

Optimizing Health: Intestinal Health and Repair

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Intestinal Health: Overview

- Repair/Restore Intestinal Health and Function
 - Support Digestive Processes
 - Replenish Friendly Micro-organisms (Probiotics)
 - Add Prebiotics
 - Avoid Common Food Allergens

Signs and Symptoms: GI Distress

Obvious

Reflux/ indigestion
Irregularity
Burning pain
Food Sensitivities
Stomach pain/cramping
Burping/Belching
Flatulence
Nausea
Use of Antacids

Subtle

Fatigue
Maintaining focus
Mood Swings
Depression
Lowered Immunity
Malabsorption
Skin rashes

Agents Causing GI Dysfunction

- Antibiotics
- Long term use of NSAIDS
- Caffeine and alcohol
- Psychological stress or anxiety
- Parasites
- Birth Control
- Steroids
- Mold
- Drugs

Behavioral Changes: Intestinal Health

- Eat slowly/ chew food well
- Eat in calm environment
- Eat with friends/family
- Eat smaller meals more often
- Do not over eat

Laboratory Testing

- **Genova Diagnostics**
 - CDSA 2.0
 - CDSA + parasitology
- **MetaMetrix**
- **Enterolab**
- **AICAT: Cell Science Systems**
 - Food Sensitivities (150 Foods)
 - Environmental (Preservatives, Coloring agents)
 - Pharmaceuticals

Digestion/Absorption

Analyte

Result

Reference Range

1. Pancreatic Elastase 1 



≥ 201 mcg/g

2. Putrefactive SCFAs
(Total*)



1.3-8.6 micromol/g

*Total values equal the sum of all measurable parts.

Gut Immunology

Analyte

Result

Reference Range

3. Eosinophil Protein X

<0.9



≤ 7.0 mcg/g





4. Calprotectin

<16


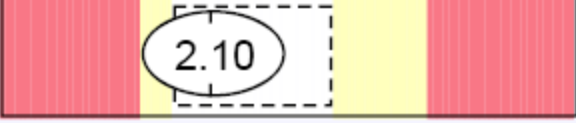



≤ 50 mcg/g

Metabolic

Analyte	Result	Reference Range
5. Beneficial SCFAs (Total*)		≥ 13.6 micromol/g
6. n-Butyrate		≥ 2.5 micromol/g
7. pH 		6.1-7.9
8. Beta-glucuronidase		337-4,433 U/g

Bile Acids

9. Lithocholic acid (LCA)		0.65-5.21 mg/g
10. Deoxycholic acid (DCA)		0.67-6.76 mg/g
11. LCA / DCA Ratio		0.39-2.07

*Total values equal the sum of all measurable parts.

Microbiology

Bacteriology

12. Beneficial Bacteria

Lactobacillus species
Escherichia coli
Bifidobacterium

	(3+)
	(4+)
	(4+)

13. Additional Bacteria

gamma haemolytic Streptococcus
alpha haemolytic Streptococcus
Bacillus species
Coag. negative Staphylococcus

NP	(4+)
NP	(2+)
NP	(1+)
NP	(2+)

14. Mycology

Candida albicans
Geotrichum species

NP	(1+)
NP	(1+)

Interpretation At A Glance

DIGESTIVE DEFICIENCY

Analyte #:

DYSBIOSIS

Analyte #:

INFLAMMATION/IBD

Analyte #:

NEOPLASTIC RISK

Analyte #:

Azole Antifungals

CANDIDA ALBICANS

	S	I	R
Fluconazole	≤ 0.125		
Itraconazole	$= 0.25$		
Ketoconazole	$= 0.125$		

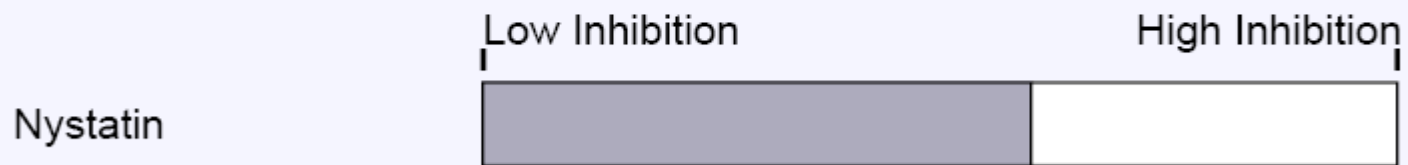
S Indicates susceptibility to prescriptive agents

I Indicates intermediate susceptibility to prescriptive agents

R Indicates resistance to prescriptive agents

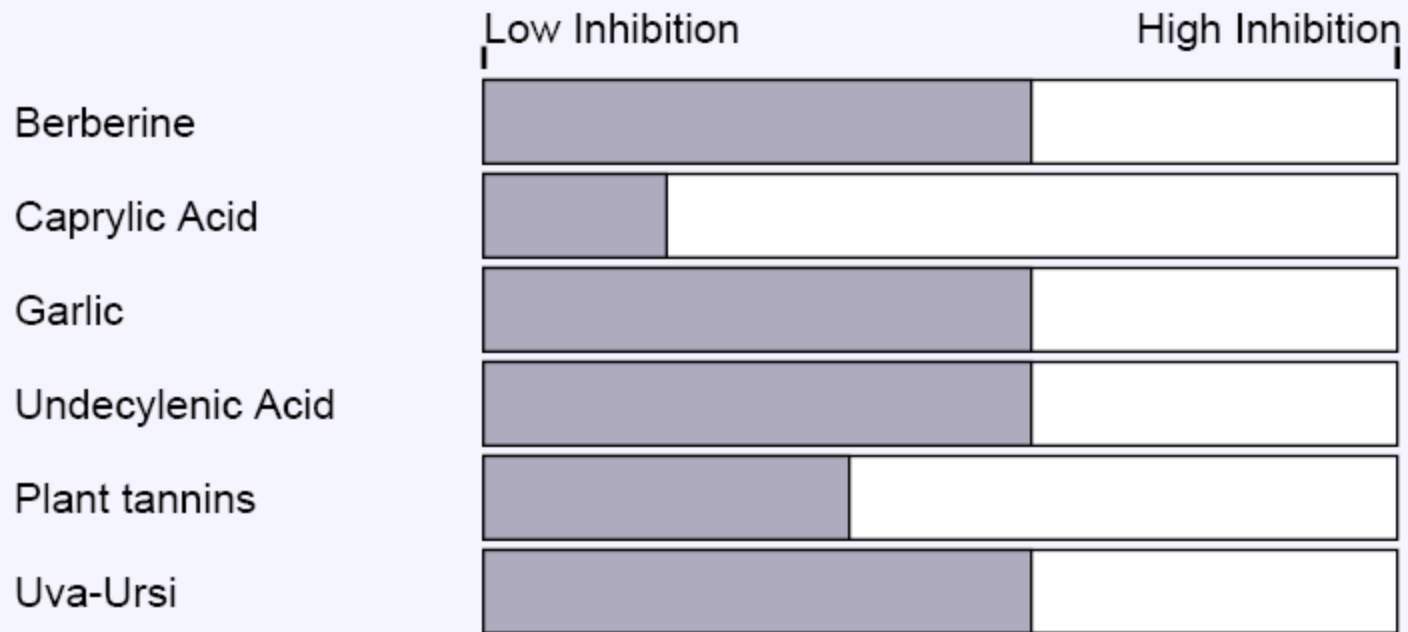
Non-absorbed Antifungals

CANDIDA ALBICANS



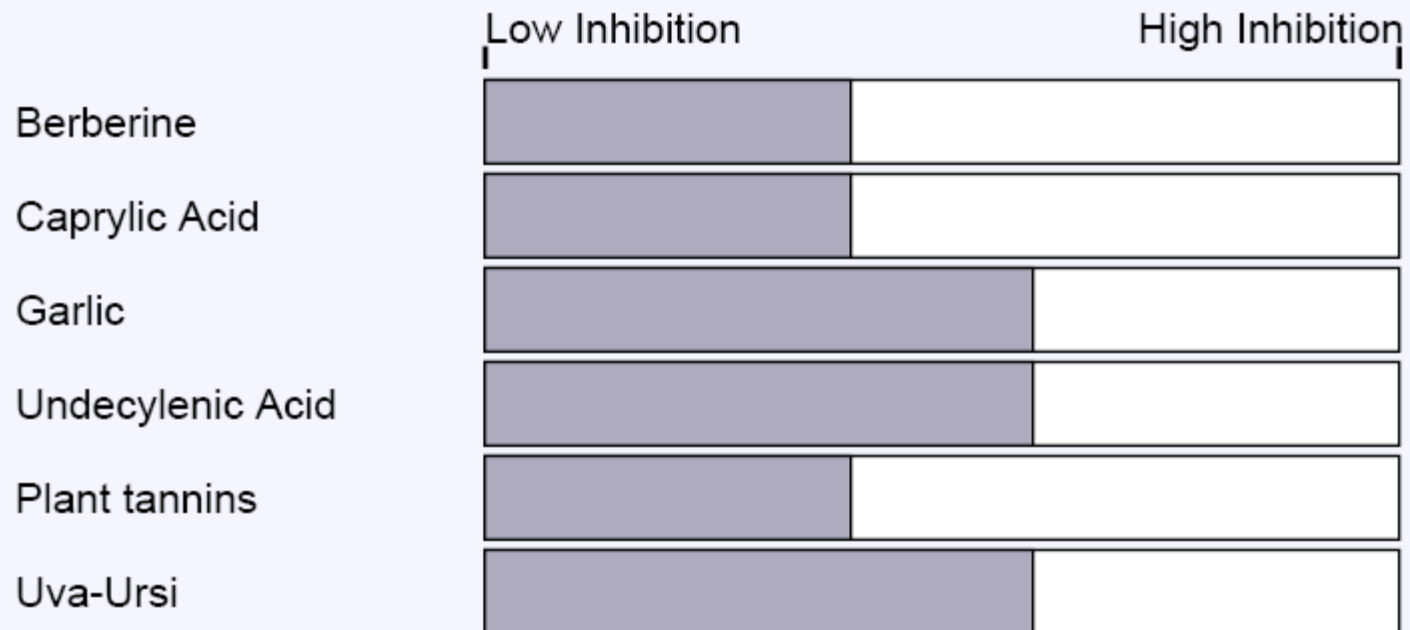
Natural Antifungals

CANDIDA ALBICANS



Natural Antifungals

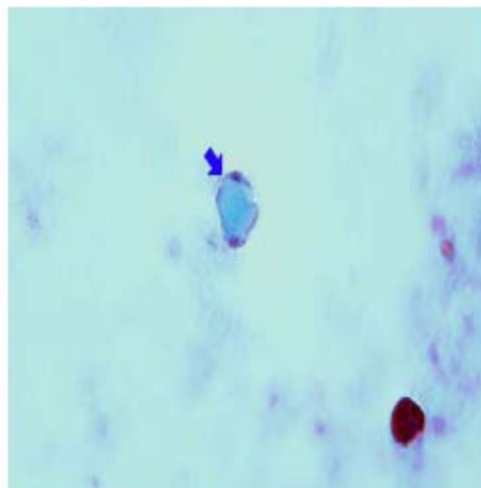
GEOTRICHUM SPECIES



Parasitology

Microscopic Exam Results:

Blastocystis hominis: Many



Specimen Tested: Stool

PARASITOLOGY EIA TESTS:

	In Range	Out of Range
<i>Cryptosporidium</i>	<input type="text" value="Negative"/>	<input type="text"/>
<i>Giardia lamblia</i>	<input type="text" value="Negative"/>	<input type="text"/>
<i>Entamoeba histolytica/dispar</i>	<input type="text" value="Negative"/>	<input type="text"/>

Representative photograph of organism(s)

Digestion

Food + Enzymes + HCL =

- Sugars
- Fatty Acids
- Amino Acids
- Vitamins
- Minerals

Cell Growth

HCL: Sterilizing Effect

BioGenesis Products Supporting Digestion

- **UltraGest-** 2 forms of HCL acid
- **BioPan-** Digestive Enzymes
- **PanZyme-** HCL+ pancreatic enzymes
- **VegiZyme-** Vegetarian digestive enzymes
- **CholeLVR-** Bile and other nutrients to support fat digestion/absorption
- **BioLiv-** Promotes bile flow and liver function

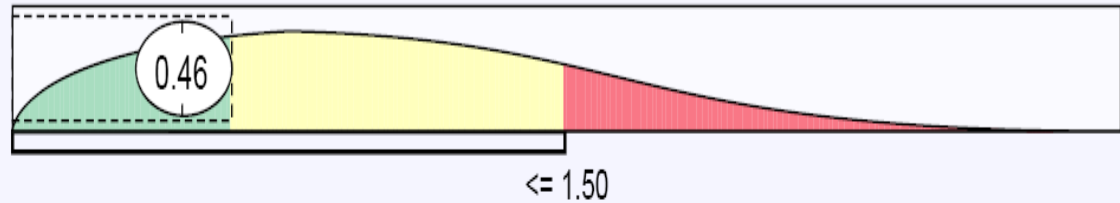
Leaky Gut Syndrome: Signs and Symptoms

- Fatigue
- Nausea, Diarrhea, and/or Constipation
- Frequent Colds and Flu
- Irritability
- Hyperactivity
- Headaches
- Muscle Joint Pain/Stiffness
- Poor Concentration/ Focus
- Food and/or Environmental Hypersensitivity
- Skin Rashes
- Possible Progression to Systemic Inflammatory Conditions

Intestinal Permeability

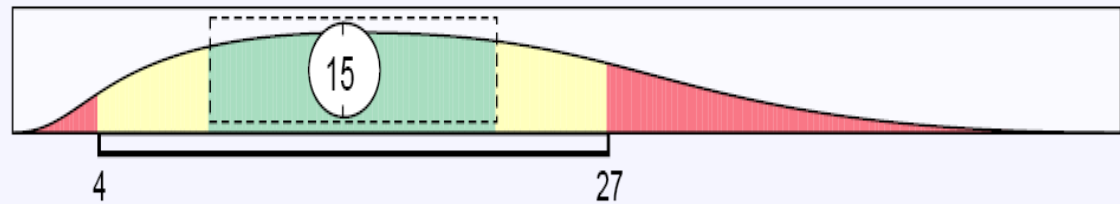
Lactulose Percent Recovery

Ref Range
%



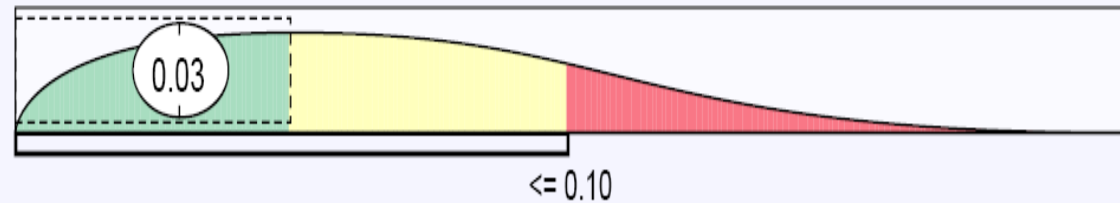
Mannitol Percent Recovery

Ref Range
%





Lactulose/Mannitol Ratio

Ref Range



Leaky Gut Syndrome: Inflammation

- **Poor Digestion**  **Inflammation**
 - Undigested food passes through lining of small intestine; reacts with immune cells
- **Inflammation**  **Stress on immune system, liver, brain and other organs and systems of the body**
- **Are people with ImmunoGenomic SNPs more susceptible to Leaky Gut Syndrome?**

Leaky Gut Syndrome: Consequences

Chronic Inflammation  Increased cortisol

Weight gain

Elevated Blood Pressure

Insulin resistance

Fatigue

Excess Cytokines and Interleukins

Fish Oil Concentrates



- **Ultra EPA/DHA Plus natural Vitamin E Enteric Coated**
 - Assists in maintaining healthy intestinal permeability;
 - Pleasant taste and reduced side effects of belching fish oil after-taste and diarrhea;
 - Increased compliance for long-term treatments;
 - Improved absorption resulting in lower dosages.

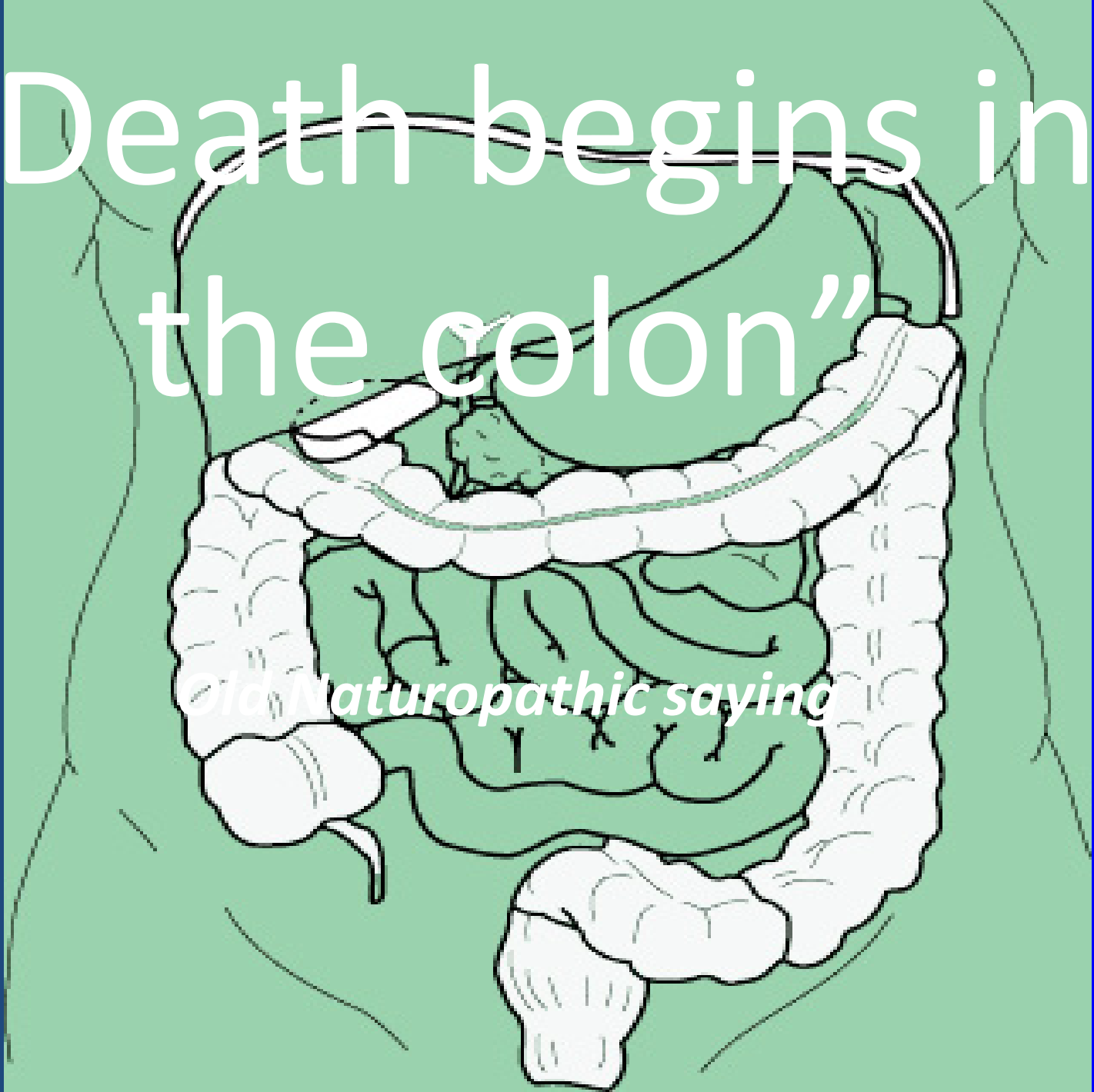


BioGenesis Products: Leaky Gut

- **Gastric Repair Complex**
 - Mucilaginous herb, Glutamine, DG Licorice
- **Intestinal Repair Complex**
 - 2 tbs of powder in water to sooth irritated mucosal tissue, decrease inflammation
- **Intestinal RejuvenX**
 - Non GMO rice powder with core vitamins, glutamine, quercitin, green tea extract
- **Glutamine Powder**- 2.5 g per ½ tsp to liquids

“Death begins in
the colon”

Old Naturopathic saying



Large Bowel: Dysfunction

- **Slowed Transit Time**

- PMS Headaches Skin Reactions
- Fatigue Bloating Irritability

- **Fast Transit Time**

- Electrolyte imbalance Dehydration
- Microflora depletion
 - Food Allergies
 - Skin Disorder

Microbiology

Bacteriology

Beneficial Bacteria

Lactobacillus species
Escherichia coli
Bifidobacterium





*NG	
	4+
	4+

Additional Bacteria

gamma haemolytic Streptococcus
alpha haemolytic Streptococcus
Vibrio fluvialis




NP		4+
NP		4+
P		2+

Metabolic Markers

		Reference Range
Beneficial SCFAs (Total*)		≥ 13.6 micromol/g
n-Butyrate		≥ 2.5 micromol/g
Beta-Glucuronidase		337-4,433 U/g
pH ♦		6.1-7.9

* Total values equal the sum of all measurable parts.

SCFA distribution

Acetate %		44.5-72.4 %
Propionate %		≤ 32.1 %
n-Butyrate %		10.8-33.5 %

BioGenesis Products: Large Bowel

- **ProFlora Plus**
 - Combination of *L. acidophilus*, *L. rhamnosus*, *Bifidobacterium spp.*
- **Florastor[®]**
 - Source of *Saccharomyces boulardii lyo* (antimicrobial)
- **UltraFiber Plus**
 - Combination of soluble, insoluble fiber, antioxidants and *L. acidophilus*
- **Intestinal Repair Caps**
 - Contains butyric acid, major fuel source for colon cells

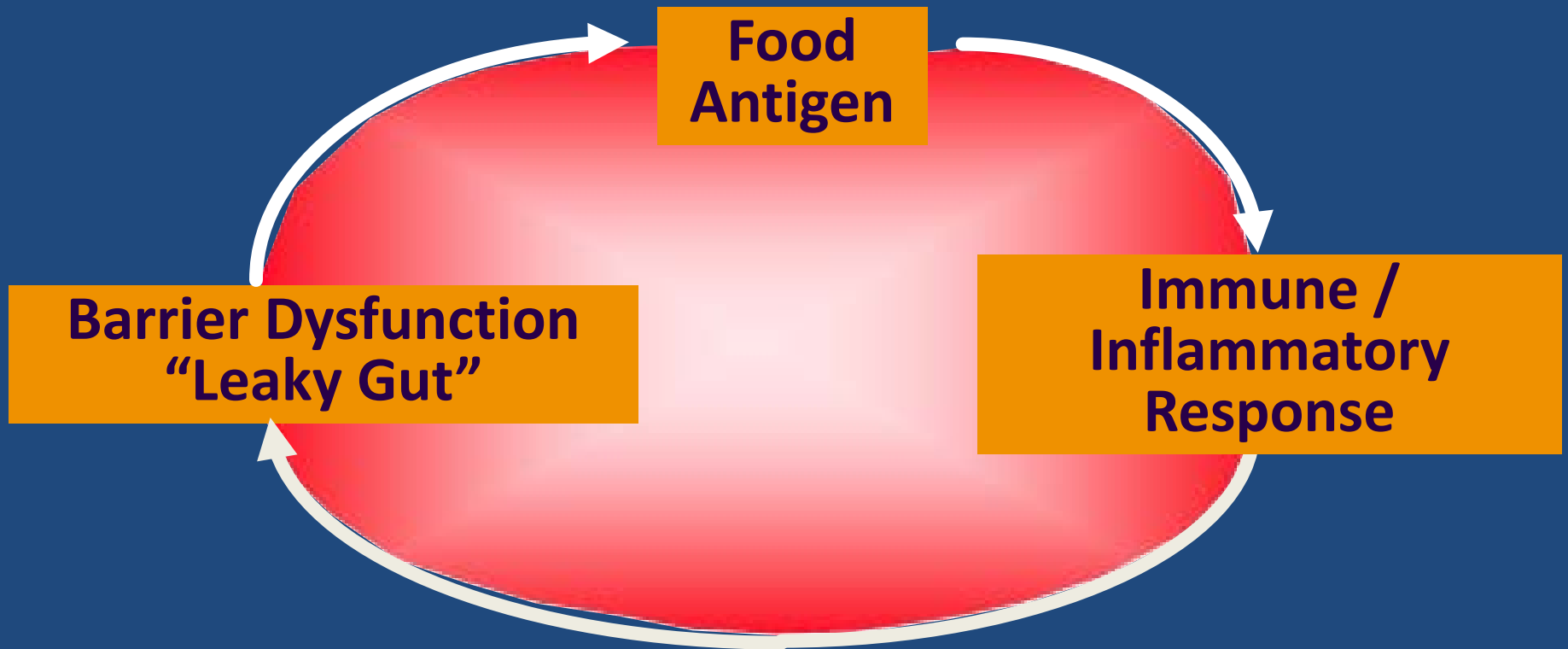
Intestinal Dysbiosis

- Overgrowth of toxin producing Bacteria, yeast, and/or parasites in colon
- Must re-establish balance by eliminating pathogenic bacteria

BioGenesis Products: Intestinal Dysbiosis

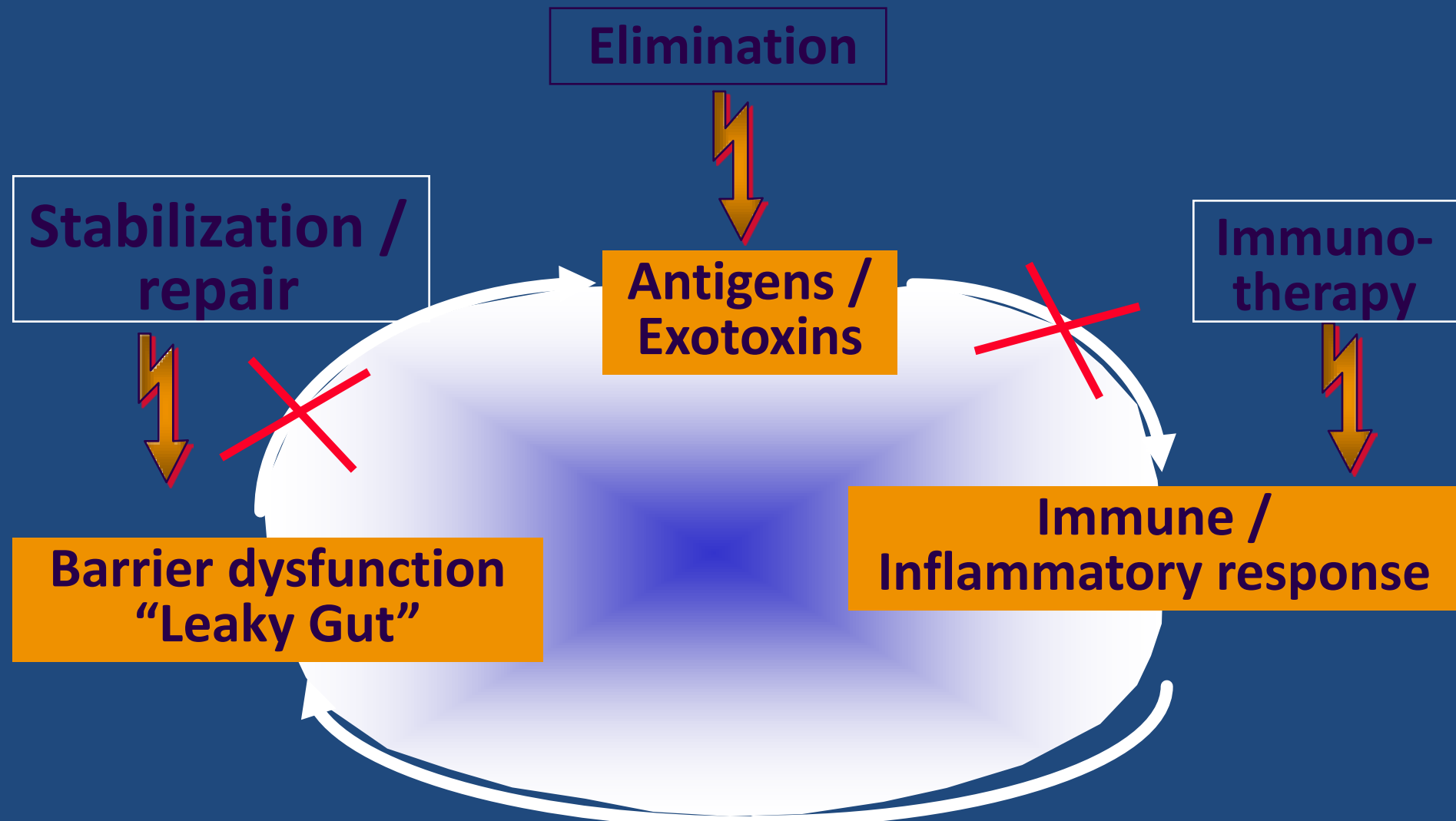
- **Parabiotic +**
 - Combination of antibacterial herbs & essential oils
- **Oregano oil**
 - Std. extract effective against fungal organisms
- **Garlic 7000**
 - Enteric coated with high allicin (antimicrobial)
- **Dysbioplex FNG**
 - Transfer factors (colostrum) modulates immune systems

Food Allergy



Dietary antigens induce an immunoinflammatory response that impairs the intestine's barrier function. Mucosal dysfunction "leaky gut" may lead to increased absorption of intraluminal antigens / toxins.

Treatment of Food Allergy



Probiotic bacteria may counteract the hypersensitivity process by modifying the immunomodulatory activity of dietary antigens and potentiate the host's endogenous defense mechanisms by stabilizing the gut mucosal barrier functions.

Food Allergens

- Identify offending foods
 - AICAT test
 - EnteroLab
- Eliminate foods
 - Severe Reaction: 6 months to 1 year
 - Moderate Reaction: 3 to 6 months
 - Mild Reaction: use only once per week

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Final Laboratory Report

Date: 8/15/2008

Name: [REDACTED]

A) Gluten Sensitivity Stool and Gene Panel Complete *Best test/best value

Fecal Antigliadin IgA 85 (Normal Range <10 Units)

Fecal Antitissue Transglutaminase IgA 62 Units (Normal Range <10 Units)

Quantitative Microscopic Fecal Fat Score 1186 Units (Normal Range <300 Units)

Fecal anti-casein (cow's milk) IgA antibody 41 Units (Normal Range <10 Units)

HLA-DQB1 Molecular analysis, Allele 1 0303

HLA-DQB1 Molecular analysis, Allele 2 0602

Serologic equivalent: HLA-DQ 3,1 (Subtype 9,6)

Food Sensitivities: ALCAT Test

SEVERE

ARTICHOKE
BANANA
BREWER'S YEAST
CORN
COW'S MILK
CUMIN
ORANGE
PEANUT

MODERATE

APPLE
BEET SUGAR
BUCKWHEAT
CHERRY
CHILI PEPPER
CRAB
DILL MIX
GOAT'S MILK
HOPS
JALAPENO PEPPER
LEEK
PINTO BEAN
RHUBARB
ROMAINE LETTUCE
SHRIMP
TAPIOCA

Coloring Agents and Drugs: ALCAT Test

ORANGE

AMPICILLIN
BLUE#1 BRILLIANT BLUE
BRILLIANT BLACK
CURVULARIA
INDOCIN
PENICILLAMINE
PHENOL
PIROXICAM (FELDENE)
SACCHARINE
SPONDYLOCLADIUM
SPOROBOLOMYCES
SULFAMETHOXAZOLE

RED

CAFFEIC ACID
CEPHALOSPORIN C
FUSARIUM OXYSPORIUM
HISTAMINE
RED#3 ERYTHROSINE B
SOLANINE
TOLUENE
YELLOW#6 SUNSET YELLOW

You have a mild reaction to Candida Albicans, also limit these foods:

BAKER'S YEAST

CANE SUGAR

MUSHROOM

You have no reaction to Gliadin and mild reaction to Gluten, limit these foods:

BARLEY
OAT

GLIADIN
WHEAT

MALT

You have no reaction to Whey and severe reaction to Casein, eliminate these foods:

SHEEP'S MILK

WHEY

Summary

- Optimize Health by:
 - Restore: Digestive Function
 - Repair: Intestinal Tissue
 - Replace: Pre and Probiotics
 - Eliminate Food Allergens