



INE | INSTITUTE OF
NUTRITIONAL
ENDOCRINOLOGY

Digestion: Healing Dysbiosis – Candida and Other Gut Bugs

Dr. Ritamarie Loscalzo

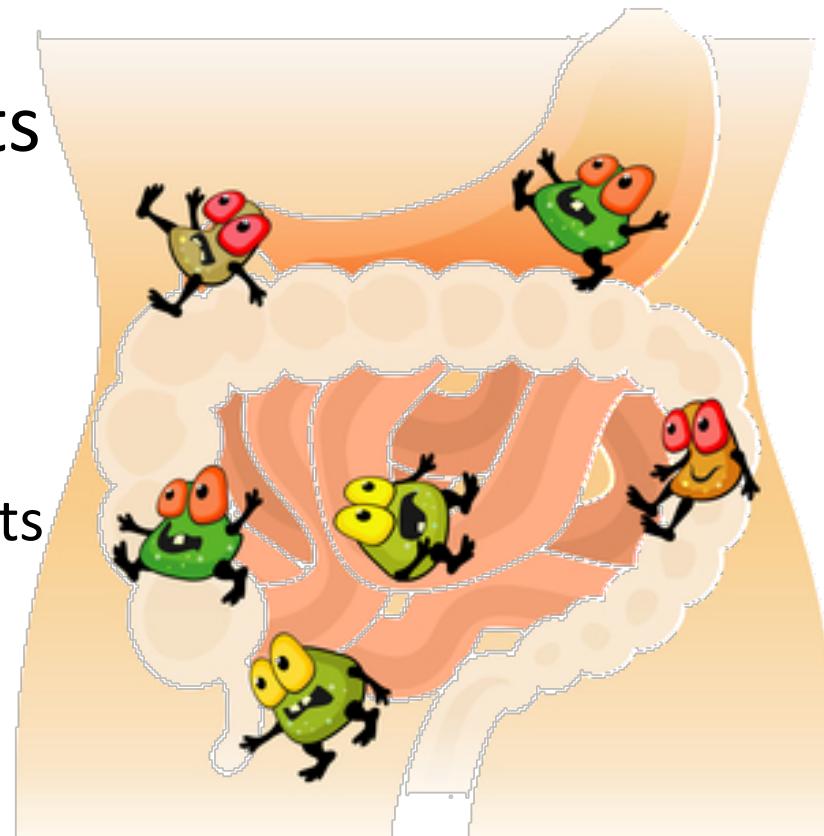


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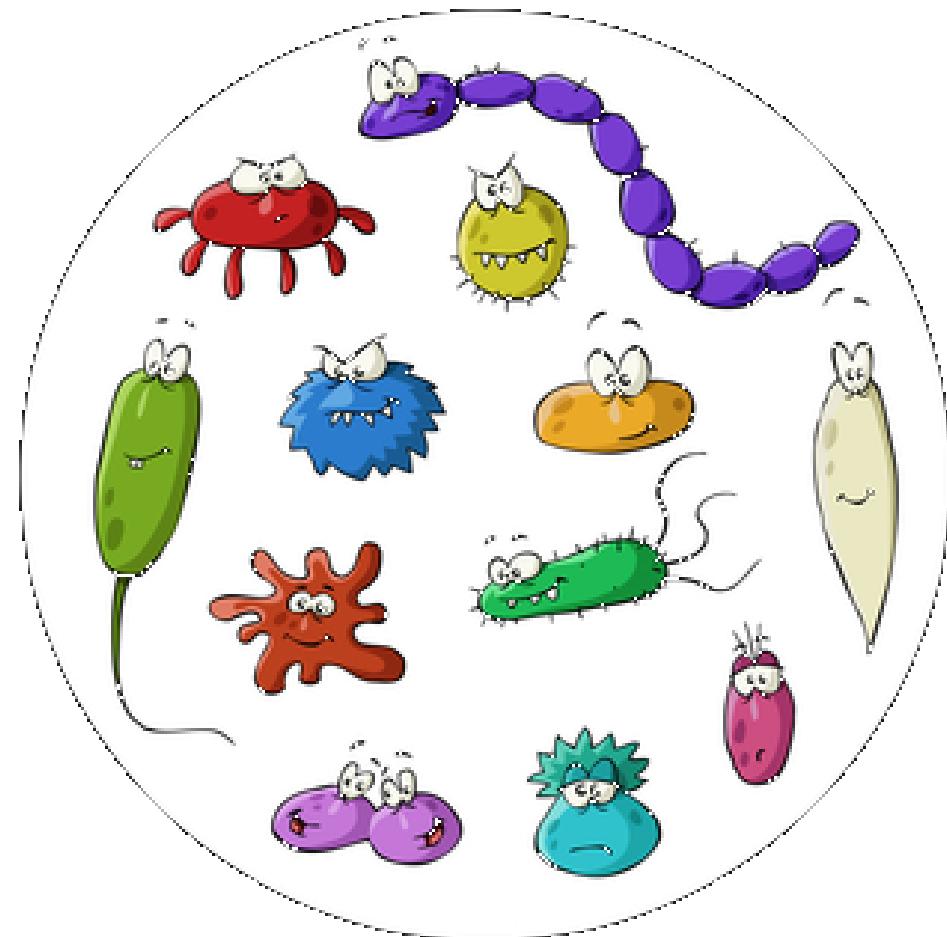
Dysbiosis (Unfriendly Gut Bugs)

- ✓ “Bad life in the digestive tract”
- ✓ The balance of favorable to unfavorable organisms shifts
- ✓ Symptoms result from:
 - Endotoxins produced by the bugs
 - Interference with functioning of “good bugs” in producing nutrients and enzymes
 - Gases and fermentation



Organisms That Can Cause Dysbiosis

- ✓ Fungi and yeasts
- ✓ Bacteria
- ✓ Viruses
- ✓ Parasites
- ✓ Worms

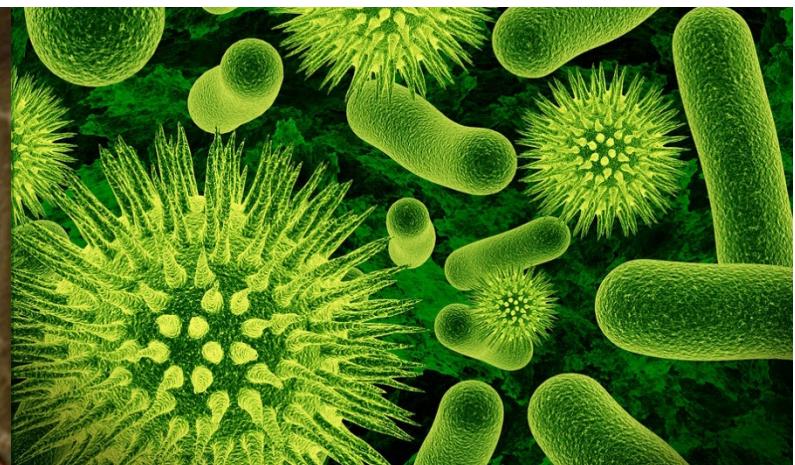


Fungi and Yeasts

✓ *Candida albicans*

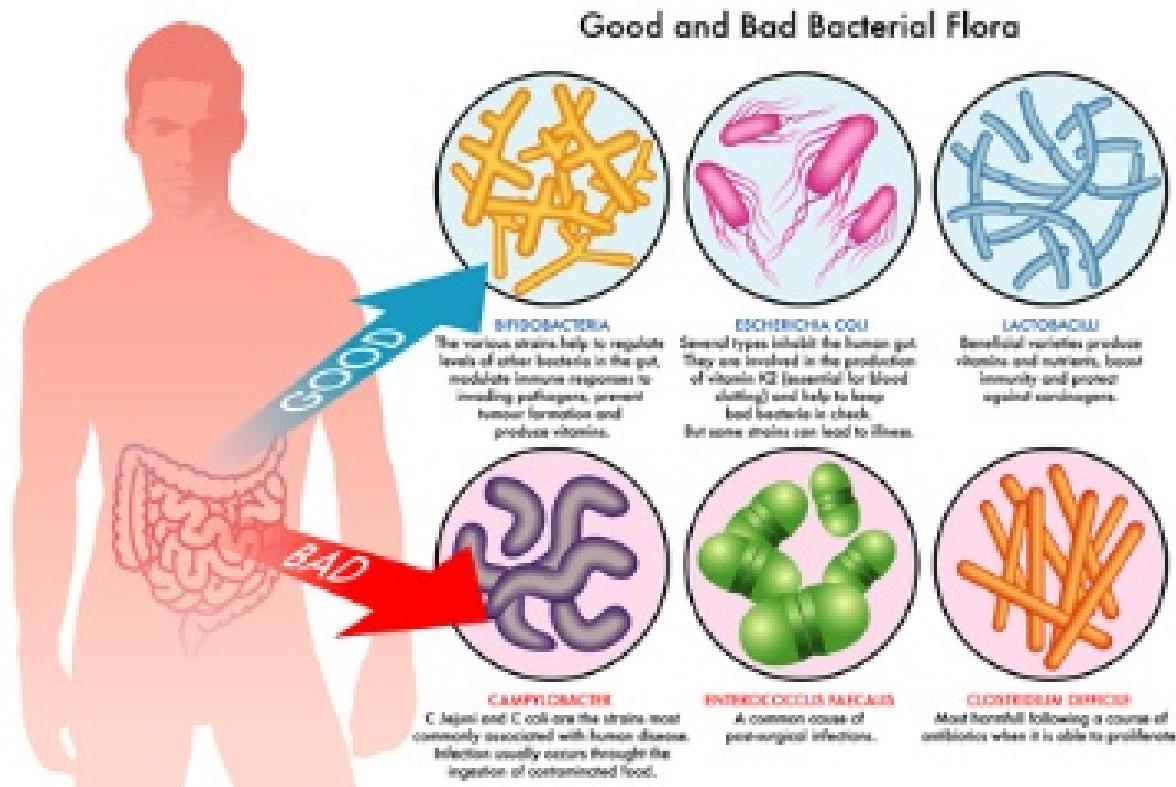
- A yeast: a single-celled fungus - normal inhabitant
- In unhealthy conditions:
 - Changes shape to mycelia - can embed into tissues and grow out of control
 - Gives off toxins that lead to inflammation and symptoms

✓ *Saccharomyces*



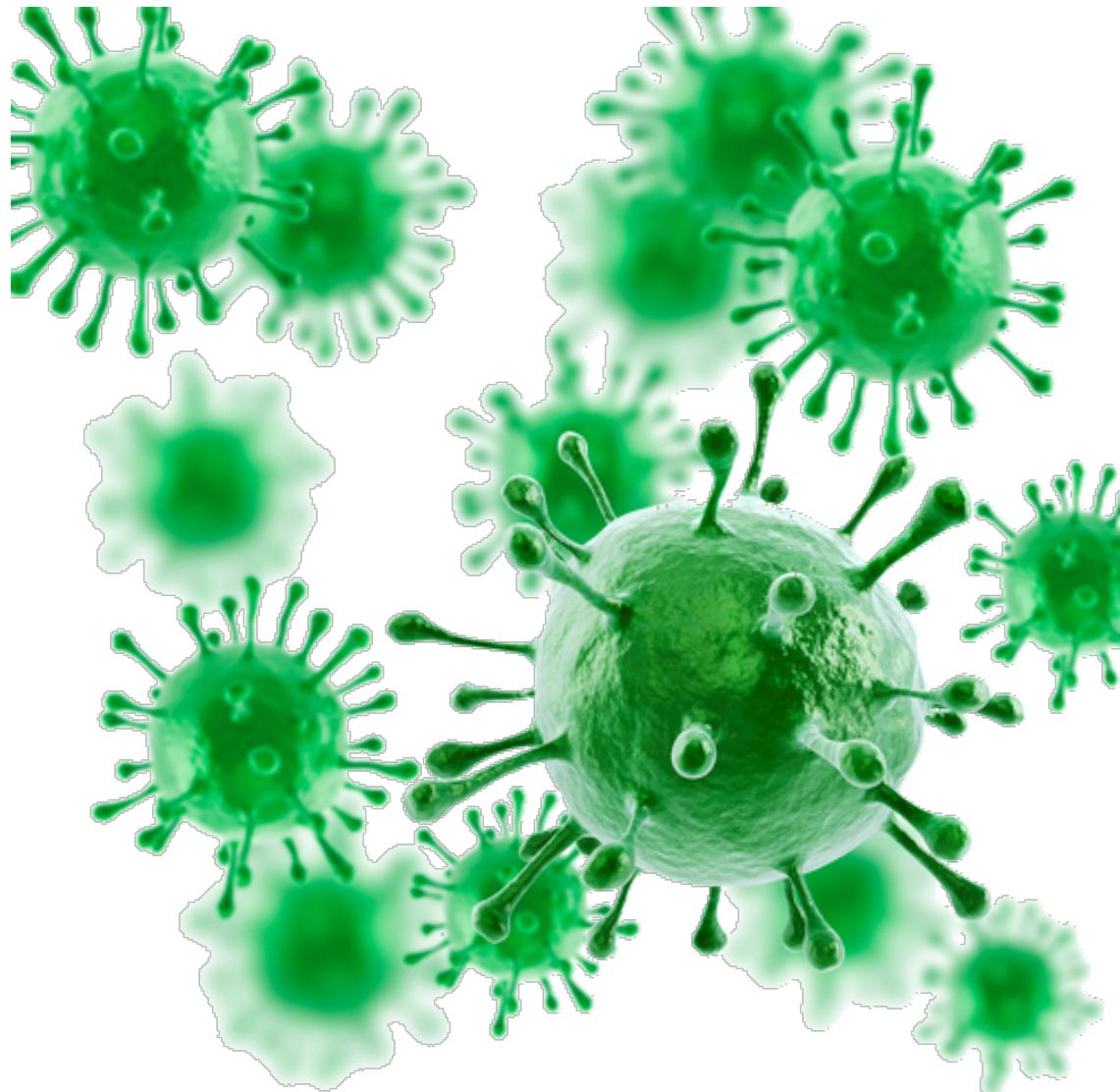
Bacterial Overgrowth Found in Gut

- ✓ E. coli
- ✓ Klebsiella
- ✓ Clostridia
- ✓ Yersinia
- ✓ Shigella
- ✓ Salmonella
- ✓ Campylobacter
- ✓ Listeria
- ✓ (many more...)



Viruses Found in Gut

- ✓ Rotavirus
- ✓ Adenovirus
- ✓ Astroviruses
- ✓ Cytomegalovirus
- ✓ Picornavirus
- ✓ Torovirus
- ✓ (many more...)



Parasites That Can Invade the Gut

- ✓ Giardia
- ✓ Blastocystis hominis
- ✓ Cryptosporidium
- ✓ Entamoeba histolytica
- ✓ Endolimax nana
- ✓ Dientamoeba fragilis
- ✓ Enterobius vermicularis (pinworms)
- ✓ Roundworms
- ✓ Hookworms



Causes of Dysbiosis

✓ Antibiotics

- Medications
- In foods

✓ Steroids

- Oral
- Topical
- In foods

✓ Diet

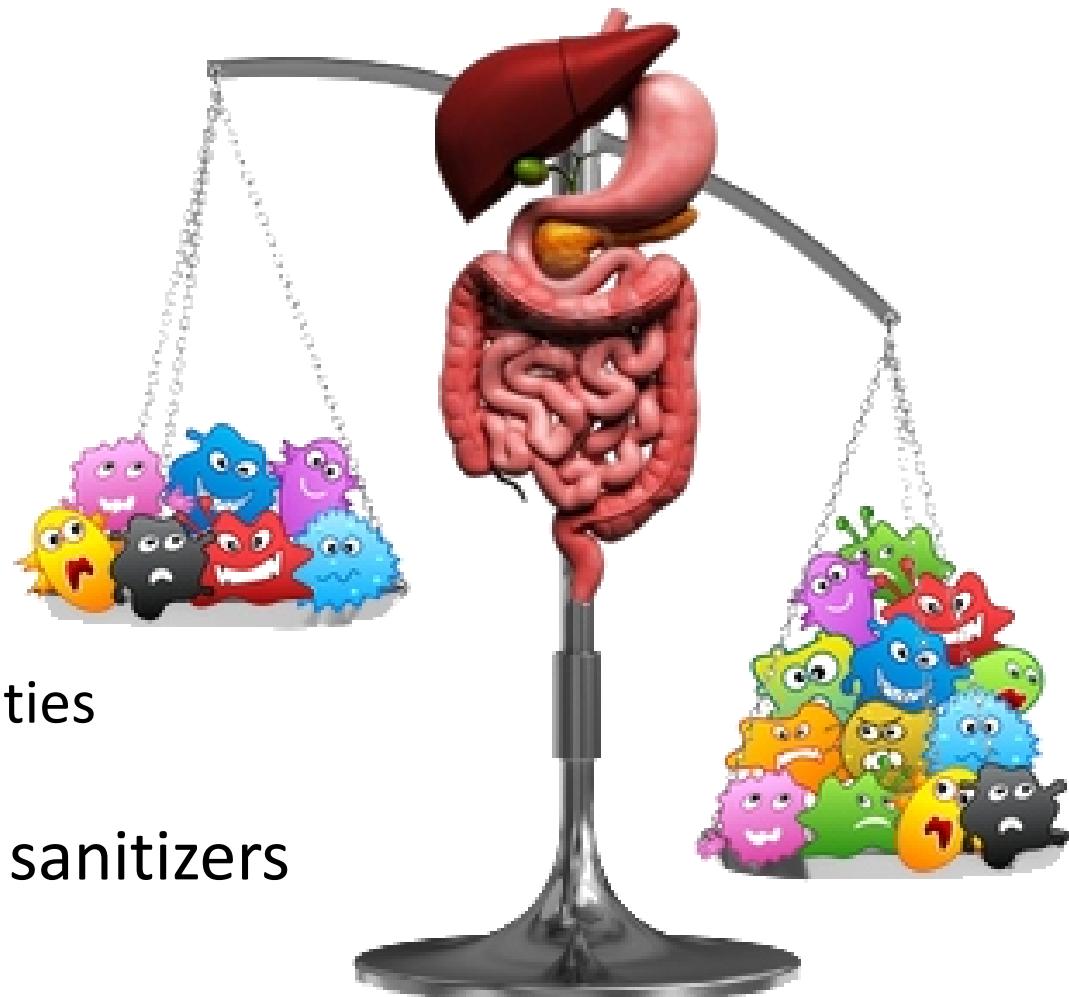
- High in sugar, processed foods, and protein
- Nutrient deficiencies
- Food allergies or sensitivities

✓ Birth control pills

✓ Antimicrobial soaps and sanitizers

✓ Stress

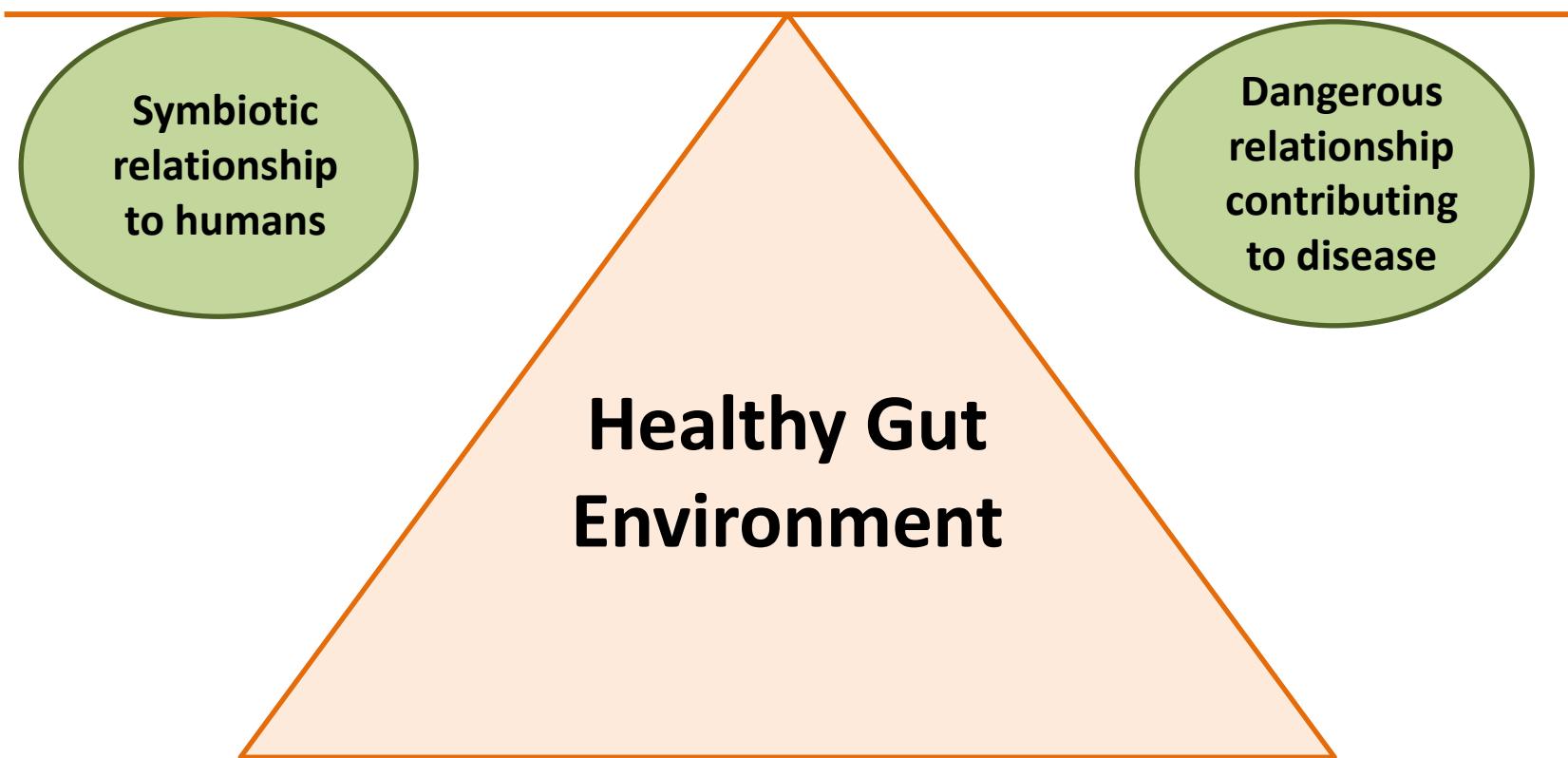
✓ Inflammation



<http://www.drritamarie.com/go/AMRCausesOfIntestinalDysbiosis>



Microbiome in Balance

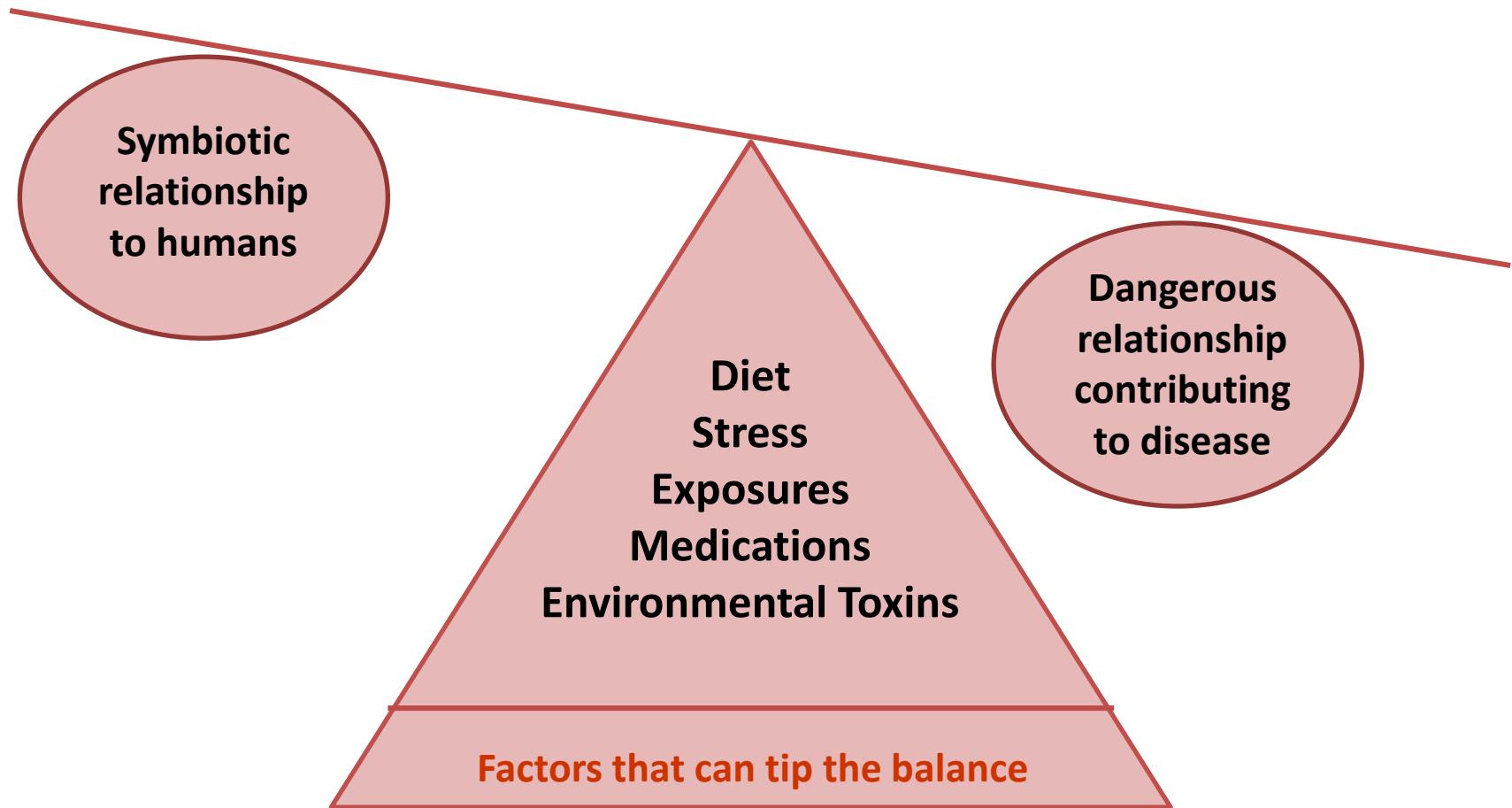


Adapted From Healthy Digestion the Natural Way by D. Lindsey Berkson p 161



Microbiome Out of Balance

Dysbiosis



Adapted From *Healthy Digestion the Natural Way* by D. Lindsey Berkson p 161



Candida

✓ General candida information:

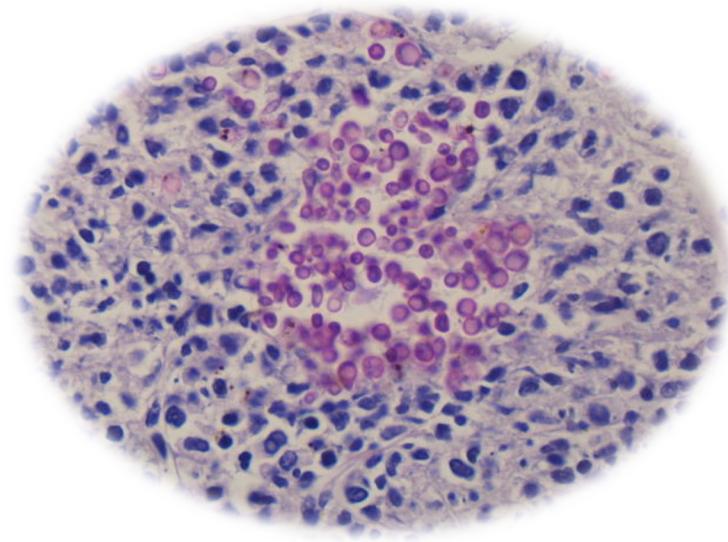
- A yeast: a single-celled fungus
- Covers everything
- Normal inhabitant of the human body

✓ Under healthy conditions:

- A symbiotic renter that doesn't cause problems
- Balance between humans and yeast

✓ In unhealthy conditions:

- It changes shape from a round, benign, and jolly inhabitant, to an elongated hot-dog shaped invader
- It's then called a mycelia and can embed into tissues and grow out of control
- Gives off toxins that lead to inflammation and lots of symptoms



Symptoms of Candidiasis, aka Candida-Related Complex (CRC)

Digestive Systems

- Bloating and gas
- Diarrhea
- Constipation
- Abdominal pain
- Burning in the esophagus
- Itching and burning in the rectum
- Burping



Systemic Symptoms

- Headaches
- Muscle pains
- Fatigue
- Allergy symptoms
- Male and female disorders

Central Nervous System Issues

- Anxiety
- Depression
- ADD and ADHD
- Memory problems
- Learning disabilities



Clearing Out Dysbiosis

- ✓ **Stop eating anything that creates sugar** in the gut, including refined carbs, alcohol, and fruit juice
- ✓ **Take antimicrobial herbs:** grapefruit seed extract, oregano oil, Berberine, garlic, etc.
- ✓ **Take probiotics** to reseed the friendly bacteria
- ✓ **Take nutrients that heal** the lining of the gut, since mycelia and endotoxins can damage the lining



The 4R Process

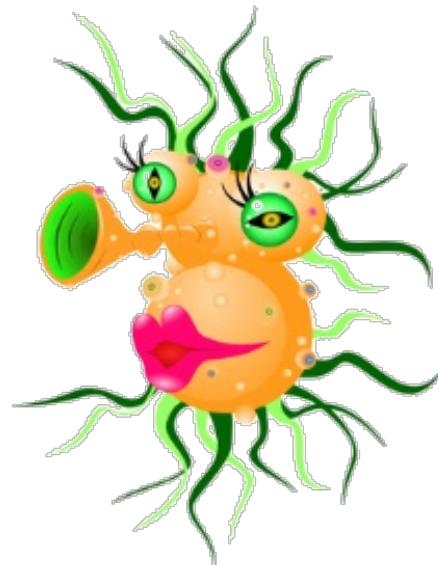


- ✓ Remove
- ✓ Replace
- ✓ Repair
- ✓ Reinoculate



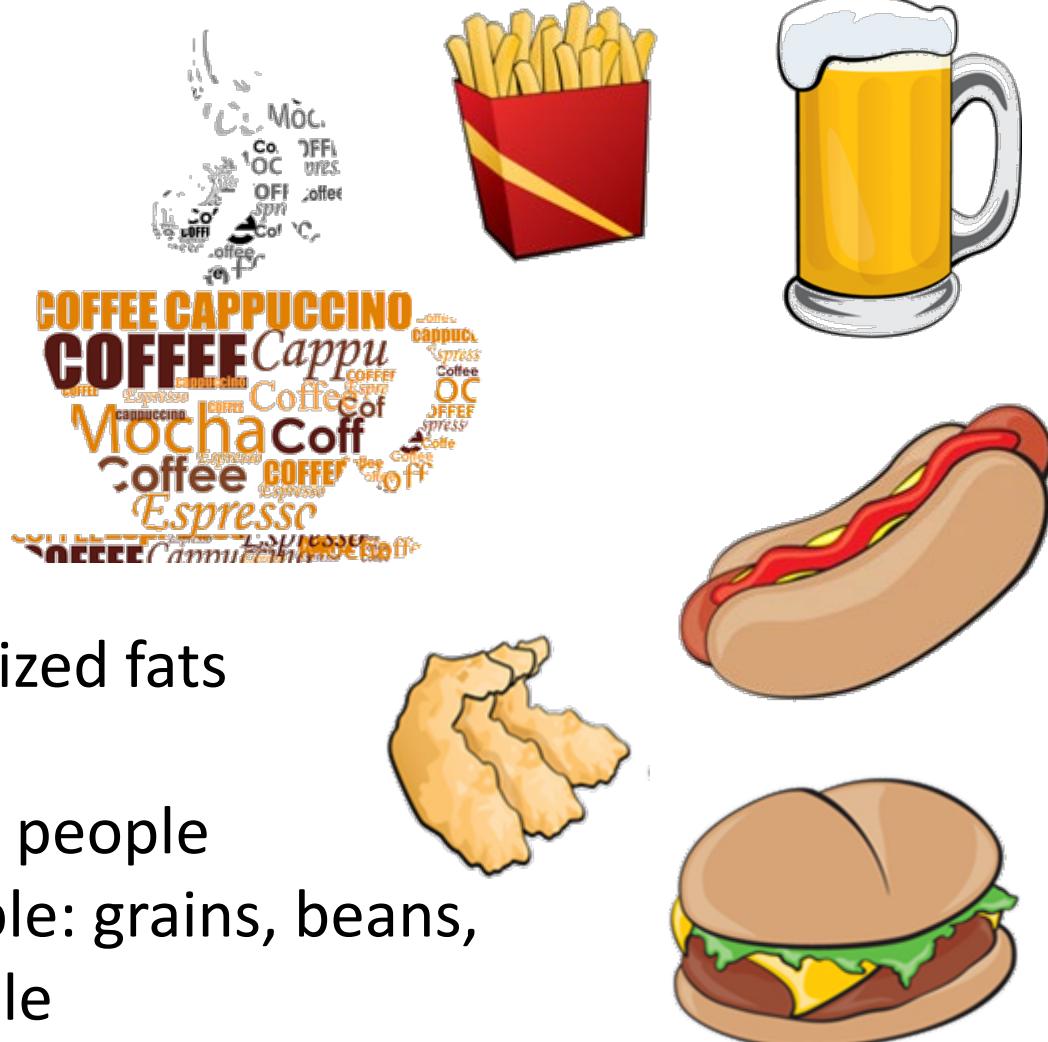
Remove Toxic Foods, Chemicals and Organisms

- ✓ Foods that hurt the gut
- ✓ Medications unless prescribed by a doctor
- ✓ Candida, parasites, bacteria
- ✓ Common Allergens
 - Gluten
 - Dairy
 - Egg
 - Peanuts
 - Corn
 - Soy



Foods That Can Hurt The Gut

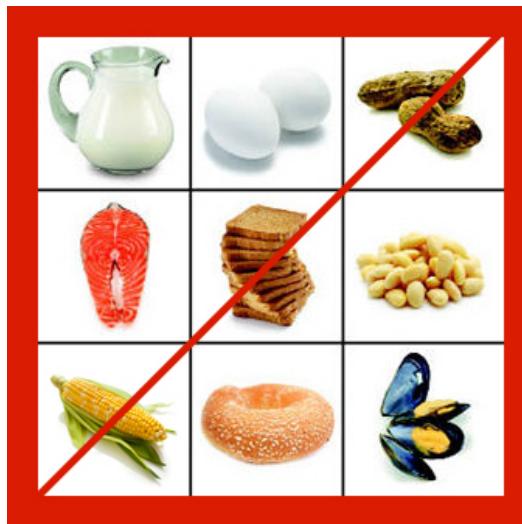
- ✓ Sugar
- ✓ Gluten
- ✓ Dairy
- ✓ Refined carbohydrates
- ✓ All allergens
- ✓ Caffeine
- ✓ Alcohol
- ✓ Trans fats
- ✓ Heated, processed, oxidized fats
- ✓ Processed meats
- ✓ Nightshades in sensitive people
- ✓ Lectins in sensitive people: grains, beans,
- ✓ FODMAPs in some people



Elimination Diet

✓ Common allergens

- Gluten
- Dairy
- Egg
- Peanuts
- Corn
- Soy



- ✓ Foods they eat frequently
- ✓ Foods they crave
- ✓ Foods they don't digest well

✓ Known allergens

- Confirmed
- Suspected



Elimination/Provocation

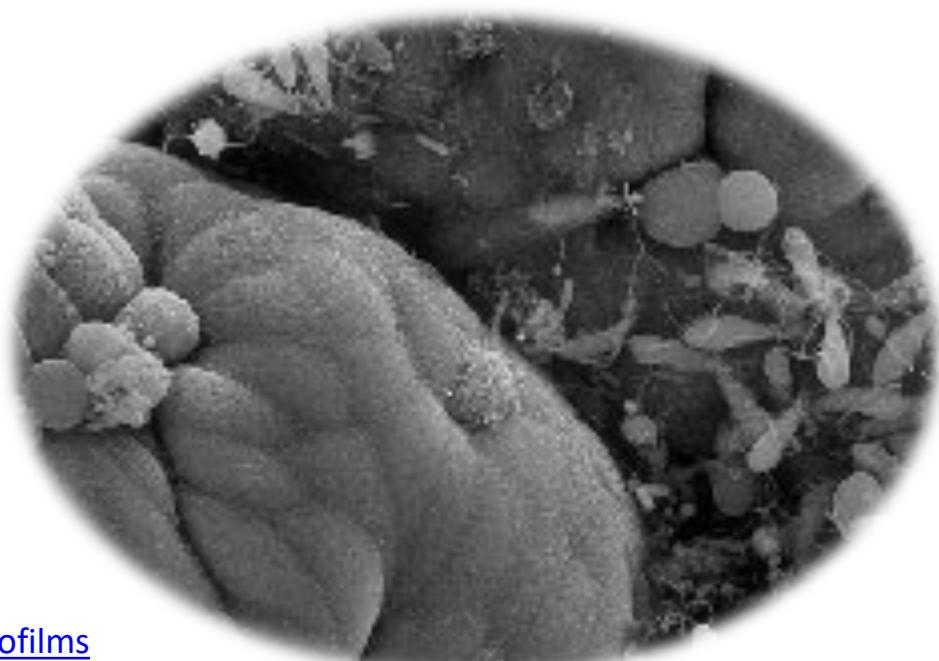


Identify suspicious / common allergens
Remove from diet for adequate time
Reintroduce in systematic manner in high dose
Sleuth how they feel (old symptoms return) immediately to 3 days out



Biofilms

- ✓ “A complex structure adhering to surfaces that are regularly in contact with water, consisting of colonies of bacteria and usually other microorganisms such as yeasts, fungi, and protozoa that secrete a mucilaginous protective coating in which they are encased.”
- ✓ Difficult to penetrate and remove
- ✓ Require special biofilm disrupting substances



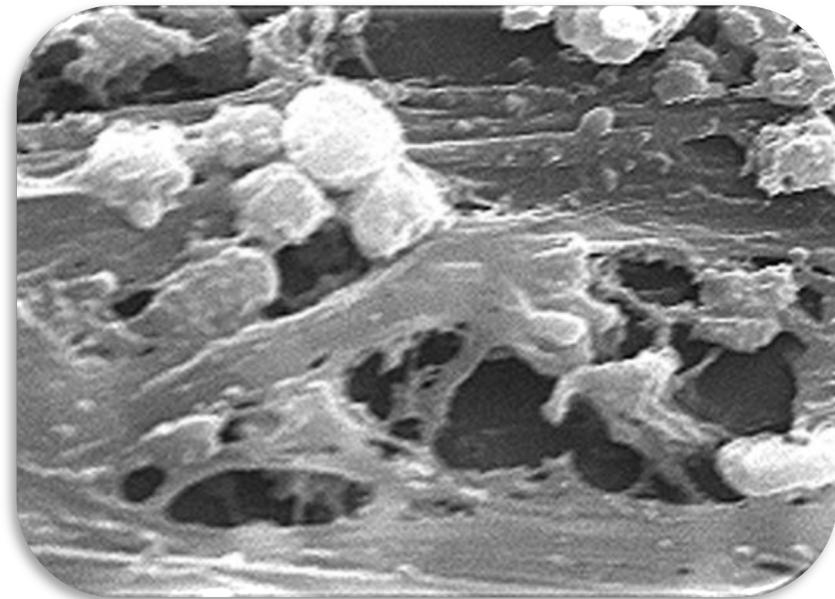
<http://www.drritamarie.com/go/RoleOfBacterialBiofilms>



Biofilm Disruptors

✓ Enzymes

- Serratiopeptidase
- Lysozyme
- Proteases:
Chymotrypsin, Bromelain and Papain
- Digestive complexes



✓ Colloidal Silver

<http://www.drritamarie.com/go/PMID21756192>

✓ N-Acetyl Cysteine

<http://www.drritamarie.com/go/PMID25339490>, <http://www.drritamarie.com/go/ajidm255>

✓ Rosemary Essential Oil

Candida albicans and *C. tropicalis* biofilm (Chifiriuc et al 2012)

✓ Tea Tree Oil

S. aureus, MRSA and *C. albicans* biofilm (Kwiecinski et al 2009, Park et al 2007, Sudjana et al 2012)

<http://www.drritamarie.com/go/AEM0749911>



Antimicrobial Herbs and Foods

- ✓ Berberine containing herbs
 - Bayberry
 - Oregon grape
 - Goldenseal
- ✓ Oregano
- ✓ Turmeric
- ✓ Thyme
- ✓ Propolis
- ✓ Fennel
- ✓ Neem
- ✓ Sage
- ✓ Pumpkin seeds / seed oil
- ✓ Coconut oil (caprylic acid)
- ✓ Pomegranate juice
- ✓ Rosemary
- ✓ Garlic
- ✓ Pau d'arco
- ✓ Grapefruit seed extract
- ✓ Undecylenic acid
- ✓ Artemisia
- ✓ Black walnut



Antimicrobial Essential Oils

- ✓ Carrot seed
- ✓ Celery seed
- ✓ Coriander seed
- ✓ Cinnamon
- ✓ Eucalyptus
- ✓ Oregano
- ✓ Citronella
- ✓ Bergamot
- ✓ Basil
- ✓ Cardamom
- ✓ Geranium
- ✓ Bay laurel
- ✓ Lemongrass
- ✓ Orange
- ✓ Patchouli
- ✓ Marjoram



<http://www.drritamarie.com/go/PMID8893526>



Dysbiosis Formulas

✓ HealthForce Nutritionals SCRAM™

- Candida
- Parasites



✓ Allergy Research Tricycline

- Bacteria
- Candida
- Parasites



Other Dysbiosis Supplements

✓ **Biocidin:** Bio-Botanical research



✓ **Formula SF722:** Thorne

✓ **GI Microbe-X:** Designs for Health

✓ **Para-Gard:** Integrative Therapeutics



✓ **Tanalbit:** Intensive Nutrition

✓ **GI Shield:** Gaia Herbs



✓ **Fungus Fighter Compound:** Herb Pharm

✓ **Candactive:** Wise Women Herbals



Do It Yourself Dysbiosis Protocols

✓ Stool sensitivity testing

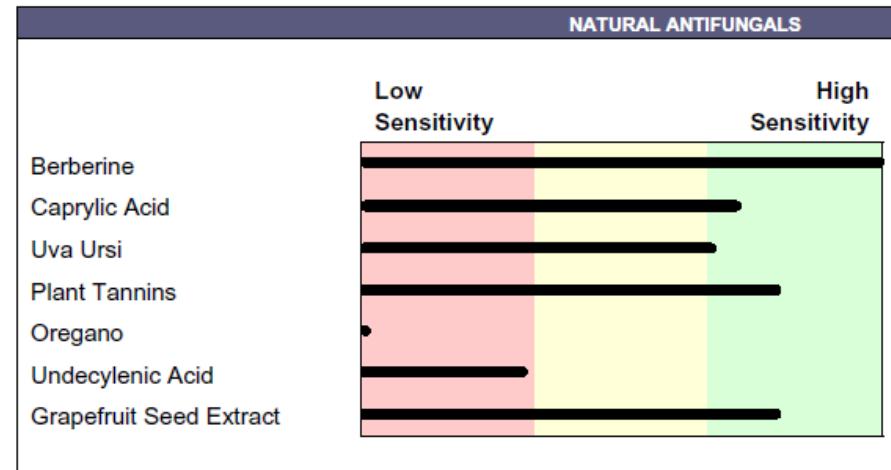
- Choose those with high sensitivity to most microbes
- Best to rotate all except caprylic acid and silver

✓ Symptoms

- History and assessment questionnaires

✓ Target particular organisms suspected

- H. pylori
- SIBO
- Candida
- Parasites
- Bacteria



<http://www.drritamarie.com/go/EmersonDysbiosisSupplements>



28-Day Candida/Parasite Cleanse

✓ HealthForce Nutritionals SCRAM™

- Cloves
- Black Walnut Hull
- Wormwood Herb
- Milk Thistle Seed Extract
(to control die-off reactions)
- Wasabi Extract
(to control die-off reactions)
- Enzymes
(protease, amylase, cellulase, lipase)



SCRAM Dosages

- ✓ **Day 1:** One VeganCap™
- ✓ **Day 2:** Three VeganCaps™
- ✓ **Day 3:** Six VeganCaps™
- ✓ **Days 4-17:** Ten VeganCaps™



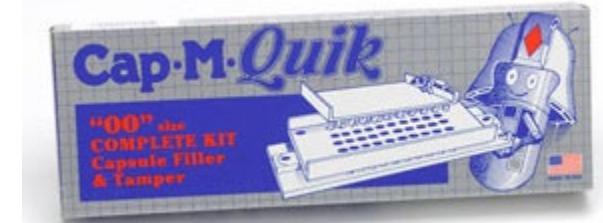
- *Ideally, take all at once until the bottle is gone. If you notice detox symptoms like headache, muscle and joint aches, skin rashes, or feeling exhausted... slow down. Take it nice and slow.*
- *Make sure you are having at least 2-3 bowel movements during this process. If you are not, consider an enema, a colonic, or adding a gentle intestinal movement formula, like **HealthForce Nutritionals Intestinal Movement Formula**.*



Preventing/Eliminating Parasite Eggs: Cloves

Make the capsules fresh, as the volatile oils in cloves deteriorate quickly. Only freshly ground cloves have the medicinal properties to kill parasite eggs.

- ✓ Dried whole cloves, not irradiated
- ✓ Double-zero “00” empty capsules
- ✓ **Cap-M-Quick** – a device that makes it easy to fill capsules
- ✓ Grinder



Candida/Parasite Cleanse Supplement Schedule

Day	# to Take SCRAM	# to Take Cloves	Day	# to Take SCRAM	# to Take Cloves
1	1 <input type="checkbox"/>	1 <input type="checkbox"/>	15	10 <input type="checkbox"/>	9 <input type="checkbox"/>
2	3 <input type="checkbox"/>	2 <input type="checkbox"/>	16	10 <input type="checkbox"/>	8 <input type="checkbox"/>
3	6 <input type="checkbox"/>	3 <input type="checkbox"/>	17	10 <input type="checkbox"/>	7 <input type="checkbox"/>
4	10 <input type="checkbox"/>	4 <input type="checkbox"/>	18		6 <input type="checkbox"/>
5	10 <input type="checkbox"/>	5 <input type="checkbox"/>	19		5 <input type="checkbox"/>
6	10 <input type="checkbox"/>	6 <input type="checkbox"/>	20		4 <input type="checkbox"/>
7	10 <input type="checkbox"/>	7 <input type="checkbox"/>	21		3 <input type="checkbox"/>
8	10 <input type="checkbox"/>	8 <input type="checkbox"/>	22		3 <input type="checkbox"/>
9	10 <input type="checkbox"/>	9 <input type="checkbox"/>	23		3 <input type="checkbox"/>
10	10 <input type="checkbox"/>	10 <input type="checkbox"/>	24		3 <input type="checkbox"/>
11	10 <input type="checkbox"/>	12 <input type="checkbox"/>	25		3 <input type="checkbox"/>
12	10 <input type="checkbox"/>	12 <input type="checkbox"/>	26		2 <input type="checkbox"/>
13	10 <input type="checkbox"/>	11 <input type="checkbox"/>	27		1 <input type="checkbox"/>
14	10 <input type="checkbox"/>	10 <input type="checkbox"/>	28		1 <input type="checkbox"/>



Replace Missing Enzymes and Nutrients

- ✓ **Raw and living foods:**
contain enzymes (as much as tolerated)
- ✓ **Digestive enzymes:**
with all cooked or complex raw foods
- ✓ **Greens, fresh fruits, and vegetables:**
nutrient-dense foods
- ✓ **Green juices, sea vegetables, and microalgae:**
the most nutrient dense of all, as tolerated
- ✓ **Nutritive herbs and supplements:**
as needed



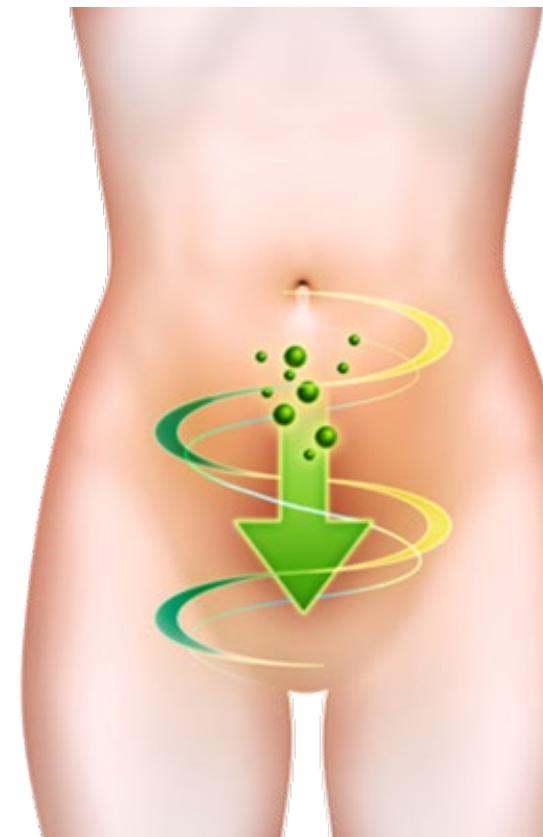
Reinoculate

✓ Put back normal flora with probiotics

- There are thousands
- Only a few dozen available commercially

✓ Feed the normal flora with prebiotics

- Fructooligosaccharides
- Inulin (longer chain length than FOS)
- Bifidobacter ferment to make SCFAs (short chain fatty acids)



Probiotics to Reinoculate The Gut

Food First!

✓ Cultured (Fermented) Vegetables

- Kimchi
- Sauerkraut

✓ Yogurt

- Seed yogurt
- Coconut yogurt
- Nut yogurt (cashew)

✓ Beverages

- Coconut kefir
- Kevita
- Kombucha
- Rejuvalec

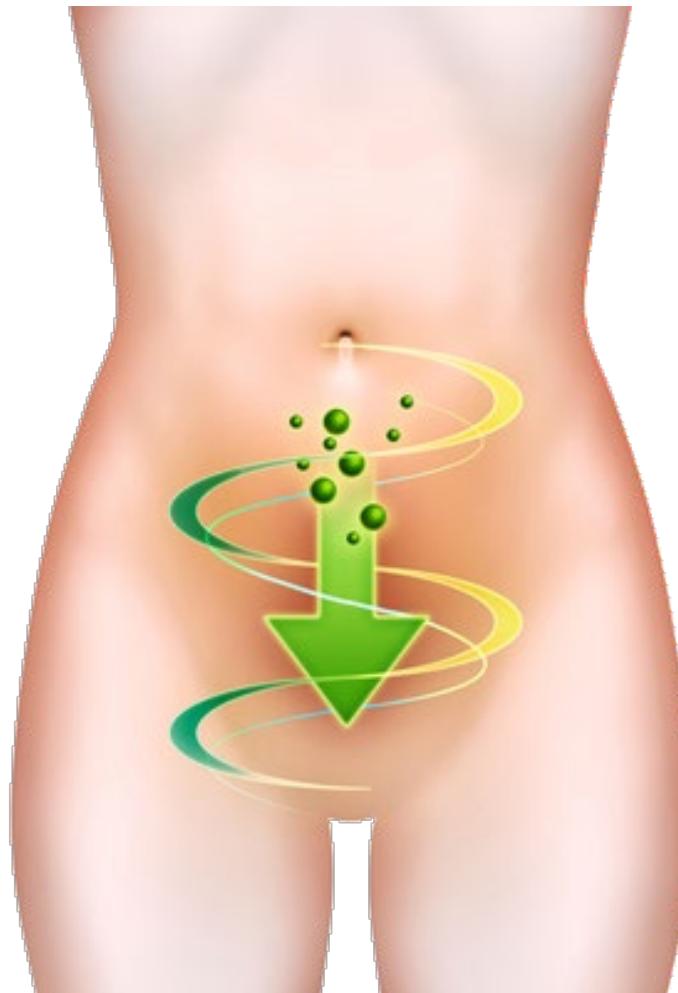
✓ Fermented Soy

- Miso
- Natto
- Tempeh



Reinoculate Supplemental Probiotics

- ✓ Lactobacillus
 - Acidophilus
 - Reuteri
 - Thermophilus
 - Helvetica
- ✓ Bifidus
- ✓ *Saccharomyces boulardii*
- ✓ *L. Sporogenes*
- ✓ Mixed strains ...



Reinoculate Prebiotic Containing Foods

- ✓ Jerusalem artichoke
- ✓ Chicory
- ✓ Dandelion
- ✓ Gum arabic, AKA acacia gum
- ✓ Dandelion root
- ✓ Wild yam
- ✓ Jicama root
- ✓ Burdock root
- ✓ Onions
- ✓ Garlic
- ✓ Leeks
- ✓ Asparagus
- ✓ Yacón



Inulin Containing Foods

<http://www.drritamarie.com/go/InulinFiberSources>

- Chicory root
- Dietary fiber
- Vitamin C
- Calcium
- Natural flavors from the peel of the orange



<http://www.drritamarie.com/go/JustLikeSugar>

Sugar Cane

Just Like Sugar

1 teaspoon	= 1 3/4 teaspoon
1 tablespoon	= 1 3/4 tablespoon
1/8 cup	= 1/4 cup
1/4 cup	= 7/16 cup
1/2 cup	= 7/8 cup
2/3 cup	= 1 1/4 cup
1 cup	= 1 3/4 cup



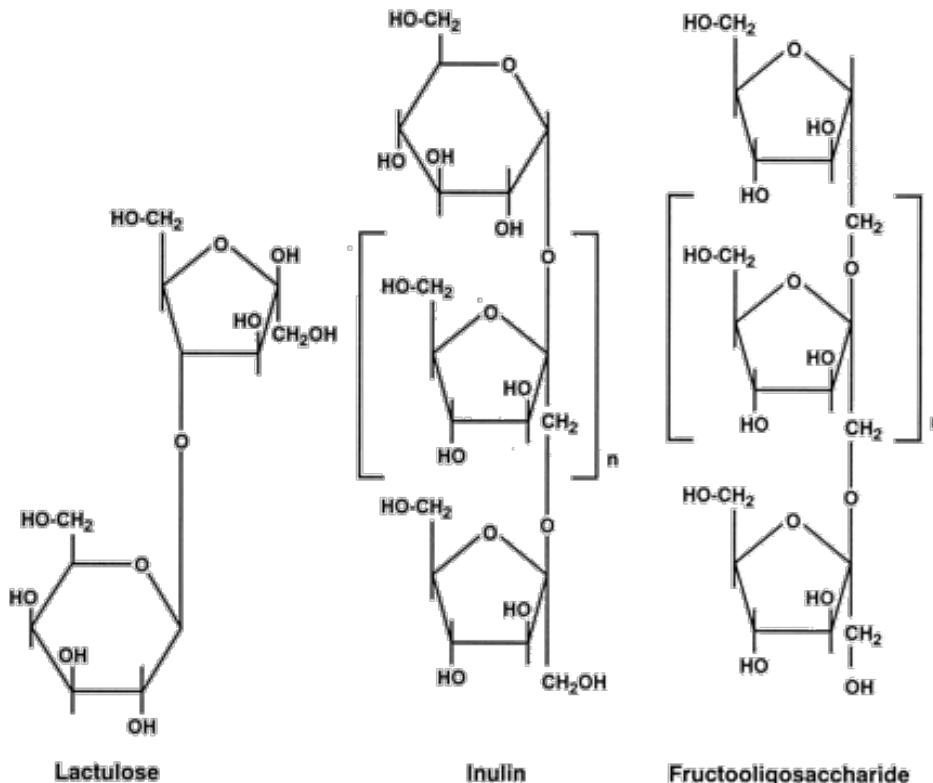
inuliflora
Organic Jerusalem Artichoke Powder
A raw superfood with a delicate, sweet and nutty flavour, our Jerusalem artichoke powder can be easily integrated into any daily routine. Add our powder to your juices, yogurts, dips, smoothies, baked goods, purées, salads, vinaigrettes, etc., and take pleasure in healthy eating while feeding your intestinal flora!
Ingredient : raw organic Jerusalem artichokes, dehydrated and powdered.
Seal the bag after each use and store in a cool dry place.

<http://www.drritamarie.com/go/Inuliflora>



Reinoculate Prebiotic Supplements

- ✓ Fructooligosaccharides (FOS)
- ✓ Inulin



Problems with Prebiotics and Probiotics

✓ Prebiotics:

- Can feed the “bad” bugs as well as good
- Can cause bloating and gas
- Can aggravate SIBO



✓ Probiotics:

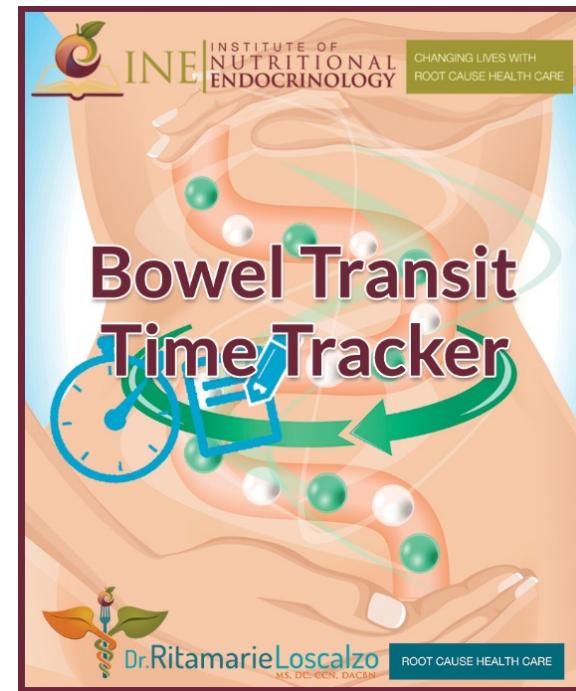
- Can “get stuck” in small intestine and cause SIBO when migrating motor complex is weak
- Can migrate back up into small intestine if ileocecal valve is weak
- Overload of D-Lactic acid which can produce fatigue and neurologic symptoms



Important Considerations for Managing Dysbiosis

Transit Time Optimization

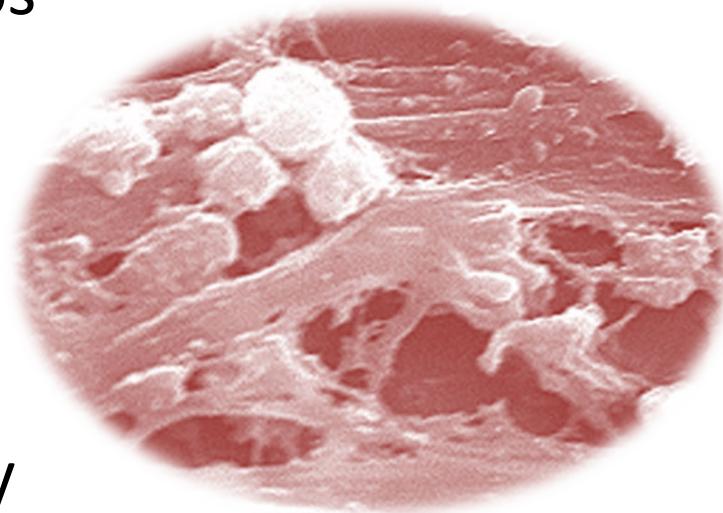
- Hydration
- Peristalsis: abdominal massage and exercise
- Elimination: colonics, enemas
- Migrating motor complex
 - Separate meals by 4-6 hours
 - No eating before bed
 - Take prokinetic herbs like triphala and ginger



Important Considerations for Managing Dysbiosis

Biofilm Disruptors

- Pure Encapsulations: SerratioZyme (porcine)
- InterFase, InterFase Plus: Enzymatic therapies (contains egg extract)
- Biofilm Defense: Kirkman Labs
- Paratosin: Premier Research Labs
- Serratiopeptidase
- Proteases and general enzyme formulas
- Colloidal silver
- N-Acetyl Cysteine
- Essential oils: tea tree, rosemary



Important Considerations for Managing Dysbiosis

Choose Antimicrobial Herbs Wisely:

- Stool test with culture and sensitivity
- Choose species specific herbs or combinations
 - Bacteria
 - Large intestine
 - Small intestine
 - Candida and fungus
 - Parasites
- Address eggs for parasites (cloves)
- Rotate to prevent resistance
- Continue for long enough
- Repeat as necessary



Important Considerations for Managing Dysbiosis

Rotate Herbs to Prevent Resistance

- Choose four or five herbs
- Rotate them five days on each (capsules/tinctures/oils/powders)
- Use biofilm disruptor between meals
 - Start with small dose
 - Slowly increase over time to 3, 3 times a day
- Continue the rotation for two months
- Re-assess



Important Considerations for Managing Dysbiosis

Adjunctive Procedures to Enhance Efficacy

- Castor oil packs
 - Liver
 - Abdomen
- Restore sympathetic balance
 - HeartMath
 - Vagus nerve stimulation
 - Yoga, meditation, etc.
- Abdominal massage
- Ileocecal valve manipulation
- Clay packs combined with topical essential oils



Important Considerations for Managing Dysbiosis

Reinoculate Carefully

- Caution with prebiotics until SIBO addressed, if present
- Start with Bifidus – most commonly low compared to lactobacillus
- Use lactobacillus that are not D-lactic acid producers
- Caution with fermented foods if SIBO suspected

