing
- 4. Includes the prebiotic NutraFlora®
  - Helps stimulate the growth of probiotics
- 5. Comes in dark amber glass bottles

## Be Kind To Yourself

#### **Physical and Emotional Stress Can Affect Digestion and Absorption**

Learn about yourself, food, fluids, and resources. Limit or avoid foods and drinks that you do not tolerate. Write it down and keep it with you. Advocate and communicate. Remember you are an individual. Allow yourself time to heal. Say I can instead of I cannot.

### Be Kind to Yourself

# Thank You

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### References

Cleveland Clinic. (2022, March 14). What Are Prebiotics and What Do They Do? Retrieved fromHealthEssentials: https://health.clevelandclinic.org/what-are-prebiotics/

Gold, P. (2023). The Top-Rated Probiotic Supplements of 2023. Retrieved from ReviewScout: https://www.reviewscout.org/top-5-probiotics/?ucacid=226178774.369919

Gordon, B., & Klemm, S. (2022, June 23). Eat Right. Academy of Nutrition and Dietetics. Retrieved from How Much Water Do you Need?: https://www.eatright.org/health/essential-nutrients/water/how-much-water-do-you-need

InnerGood. (2018, April). Common Vitamin and Nutritional Deficiencies of Ostomy Patients. Retrieved from InnerGood: https://innergood.ca/common-vitaminnutritional-deficiencies-ostomy-patients/

Judkins TC, A. D. (2020, January 13). Probiotics, Nutrition, and the Small Intestine. Retrieved from National Library of Medicine: https://pubmed.ncbi.nlm.nih.gov/31930437/

Julson, E. (2023, February 16). How Probiotics Can Help You Lose Weight and Belly Fat. Retrieved from Healthline: https://www.healthline.com/nutrition/probioticsand-weight-loss

Knott, A. (2023, June 12). The 12 Best Supplements, According to a Dietitian. Retrieved from Verywell Fit: https://www.verywellfit.com/best-supplements-4169376

Larson, H. (2021, March 01). Eat Right. Academy of Nutrition and Dietetics. Retrieved from Easy Ways to Boost Fiber in Your Daily Diet: https://www.eatright.org/health/essential-nutrients/carbohydrates/easy-ways-to-boost-fiber-in-your-daily-diet

National Institutes of Health. (2005). Nutrient Recommendations: Dietary Reference Intakes (DRI). Retrieved from US Department of Health and Human Services: https://ods.od.nih.gov/HealthInformation/nutrientrecommendations.aspx#dri

Nutritional Therapy for IBD. (2023). Navigating Nutritional Therapy. Retrieved from Nutritional Therapy for IBD: https://www.ntforibd.org/

Phillips, M. M. (2019, April 16). NIH National Library of Medicine Medical Encyclopedia. Retrieved from Soluble and Insoluble Fiber: https://medlineplus.gov/ency/imagepages/19691.htm



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