

TEST PATIENT

Dr.TEST DOCTOR



P: 1300 688 522
 E: info@nutripath.com.au
 A: PO Box 442 Ashburton VIC 3142

Date of Birth : 01-Jan-1962
 Sex : F
 Collected : 23/Aug/2019
 Received: 23-Aug-2019
 123 TEST STREET
 BURWOOD VIC 3125
 Lab id : **3629215** UR#:

TEST HEALTH CENTRE
 123 TEST STREET
 BURWOOD VIC 3125

COMPLETE MICROBIOME MAPPING

General Macroscopic Description

	Result	Range	Markers
Stool Colour	Brown		Colour - Brown is the colour of normal stool. Other colours may indicate abnormal GIT conditions.
Stool Form	Formed		Form -A formed stool is considered normal. Variations to this may indicate abnormal GIT conditions.
Mucous	NEG	< +	Mucous - Mucous production may indicate the presence of an infection, inflammation or malignancy.
Occult Blood	NEG	< +	Blood (Macro) - The presence of blood in the stool may indicate possible GIT ulcer, and must always be investigated immediately.

GIT Functional Markers

	Result	Range	Units	
Calprotectin.	3.0	0.0 - 50.0	ug/g	
Pancreatic Elastase	475.0	> 200.0	ug/g	
Faecal Secretory IgA	1450.0	510.0 - 2010.0	ug/g	
Faecal Zonulin	60.0	0.0 - 107.0	ng/g	
Faecal B-Glucuronidase	4108.0	337.0 - 4433.0	U/g	
Steatocrit	2.0	0.0 - 15.0	%	
Transglutaminase IgA	94.0	0.0 - 157.0	units/L	

Microbiome Mapping Summary

Parasites & Worms	Bacteria & Viruses	Fungi and Yeasts
	Streptococcus species Citrobacter freundii.	

Key Phyla Microbiota

Bacteroidetes	29.80	8.61 - 33.10	x10 ¹¹ org/g	
Firmicutes	9.93	5.70 - 30.40	x10 ¹⁰ org/g	
Firmicutes:Bacteroidetes Ratio	0.03	< 1.00	RATIO	



TEST PATIENT

Dr.TEST DOCTOR



P: 1300 688 522
 E: info@nutripath.com.au
 A: PO Box 442 Ashburton VIC 3142

Date of Birth : 01-Jan-1962
 Sex : F
 Collected : 23/Aug/2019
 Received: 23-Aug-2019
 123 TEST STREET
 BURWOOD VIC 3125
 Lab id : **3629215** UR#:

TEST HEALTH CENTRE
 123 TEST STREET
 BURWOOD VIC 3125

Parasites and Worms. Result Range Units

Parasitic Organisms

Cryptosporidium.	<dl	< 1.0	x10 ⁶ org/g	
Entamoeba histolytica.	<dl	< 1.0	x10 ⁴ org/g	
Giardia lamblia.	<dl	< 5.0	x10 ³ org/g	
Blastocystis hominis.	<dl	< 2.0	x10 ³ org/g	
Dientamoeba fragilis.	<dl	< 1.0	x10 ⁵ org/g	
Endolimax nana	<dl	< 1.0	x10 ⁴ org/g	
Entamoeba coli.	<dl	< 5.0	x10 ⁶ org/g	
Pentatrichomonas hominis	<dl	< 1.0	x10 ² org/g	

Worms

Ancylostoma duodenale, Roundworm	Not Detected
Ascaris lumbricoides, Roundworm	Not Detected
Necator americanus, Hookworm	Not Detected
Trichuris trichiura, Whipworm	Not Detected
Taenia species, Tapeworm	Not Detected

Comment: Not Detected results indicate the absence of detectable DNA in this sample for the worms reported.

Opportunistic Bacteria/Overgr Result Range Units

Bacillus species.	<dl	< 1.5	x10 ⁵ org/g	
Enterococcus faecalis	<dl	< 1.0	x10 ⁴ org/g	
Enterococcus faecium	<dl	< 1.0	x10 ⁴ org/g	
Morganella species	<dl	< 1.0	x10 ³ org/g	
Pseudomonas species	<dl	< 1.0	x10 ⁴ org/g	
Pseudomonas aeruginosa.	<dl	< 5.0	x10 ² org/g	
Staphylococcus species	<dl	< 1.0	x10 ⁴ org/g	
Staphylococcus aureus	<dl	< 5.0	x10 ² org/g	
Streptococcus species	1.2 *H	< 1.0	x10 ³ org/g	
Methanobacteriaceae	1.45	< 5.00	x10 ⁹ org/g	

Potential Autoimmune Triggers

Citrobacter species.	<dl	< 5.0	x10 ⁵ org/g	
Citrobacter freundii.	5.7 *H	< 5.0	x10 ⁵ org/g	
Klebsiella species	<dl	< 5.0	x10 ³ org/g	
Klebsiella pneumoniae.	<dl	< 5.0	x10 ⁴ org/g	
Prevotella copri	<dl	< 1.0	x10 ⁷ org/g	
Proteus species	<dl	< 5.0	x10 ⁴ org/g	
Proteus mirabilis.	<dl	< 1.0	x10 ³ org/g	
Fusobacterium species	2.30	< 10.00	x10 ⁷ org/g	

Fungi & Yeast Result Range Units

Candida species.	<dl	< 5.0	x10 ³ org/g	
Candida albicans.	<dl	< 5.0	x10 ² org/g	
Geotrichum species.	<dl	< 3.0	x10 ² org/g	
Microsporidium species	<dl	< 5.0	x10 ³ org/g	
Rhodotorula species.	<dl	< 1.0	x10 ³ org/g	

TEST PATIENT

Dr. TEST DOCTOR



P: 1300 688 522
 E: info@nutripath.com.au
 A: PO Box 442 Ashburton VIC 3142

Date of Birth : 01-Jan-1962
 Sex : F
 Collected : 23/Aug/2019
 Received: 23-Aug-2019
 123 TEST STREET
 BURWOOD VIC 3125
 Lab id : **3629215** UR#:

TEST HEALTH CENTRE
 123 TEST STREET
 BURWOOD VIC 3125


Bacterial Pathogens	Result	Range	Units	
Campylobacter.	<dl	< 1.0	x10 ³ CFU/g	
C. difficile, Toxin A	<dl	< 1.0	x10 ³ CFU/g	
C. difficile, Toxin B	<dl	< 1.0	x10 ³ CFU/g	
Enterohemorrhagic E. coli	<dl	< 1.0	x10 ³ CFU/g	
E. coli O157	<dl	< 1.0	x10 ² CFU/g	
Enteroinvasive E. coli/Shigella	<dl	< 1.0	x10 ³ CFU/g	
Enterotoxigenic E. coli LT/ST	<dl	< 1.0	x10 ³ CFU/g	
Shiga-like Toxin E. coli stx1	<dl	< 1.0	x10 ³ CFU/g	
Shiga-like Toxin E. coli stx2	<dl	< 1.0	x10 ³ CFU/g	
Salmonella.	<dl	< 1.0	x10 ⁴ CFU/g	
Vibrio cholerae	<dl	< 1.0	x10 ⁵ CFU/g	
Yersinia enterocolitica.	<dl	< 1.0	x10 ⁵ CFU/g	
Helicobacter pylori	<dl	< 1.0	x10 ³ CFU/g	

Comment: Helico Pylori virulence factors will be listed below if detected POSITIVE

H.pylori Virulence Factor, babA	Not Detected
H.pylori Virulence Factor, cagA	Not Detected
H.pylori Virulence Factor, dupA	Not Detected
H.pylori Virulence Factor, iceA	Not Detected
H.pylori Virulence Factor, oipA	Not Detected
H.pylori Virulence Factor, vacA	Not Detected
H.pylori Virulence Factor, virB	Not Detected
H.pylori Virulence Factor, virD	Not Detected

Viral Pathogens	Result	Range	Units	
Adenovirus 40/41	<dl	< 1.0	x10 ¹⁰ CFU/g	
Norovirus GI/II	<dl	< 1.0	x10 ⁷ CFU/g	

Normal Bacterial GUT Flora	Result	Range	Units	
Bacteroides fragilis	108.4	1.6 - 250.0	x10 ⁹ CFU/g	
Bifidobacterium species	3950.0	> 6.7	x10 ⁷ CFU/g	
Enterococcus species	220.0	1.9 - 2000.0	x10 ⁵ CFU/g	
Escherichia species	390.3	3.7 - 3800.0	x10 ⁶ CFU/g	
Lactobacillus species	4256.0	8.6 - 6200.0	x10 ⁵ CFU/g	
Clostridium species	19.0	1.2 - 50.00	x10 ³ CFU/g	
Enterobacter species	39.0	1.0 - 50.00	x10 ⁶ CFU/g	
Akkermansia muciniphila	45.6	0.01 - 50.00	x10 ³ CFU/g	
Faecalibacterium prausnitzii	640.0	1.0 - 500000	x10 ³ CFU/g	

 <p>P: 1300 688 522 E: info@nutripath.com.au A: PO Box 442 Ashburton VIC 3142</p>	<p>Date of Birth : 01-Jan-1962 Sex : F Collected : 23/Aug/2019 Received: 23-Aug-2019 123 TEST STREET BURWOOD VIC 3125 Lab id : 3629215 UR#:</p>	<p>TEST HEALTH CENTRE 123 TEST STREET BURWOOD VIC 3125</p>
--	--	--

Pathogen Summary:

Macroscopy Comment

BROWN coloured stool is considered normal in appearance.

BLOOD PRESENT: Consider blood vessel injury, inflammation, infection, ulceration, hemorrhoids, severe constipation & other injury.
Treatment:

- Investigate the cause of bleeding using other diagnostic tools such as endoscopy
- Assess other CDSA markers such as calprotectin, H. pylori, M2PK & microbiology markers.

GIT Markers Comment

PANCREATIC ELASTASE: Normal exocrine pancreatic function.

Pancreatic Elastase reflects trypsin, chymotrypsin, amylase and lipase activity.

This test is not affected by supplements of pancreatic enzymes.

Healthy individuals produce on average 500 ug/g of PE-1. Thus, levels below 500 ug/g and above 200 ug/g suggest a deviation from optimal pancreatic function.

The clinician should therefore consider digestive enzyme supplementation if one or more of the following conditions is present: Loose watery stools, Undigested food in the stools, Post-prandial abdominal pain, Nausea or colicky abdominal pain, Gastroesophageal reflux symptoms, Bloating or food intolerance.

CALPROTECTIN Normal:

Low/Absent inflammation of the GIT.

Patients without GIT inflammation and untreated IBS sufferers have levels below 50 ug/g.

FAECAL SECRETORY IgA:

Production of sIgA is important to the normal function of the gastrointestinal mucosa as an immune barrier.

It represents the first line immune defense of the GIT.

Elevated levels are associated with an upregulated immune response.

beta GLUCURONIDASE ELEVATED:

Suspect increased activation and enterohepatic recirculation of toxins, hormones, and various drugs within the body. Increased burden on glucuronidation pathway is associated with increased risk of colorectal, prostate and breast cancers.

Treatment:

Consider Calcium-D-glucarate which may assist with lowering B-glucuronidase levels. It is also suggested to introduce a low-calorie/vegetarian diet for 4 weeks which may also be beneficial with lowering faecal B-glucuronidase levels.

Opportunistic Bacteria Comment

ELEVATED BACILLUS SPECIES LEVEL:

Bacillus species are spore forming, gram-positive rods belonging to the Bacillaceae family. There are currently 50 valid species within the genus.

Sources:

Meat dishes are a common source of infection in other species of Bacillus such as B. subtilis and B. licheniformis.

B. cereus food poisoning includes meats, pasta, vegetable dishes, desserts, cakes, sauces and milk.

Pathogenicity:

As yet, no toxins or other virulence factors have been identified in association with the symptoms that accompany non-B. cereus species.

Symptoms:

B. licheniformis and B. subtilis are associated with food-borne diarrheal illness.

Treatment:

It should be noted that the level of Bacillus spp should be considered in context of clinical symptoms. The level may be neither beneficial nor pathogenic. Where present, often inadequate levels of beneficial bacteria are also noted. These organisms may become dysbiotic at high levels where treatment may become necessary.

Natural Microbials:

In high levels of Bacillus spp, a combination of berberine and plant tannins have shown a high susceptibility success for treatment.

Antibiotics:

B. species is almost always susceptible to clindamycin, erythromycin and vancomycin.

METHANOBACTERIACEAE:

Family of bacteria-like microbes that produce methane. Facilitates carbohydrate fermentation and short-chain fatty acid production



P: 1300 688 522
E: info@nutripath.com.au
A: PO Box 442 Ashburton VIC 3142

Date of Birth : 01-Jan-1962
Sex : F
Collected : 23/Aug/2019
Received: 23-Aug-2019
123 TEST STREET
BURWOOD VIC 3125
Lab id : **3629215** UR#:

TEST HEALTH CENTRE
123 TEST STREET
BURWOOD VIC 3125

by beneficial bacteria.

LOW levels may indicate reduced production of short-chain fatty acids and may be associated with inflammation.

HIGH levels linked to chronic constipation, as well as some types of SIBO and IBS.

Potential Autoimmune Comments

ELEVATED CITROBACTER FREUNDII LEVEL:

Sources:

Citrobacter is a gram-negative bacteria in the Enterobacteriaceae family. Common in the environment and may be spread by person-to person contact. Several outbreaks have occurred in babies in hospital units. Isolated from water, fish, animals and food.

Pathogenicity:

Citrobacter is considered an opportunistic pathogen and therefore can be found in the gut as part of the normal flora.

Symptoms:

Citrobacter has occasionally been implicated in diarrheal disease, particularly C. freundii and C. diversus and C. koseri

Treatment:

Treatment is not generally required in low amounts. However, where high levels are present and patients are symptomatic. A combination of oregano, plant tannins and Uva-Ursi has shown high susceptibility.

ELEVATED PREVOTELLA COPRI LEVEL:

Sources:

Prevotella is a beneficial bacteria as it is associated with a plant-rich diet, however it is also linked to chronic inflammatory conditions, such as arthritis.

Prevotella is a Gram-negative bacteria. Studies indicate that long-term diet is strongly associated with the gut microbiome composition. Those who eat plenty of protein and animal fats typical of Western diet have predominantly Bacteroides bacteria, while those who consume more carbohydrates, especially fibre, the Prevotella species dominate.

Symptoms:

Chronic inflammatory condition, such as arthritis.

FUSOBACTERIUM SPECIES:

Genus of gram-negative bacteria in the Fusobacteria phylum. Commonly found in the oral cavity, and may also be found in the intestine. Associated with inflammatory processes, as well as autoimmune conditions such as systemic sclerosis.

Bacterial Pathogens Comment

ELEVATED CLOSTRIDIUM DIFFICILE TOXIN A, TOXIN B:

Sources

2-10% of population are carriers, most are asymptomatic.

Prolonged use of antibiotics may be causative factor.

Symptoms

Symptoms include inflammation, abdominal pain, cramping, fever, and diarrhea often presenting during antibiotic use and often subside once antibiotics are discontinued.

Gastrointestinal (GI) infection can cause reactive arthritis.

Treatment

See patient's calprotectin and secretory IgA (SIgA) levels to determine GI inflammation and immune response.

Consider Saccharomyces boulardii, high dose probiotics, broad- spectrum antimicrobial herbs, and 5R Protocol

Mild infections can be treated with metronidazole

Heavy infections can be treated with vancomycin and fidaxomicin

Asymptomatic patients may not need treatment. In asymptomatic patients with positive toxins A and/or B, the genes are likely not "turned on," and thus not causing disease. It is still prudent to avoid antibiotics in these patients to prevent CDAD.

Consider antimicrobial herbal formulas, which can suppress C. diff without activating toxin production.

Additional testing for toxins A and B may be warranted.

Normal Bacterial Flora Comment

ELEVATED BACTEROIDES FRAGILIS LEVEL:

Organism of the Bacteroidetes phylum. Immune-modulating normal gut species believed to be involved in microbial balance, barrier integrity, and neuroimmune health.

High levels may result from reduced digestive capacity or constipation.

TEST PATIENT**Dr.TEST DOCTOR**

P: 1300 688 522
E: info@nutripath.com.au
A: PO Box 442 Ashburton VIC 3142

Date of Birth : 01-Jan-1962
Sex : F
Collected : 23/Aug/2019
Received: 23-Aug-2019
123 TEST STREET
BURWOOD VIC 3125
Lab id : **3629215** UR#:

TEST HEALTH CENTRE
123 TEST STREET
BURWOOD VIC 3125

ELEVATED CLOSTRIDIUM SPECIES LEVEL:

Organism of the Firmicutes phylum. The Clostridium genus is diverse and consists of both pathogens and normal commensals that perform a wide variety of functions (beneficial and potentially harmful).
High levels may result from reduced digestive capacity or constipation.

ELEVATED ENTEROBACTER SPECIES LEVEL:

Organism of the Proteobacteria phylum. Closely related to E. coli (in the same taxonomic family).
High levels may indicate increased intestinal inflammatory activity.

AKKERMANSIA MUNICIPALIS:

Major species in the gut ecosystem primarily involved in breaking down mucus polysaccharides, generating mucus-derived sugars and metabolic products that support the growth and energy needs of other gut microbes. Promotes mucosal health and mucus production.

LOW levels associated with obesity and metabolic dysfunction.

HIGH levels linked to multiple sclerosis.

FAECALIBACTERIUM PRAUSNITZII:

Widely recognized as an important keystone species in the Clostridia class, as well as a major butyrate producer. Promotes anti-inflammatory processes and mucosal homeostasis.

LOW levels have been associated with a wide range of chronic inflammatory and autoimmune diseases.



P: 1300 688 522
 E: info@nutripath.com.au
 A: PO Box 442 Ashburton VIC 3142

Date of Birth : 01-Jan-1962
 Sex : F
 Collected : 23/Aug/2019
 Received: 23-Aug-2019
 123 TEST STREET
 BURWOOD VIC 3125
 Lab id : **3629215** UR#:

TEST HEALTH CENTRE
 123 TEST STREET
 BURWOOD VIC 3125

The Four “R” Treatment Protocol

REMOVE	Using a course of antimicrobial, antibacterial, antiviral or anti parasitic therapies in cases where organisms are present. It may also be necessary to remove offending foods, gluten, or medication that may be acting as antagonists. Consider testing IgG96 foods as a tool for removing offending foods.	ANTIMICROBIAL	Oil of oregano, berberine, caprylic acid
		ANTIBACTERIAL	Liquorice, zinc carnosine, mastic gum, tribulus, berberine, black walnut, caprylic acid, oil of oregano
		ANTIFUNGAL	Oil of oregano, caprylic acid, berberine, black walnut
		ANTIPARASITIC	Artemesia, black walnut, berberine, oil of oregano
		ANTIVIRAL	Cat’s claw, berberine, echinacea, vitamin C, vitamin D3, zinc, reishi mushrooms
		BIOFILM	Oil of oregano, protease
REPLACE	In cases of maldigestion or malabsorption, it may be necessary to restore proper digestion by supplementing with digestive enzymes.	DIGESTIVE SUPPORT	Betaine hydrochloride, tilactase, amylase, lipase, protease, apple cider vinegar, herbal bitters
REINOCULATE	Recolonisation with healthy, beneficial bacteria. Supplementation with probiotics, along with the use of prebiotics helps re-establish the proper microbial balance.	PREBIOTICS	Slippery elm, pectin, larch arabinogalactans
		PROBIOTICS	Bifidobacterium animalis sup lactise, lactobacillus acidophilus, lactobacillus plantarum, lactobacillus casei, bifidobacterium breve, bifidobacterium bifidum, bifidobacterium longum, lactobacillus salivarius ssp salivarius, lactobacillus paracasei, lactobacillus rhamnosus, Saccaromyces boulardii
REPAIR & REBALANCE	Restore the integrity of the gut mucosa by giving support to healthy mucosal cells, as well as immune support. Address whole body health and lifestyle factors so as to prevent future GI dysfunction.	INTESTINAL MUCOSA IMMUNE SUPPORT	Saccaromyces boulardii, lauric acid
		INTESTINAL BARRIER REPAIR	L-Glutamine, aloe vera, liquorice, marshmallow root, okra, quercetin, slippery elm, zinc carnosine, Saccaromyces boulardii, omega 3 essential fatty acids, B vitamins
		SUPPORT CONSIDERATION	Sleep, diet, exercise, and stress management