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NUTRITIONAL  
ENDOCRINOLOGY

# **Digestion: Healing Dysbiosis – Candida and Other Gut Bugs**

**Dr. Ritamarie Loscalzo**



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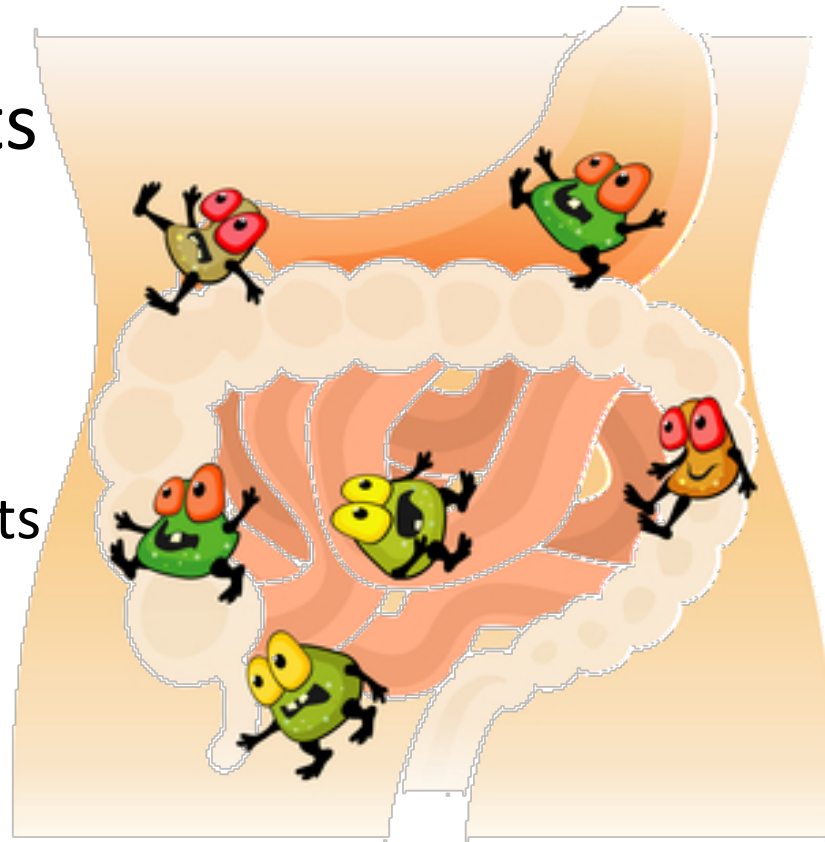
# Dysbiosis (Unfriendly Gut Bugs)

✓ “Bad life in the digestive tract”

✓ The balance of favorable to unfavorable organisms shifts

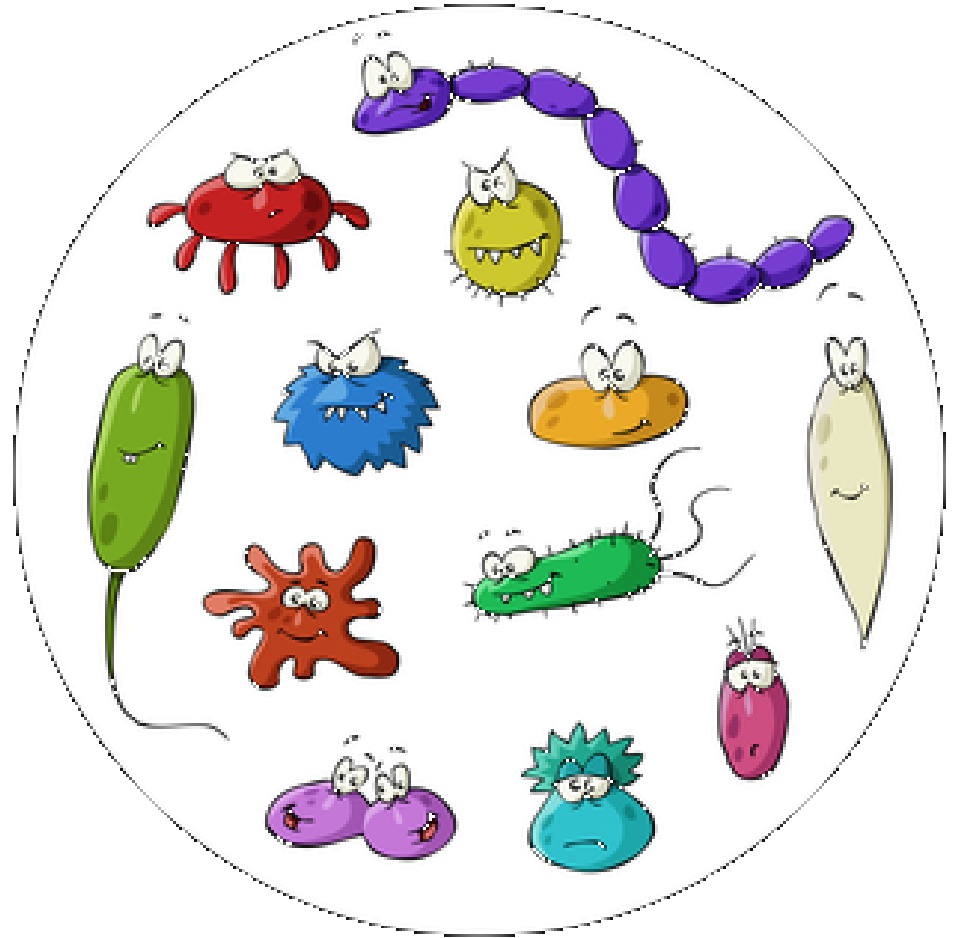
✓ Symptoms result from:

- 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

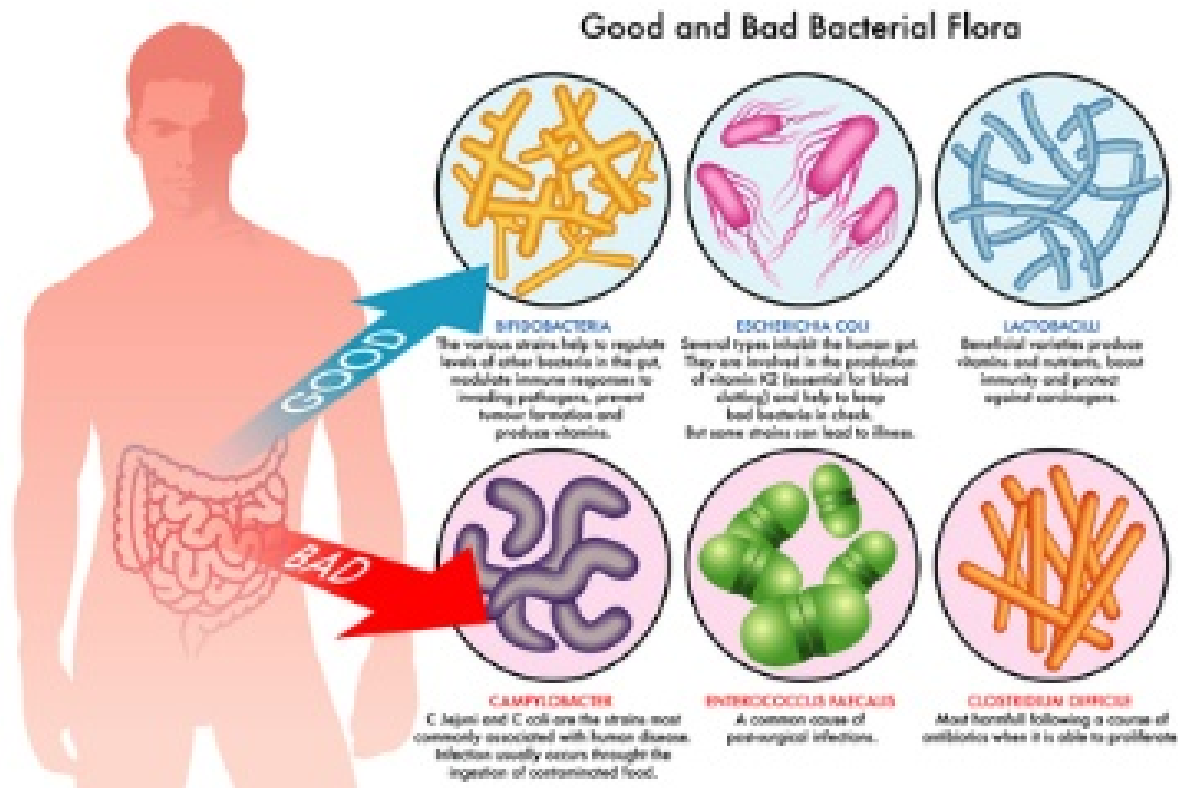
- A yeast: a single-celled fungus - normal inhabitant
- In unhealthy conditions:
  - Changes shape to mycelia - can embed into tissues and grow out of control
  - Gives off toxins that lead to inflammation and symptoms

## ✓ Saccharomyces



# Bacterial Overgrowth Found in Gut

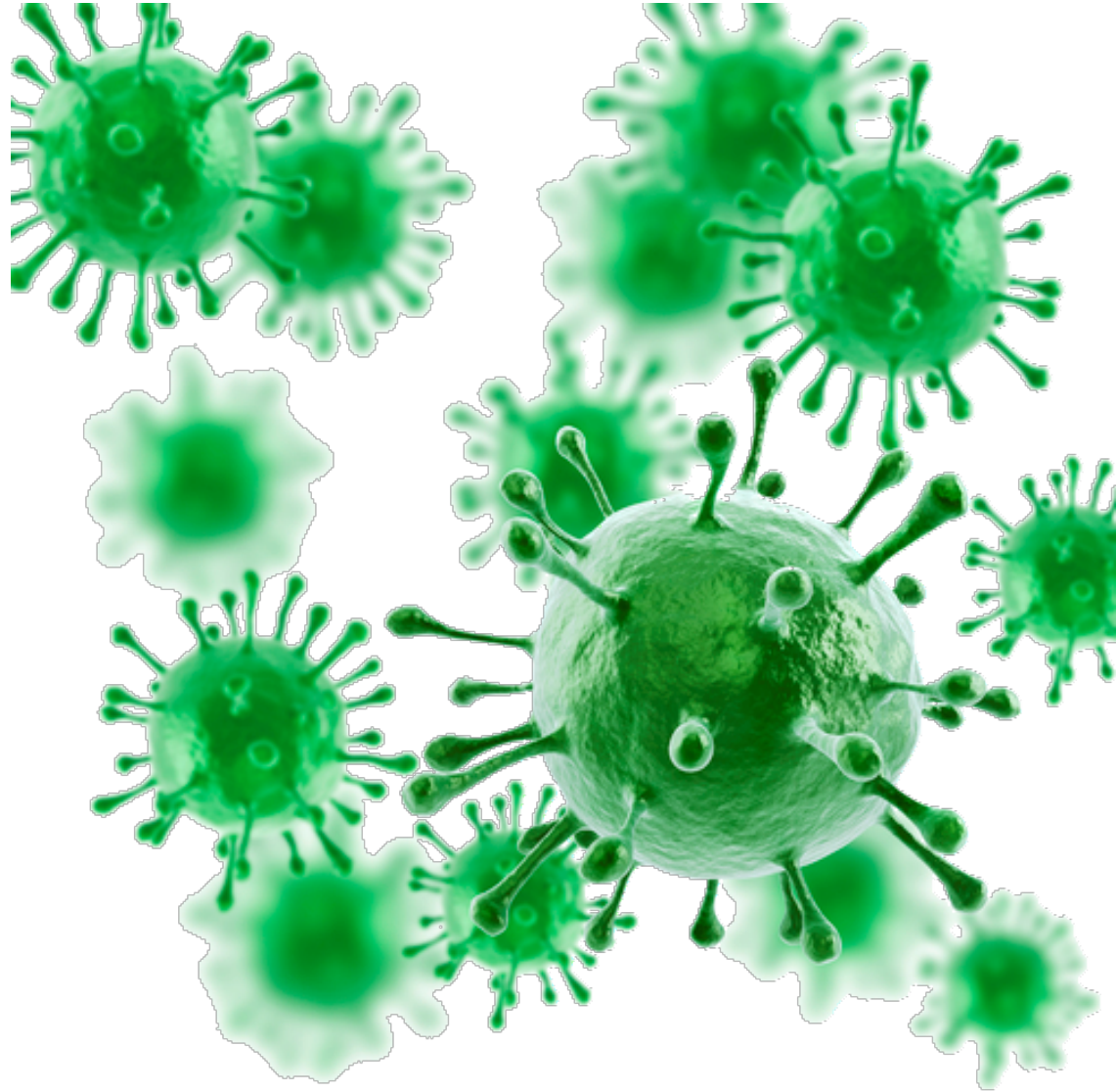
- ✓ E. coli
- ✓ Klebsiella
- ✓ Clostridia
- ✓ Yersinia
- ✓ Shigella
- ✓ Salmonella
- ✓ Campylobacter
- ✓ Listeria
- ✓ (many more...)





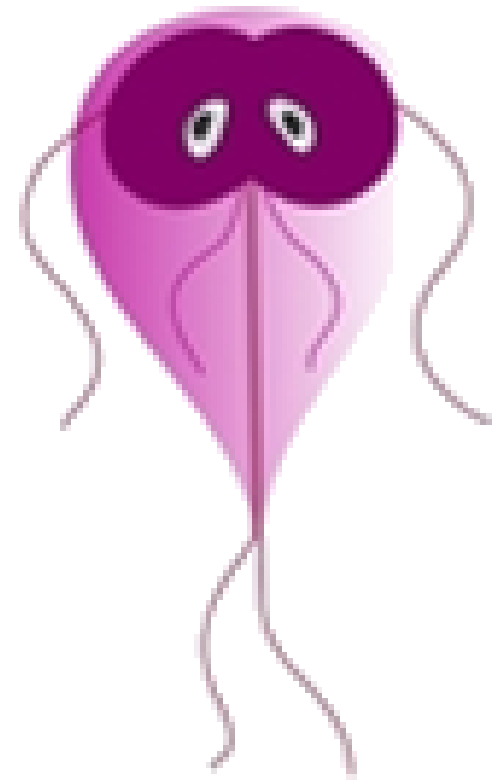
# Viruses Found in Gut

- ✓ 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

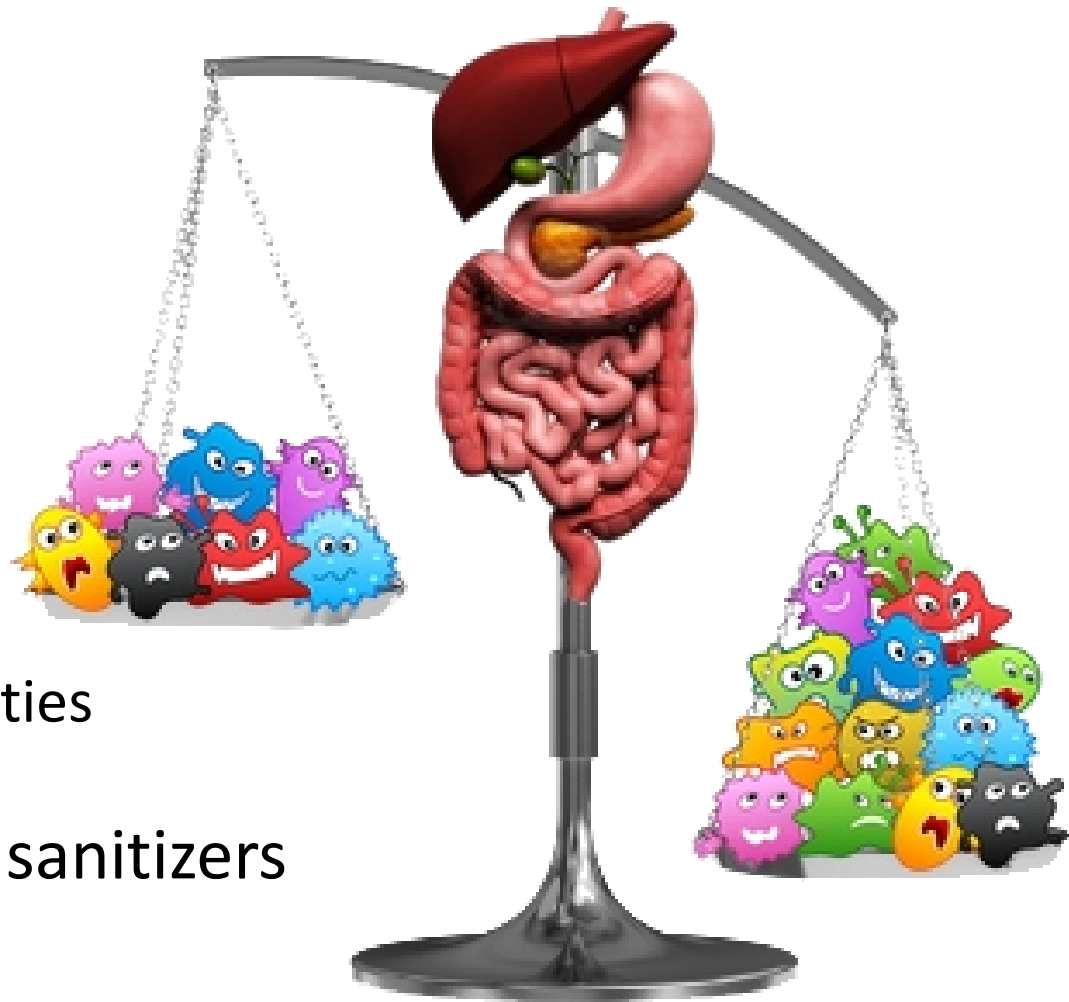
- High in sugar, processed foods, and protein
- Nutrient deficiencies
- Food allergies or sensitivities

## ✓ Birth control pills

## ✓ Antimicrobial soaps and sanitizers

## ✓ Stress

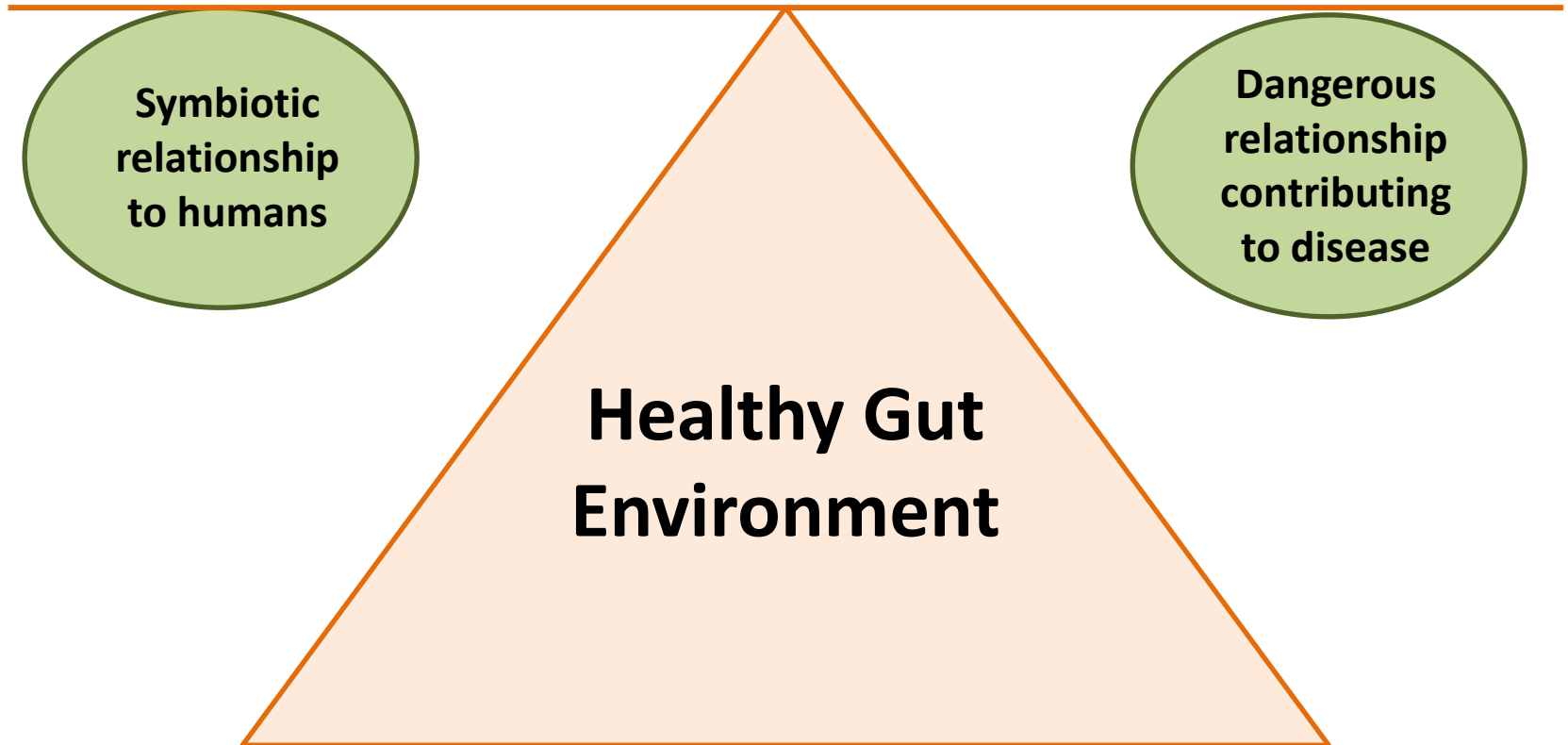
## ✓ Inflammation



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



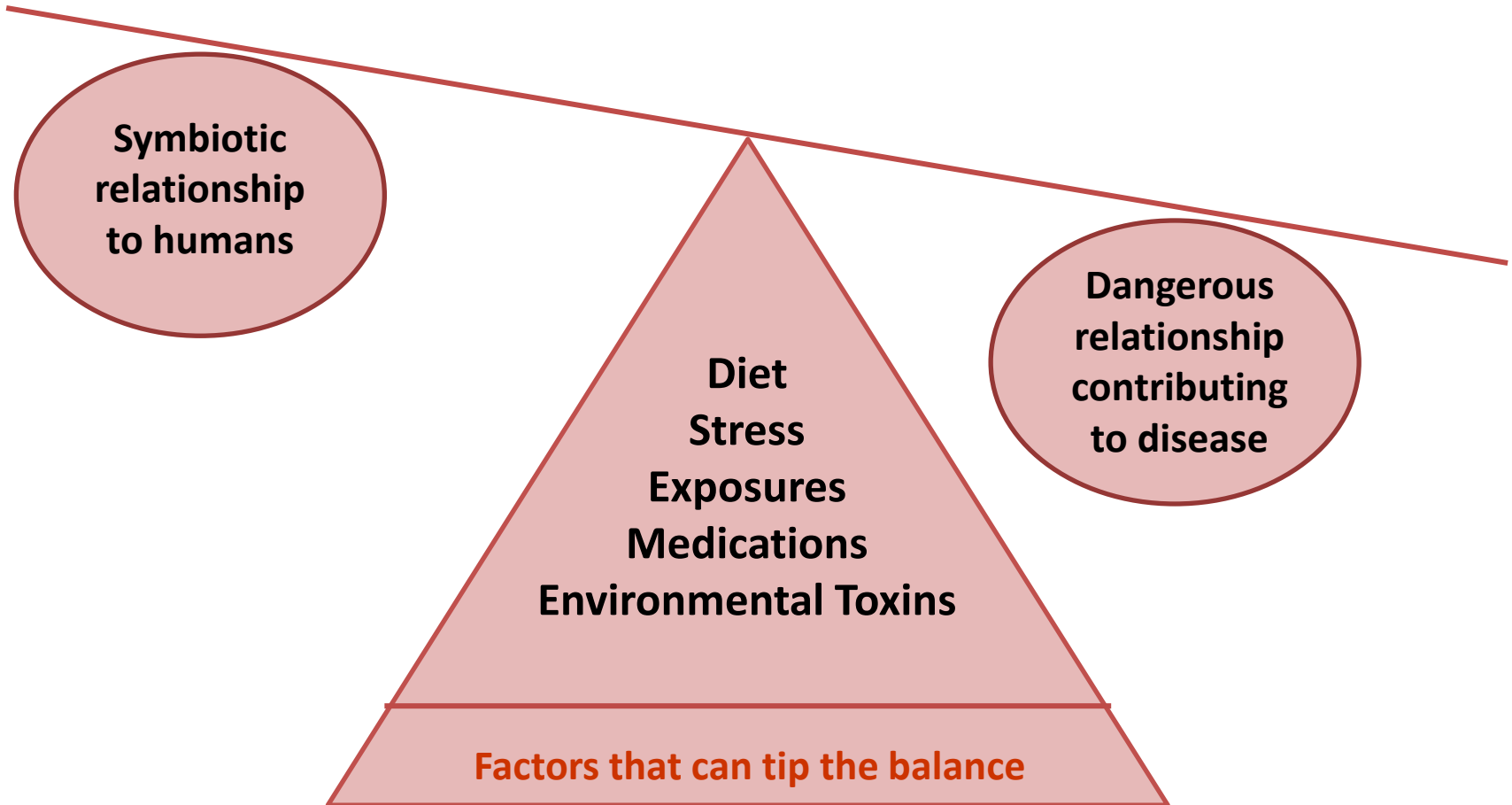
# Microbiome in Balance



*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:

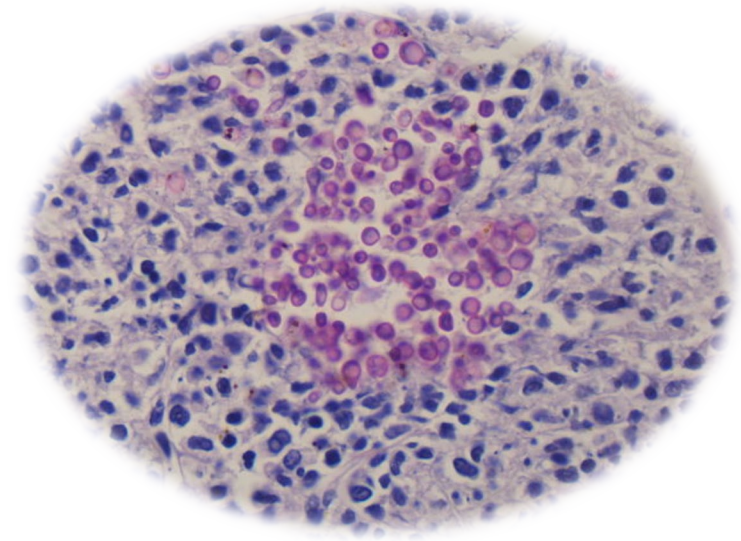
- A yeast: a single-celled fungus
- Covers everything
- Normal inhabitant of the human body

## ✓ 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



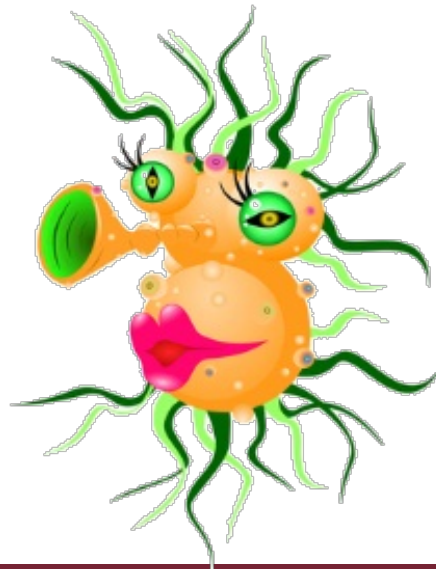
# Remove

## Toxic Foods, Chemicals and Organisms

- ✓ Foods that hurt the gut
- ✓ Medications unless prescribed by a doctor
- ✓ Candida, parasites, bacteria

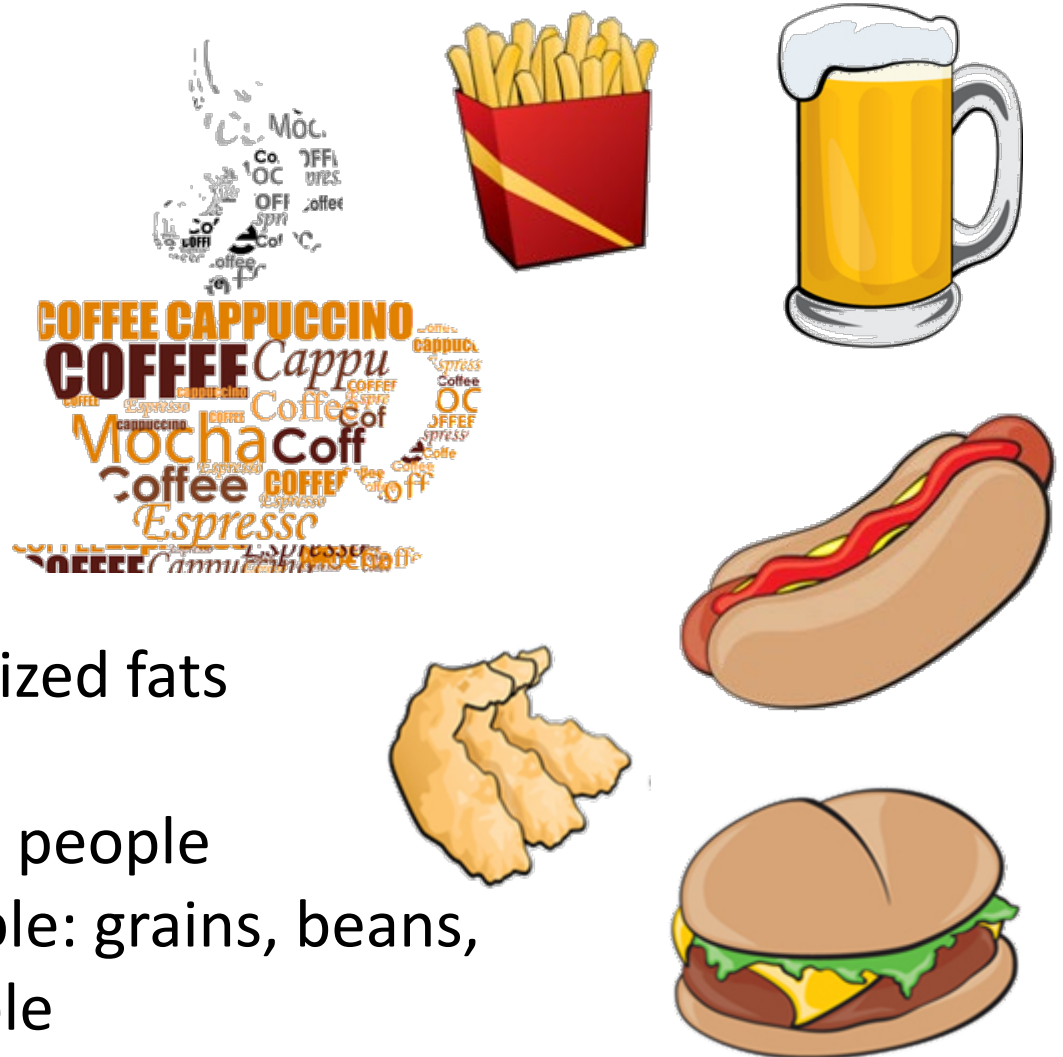
### ✓ Common Allergens

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



# Foods That Can Hurt The Gut

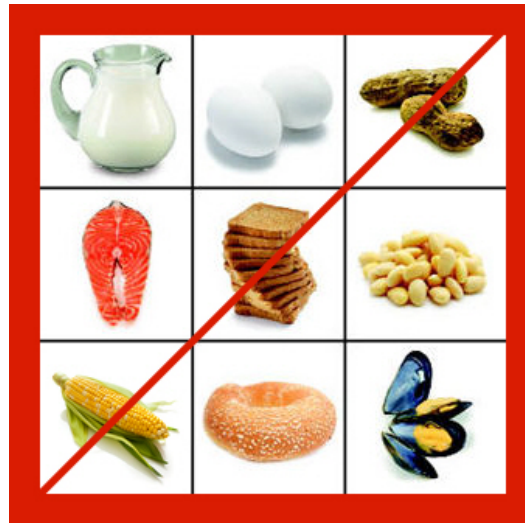
- ✓ Sugar
- ✓ Gluten
- ✓ Dairy
- ✓ Refined carbohydrates
- ✓ All allergens
- ✓ Caffeine
- ✓ Alcohol
- ✓ Trans fats
- ✓ Heated, processed, oxidized fats
- ✓ Processed meats
- ✓ Nightshades in sensitive people
- ✓ Lectins in sensitive people: grains, beans,
- ✓ FODMAPs in some people



# 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

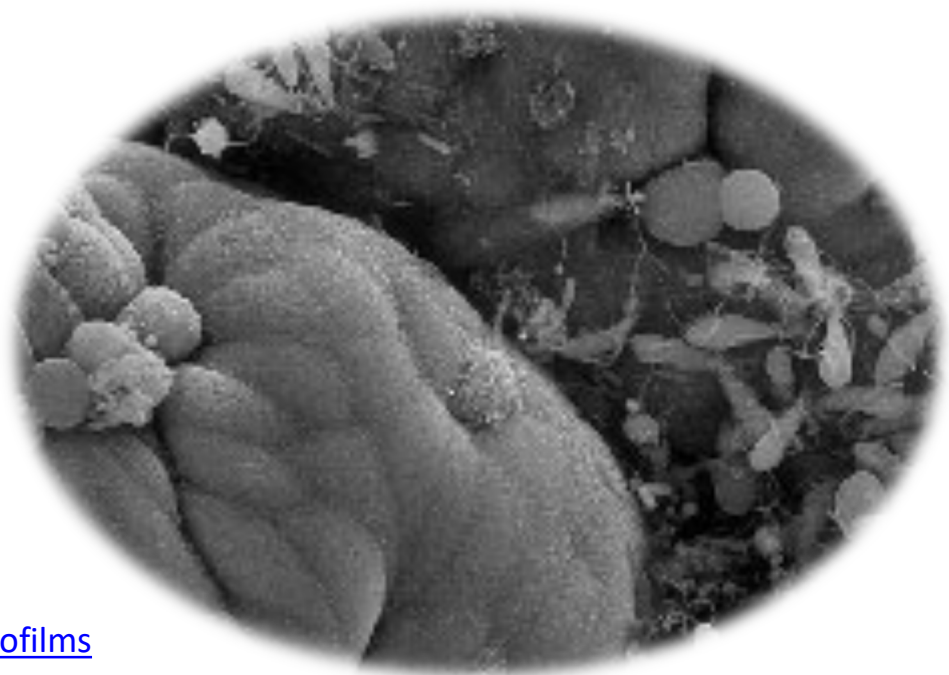
Reintroduce in systematic  
manner in high dose

*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

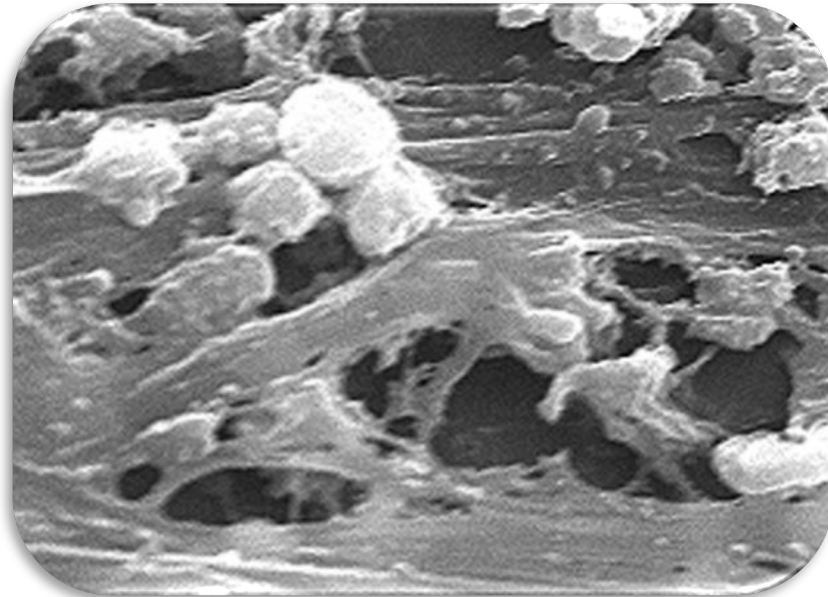
<http://www.drritamarie.com/go/PMID25339490>, <http://www.drritamarie.com/go/ajidm255>

## ✓ 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



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

# Do It Yourself Dysbiosis Protocols

## ✓ Stool sensitivity testing

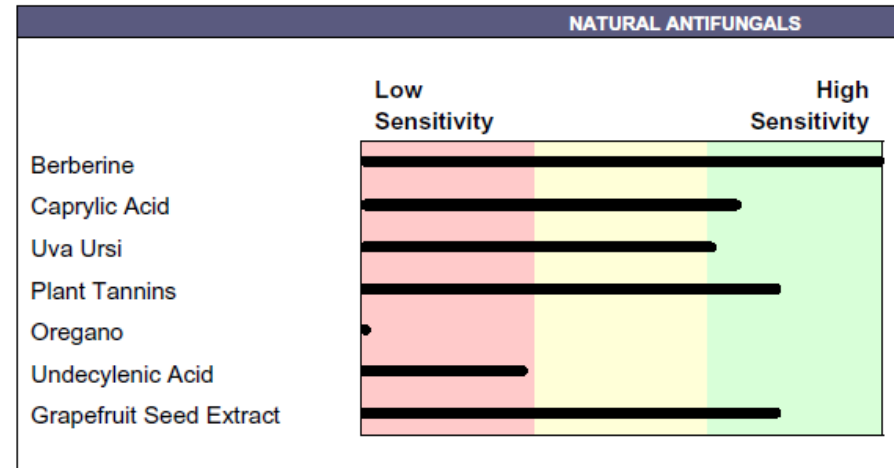
- Choose those with high sensitivity to most microbes
- Best to rotate all except caprylic acid and silver

## ✓ Symptoms

- History and assessment questionnaires

## ✓ Target particular organisms suspected

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





# 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"/>

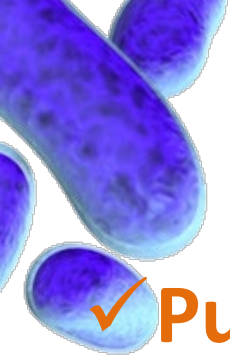


# Replace

## 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





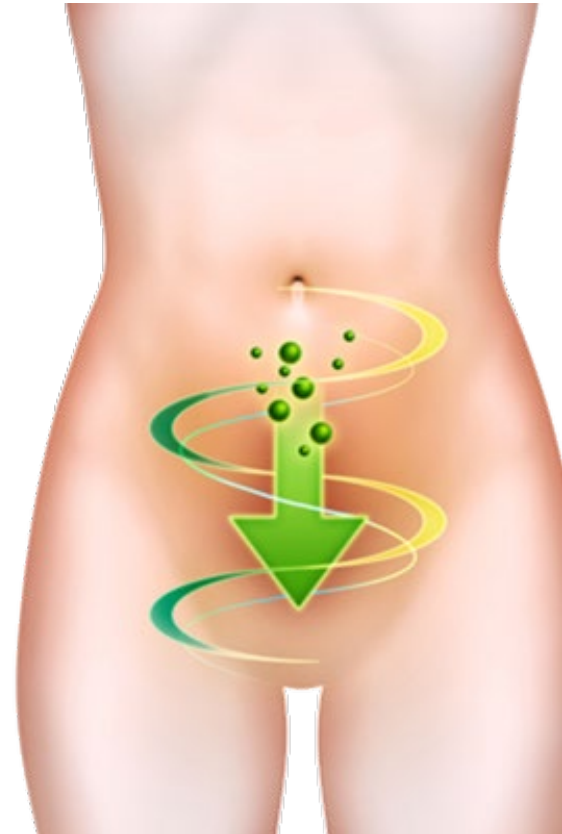
# Reinoculate

## ✓ 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

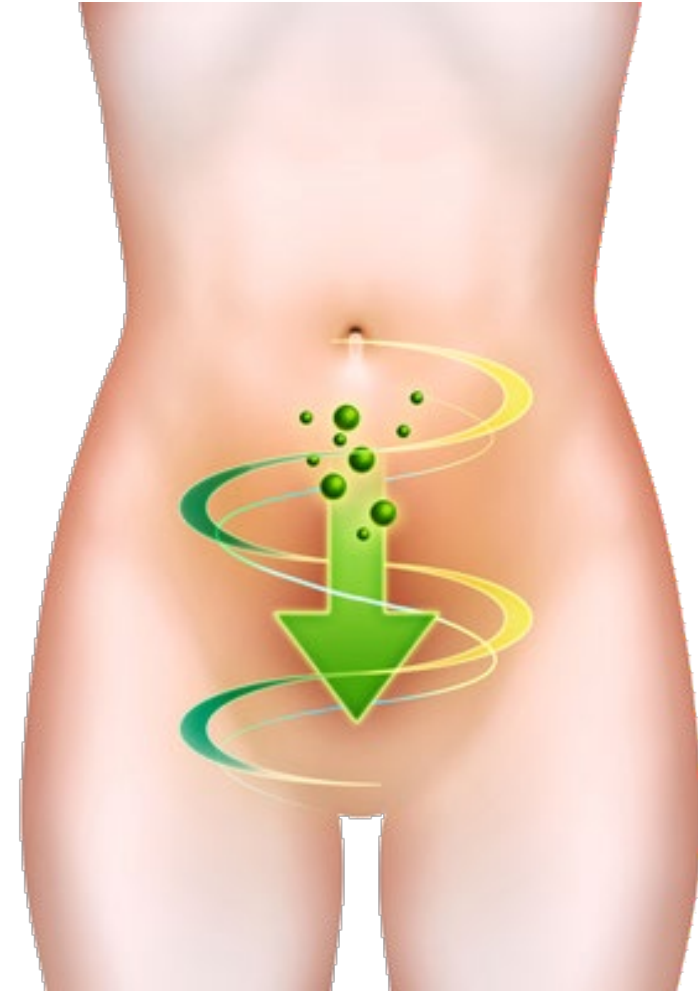
- Miso
- Natto
- Tempeh



# 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>

Nutrition Facts	
Valeur nutritive	
Per 9 g / pour 9 g	
Amount Teneur	% Daily Value % valeur quotidienne
Calories / Calories 30	
Fat / Lipides 0 g	0 %
Carbohydrate / Glucides 8 g	3 %
Fibre / Fibres 7 g	28 %
Sugars / Sucres 1 g	
Protein / Protéines 1 g	
Iron / Fer	4 %
Not a significant source of saturated fat, trans fat, cholesterol, sodium, vitamin A, vitamin C or calcium.	
Source négligeable de lipides saturés, lipides	

**inuli flora**

**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>

## Sugar Cane

## Just Like Sugar

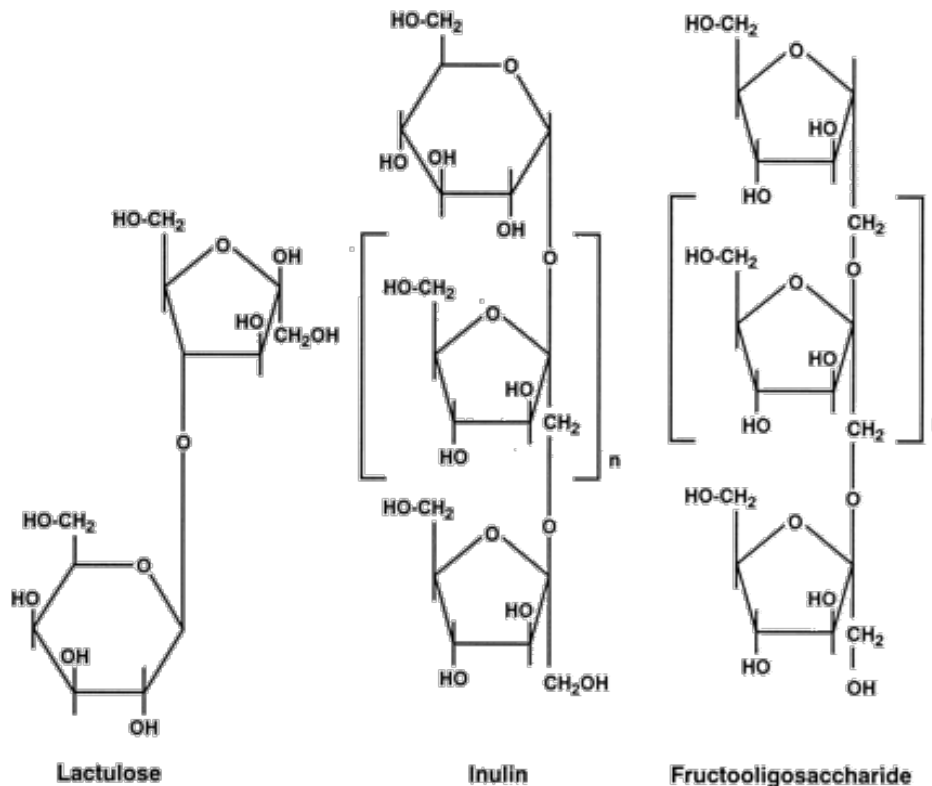
1 teaspoon	=	1 3/4 teaspoon
1 tablespoon	=	1 3/4 tablespoon
1/8 cup	=	1/4 cup
1/4 cup	=	7/16 cup
1/2 cup	=	7/8 cup
2/3 cup	=	1 1/4 cup
1 cup	=	1 3/4 cup



# 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:

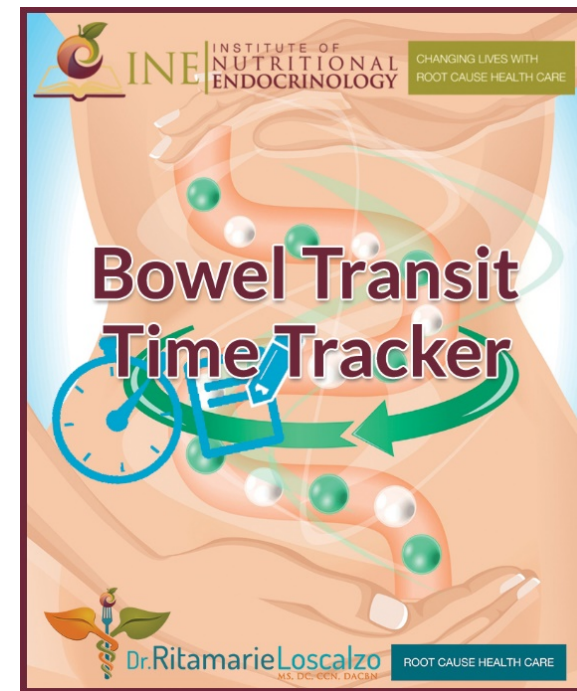
- Can “get stuck” in small intestine and cause SIBO when migrating motor complex is weak
- Can migrate back up into small intestine if ileocecal valve is weak
- Overload of D-Lactic acid which can produce fatigue and neurologic symptoms



# 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

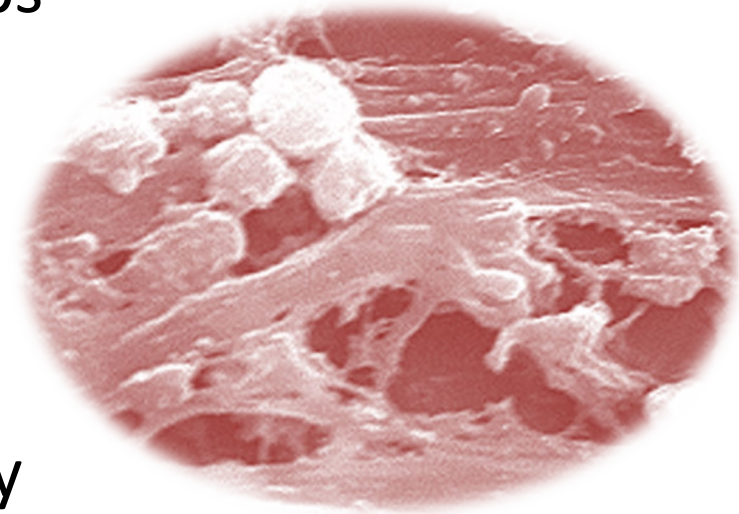




# Important Considerations for Managing Dysbiosis

## 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

