

# Gastrointestinal Imbalance: The Root of Dis-ease

## With Holly German ND

The information in this lecture is not intended to be a substitute for medical care

### Interesting Facts

- You're not just what you eat, you're what you ABSORB!  
(Even the healthiest diet doesn't equal good health unless the vitamins and minerals are accessible)
- The surface area of the gastrointestinal system is greater than the surface area of a tennis court!
- There are over 400 species of microbes living in your gut, totaling over 15 pounds of mass and containing more bacteria than there are known stars in the sky
- Poor digestive health is the #1 "obstacle to cure".

### Lecture Overview

- Symptoms of GI Imbalance
- Dysbiosis
- Leaky gut
- Causes of GI imbalance
- Lab testing
- Treatments - Optimizing GI health

### Symptom Overview – Head to Toe

- Fuzzy thinking, poor memory, anxiety, depression, insomnia, fatigue, lethargy
- Acne, eczema, mouth sores, bad breath, acid reflux, heart burn, belching
- Stomach aches, nausea, bloating, uncomfortable fullness, loss of appetite, constipation, diarrhea, inconsistent bowel movements
- Gas, constipation, diarrhea, hemorrhoids
- Frequent illness, reduced immune response
- Thyroid/adrenal imbalance, weight gain

### The Brain/Gut Connection

- There are more neurons in the small intestine than in the entire spinal cord
- The GI system is the only system in the body that has its own, independently operating, nervous system
- GI imbalance is OFTEN the underlying factor in depression, anxiety, and more serious mental disorders
- Conditions aggravated by nutrient depletions – B vitamins
- A large portion of serotonin is actually created in the gut and the rest of the serotonin that your body creates requires many nutrients to be made.

### Skin Health

- GI tissue and skin tissue are from the same origin
- Skin health is a mirror of GI health.

### Weight Gain

- Too many bad bugs and too few good bugs = inflammation
- Inflammation in GI leads to improper glucose/insulin balance
- Cells become desensitized to insulin = metabolic syndrome and insulin resistance
- Symptoms of metabolic syndrome/insulin resistance – increased appetite, weight gain (difficulty losing weight), high blood pressure, high cholesterol & triglycerides

## Immunity

- The GI system comprises 75% of the body's immune system

## Causes of GI imbalance

- Poor diet
- Food intolerances – not the initial cause but do make the imbalance worse
- Stress
- Medications
- Environmental Toxins
- Smoking
- Ageing

## Poor Diet

- Obvious “junk” foods – sugar, simple carbs, alcohol – all lead to GI imbalance
- What works for 1 person does not always work for the next
- Excessive caffeine makes the body mimic a stress response = impaired digestion

## Stress

- Stress state = fight or flight, NOT rest and digest
- In stress state, digestion STOPS!  
(Even when you have food in your stomach fermentation and putrefaction = toxins released into the GI tract)
- Stress (cortisol) turns off your secretory IgA – your gut immune protection

## Medications

- Antacids (Both over the counter and prescription)
- Analgesics (i.e. Tylenol, Aspirin)
- Antibiotics (Directly or from food (animal) sources)

## Environmental Toxins

- Pesticides in food
- Chlorine in water (What does bleach do? Kill bacteria – both good and bad bugs!)  
Important to use filtered H<sub>2</sub>O, add chlorine filters on shower.

## Dysbiosis

- Too few good bugs and too many bad bugs in the gut
- If the good bugs are killed the bad bugs will take over (i.e. candida overgrowth after antibiotics = yeast infections, thrush)
- The following are present in small amounts, only problematic when get out of control:
  - Yeast (Candida, geotrichim, rhodotorula)
  - H. Pylori (stomach ulcers)
  - Intestinal parasites

## Leaky Gut

- Usually arises from a chronic state of GI imbalance and dysbiosis
- The lining of the GI tracts is usually made up of tight junctions, leaky gut is when the tight junctions are impaired and large food particles escape into the blood stream
- Linked to many diseases

(Autoimmune, asthma, hormone imbalance, migraines, GI upset of all kinds, mood disorders, autistic spectrum disorders, arthritis, fibromyalgia, chronic sinusitis, chronic allergies)

- Often results in MANY food intolerances
- Leads to overwhelm of detoxification systems and sluggish liver clearance

#### Leaky Gut: Lab Diagnostics

- Food sensitivity panel
- Stool test – bacteria, yeast, parasites
- H. Pylori breath test
- Lactulose/mannitol urine test
- Nutrient analysis
- Celiac's blood test
- Lactose intolerance
- Glucose, insulin, hemoglobin A1C

#### Stool Test

- Comprehensive stool test – sample report  
<http://www.doctorsdata.com/repository.asp?id=2253>

#### Lactulose/Mannitol Test

- <http://www.metamatrixinstitute.org/file.axd?file=2011%2F6%2FPage-426.pdf>
- Normally, mannitol is easily absorbed but lactulose is not. In leaky gut, both are absorbed and excreted through urine.

#### Treatment Overview

- Remove the cause – medications? Stress?
- Avoid food intolerances
- Maximizing nutrition (Nutrient-dense diet, IM, IV, supplementation)
- Balancing gut bacteria (Kill off bad bugs & Replenish good bugs)
- Repairing GI lining
- Don't eat if you're stressed
- Take a few deep breaths before you eat, eat calmly, savor your food – be present
- Chew slowly and completely
- Minimize sugar, processed foods, alcohol
- Avoid your individual food intolerances
- Avoid rancid or bad oils (Don't cook oils beyond their burn temps/ Cold pressed and unrefined oils should not be highly heated!)
- Ensure adequate fiber and bowel transit time – should be 12-24 hours (Test with eating beets or activated charcoal)
- Fiber supplementation may be necessary
- Emphasize nutrient dense organic foods

#### Optimizing Digestion

- Digestive enzymes before meals
- Bitter/digestive enhancing herbs before meals (Ginger, chamomile, bitter orange oil peppermint, gentian, "Sweetish Bitters" by Gaia, Bitter greens with meals – arugula, endive, radicchio, Apple cider vinegar, Lemon water in AM)

- Nutritional Supplements may be necessary if absorption is highly compromised
- Injections (especially of B vitamins)
- IV therapy
- Probiotics (Supplement with 5 billion +, Take WITH meals, + lactoferrin
  - ✦ Inhibits ability of bad bugs to stick to intestinal wall
  - ✦ Immune booster
  - ✦ Found in colostrum
  - ✦ Boosts GI immunity Sacchromyces boullardi

Probiotics may initially cause gas/bloating – should dissipate after taking for 1-2 weeks

- Yogurt, kefir, kombucha (Food sources often not enough)
- Antimicrobial herbs (Goldenseal, artemisia, black walnut, oregano oil, garlic, pau d'arco)
- Nystatin

#### Repairing a Leaky Gut

- Cannot be done with supplements alone – irritating factors must be removed
- Glutamine (500 mg 3x/day)
- N-Acetyl-D-Glucosamine (NAG) 750 mg 3x/day
- Phosphatidylcholine/Lecithin (150 mg 3x/day)
- Mucilagenous Herbs (Licorice, slippery elm, aloe, marshmallow)
- Glutathione (repairs leaky gut, supports liver detox =Milk thistle, selenium, whey protein, IV very effective)

#### Resources

- Probiotics and Depression  
<http://www.livescience.com/15822-embargoed-probiotic-bacteria-treat-depression.html>
- Gut bacteria and weight gain  
<http://www.time.com/time/health/article/0,8599,1969807,00.html>
- Levin, Buck, Ph.D., R.D., "Intestinal Permeability and Nutritional Support of Intestinal Integrity", Quaterly Review of Natural Medicine, Summer 1994.

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