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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.



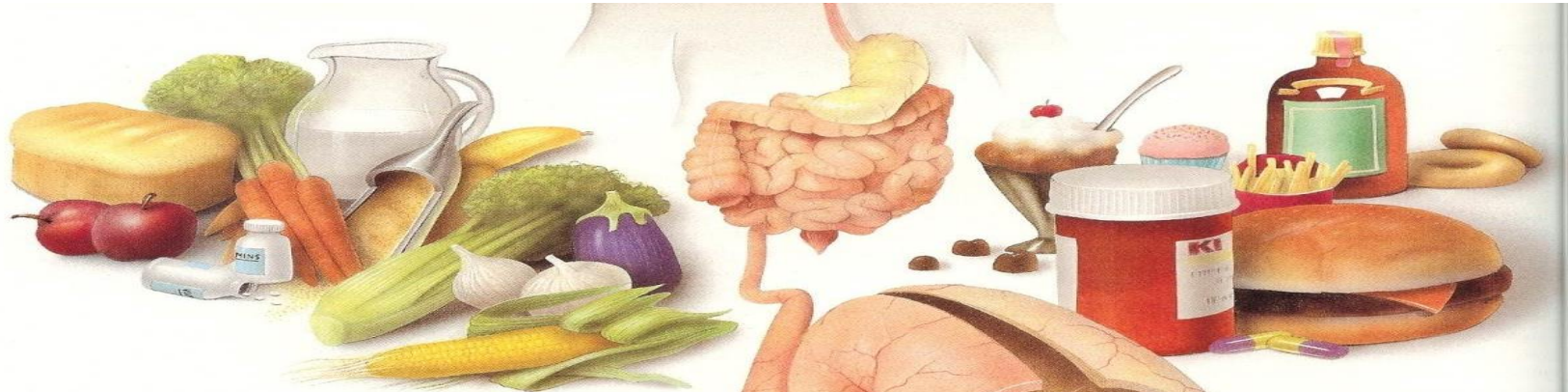
# What Can Go Wrong in the Intestines?

- ✓ 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



## Healthy Function

Healthful bacteria that coats and protects the intestinal wall, along with other factors obtained from food or from natural intestinal secretions, inhibit unhealthy bacteria and contribute to maintaining bacterial balance and optimal intestinal health.

### Lactoperoxidase:

A protein enzyme that damages unhealthy bacteria.

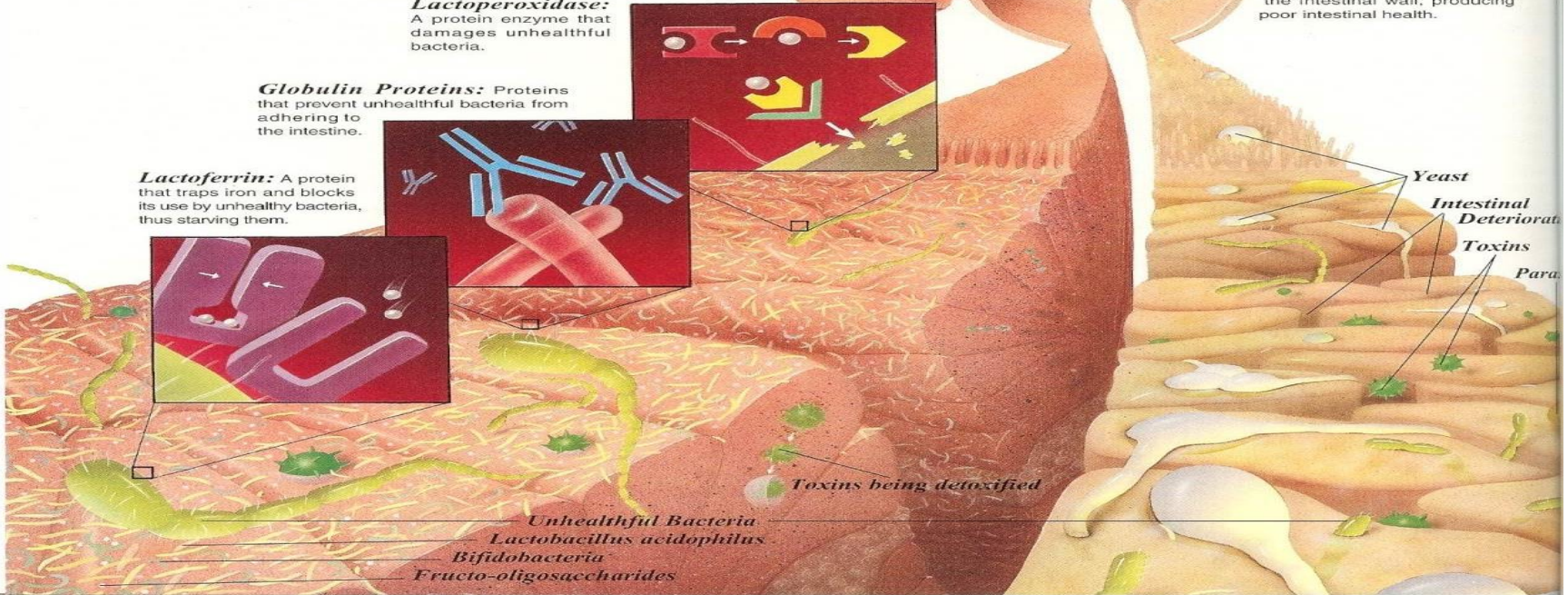
**Globulin Proteins:** Proteins that prevent unhealthy bacteria from adhering to the intestine.

**Lactoferrin:** A protein that traps iron and blocks its use by unhealthy bacteria, thus starving them.



## Unhealthy Function

With healthful bacteria and other protective factors missing, unhealthy bacteria, yeast, parasites and toxins may accumulate, damaging the intestinal wall, producing poor intestinal health.





# Damaged Intestine



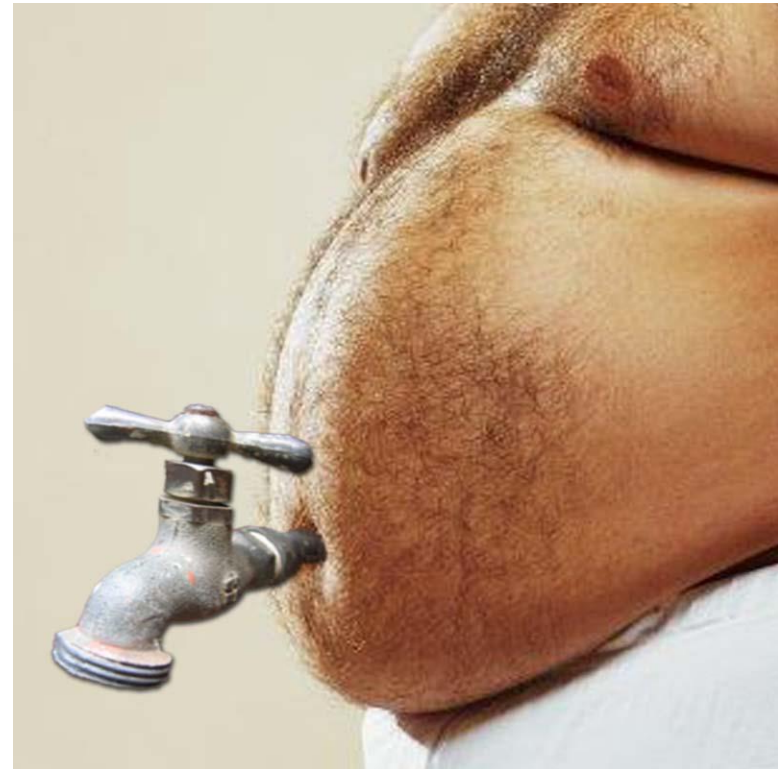
# Symptoms of Leaky Gut

- ✓ **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**

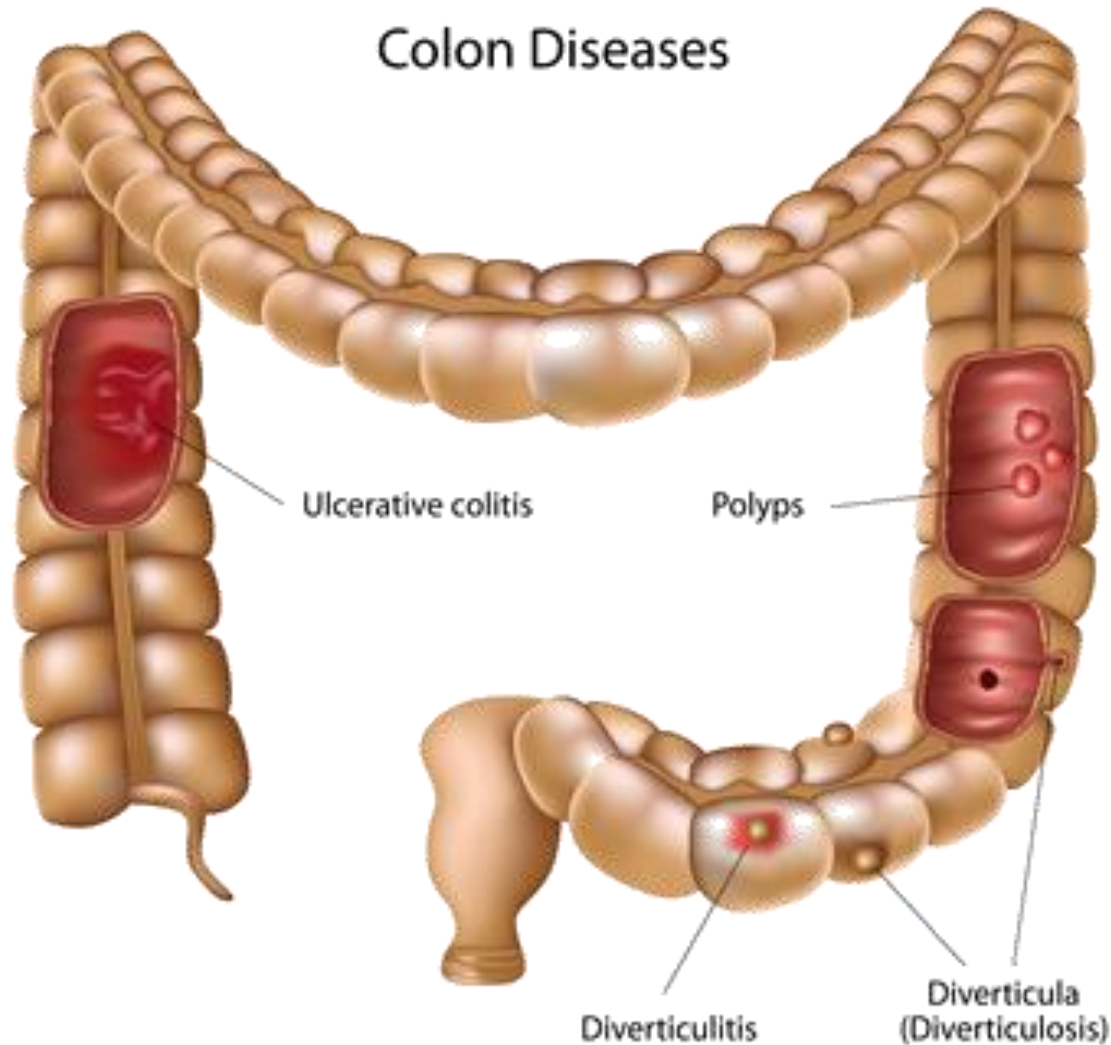


# Leaky Gut Lab Tests

- ✓ **Intestinal Permeability:** <http://www.cyrexlabs.com/>
- ✓ **Stool Test:** normal flora, pathogens, inflammation – Genova, Metamatrix, 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*

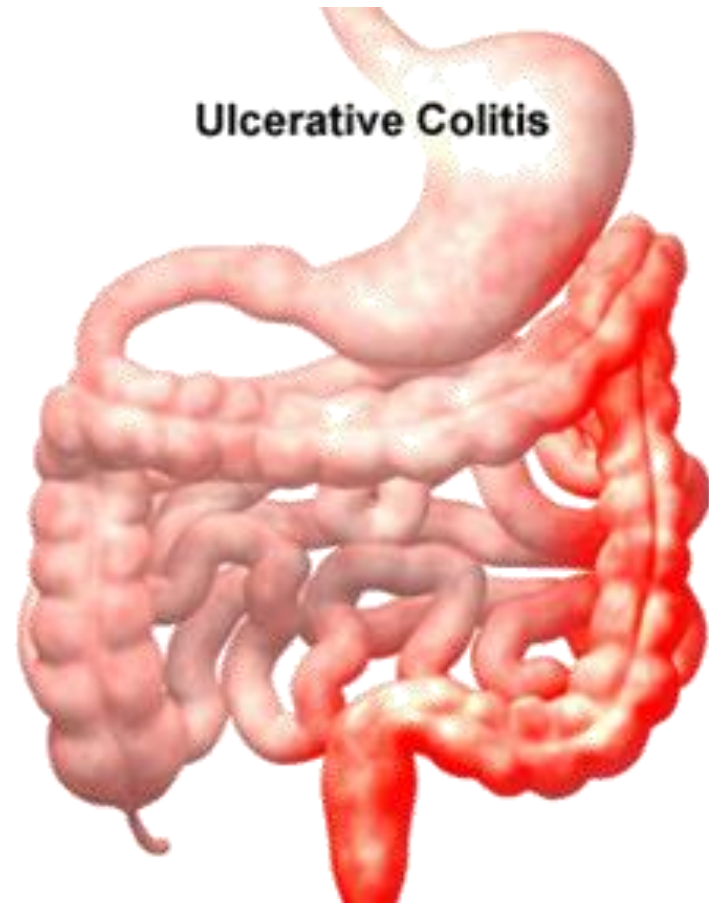


# Ulcerative Colitis

✓ **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



The stages of  
colon cancer

