



CROHN'S & COLITIS
FOUNDATION OF AMERICA

*Diet, Nutrition &
Inflammatory Bowel Diseases:*

**Understanding
the Connection**



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Faculty Introduction

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Diet, Nutrition & Inflammatory Bowel Diseases: Understanding the Connection



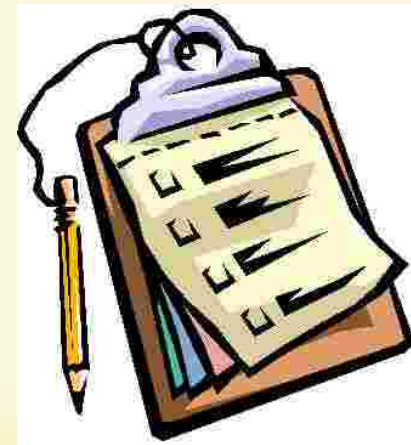
Today's Objectives

- Understand the importance of diet and nutrition in inflammatory bowel diseases (IBD)
- Review the effects of IBD on digestion
- Discuss various diets that have been popularized in the lay press and on the Internet
- Identify key elements of nutrition support therapy



Today's Objectives

- Outline dietary strategies that are helpful in controlling IBD symptoms
- Review suggestions for diet during a flare
- Discuss what's new in alternative nutritional therapies
- Answer questions





Why is DIET in IBD a “HOT” Topic?

- The role of diet in the cause and control of IBD seems to make sense:
 - “You are what you eat”
 - Reasonable to consider a dietary contributor to intestinal disease
 - An inflamed gut *feels* worse when food passes through it; therefore, the food *must* be making it worse
 - The rise in IBD around the world may be best explained by changes in the world’s diet



Why is DIET in IBD a “HOT” Topic?

- Fear or lack of response or dissatisfaction with current conventional medical or surgical therapies leads to searching for alternate “natural” or complementary options
- Unfortunately, it appears to be much more complicated than this



Importance of Diet and Nutrition

- Diet and nutrition are important parts of IBD management
- *Diet* is the actual food that is consumed
 - “What you eat”
- *Nutrition* refers to properly absorbing food and staying healthy
 - “How you eat”
- Incorporating good nutrition into your diet is essential



Role of Diet

- No evidence that diet can *cause* or *cure* inflammatory bowel diseases (IBD)
- IBD is not related to food *allergy* but symptoms may be worsened by food *intolerance*
- Proper diet may
 - Improve symptoms of IBD
 - Enable healing



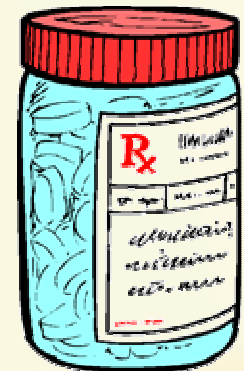
Importance of Nutrition

- Patients with IBD are prone to becoming malnourished due to
 - Loss of appetite (due to nausea, abdominal pain)
 - Chronic disease tends to increase calorie needs of the body
 - Poor digestion and absorption of nutrients (Crohn's disease, in particular)



Principles of Good Nutrition

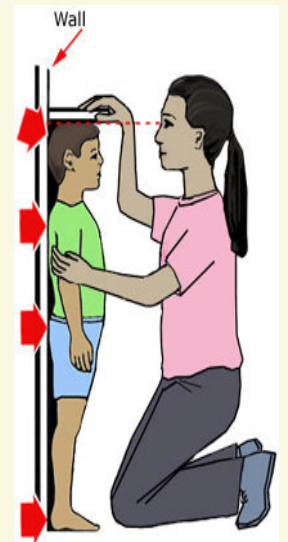
- Maintaining good nutrition is key to:
 - Medications being more effective
 - Healing, immunity and energy levels
 - Preventing or minimizing gastrointestinal symptoms and normalizing bowel function





Impact of Nutrition on IBD

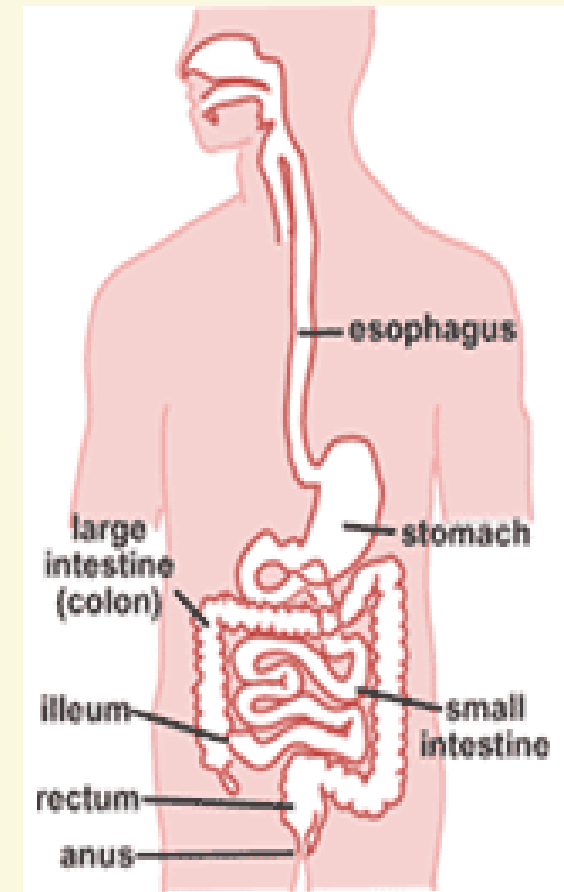
- Effects of poor nutrition or malnutrition
 - Lost nutrients may cause growth effects in children and teenagers
 - Weight loss in women and girls may impact hormone levels (menstrual changes)





The Digestive System

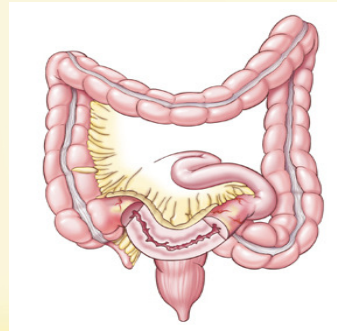
- *Digestion* is the process by which food is converted into substances that can be absorbed by the body
- Body absorbs nutrients from food to function properly
- Most absorption occurs in **small intestine**
- Watery food residue and undigested secretions pass into **large intestine** where water is recycled
- Solid, undigested food mixes with bacteria living in the large intestine to form bowel movements





Effects of IBD on Digestion

- Crohn's disease (CD)
 - Inflamed small intestine is less able to fully digest and absorb nutrients (malnutrition)
 - Incompletely digested foods that travel through colon may also cause diarrhea
- Ulcerative colitis (UC)
 - Small intestine works normally
 - Inflamed colon causes urgency and does not recycle water properly, resulting in diarrhea





Implications of IBD on Nutrition

- Reduced absorption may lead to nutritional deficiencies

Iron

- Decreased absorption
- Bleeding

Vitamin B₁₂

- Ileal resection

Vitamin D

- Intestinal surgery
- Common deficiency in CD

Zinc

- Chronic diarrhea
- Fistula



Is There a Special Diet for Patients With IBD?

- Several diets advertised specifically for managing IBD
- Many claims are supported by small numbers of subjects
- Most have not been proven scientifically and benefits have not been seen in formal studies
- Talk to your doctor about your questions



Is There a Special Diet for Patients With IBD?

Diet	Proposed Approach and Description
Elimination diet	Keep a food or symptoms diary over several weeks as various foods are “eliminated”
Low-fiber with low-residue diet	Minimizes the intake of foods that add bulk residue to stool (raw fruits, vegetables, seeds, nuts) Often used in patients with strictures or during flares



Is There a Special Diet for Patients With IBD?

Diet	Proposed Approach and Description
The Colitis 5-Step Formula	Uses a natural pathogen killer to eliminate infection along with diet and physical activity to put digestive system back in order
The Specific Carbohydrate Diet™	Reducing poorly digestible carbohydrates to lessen symptoms of gas, cramps and diarrhea Consists mainly of meats, vegetables, oils, honey
The Maker's Diet	Focuses on four components of total health—physical, mental, spiritual, emotional



Is There a Special Diet for Patients With IBD?

Diet	Proposed Approach and Description
Total bowel rest	Period of complete bowel rest (during which patients are nourished with fluids delivered intravenously) may decrease inflammation and has been effective in CD
Elemental diet	Limits carbohydrate intake to reduce microbes that might contribute to symptoms



Key Messages: Diet

- Diet has not been proven to
 - Prevent IBD
 - Provide sustainable disease control
- *Can* help symptoms while disease is being treated in other ways
- Recommendations should be individualized based on
 - Which disease you have (CD vs UC)
 - What part of intestine is affected
 - Disease activity (remission vs flare)



Key Messages: Diet

Diet cannot	Diet can	Diet should be
<ul style="list-style-type: none">• Prevent IBD• Provide sustainable disease control	<ul style="list-style-type: none">• Help symptoms while disease is being treated in other ways	<ul style="list-style-type: none">• Individualized based on<ul style="list-style-type: none">– Which disease you have (CD vs UC)– What part of intestine is affected– Disease activity (remission vs flare)



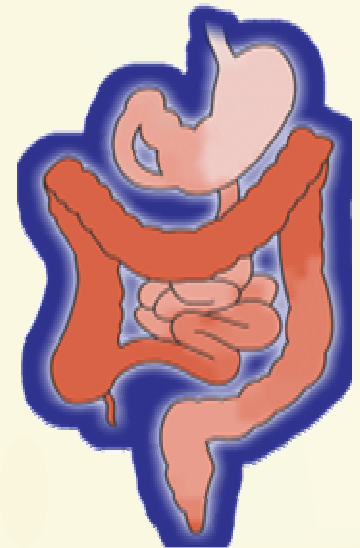
Key Messages: Diet

- Individual experience should guide food selection
 - Create a food journal and eliminate problematic foods
- Strive for a well-balanced, healthy diet based on
 - Hydration
 - Continual adequate nutrient intake
- Overall goals of managing IBD
 - Unrestricted quality of life and improved long term outcomes



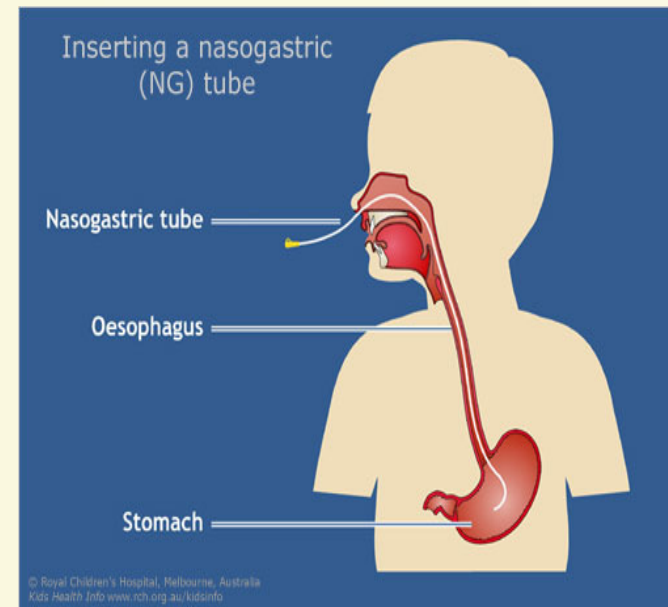
Nutrition Support Therapy

- Additional supplementation may be necessary during the disease course if
 - Weight loss
 - Oral intake issues
 - Surgery
 - Obstruction
 - Severe inflammation



Nutrition Support Therapy

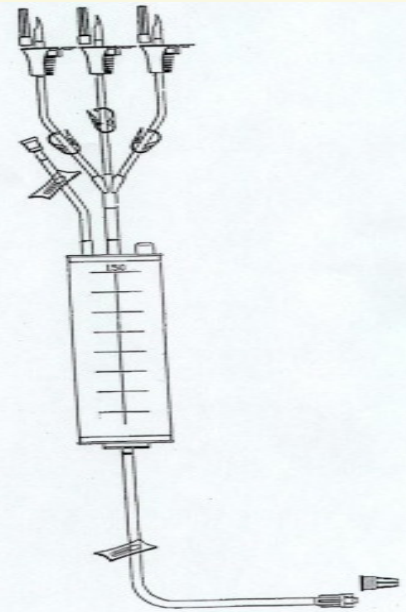
- Liquid nutritional supplements
 - PediaSure[®] and Ensure[®]
 - Boost[®]
 - Modulen IBD[®]
- Enteral nutrition
 - Nutrient-rich liquid formula administered through
 - Nasogastric tube (NG tube) – From nose to stomach
 - Gastrostomy tube (G-tube) – Tube goes directly from abdominal wall into stomach





Nutrition Support Therapy

- Parenteral nutrition
 - Delivered through a catheter placed into a large blood vessel
 - More complications than enteral nutrition
 - Requires specialized training to administer
 - Rarely necessary anymore





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Dietary Management of IBD



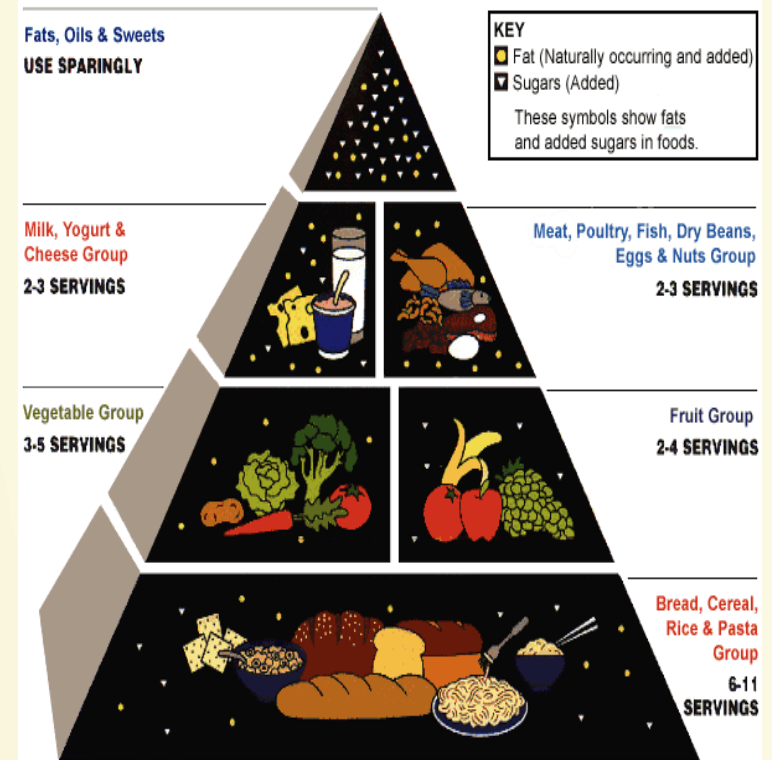
Strategies to Control IBD Symptoms

- Avoid *your* trigger foods
 - Not all IBD patients are affected by the same foods
 - Common foods that *may* cause gastrointestinal (GI) discomfort
 - High-fiber foods (nut; raw, leafy vegetables)
 - High-fat foods (greasy, fried foods)
 - Caffeine (coffee, tea, soda, chocolate)
 - Alcohol
 - Dairy (lactose)
 - Spicy foods



Strategies to Control IBD Symptoms

- Ensure adequate and appropriate intake of calories
 - Fluids
 - Carbohydrates
 - Protein
 - Fats
 - Fruits and vegetables





Strategies to Control IBD Symptoms

Fluid intake

- Drink 8–10 glasses per day (preferably water) to prevent dehydration

Carbohydrates

- Bread, rice, pasta, crackers, cereal
- Good source of energy but low in vitamins and minerals
- Tend to be consumed in excess because they usually cause little discomfort



Strategies to Control IBD Symptoms

Protein

- Meat, fish, eggs, nuts, poultry, soy
- 25% of diet should consist of protein source

Fats

- “Healthy” fats preferred
 - Omega 3 fatty acids
 - Olive and canola oil
- “Unhealthy” fats (saturated fats)
 - Butter, lard, margarine
 - High-fat meats
 - Fried foods



Strategies to Control IBD Symptoms

Fruits

- Main source of vitamins and minerals
- Deeply colored fruits have most nutrients

Vegetables

- **Well tolerated**
 - Cooked, no skin or seeds (butternut squash, carrots, asparagus, spinach, sweet potato)
- **Poorly tolerated**
 - Raw, with skin or seeds (eggplant, cabbage, string beans, celery, cucumber, garlic, onion)



Diet During a Flare

- Follow a low-residue diet to relieve abdominal pain and diarrhea
- Avoid foods that may increase stool output (raw fruits and vegetables, prunes, caffeine)
- Eat smaller, more frequent meals
- Consider nutritional supplements if appetite is poor



Diet During a Flare: Low-Residue Diet

<p>Grains Plain cereals White rice Refined pasta AVOID whole grains</p>	<p>Fruits Fruit juices (except prune) Apple sauce, bananas</p>
<p>Vegetables Potatoes (no skin) Well cooked</p>	<p>Meat and protein Well cooked AVOID beans, nuts, seeds</p> <p>Dairy As tolerated or alternate sources</p>



Principles of Food Selection

- Choose
 - **Carbohydrates** with more soluble fiber (oat brans, legumes, barley)
 - **Protein** (eggs, lean meats, smooth nut butters)
 - **Deeply colored** fruits and vegetables (highest in nutrients)
 - Foods high in **vitamins and minerals**
- Prepare meals with **healthy fats** (olive or canola oil)



Vitamin and Mineral Supplementation

- Most would benefit from a daily multivitamin
- Additional supplements may help
 - Depends on location and extent of disease
- Vitamin B₁₂
 - Monthly intramuscular injection may be given to patients with ileitis
- Calcium
 - Many patients avoid dairy products (lactose intolerance)
 - Consume 1500 mg daily (diet or supplement)





Vitamin and Mineral Supplementation

- Vitamin D
 - Helps absorption of calcium
 - Supplement with 800 IU daily
- Folic acid
 - Deficiency common in patients taking sulfasalazine (Azulfidine®)
 - Typically supplement with folic acid 1 mg daily





Complementary Therapy

Complementary therapies should *not* replace prescription medications

- Probiotics
 - “Good” bacteria that restore balance to the intestines
 - Most studies have not shown benefit
 - May help for maintenance of UC
- Omega-3 fatty acids (fish oils)
 - Large well-controlled trials showed no benefit in CD



Complementary Therapy

- Short-chain fatty acids (SCFA)
 - Boosting amount of SCFA in large intestine may decrease symptoms
- Natural aloe supplement
 - Some work gently within intestines to break down impacted food to cleanse the bowel



Key Points

- Diet and nutrition are important parts of IBD management
- Knowing “how” to eat is equally important to “what” to eat
- Choose foods wisely and with careful consideration
- Strive for a well-balanced, healthy diet



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Questions and Answers