

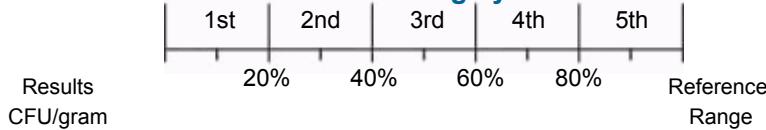
Ordering Physician:

About Your Body, Inc.
 Friends & Family Program
 901 E Reynolds St.
 Goshen, Indiana 46526

2100 Gastrointestinal Function Profile

Methodology: DNA Analysis, GC/MS, Microscopic, Colorimetric, Automated Chemistry, ELISA

Percentile Ranking by Quintile



Predominant Bacteria

(E+007)

Obligate anaerobes

Organism	Results	Percentile	Reference Range
Bacteroides sp.	1.1	1.6	>= 1.3
Clostridia sp.	1.0	1.5	>= 1.0
Prevotella sp.	2.8	1.6	>= 1.1
Fusobacteria sp.	1.1	1.6	>= 1.1
Streptomyces sp.	3.4	1.6	>= 1.0
Mycoplasma sp.	3.3	1.7	>= 1.2

Facultative anaerobes

Organism	Results	Percentile	Reference Range
Lactobacillus sp.	2.8	1.8	>= 1.2
Bifidobacter sp.	6.0	2.3	>= 1.8

Obligate aerobes

Organism	Results	Percentile	Reference Range
Escherichia coli	2.4	1.7	>= 1.1

Opportunistic Bacteria

No clinically significant amounts.

Units and Reference Ranges

Organisms are detected by DNA analysis. One colony forming unit (CFU) is equivalent to one bacterium. Each genome detected represents one cell, or one CFU. Results are expressed in scientific notation, so an organism reported as 2.5 E7 CFU/gram is read as 25 million colony forming units per gram of feces. The cutoff for significance of Opportunistic Bacteria has been set at 1.0E+ 005 (100,000). These are levels above which clinically significant growth may be present. Rather than reporting semi-quantitative +1 to +4 levels, the new methodology provides full quantitative analysis.

Predominant Bacteria play major roles in health. They provide colonization resistance against potentially pathogenic organisms, aid in digestion and absorption, produce vitamins and SCFA's, and stimulate the GI immune system. DNA probes allow detection of multiple species (sp.) within a genus, so the genera that are reported cover many species.

Opportunistic Bacteria may cause symptoms and be associated with disease. They can affect digestion and absorption, nutrient production, pH and immune state. Antibiotic sensitivity tests will be performed on all opportunistic bacteria found, although clinical history is usually considered to determine treatment since the organisms are not generally considered to be pathogens.

Taxonomy Unavailable

Gifx will detect DNA from all commonly reported organisms in microscopic parasitology. In addition, any DNA present from yeast/fungi or protozoa will also be detected. These are reported as positive, taxonomy unavailable.

These test results are not for the diagnosis of disease. They are intended to provide nutritional guidelines to qualified healthcare professionals with full knowledge of patient history and concerns to assist in their design of an appropriate healthcare program.

Ordering Physician:

Metamatrix Staff & Family

3425 Corporate Way
 Duluth, GA 30096

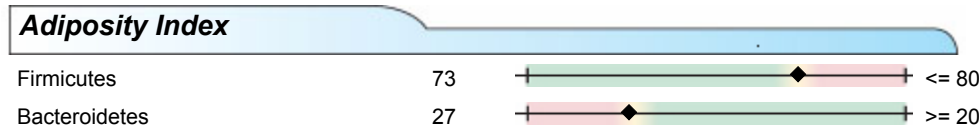
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	Results CFU/gram	Reference Range
Pathogenic Bacteria		
Helicobacter pylori	<0.01	<=1.0E+003
Clostridium difficile	<0.01	<=1.0E+003
Campylobacter sp.	<0.01	<=1.0E+003
E.H.E. coli	<0.01	<=1.0E+003

Yeast/Fungi
 No clinically significant amounts.

Parasites
 Necator americanus (hookworm) **Positive** Neg



Drug Resistance Genes

aacA, aphD	Pos	gyrB, ParE	Neg
mecA	Pos	PBP1a, 2B	Neg
vanA, B, and C	Neg		

Pathogenic Bacteria

Helicobacter pylori (H. pylori) bacterium causes peptic ulcer disease and has been associated with increased gastric cancer risk. H. pylori is a Type I carcinogen.

Clostridium difficile is a gram-positive bacterium that can cause diarrhea. C. difficile infection can have symptoms closely resembling Irritable Bowel Syndrome (IBS) and Inflammatory Bowel Disease (IBD).

Campylobacter, a gram-negative bacterium, is a frequent cause of mild to severe diarrheal disease from contaminated food.

Enterohemorrhagic E. coli or similar strains of E. coli produce toxins that may cause severe gastrointestinal disease. Transmission of these bacteria is commonly from contaminated or inadequately cooked beef and milk products.

Yeast/Fungi

Yeast overgrowth has been linked to many chronic conditions, in part because of antigenic responses in some patients to even low rates of yeast growth. Potential symptoms include diarrhea, headache, bloating, atopic dermatitis and fatigue. Positives are reported as +1, +2, +3 or +4 indicating >100, >1000, >10000 or >100000 pg DNA/g.

Parasites

Parasite infections are a major cause of non-viral diarrhea. Symptoms may include constipation, gas, bloating, increased allergy response, colitis, nausea and distention.

Giardia can cause acute or chronic infections. Acute symptoms include nausea, low-grade fever, epigastric pain and explosive watery stools. Chronic symptoms include recurrent diarrhea, distention, belching and heartburn.

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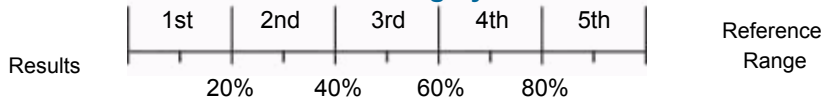
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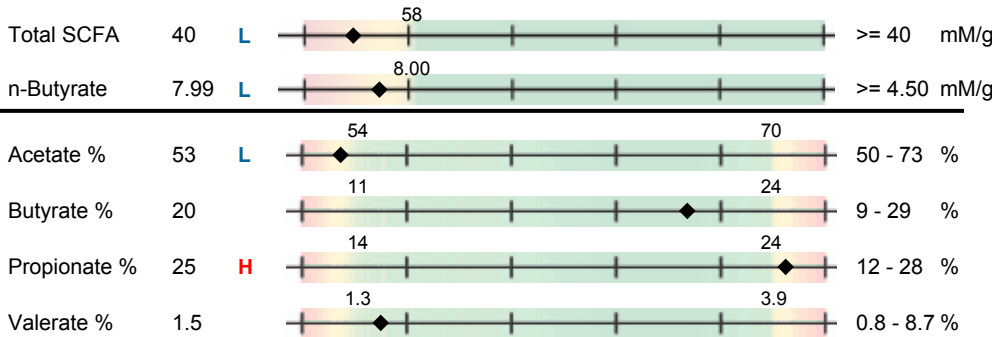
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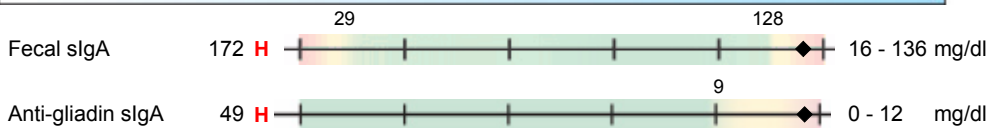
Beneficial SCFA



Inflammation



Immunology



Entamoeba histolytica is a tissue-invading parasite. Approximately 10% of infected patients have clinical symptoms. Symptoms may appear in asymptomatic carriers following stresses that diminish GI immune response. Most symptomatic patients present with dysentery or colitis.

Cryptosporidium usually infects the brush border of the intestine. Symptoms include diarrhea, nausea and cramping. The disease is usually self-limiting in immunocompetent patients.

The **Adiposity Index** is derived by using DNA probes that detect multiple genera of the phyla Firmicutes and Bacteroidetes. Abnormalities of these phyla may be associated with increased caloric extraction from food.

Beneficial SCFA

Short chain fatty acids (SCFA) are produced by bacterial fermentation of dietary polysaccharides and fiber. The product, N-butyrate, is taken up and used to sustain the normal activity of colonic epithelial cells. Butyrate has been shown to lower the risk of colitis and colorectal cancer. A healthy balance of GI microbes depends on production of SCFA by one specie to allow the normal growth of another one in a complex cross-feeding network.

Inflammation

Lactoferrin, an iron-binding glycoprotein, is released in IBD but not in non-inflammatory IBS. High levels are found in Crohn's, UC or infection. WBC's are elevated in general inflammation/infection. Mucus is often visualized in acute GI inflammation.

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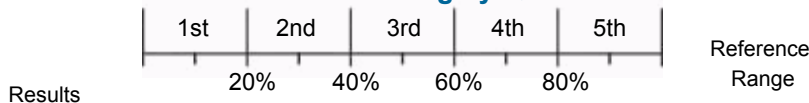
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Additional Tests

pH	6.0	5.9	6.9	5.7 - 7.1
Occult blood	Neg			Neg
RBCs	Moderate			Neg
Color	Brown			

Digestion

Elastase 1	438	376	>= 211 ug/mL
Triglycerides	147	247	<= 365 mg/dl
Putrefactive SCFA	1.8	4.2	<= 6.0 mM/g
Vegetable Fibers	Few		None-Few

Absorption

LCFAs	7.9 H	4.8	<= 13.2 mmol/L
Total Fat	10.8 H	10.1	<= 21.2 mmol/L
Cholesterol	47	98	<= 154 mg/dl

Immunology

High fecal sIgA indicates immune system reactions to the presence of antigens from bacteria, yeast or other microbes. Low sIgA can result from stress or malnutrition. Anti-gliadin sIgA is a screening marker for gluten sensitivity.

Additional Tests

pH is influenced by numerous factors, but it is strongly related to the bacterial release of pH-lowering organic acids and pH-raising ammonia. Positive **occult blood** can signify GI tract bleeding, as can elevated **RBCs**. **Color** (other than brown) abnormalities can be due to upper GI bleeding, or bile duct blockage, steatorrhea or antibiotic use.

Digestion

Pancreatic elastase 1 levels below the reference limits are strongly correlated with pancreatic insufficiency. High triglycerides signify fat maldigestion. Putrefactive SCFA are a result of bacterial fermentation of undigested protein. High numbers of vegetable fibers indicate maldigestion.

Absorption

High **LCFA** indicates fat malabsorption due to pancreatic or biliary insufficiency, or acute bacterial infection that produces intestinal cell destruction. High total fat usually signals malabsorption, as does elevated fecal cholesterol.

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Microbial Sensitivity Profile

Bacterial Sensitivities

No Sensitivity Needed

Bacterial growth suppression is measured in a liquid growth medium where fungal growth is suppressed and specific antibacterial agents are introduced before incubation. In contrast to the older isolation and culture techniques, such universal culturing more closely approximates the actions of antibacterials in the complex milieu of the colon.

Agents marked as "**Sensitive**" cause effective bacterial growth suppression. Those antibacterial agents are candidates for suppressing the growth of bacteria in the patient's colon. The results apply to all organisms reported under "Opportunistic Bacteria".

Agents indicated as "**Resistant**" have low effectiveness. If all tested agents are resistant, synergistic mixtures of antibacterial agents may be effective.

Sensitivities are not performed on "**Pathogens**" or "**Parasites**" because they do not grow in culture under normal laboratory conditions. Standard protocols are generally used for treatment of pathogens and parasites.

For Botanical sensitivity testing the active ingredients are tested and an example of the available source is shown.

Microbial Sensitivity Profile

Fungal Sensitivities

No Sensitivity Needed

Fungal growth suppression is measured in a liquid growth medium where bacterial growth is suppressed and specific antifungal agents are introduced before incubation. Growth inhibition is measured after incubation. In contrast to the older isolation and culture techniques, such as universal culturing more closely approximates the actions of antifungals in the complex milieu of the colon.

Agents marked as "**Sensitive**" cause effective fungal growth suppression. Those antifungal agents are candidates for suppressing the growth of fungi and yeasts in the patient's colon. The results apply to all organisms reported under "Mycology".

Agents indicated as "**Resistant**" have low effectiveness and can increase the risk of inducing drug resistant organisms. If all tested agents are resistant, synergistic mixtures of antifungal agents may be effective.

Sensitivities are not performed on "**Pathogens**" or "**Parasites**" because they do not grow in culture under normal laboratory conditions. Standard protocols are generally used for treatment of pathogens and parasites.

For Botanical sensitivity testing the active ingredients are tested and an example of the available source is shown.