



INE | INSTITUTE OF  
NUTRITIONAL  
ENDOCRINOLOGY

# Digestion: Small and Large Intestines - Pathology

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**Medical Disclaimer:** The information in this presentation is not intended to replace a one-on-one relationship with a qualified health care professional and is not intended as medical advice. It is intended as a sharing of knowledge and information from the research and experience of Dr. Ritamarie Loscalzo, [drritamarie.com](http://drritamarie.com), and the experts who have contributed. We encourage you to make your own health care decisions based upon your research and in partnership with a qualified health care professional.

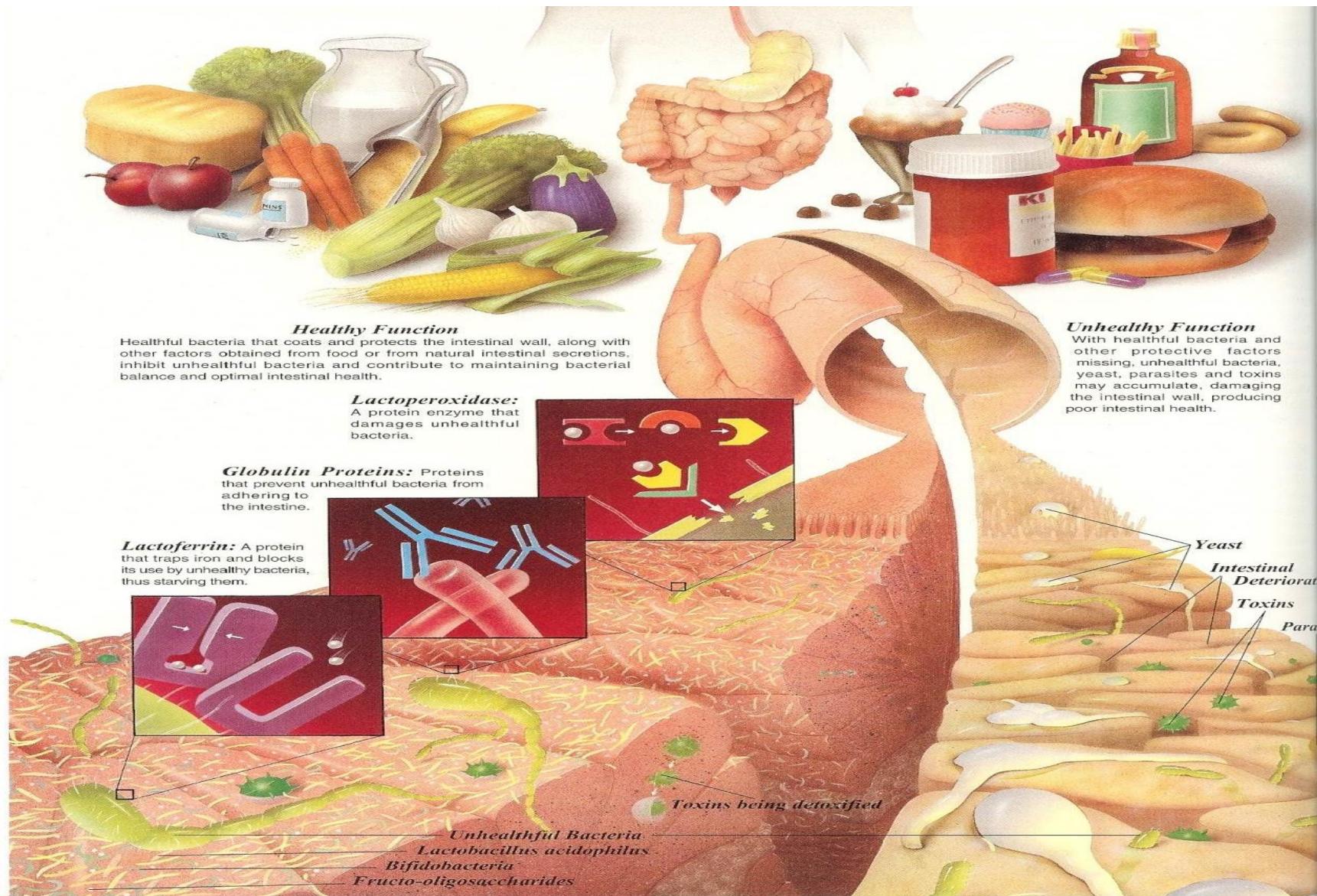


# What Can Go Wrong in the Intestines?

- ✓ Leaky gut and malabsorption
- ✓ Dysbiosis - infections
- ✓ Irritable bowel
- ✓ Inflammatory bowel – Crohn's, Ulcerative Colitis
- ✓ Celiac
- ✓ SIBO
- ✓ Diverticulosis/Diverticulitis
- ✓ Constipation
- ✓ Hemorrhoids
- ✓ Food allergy
- ✓ Diarrhea
- ✓ Gas and bloating
- ✓ Pain



# How Your Small Intestine Works

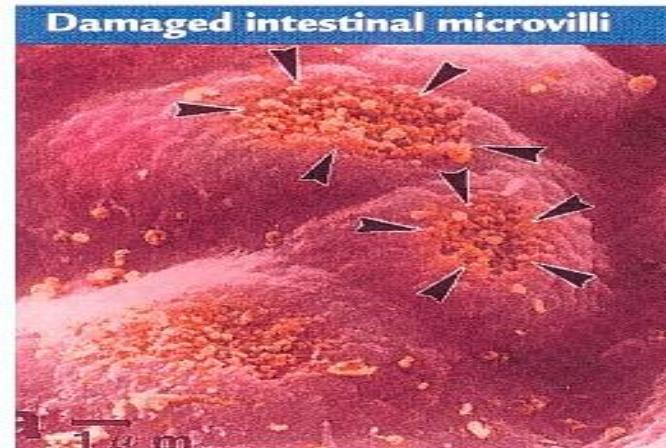


# Damaged Intestine



# Symptoms of Leaky Gut

- ✓ **Gastrointestinal complaints:** Gas, bloating, constipation, diarrhea, pain
- ✓ **Neurological disturbances:** Aggressive behavior, depression, anxiety, confusion, brain fog, mood swings, nervousness, poor memory
- ✓ **Respiratory troubles:** Shortness of breath, asthma, sinus congestion, airborne allergies
- ✓ **Hormone Imbalance:** Insulin resistance, thyroid complaints, adrenal fatigue, menstrual imbalances
- ✓ **Other symptoms:** Poor immunity, recurrent bladder infections, recurrent vaginal infections, skin rashes, bedwetting, chronic joint pain, chronic muscle pain, fatigue



# Causes of Leaky Gut

- ✓ **Infection:** Toxins released by organisms
- ✓ **Toxins:** Alcohol, caffeine, heavy metal toxicity, food additives and preservatives
- ✓ **Medications:** NSAIDs, aspirin, antibiotics, birth control pills, steroids, measles vaccine
- ✓ **Diet**
- ✓ **Eating under stress**
- ✓ **Pancreatic insufficiency**
- ✓ **Insufficient chewing**
- ✓ **Poor food combining**



# Leaky Gut Functional Assessment

- ✓ Mental and emotional state
- ✓ Chewing
- ✓ Stomach acid
- ✓ Mucosal lining
- ✓ Liver/gall bladder function
- ✓ Pancreatic enzymes
- ✓ Gut flora
- ✓ Elimination



# Leaky Gut Assessment

- ✓ Constipation and/or diarrhea
- ✓ Abdominal pain or bloating
- ✓ Mucus or blood in stool
- ✓ Food allergies, sensitivities or intolerance
- ✓ Ulcerative colitis, Crohn's disease, or celiac disease
- ✓ Alcohol consumption makes you sick
- ✓ History of antibiotic use
- ✓ Use of non-steroidal anti-inflammatory drugs (Aspirin, Tylenol, Motrin)
- ✓ Depression
- ✓ Hormone imbalance
- ✓ Brain fog
- ✓ Confusion, poor memory, or mood swings
- ✓ Joint pain or swelling, arthritis
- ✓ Chronic or frequent fatigue
- ✓ Sinus or nasal congestion
- ✓ Chronic or frequent inflammation
- ✓ Eczema, skin rashes, or hives
- ✓ Asthma, hayfever, or airborne allergies

**\*\*Red indicates systemic symptoms**

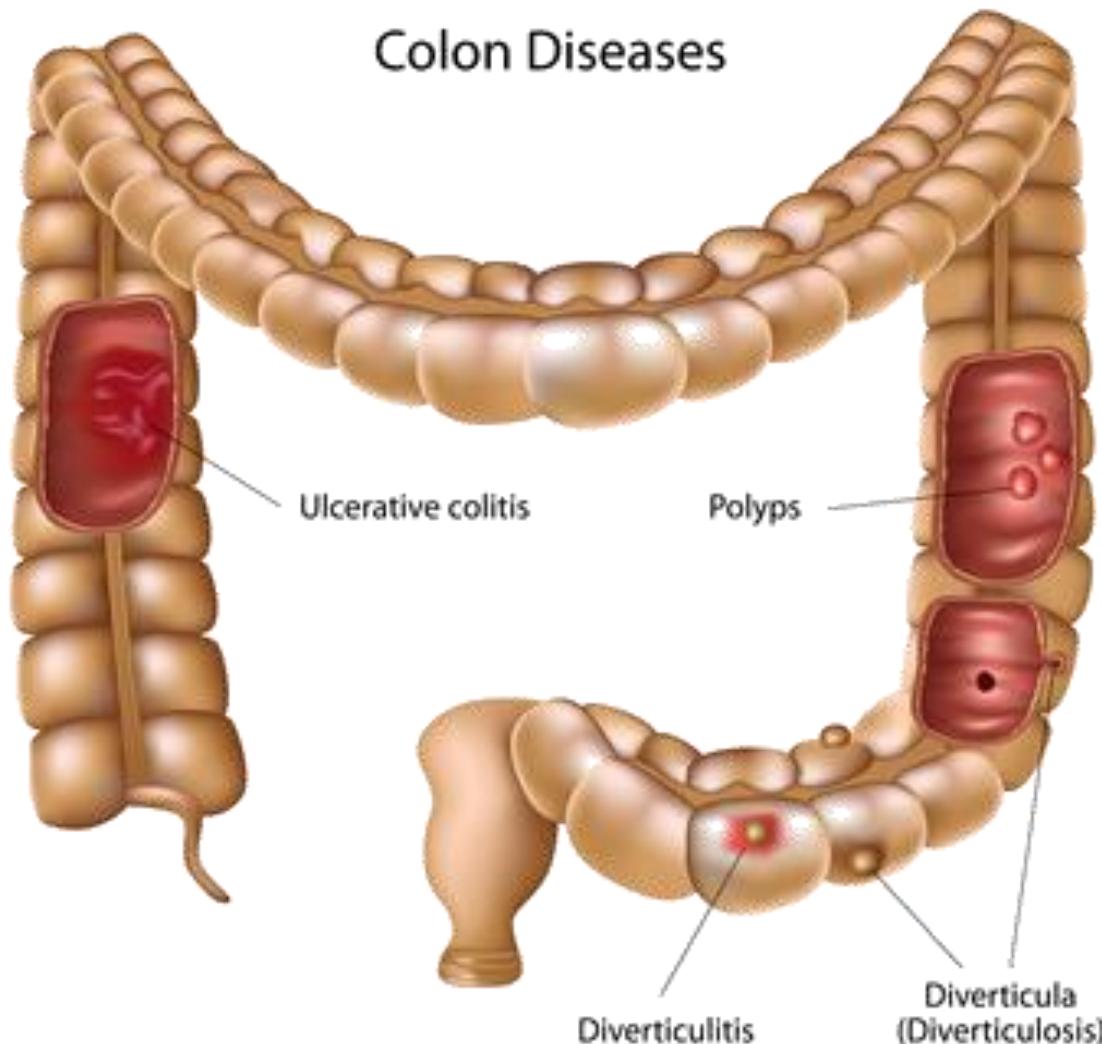


# Leaky Gut Lab Tests

- ✓ **Intestinal Permeability:** <http://www.cyrexlabs.com/>
- ✓ **Stool Test:** normal flora, pathogens, inflammation – Genova, Metametrix, Diagnos-Techs, BioHealth
- ✓ **Gluten Test:**
  - Stool Antibodies: <http://www.enterolab.com/>
  - Blood Antibodies Complete:  
<http://www.cyrexlabs.com/>



# Large Intestine Diseases



# Inflammatory Bowel Diseases

Chronic inflammation along the GI tract,  
Usually autoimmune

- ✓ Ulcerative Colitis
- ✓ Crohn's

- ✓ Microscopic Colitis
  - Collagenous colitis
  - Lymphocytic colitis



*Healthy Colon*



*Ulcerative Colitis*



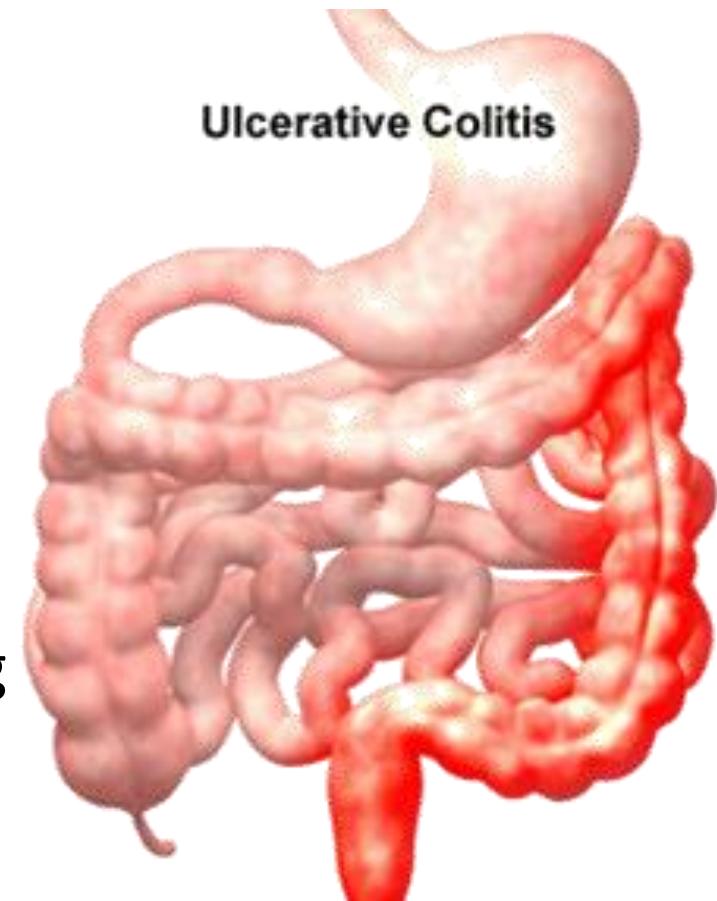
*Crohn's Disease*

# Ulcerative Colitis

✓ **Location:** Most common on the left side of the large intestine: descending colon, sigmoid, and rectum

✓ **Characteristics:**

- Inflammation and ulceration on the surface of intestinal lining
- Thinning of the mucosa
- Blood and mucous in the stools
- Diarrhea
- Cyclic abdominal pain and cramping
- Rectal pain
- Weight loss, fever, fatigue



# Crohn's Disease

✓ **Location:** Anywhere in GI tract, most commonly in ileocecal area (about 50%). Other locations: large intestine (about 20%), small intestine alone (about 30%), stomach (rarely), mouth and esophagus (very rare)

✓ **Characteristics:**

- Inflammation deep into the lining
- Thickening of the mucosa
- Serious pain
- Lots of diarrhea
- Weight loss, fever, fatigue
- Rectal bleeding (less than UC)



# Colon Cancer

