

designs for health® Australia

GI-Map Case Studies & Practitioner Questions



Dr David Brady



Lea McIntyre ND



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Webinar Logistics

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Download Slides & Case Studies here:
designsforhealth.com.au/slides

ASK QUESTIONS & PARTICIPATE IN POLLS

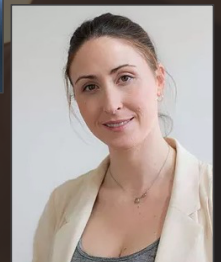
Use **GoToWebinar Question Box** to ask questions

SPECIAL OFFER FOR ALL PARTICIPANTS

Check the **Special Offer at the end of the webinar**



James Burgin



Kate Anderson

designs for health® Australia

Our vision

To provide a better way to help Australian Practitioners and their patients thrive, by providing them with comprehensive support:

- A specialised range of 'professional only' nutritional products
- Research and education resources
- Practice development services

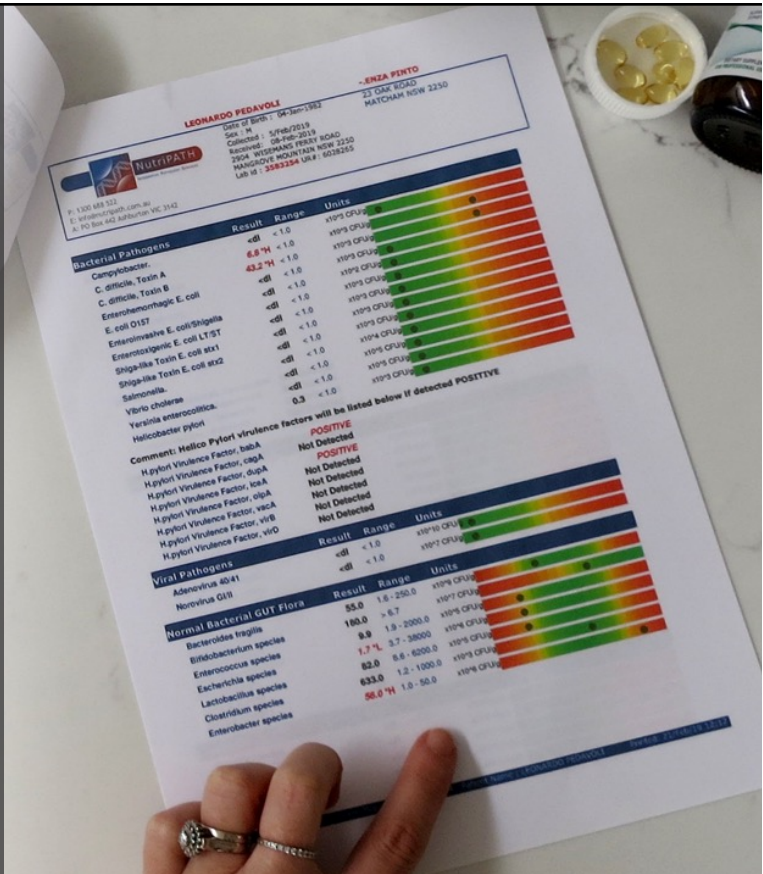
Maximise the potential for successful clinical healthcare outcomes

designs for health® Australia

GI-Map Test

Comprehensive collection of microbial targets + immune & digestive markers

Available from:





**CERTIFIED
PRACTITIONER**

Dr David Brady

Dr. David M. Brady has 28-years of experience as an integrative practitioner and over 24 years in health sciences academia. He is a licensed naturopathic medical physician in Connecticut and Vermont, is board certified in functional medicine and clinical nutrition, and is a Fellow of the American College of Nutrition.

As chief medical officer of [Diagnostic Solutions Laboratory](#), was part of the team that over the past several years developed and launched the revolutionary quantitative DNA/PCR molecular assay for doctors to assess gastrointestinal environment performed on stool called the [GI Microbial Assay Plus](#) (GI-MAP).



Lea McIntyre

Lea McIntyre is the customer relations and technical Manger at Designs for Health Australia.

Lea has 19 years experience as a qualified naturopath, herbalist and nutritionist. In her clinical practice, Lea had a special interest in paediatric health and gut health.

Lea holds a bachelors degree in Health Science and a Masters Degree in human nutrition.

Lea provides online and on phone support for the Designs for Health Practitioner community – and is frequently called on for guidance on interpreting the GI Map Test reports.

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Webinar Structure

IN THREE PARTS...

PART ONE

GI-Map Test - Overview + Three Case Studies

- Understanding and interpreting GI-Map test reports

PART TWO

Practitioner Questions

- Frequently Asked Questions from our Help Desk
- + Live Webinar and Pre-submitted Questions

PART THREE

Clinical Trends | GI-Map Resources | Ingredients Protocols

- When to consider a GI-Map Test
- Update on ingredients utilised for GI and related health
- Education Resources to discover more about GI-Map
- Webinar Special Offer!

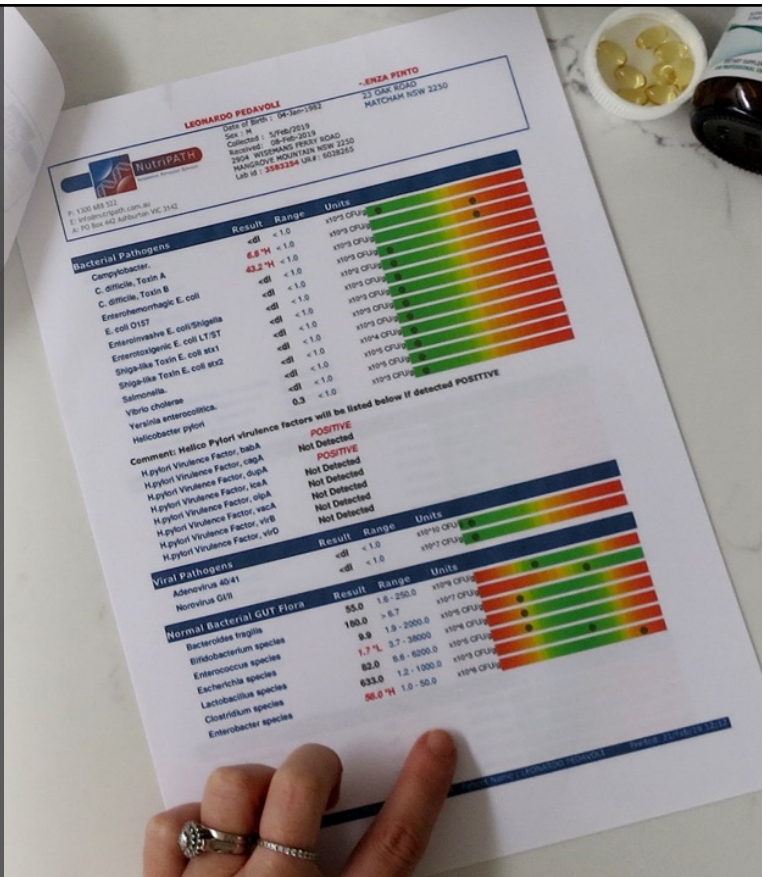


POLL

Introduction

What is the GI-Map Test?

Brief overview from Dr Brady



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Case Study ONE

Terese | Female | Age 49 years

Overview:

Client wanted to explore the relation between her thyroid issues and her GI health
She suspected an autoimmune thyroid issue triggered by a gut issue

Symptoms:

- Bloating irrelevant of what was eaten
- Sluggish metabolism
- Low energy levels

Background:

- She had blastositis hominus 3 years ago.
Used antibiotics to kill it off and felt amazing after, and dropped 6kg.
- Then the weight went back on and bloating started again, foggy head, sluggish metabolism.
- Bowel movements were erratic: Constipation vs loose bowel movements.
- Her gut wasn't as good after she cleaned out the blastocyst

Case Study 1

NutriPATH
 Date of Birth : 09-Oct-1966
 Sex : F
 Collected : 19/Mar/2019
 Received : 21-Mar-2019

P: 1300 688 522
 E: info@nutripath.com.au
 A: PO Box 462, Ashburton VIC 3142

COMPLETE MICROBIOME MAPPING

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.
Blood (Macro)	NEG <+	Blood (Macro) - The presence of blood in the stool may indicate possible GIT ulcer, and must always be investigated immediately.
Calprotectin	14.0 0.0 - 50.0 ug/g	
Pancreatic Elastase	>500.0 > 200.0 ug/g	
Faecal Secretory IgA	385.0 *L 510.0 - 20710.0 ug/g	
Faecal Zonulin	116.0 *H 0.0 - 107.0 ug/g	
Faecal B-Glucuronidase	2836.0 337.0 - 4433.0 U/g	

Microbiome Mapping Summary

Parasites & Worms	Bacteria & Viruses	Fungi and Yeasts
Dientamoeba fragilis. Fenestrated hominis	Morganella species Citrobacter species. Prevotella copri Enterotoxigenic E. coli LT/ST	

Key Phyla Microbiota

Bacteroidetes	3.1 *L 8.6 - 33.1 x10 ¹¹ org/g	
Firmicutes	11.6 5.7 - 30.4 x10 ¹⁰ org/g	
Firmicutes:Bacteroidetes Ratio	0.4 <1.0 RATIO	

Parasites and Worms.	Result	Range	Units

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Parasitic Organisms

Cryptosporidium	<dI	<1.0	x10 ⁶ org/g
Entamoeba histolytica.	<dI	<1.0	x10 ⁴ org/g
Giardia lamblia.	<dI	<2.0	x10 ³ org/g
Blasocystis hominis.	<dI	<5.0	x10 ³ org/g
Dientamoeba fragilis.	47.9 *H	<1.0	x10 ⁶ org/g
Entamoeba coli.	<dI	<5.0	x10 ⁶ org/g
Endolimax nana	<dI	<1.0	x10 ⁴ org/g
Pentastichomonas hominis	5.6 *H	<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/Overgrr

Result	Range	Units
Bacillus species.	0.1 <1.0	x10 ⁹ org/g
Enterococcus faecalis	0.2 <1.0	x10 ⁴ org/g
Enterococcus faecium	0.8 <1.0	x10 ⁴ org/g
Morganella species	1.2 *H <1.0	x10 ⁹ org/g
Pseudomonas species	<dI	<1.0
Pseudomonas aeruginosa.	<dI	<5.0
Staphylococcus species	0.5 <1.0	x10 ⁴ org/g
Staphylococcus aureus	0.3 <5.0	x10 ² org/g
Streptococcus species	<dI	<1.0
Potential Autoimmune Triggers		
Citrobacter species.	3220.0 *H	<5.0
Citrobacter freundii.	<dI	<5.0
Klebsiella species	<dI	<5.0
Klebsiella pneumoniae.	<dI	<5.0
Prevotella copri	6.6 *H	<1.0
Proteus species	<dI	<5.0
Proteus mirabilis.	<dI	<1.0

Fungi & Yeast

Result	Range	Units
Candida species.	3.4 <5.0	x10 ³ org/g
Candida albicans.	<dI	<5.0
Geotrichum species.	<dI	<3.0
Microsporidium species	<dI	<5.0
Rhodotorula species.	<dI	<1.0

Bacterial Pathogens	Result	Range	Units

Case Study 1

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Campylobacter.	<dI	<1.0	x10 ³ CFU/g
C. difficile, Toxin A	<dI	<1.0	x10 ³ CFU/g
C. difficile, Toxin B	<dI	<1.0	x10 ³ CFU/g
Enterohemorrhagic E. coli	<dI	<1.0	x10 ³ CFU/g
E. coli O157	<dI	<1.0	x10 ² CFU/g
Enteroinvasive E. coli/Shigella	<dI	<1.0	x10 ³ CFU/g
Enterotoxigenic E. coli LT/ST	1.7 *H	<1.0	x10 ³ CFU/g
Shiga-like Toxin E. coli stx1	<dI	<1.0	x10 ³ CFU/g
Shiga-like Toxin E. coli stx2	<dI	<1.0	x10 ³ CFU/g
Salmonella.	<dI	<1.0	x10 ⁴ CFU/g
Vibrio cholerae	0.2 <1.0	x10 ⁵ CFU/g	
Yersinia enterocolitica.	<dI	<1.0	x10 ⁵ CFU/g
Helicobacter pylori	0.6 <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	<dI	<1.0
Norovirus GI/II	<dI	<1.0

Normal Bacterial GUT Flora

Result	Range	Units
Bacteroides fragilis	1.7 1.8 - 250.0	x10 ⁹ CFU/g
Bifidobacterium species	300.0 > 6.7	x10 ⁷ CFU/g
Enterococcus species	12.0 1.9 - 2000.0	x10 ⁵ CFU/g
Escherichia species	1200.0 3.7 - 3000.0	x10 ⁶ CFU/g
Lactobacillus species	38.0 8.6 - 6200.0	x10 ⁵ CFU/g
Clostridium species	<DL (a) *L 1.2 - 1000.0	x10 ³ CFU/g
Enterobacter species	21.1 1.0 - 50.0	x10 ⁶ CFU/g

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Pathogen Summary:

Macroscopy Comment
 BROWN coloured stool is considered normal in appearance.

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.

LOW sIgA LEVEL:
 The primary function of secretory IgA (sIgA) is an antibody protein secreted into the gastrointestinal tract as a first line of immune defence against pathogenic microorganisms. sIgA binds to invading micro organisms and toxins and trap them in the mucus layer or within the epithelial cells, so inhibiting microbial motility, agglutinating the organisms and neutralising their exotoxins and then assist in their harmless elimination from the body in the faecal flow. sIgA also 'tags' food as acceptable, so low sIgA leads to increased sensitivity to foods. Several studies link stress and emotionality with levels of sIgA. Production is adversely affected by stress, which is mediated by cortisol levels.

ELEVATED ZONULIN LEVELS:
 Zonulin is a protein that modulates intestinal barrier function. Zonulin release facilitates the opening of tight junctions between the cells of the intestinal lining to allow for passage of nutrients and fluids into the body. However, Zonulin release can be "overstimulated" by certain external factors to cause excessive opening of tight junctions, leading to intestinal hyperpermeability or "leaky gut", inflammation, liver overload, nutrient deficiencies, rheumatoid arthritis and autoimmune disorders.

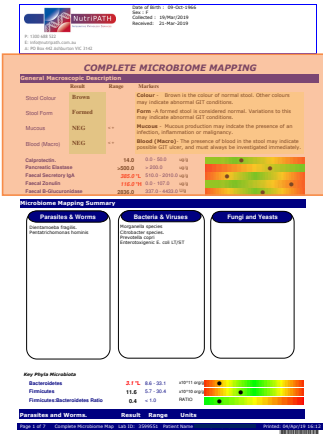
Identify the possible cause/s (Gut microorganism imbalance or the presence of dietary Gluten/gluten) and remove to reduce further damage. If it's gluten for gluten sensitivity or celiac disease, remove gluten. If bacterial overgrowth or dysbiosis, treat the bacterial overgrowth.

Treatment:
 Firstly, fix the gut. Treat/repair the gut before proceeding with other protocols; nutrients and other supplements can be damaging to the system if they get out of the gut
 Follow a grain - free diet for at least 12 months.
 Eliminate gluten, sugar, processed food, artificial flavorings, colors, trans fats.

Supplementation:
 Caprylic acid, Probiotics, acidophylus and B complex, fish oil, Magnesium D3, CoQ10, My Citrate, Boswellia & Curcumin, Milk Thistle, Selenium
 For patients with chronic digestive issue: Vitamin A, L-Glutamine, Probiotics

Further investigations to consider:
 - SIBO Breath Test
 - IgG or IgA 95 Food Sensitivity

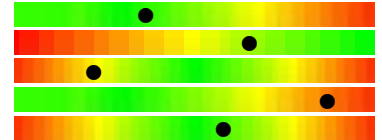
Case Study 1



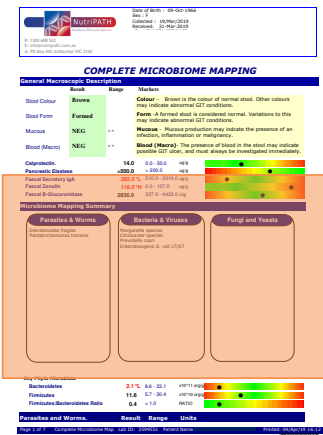
COMPLETE MICROBIOME MAPPING

General Macroscopic Description

	Result	Range	Markers
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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.
Blood (Macro)	NEG	< +	Blood (Macro) - The presence of blood in the stool may indicate possible GIT ulcer, and must always be investigated immediately.
Calprotectin.		14.0	0.0 - 50.0 ug/g
Pancreatic Elastase		>500.0	> 200.0 ug/g
Faecal Secretory IgA		385.0 *L	510.0 - 2010.0 ug/g
Faecal Zonulin		116.0 *H	0.0 - 107.0 ug/g
Faecal B-Glucuronidase		2836.0	337.0 - 4433.0 U/g



Case Study 1



Microbiome Mapping Summary

Parasites & Worms

Dientamoeba fragilis.
Pentatrichomonas hominis

Bacteria & Viruses

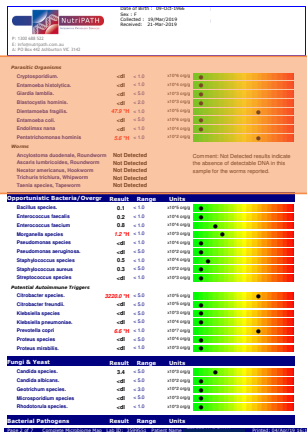
Morganella species
Citrobacter species.
Prevotella copri
Enterotoxigenic E. coli LT/ST

Fungi and Yeasts

Key Phyla Microbiota

Bacteroidetes	3.7 *L	8.6 - 33.1	x10 ¹¹ org/g	
Firmicutes	11.6	5.7 - 30.4	x10 ¹⁰ org/g	
Firmicutes:Bacteroidetes Ratio	0.4	< 1.0	RATIO	

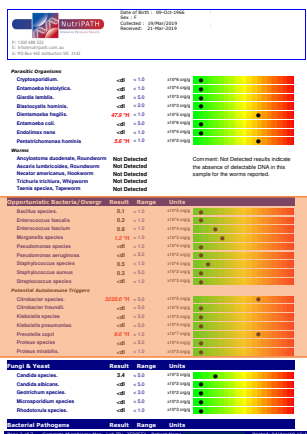
Case Study 1



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.	47.9 *H	< 1.0	x10 ⁵ org/g
Entamoeba coli.	<dl	< 5.0	x10 ⁶ org/g
Endolimax nana	<dl	< 1.0	x10 ⁴ org/g
Pentatrichomonas hominis	5.6 *H	< 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		

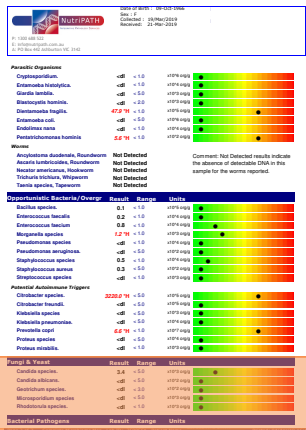
Comment: Not Detected results indicate the absence of detectable DNA in this sample for the worms reported.

Case Study 1



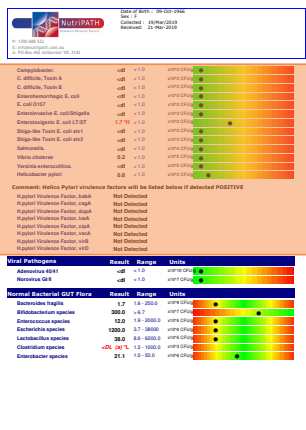
Opportunistic Bacteria/Overgr	Result	Range	Units
Bacillus species.	0.1	< 1.0	x10 ⁵ org/g
Enterococcus faecalis	0.2	< 1.0	x10 ⁴ org/g
Enterococcus faecium	0.8	< 1.0	x10 ⁴ org/g
Morganella species	1.2 *H	< 1.0	x10 ³ org/g
Pseudomonas species	<dl	< 1.0	x10 ⁴ org/g
Pseudomonas aeruginosa.	<dl	< 5.0	x10 ² org/g
Staphylococcus species	0.5	< 1.0	x10 ⁴ org/g
Staphylococcus aureus	0.3	< 5.0	x10 ² org/g
Streptococcus species	<dl	< 1.0	x10 ³ org/g
Potential Autoimmune Triggers			
Citrobacter species.	3220.0 *H	< 5.0	x10 ⁵ org/g
Citrobacter freundii.	<dl	< 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	6.6 *H	< 1.0	x10 ⁷ org/g
Proteus species	<dl	< 5.0	x10 ⁴ org/g
Proteus mirabilis.	<dl	< 1.0	x10 ³ org/g

Case Study 1



Fungi & Yeast	Result	Range	Units
Candida species.	3.4	< 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

Case Study 1

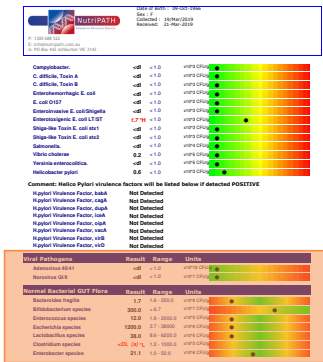


Bacterial Pathogens	Result	Range	Units
Campylobacter.	<dl	< 1.0	x10 ³ CFU/g
C. difficile, Toxin A	<dl	< 1.0	x10 ³ CFU/g
C. difficile, Toxin B	<dl	< 1.0	x10 ³ CFU/g
Enterohemorrhagic E. coli	<dl	< 1.0	x10 ³ CFU/g
E. coli O157	<dl	< 1.0	x10 ² CFU/g
Enteroinvasive E. coli/Shigella	<dl	< 1.0	x10 ³ CFU/g
Enterotoxigenic E. coli LT/ST	1.7 *H	< 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	0.2	< 1.0	x10 ⁵ CFU/g
Yersinia enterocolitica.	<dl	< 1.0	x10 ⁵ CFU/g
Helicobacter pylori	0.6	< 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

Case Study 1



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	1.7	1.6 - 250.0	x10 ⁹ CFU/g
Bifidobacterium species	300.0	> 6.7	x10 ⁷ CFU/g
Enterococcus species	12.0	1.9 - 2000.0	x10 ⁵ CFU/g
Escherichia species	1200.0	3.7 - 38000	x10 ⁶ CFU/g
Lactobacillus species	38.0	8.6 - 6200.0	x10 ⁵ CFU/g
Clostridium species	<DL (a) *L	1.2 - 1000.0	x10 ³ CFU/g
Enterobacter species	21.1	1.0 - 50.0	x10 ⁶ CFU/g

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Case Study ONE

Terese | Female | Age 49 years

Commentary

Therapeutic considerations

Download Webinar Slides & Case Studies here:
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Overview:

Low energy levels and frequent indigestion; vegan diet

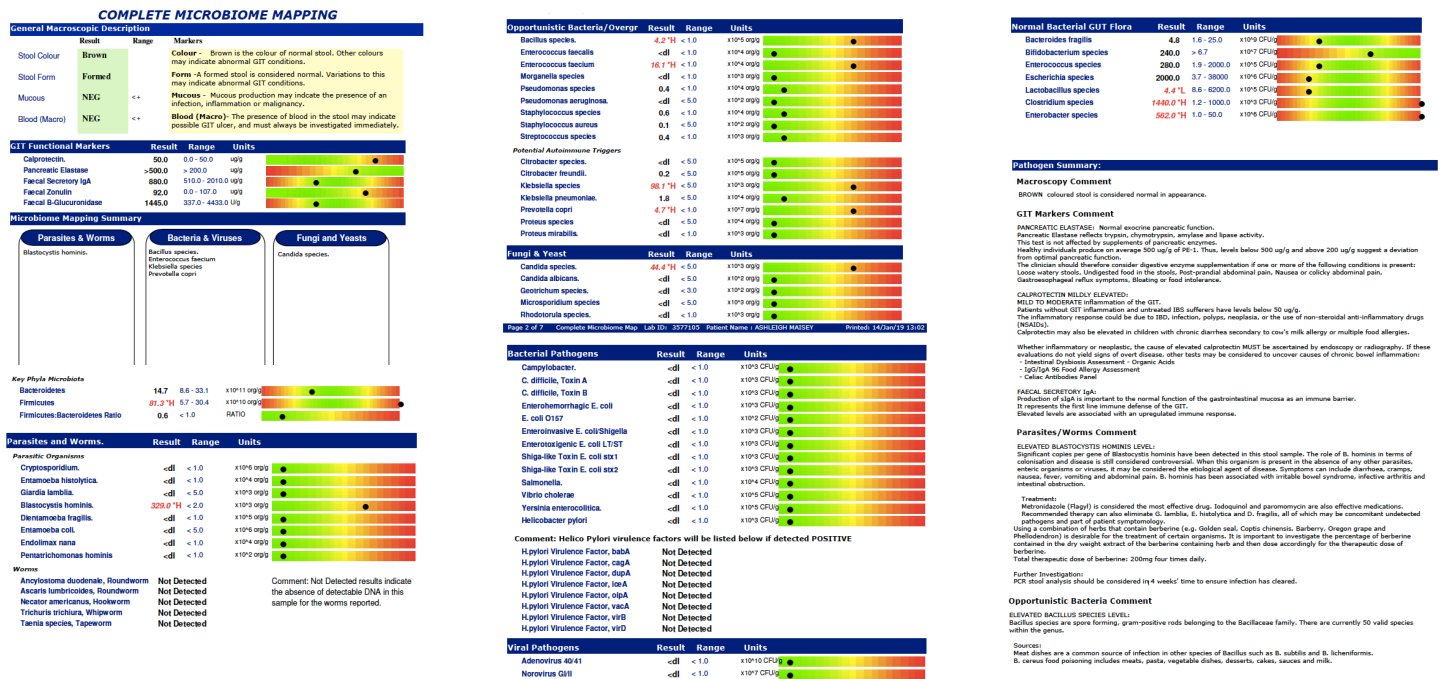
Symptoms:

- Low energy typically 4/10, falling to 2/10 in the afternoon
- GI - indigestion, bloating, alternating bowels, abdominal pain with bloating
- Eczema on her hand, will flare occasionally

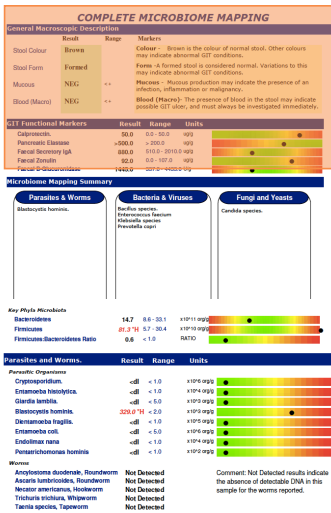
Background:

- History of blood in normal stool, medically diagnosed with IBS post endoscopy and colonoscopy
- Nervous System: SNS dominance, no caffeine, noticed her insomnia peaks around full moon
- Repro - Suggestion of Oestrogen dominance

Case Study 2



Case Study 2



COMPLETE MICROBIOME MAPPING

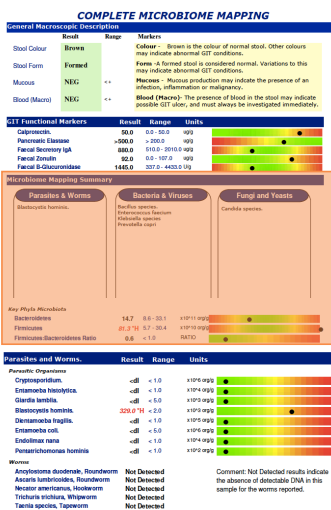
General Macroscopic Description

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Mucous	NEG	<+	Mucous - Mucous production may indicate the presence of an infection, inflammation or malignancy.
Blood (Macro)	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	50.0	0.0 - 50.0	ug/g
Pancreatic Elastase	>500.0	> 200.0	ug/g
Faecal Secondary IgA	880.0	510.0 - 2010.0	ug/g
Faecal Zonulin	92.0	0.0 - 107.0	ug/g
Faecal B-Glucuronidase	1445.0	337.0 - 4433.0	U/g

Case Study 2

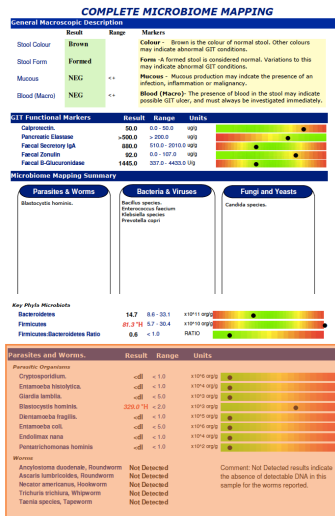


Microbiome Mapping Summary

Parasites & Worms	Bacteria & Viruses	Fungi and Yeasts
Blasocystis hominis.	Bacillus species. Enterococcus faecium Klebsiella species Prevotella copri	Candida species.

Key Phyla Microbiota	Result	Range	Units
Bacteroidetes	14.7	8.6 - 33.1	x10 ¹¹ org/g
Firmicutes	81.3 ^H	5.7 - 30.4	x10 ¹⁰ org/g
Firmicutes:Bacteroidetes Ratio	0.6	< 1.0	RATIO

Case Study 2



Parasites and Worms.

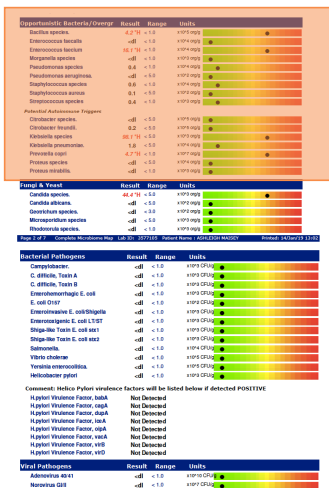
Parasitic Organisms	Result	Range	Units
Cryptosporidium.	<dl	< 1.0	x10 ⁶ org/g
Entamoeba histolytica.	<dl	< 1.0	x10 ⁴ org/g
Giardia lamblia.	<dl	< 5.0	x10 ³ org/g
Blastocystis hominis.	329.0 *H	< 2.0	x10 ³ org/g
Dientamoeba fragilis.	<dl	< 1.0	x10 ⁵ org/g
Entamoeba coli.	<dl	< 5.0	x10 ⁶ org/g
Endolimax nana	<dl	< 1.0	x10 ⁴ org/g
Pentatrichomonas hominis	<dl	< 1.0	x10 ² org/g

Worms

Worms	Result	Range	Units
Ancylostoma duodenale, Roundworm	Not Detected		
Ascaris lumbricoideis, 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.

Case Study 2



Opportunistic Bacteria/Overgr	Result	Range	Units
Bacillus species.	4.2 *H	< 1.0	x10 ⁵ org/g
Enterococcus faecalis	<dl	< 1.0	x10 ⁴ org/g
Enterococcus faecium	16.1 *H	< 1.0	x10 ⁴ org/g
Morganella species	<dl	< 1.0	x10 ³ org/g
Pseudomonas species	0.4	< 1.0	x10 ⁴ org/g
Pseudomonas aeruginosa.	<dl	< 5.0	x10 ² org/g
Staphylococcus species	0.6	< 1.0	x10 ⁴ org/g
Staphylococcus aureus	0.1	< 5.0	x10 ² org/g
Streptococcus species	0.4	< 1.0	x10 ³ org/g

Potential Autoimmune Triggers

Result	Range	Units	
Citrobacter species.	<dl	< 5.0	x10 ⁵ org/g
Citrobacter freundii.	0.2	< 5.0	x10 ⁵ org/g
Klebsiella species	98.1 *H	< 5.0	x10 ³ org/g
Klebsiella pneumoniae.	1.8	< 5.0	x10 ⁴ org/g
Prevotella copri	4.7 *H	< 1.0	x10 ⁷ org/g
Proteus species	<dl	< 5.0	x10 ⁴ org/g
Proteus mirabilis.	<dl	< 1.0	x10 ³ org/g

Case Study 2

Reportable/Bacteria/Overgr	Result	Range	Units
Bacteria species	4.2 *H	< 1.0	10 ³ CFU/g
<i>Enterococcus faecalis</i>	<dl	< 1.0	10 ³ CFU/g
<i>Enterococcus faecium</i>	1.7 *H	< 1.0	10 ³ CFU/g
<i>Morganella species</i>	<dl	< 1.0	10 ³ CFU/g
<i>Paenibacillus species</i>	0.4	< 1.0	10 ³ CFU/g
<i>Paenibacillus antraxinus</i>	<dl	< 1.0	10 ³ CFU/g
<i>Staphylococcus aureus</i>	0.8	< 1.0	10 ³ CFU/g
<i>Staphylococcus aureus</i>	0.1	< 1.0	10 ³ CFU/g
<i>Staphylococcus aureus</i>	0.4	< 1.0	10 ³ CFU/g
Atypical Actinobacteria/Fungi			
<i>Clostridium species</i>	<dl	< 1.0	10 ³ CFU/g
<i>Clostridium histolyticum</i>	0.2	< 1.0	10 ³ CFU/g
<i>Klebsiella species</i>	10.7 *H	< 1.0	10 ³ CFU/g
<i>Klebsiella pneumoniae</i>	1.8	< 1.0	10 ³ CFU/g
<i>Prevotella copri</i>	4.7 *H	< 1.0	10 ³ CFU/g
<i>Prevotella species</i>	<dl	< 1.0	10 ³ CFU/g
<i>Prevotella trachealis</i>	<dl	< 1.0	10 ³ CFU/g
Fungi & Yeast			
<i>Candida species</i>	44.4 *H	< 5.0	10 ³ CFU/g
<i>Candida albicans</i>	<dl	< 5.0	10 ³ CFU/g
<i>Geotrichum species</i>	<dl	< 3.0	10 ³ CFU/g
<i>Microsporidium species</i>	<dl	< 5.0	10 ³ CFU/g
<i>Rhodotorula species</i>	<dl	< 1.0	10 ³ CFU/g
Panel 2.1 - Clostridia/Non-clostridia			
Bacterial Pathogens			
<i>Campylobacter</i>	<dl	< 1.0	10 ³ CFU/g
<i>C. difficile</i> , Toxin A	<dl	< 1.0	10 ³ CFU/g
<i>C. difficile</i> , Toxin B	<dl	< 1.0	10 ³ CFU/g
<i>Enterohemorrhagic E. coli</i>	<dl	< 1.0	10 ³ CFU/g
<i>E. coli</i> O157	<dl	< 1.0	10 ³ CFU/g
<i>Enteroinvasive E. coli/Shigella</i>	<dl	< 1.0	10 ³ CFU/g
<i>Enterotoxigenic E. coli</i> LT/ST	<dl	< 1.0	10 ³ CFU/g
<i>Shiga-like Toxin E. coli stx1</i>	<dl	< 1.0	10 ³ CFU/g
<i>Shiga-like Toxin E. coli stx2</i>	<dl	< 1.0	10 ³ CFU/g
<i>Salmonella</i>	<dl	< 1.0	10 ³ CFU/g
<i>Vibrio cholerae</i>	<dl	< 1.0	10 ⁵ CFU/g
<i>Yersinia enterocolitica</i>	<dl	< 1.0	10 ⁵ CFU/g
<i>Helicobacter pylori</i>	<dl	< 1.0	10 ³ CFU/g
Comment: Helico Pylori virulence factors will be listed below if detected POSITIVE			
<i>H.pylori</i> Virulence Factor, baba	Not Detected		
<i>H.pylori</i> Virulence Factor, cagA	Not Detected		
<i>H.pylori</i> Virulence Factor, dupA	Not Detected		
<i>H.pylori</i> Virulence Factor, iceA	Not Detected		
<i>H.pylori</i> Virulence Factor, oipA	Not Detected		
<i>H.pylori</i> Virulence Factor, vacA	Not Detected		
<i>H.pylori</i> Virulence Factor, virB	Not Detected		
<i>H.pylori</i> Virulence Factor, virD	Not Detected		
Viral Pathogens			
Adenovirus 40/1	<dl	< 1.0	10 ³ CFU/g
Norovirus 001	<dl	< 1.0	10 ³ CFU/g

Fungi & Yeast	Result	Range	Units
Candida species.	44.4 *H	< 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

Case Study 2

Reportable/Bacteria/Overgr	Result	Range	Units
Bacteria species	4.2 *H	< 1.0	10 ³ CFU/g
<i>Enterococcus faecalis</i>	<dl	< 1.0	10 ³ CFU/g
<i>Enterococcus faecium</i>	1.7 *H	< 1.0	10 ³ CFU/g
<i>Morganella species</i>	<dl	< 1.0	10 ³ CFU/g
<i>Paenibacillus species</i>	0.4	< 1.0	10 ³ CFU/g
<i>Paenibacillus antraxinus</i>	<dl	< 1.0	10 ³ CFU/g
<i>Staphylococcus aureus</i>	0.8	< 1.0	10 ³ CFU/g
<i>Staphylococcus aureus</i>	0.1	< 1.0	10 ³ CFU/g
<i>Staphylococcus aureus</i>	0.4	< 1.0	10 ³ CFU/g
Atypical Actinobacteria/Fungi			
<i>Clostridium species</i>	<dl	< 1.0	10 ³ CFU/g
<i>Clostridium histolyticum</i>	0.2	< 1.0	10 ³ CFU/g
<i>Klebsiella species</i>	10.7 *H	< 1.0	10 ³ CFU/g
<i>Klebsiella pneumoniae</i>	1.8	< 1.0	10 ³ CFU/g
<i>Prevotella copri</i>	4.7 *H	< 1.0	10 ³ CFU/g
<i>Prevotella species</i>	<dl	< 1.0	10 ³ CFU/g
<i>Prevotella trachealis</i>	<dl	< 1.0	10 ³ CFU/g
Fungi & Yeast			
<i>Candida species</i>	44.4 *H	< 5.0	10 ³ CFU/g
<i>Candida albicans</i>	<dl	< 5.0	10 ³ CFU/g
<i>Geotrichum species</i>	<dl	< 3.0	10 ³ CFU/g
<i>Microsporidium species</i>	<dl	< 5.0	10 ³ CFU/g
<i>Rhodotorula species</i>	<dl	< 1.0	10 ³ CFU/g
Panel 2.1 - Clostridia/Non-clostridia			
Bacterial Pathogens			
<i>Campylobacter</i>	<dl	< 1.0	10 ³ CFU/g
<i>C. difficile</i> , Toxin A	<dl	< 1.0	10 ³ CFU/g
<i>C. difficile</i> , Toxin B	<dl	< 1.0	10 ³ CFU/g
<i>Enterohemorrhagic E. coli</i>	<dl	< 1.0	10 ³ CFU/g
<i>E. coli</i> O157	<dl	< 1.0	10 ³ CFU/g
<i>Enteroinvasive E. coli/Shigella</i>	<dl	< 1.0	10 ³ CFU/g
<i>Enterotoxigenic E. coli</i> LT/ST	<dl	< 1.0	10 ³ CFU/g
<i>Shiga-like Toxin E. coli stx1</i>	<dl	< 1.0	10 ³ CFU/g
<i>Shiga-like Toxin E. coli stx2</i>	<dl	< 1.0	10 ³ CFU/g
<i>Salmonella</i>	<dl	< 1.0	10 ⁴ CFU/g
<i>Vibrio cholerae</i>	<dl	< 1.0	10 ⁵ CFU/g
<i>Yersinia enterocolitica</i>	<dl	< 1.0	10 ⁵ CFU/g
<i>Helicobacter pylori</i>	<dl	< 1.0	10 ³ CFU/g
Comment: Helico Pylori virulence factors will be listed below if detected POSITIVE			
<i>H.pylori</i> Virulence Factor, baba	Not Detected		
<i>H.pylori</i> Virulence Factor, cagA	Not Detected		
<i>H.pylori</i> Virulence Factor, dupA	Not Detected		
<i>H.pylori</i> Virulence Factor, iceA	Not Detected		
<i>H.pylori</i> Virulence Factor, oipA	Not Detected		
<i>H.pylori</i> Virulence Factor, vacA	Not Detected		
<i>H.pylori</i> Virulence Factor, virB	Not Detected		
<i>H.pylori</i> Virulence Factor, virD	Not Detected		
Viral Pathogens			
Adenovirus 40/1	<dl	< 1.0	10 ³ CFU/g
Norovirus 001	<dl	< 1.0	10 ³ CFU/g

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

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Case Study TWO

Melanie | Female | Age 25 years

Commentary

Therapeutic considerations

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Case Study THREE

George | Male | Age 38 years

Overview:

"I want to recover my body strength and memory, and I have stomach issues!"

Symptoms:

- Exhausted, hard to heal any cuts on hands, sick all the time- debilitating
- Always hungry, lots bloating, irregular stools, up to 5-6 times day. Never hard, often sloppy
- Sleep ok, mood ok. Energy horrible. Exhausted all the time
- Foggy head, memory worse, inappropriate answers, short term memory changes
- No headaches. Some postural vertigo. Body aches and pains
- Recently developed shingles

Background:

- Full time sign maker - working long hours. No significant exercise
- Previous history - had a partner, young son 3yo
- Previous fatigue related to drug use - ICE, marijuana, ecstasy, cocaine for 15years
 - been through rehab in 2018
- Diet- sporadic

Case Study 3

NutriPATH
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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: Semiformed		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.
Blood (Macro): 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: 113.0 *H	0.0 - 50.0	ug/g
Pancreatic Elastase: 234.0	> 200.0	ug/g
Faecal Secretory IgA: 567.0	510.0 - 2010.0	ug/g
Faecal Zonulin: 33.0	0.0 - 107.0	ug/g
Faecal B-Glucuronidase: 1727.0	337.0 - 4433.0	U/g

Microbiome Mapping Summary

Parasites & Worms	Bacteria & Viruses	Fungi and Yeasts
Parasites & Worms: Blastocystis hominis.	Bacteria & Viruses: Enterococcus faecalis, Enterococcus faecium, Klebsiella species, Prevotella copri	Fungi and Yeasts:

Key Phyla Microbiota

Result	Range	Units
Bacteroidetes: 4.7 %L	8.6 - 33.1	x10 ¹¹ org/g
Firmicutes: 12.7 %L	5.7 - 30.4	x10 ¹⁰ org/g
Firmicutes:Bacteroidetes Ratio: 0.3	< 1.0	RATIO

Page 1 of 6 - Complete Microbiome Map Lab ID: 3587599 Patient Name: ted: 13/Mar/19 14:15

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Parasites and Worms.

Result	Range	Units
Parasitic Organisms		
Cryptosporidium	<dfl < 1.0	x10 ⁶ org/g
Entamoeba histolytica.	<dfl < 1.0	x10 ⁴ org/g
Giardia lamblia.	<dfl < 5.0	x10 ³ org/g
Blasotrypa hominis.	80.5 *H	< 2.0
Dientamoeba fragilis.	<dfl < 1.0	x10 ⁵ org/g
Entamoeba coli.	<dfl < 5.0	x10 ⁶ org/g
Endolimax nana	<dfl < 1.0	x10 ⁴ org/g
Pentatrichomonas hominis	<dfl < 1.0	x10 ² org/g
Worms		
Ancylostoma duodenale, Roundworm	Not Detected	
Ascaris lumbricoideis, 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/Overgrowth

Result	Range	Units
Bacillus species.	0.3 < 1.0	x10 ⁹ org/g
Enterococcus faecalis	1.0 *H	< 1.0
Enterococcus faecium	1.0 *H	< 1.0
Morganella species	<dfl < 1.0	x10 ³ org/g
Pseudomonas species	<dfl < 1.0	x10 ⁴ org/g
Pseudomonas aeruginosa.	<dfl < 5.0	x10 ³ org/g
Staphylococcus species	<dfl < 1.0	x10 ⁴ org/g
Staphylococcus aureus	0.4	< 5.0
Streptococcus species	0.9	< 1.0
Potential Autoimmune Triggers		
Citrobacter species.	<dfl < 5.0	x10 ⁵ org/g
Citrobacter freundii.	0.3	< 5.0
Klebsiella species	57.4 *H	< 5.0
Klebsiella pneumoniae.	0.8	< 5.0
Prevotella copri	15.4 *H	< 1.0
Proteus species	<dfl < 5.0	x10 ⁴ org/g
Proteus mirabilis.	<dfl < 1.0	x10 ³ org/g

Fungi & Yeast

Result	Range	Units
Candida species.	<dfl < 5.0	x10 ³ org/g
Candida albicans.	<dfl < 5.0	x10 ³ org/g
Geotrichum species.	<dfl < 3.0	x10 ² org/g
Microsporidium species	<dfl < 5.0	x10 ³ org/g
Rhodotrypa species.	<dfl < 1.0	x10 ³ org/g

Page 2 of 6 - Complete Microbiome Map Lab ID: 3587599 Patient Name: ted: 13/Mar/19 14:15

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Bacterial Pathogens

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

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

Result	Range	Units
Helico Virulence Factor, babA	Not Detected	
Helico Virulence Factor, cagA	Not Detected	
Helico Virulence Factor, dupA	Not Detected	
Helico Virulence Factor, iocA	Not Detected	
Helico Virulence Factor, oipA	Not Detected	
Helico Virulence Factor, vacA	Not Detected	
Helico Virulence Factor, virB	Not Detected	
Helico Virulence Factor, virD	Not Detected	

Viral Pathogens

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

Normal Bacterial GUT Flora

Result	Range	Units
Bacteroides fragilis	0.5 %L	1.6 - 250.0
Bifidobacterium species	310.0	> 6.7
Enterococcus species	0.3 %L	1.9 - 2000.0
Escherichia species	8.2	2.7 - 3000.0
Lactobacillus species	140.0	8.6 - 6200.0
Clostridium species	144.0	1.2 - 1000.0
Enterobacter species	57.0 %H	1.0 - 50.0

Page 3 of 6 - Complete Microbiome Map Lab ID: 3587599 Patient Name: ted: 13/Mar/19 14:15

Case Study 3

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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: Semiformed		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.
Blood (Macro): 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: 113.0 *H	0.0 - 50.0	ug/g
Pancreatic Elastase: 234.0	> 200.0	ug/g
Faecal Secretory IgA: 567.0	510.0 - 2010.0	ug/g
Faecal Zonulin: 33.0	0.0 - 107.0	ug/g
Faecal B-Glucuronidase: 1727.0	337.0 - 4433.0	U/g

Microbiome Mapping Summary

Parasites & Worms	Bacteria & Viruses	Fungi and Yeasts
Parasites & Worms: Blastocystis hominis.	Bacteria & Viruses: Enterococcus faecalis, Enterococcus faecium, Klebsiella species, Prevotella copri	Fungi and Yeasts:

Key Phyla Microbiota

Result	Range	Units
Bacteroidetes: 4.7 %L	8.6 - 33.1	x10 ¹¹ org/g
Firmicutes: 12.7 %L	5.7 - 30.4	x10 ¹⁰ org/g
Firmicutes:Bacteroidetes Ratio: 0.3	< 1.0	RATIO

Page 1 of 6 - Complete Microbiome Map Lab ID: 3587599 Patient Name: ted: 13/Mar/19 14:15

COMPLETE MICROBIOME MAPPING

General Macroscopic Description

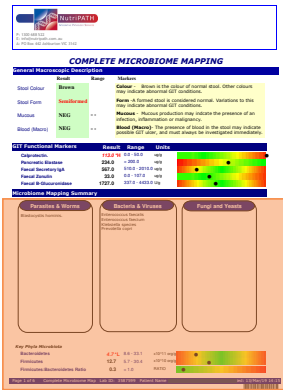
	Result	Range	Markers
Stool Colour	Brown		Colour - Brown is the colour of normal stool. Other colours may indicate abnormal GIT conditions.
Stool Form	Semiformed		Form - A formed stool is considered normal. Variations to this may indicate abnormal GIT conditions.
Mucous	NEG	< +	Mucous - Mucous production may indicate the presence of an infection, inflammation or malignancy.
Blood (Macro)	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.	113.0 *H	0.0 - 50.0	ug/g
Pancreatic Elastase	234.0	> 200.0	ug/g
Faecal Secretory IgA	567.0	510.0 - 2010.0	ug/g
Faecal Zonulin	33.0	0.0 - 107.0	ug/g
Faecal B-Glucuronidase	1727.0	337.0 - 4433.0	U/g

Case Study 3

Microbiome Mapping Summary



Parasites & Worms

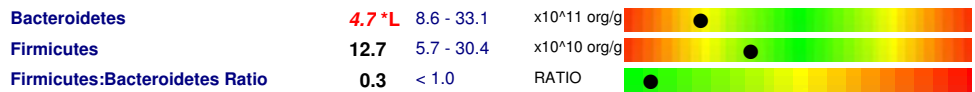
Blastocystis hominis.

Bacteria & Viruses

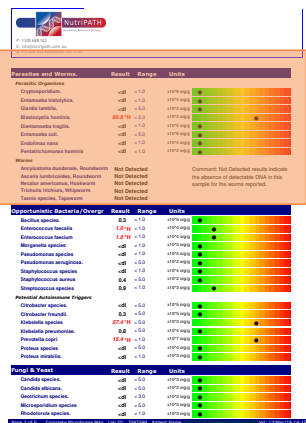
Enterococcus faecalis
Enterococcus faecium
Klebsiella species
Prevotella copri

Fungi and Yeasts

Key Phyla Microbiota



Case Study 3



Parasites and Worms. Result Range Units

Parasitic Organisms

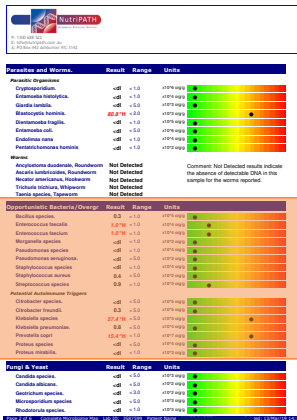
Organism	Result	Range	Units
Cryptosporidium.	<dl	< 1.0	x10 ⁶ org/g
Entamoeba histolytica.	<dl	< 1.0	x10 ⁴ org/g
Giardia lamblia.	<dl	< 5.0	x10 ³ org/g
Blastocystis hominis.	80.8 *H	< 2.0	x10 ³ org/g
Dientamoeba fragilis.	<dl	< 1.0	x10 ⁵ org/g
Entamoeba coli.	<dl	< 5.0	x10 ⁶ org/g
Endolimax nana	<dl	< 1.0	x10 ⁴ 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

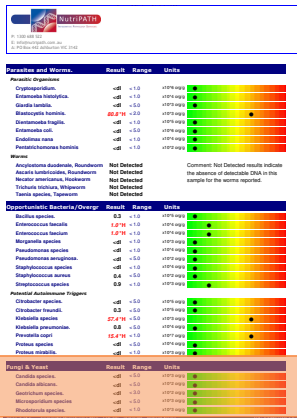
Comment: Not Detected results indicate the absence of detectable DNA in this sample for the worms reported.

Case Study 3



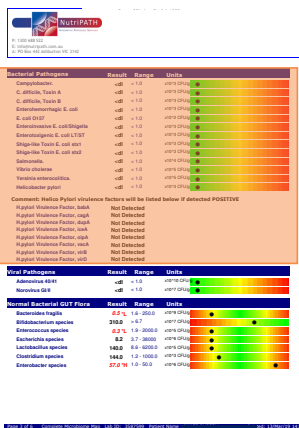
Opportunistic Bacteria/Overgr	Result	Range	Units
Bacillus species.	0.3	< 1.0	x10 ⁵ org/g
Enterococcus faecalis	1.0 *H	< 1.0	x10 ⁴ org/g
Enterococcus faecium	1.0 *H	< 1.0	x10 ⁴ org/g
Morganella species	<dl	< 1.0	x10 ³ org/g
Pseudomonas species	<dl	< 1.0	x10 ⁴ org/g
Pseudomonas aeruginosa.	<dl	< 5.0	x10 ² org/g
Staphylococcus species	<dl	< 1.0	x10 ⁴ org/g
Staphylococcus aureus	0.4	< 5.0	x10 ² org/g
Streptococcus species	0.9	< 1.0	x10 ³ org/g
Potential Autoimmune Triggers			
Citrobacter species.	<dl	< 5.0	x10 ⁵ org/g
Citrobacter freundii.	0.3	< 5.0	x10 ⁵ org/g
Klebsiella species	57.4 *H	< 5.0	x10 ³ org/g
Klebsiella pneumoniae.	0.8	< 5.0	x10 ⁴ org/g
Prevotella copri	15.4 *H	< 1.0	x10 ⁷ org/g
Proteus species	<dl	< 5.0	x10 ⁴ org/g
Proteus mirabilis.	<dl	< 1.0	x10 ³ org/g

Case Study 3



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

Case Study 3

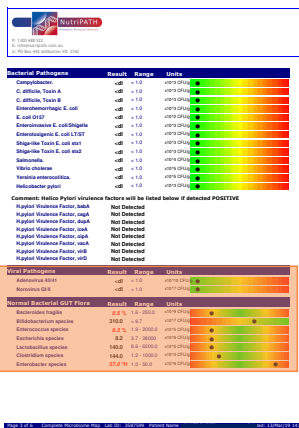


Bacterial Pathogens	Result	Range	Units
Campylobacter.	<dl	< 1.0	x10 ³ CFU/g
C. difficile, Toxin A	<dl	< 1.0	x10 ³ CFU/g
C. difficile, Toxin B	<dl	< 1.0	x10 ³ CFU/g
Enterohemorrhagic E. coli	<dl	< 1.0	x10 ³ CFU/g
E. coli O157	<dl	< 1.0	x10 ² CFU/g
Enteroinvasive E. coli/Shigella	<dl	< 1.0	x10 ³ CFU/g
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

Case Study 3



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	0.5 *L	1.6 - 250.0	x10 ⁹ CFU/g
Bifidobacterium species	310.0	> 6.7	x10 ⁷ CFU/g
Enterococcus species	0.3 *L	1.9 - 2000.0	x10 ⁵ CFU/g
Escherichia species	8.2	3.7 - 38000	x10 ⁶ CFU/g
Lactobacillus species	140.0	8.6 - 6200.0	x10 ⁵ CFU/g
Clostridium species	144.0	1.2 - 1000.0	x10 ³ CFU/g
Enterobacter species	57.0 *H	1.0 - 50.0	x10 ⁶ CFU/g

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Case Study THREE

George | Male | Age 38 years

Commentary

Therapeutic considerations

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A person is performing a yoga tree pose (Vrikshasana) on a rocky cliff. They are standing on their right leg, with their left foot resting on the right thigh. Their arms are raised straight up, with hands clasped together. The background shows a vast ocean under a sunset sky, with the sun low on the horizon and its light reflecting on the water. A small island is visible in the distance. The word "POLL" is overlaid in large white letters on the left side of the image.

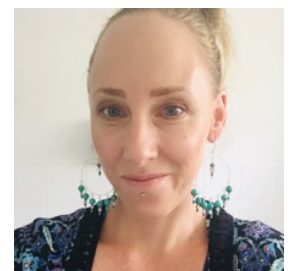
POLL

Practitioner Questions

- Frequently Asked Questions from our Help Desk
- + Live Webinar and Pre-submitted Questions

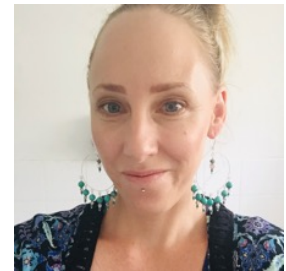
FAQs | 1

1. What are the differences between GI-Map, Ubiome & Microba?
2. What value does the GI-Map provide for clinical applications compared to these other commonly used tests?



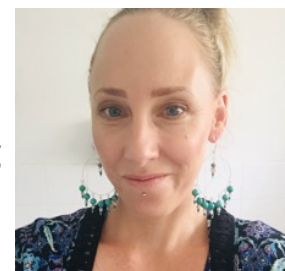
FAQs | 2

1. Level of calprotectin as is relates to Inflammatory bowel disease. We are frequently seeing calprotectin levels in the 50-100 range. At these levels would you consider referral for further investigation for inflammatory bowel disease.?
2. Does taking the OCP have any bearing on faecal B-Glucoronidase levels?
3. Can you comment on the how reduced SigA levels can be associated with sub-optimal adrenal output?
4. Biofilms – how much consideration do you give to biofilms when formulating treatment protocols? Are there specific bacteria/parasites that are known to have biofilms that suggest a preferred treatment?



Questions | 3

1. 3 reasons why I should do this test with my patients
2. What is the recommendation for retesting after treatment following initial GI map? E.g. How long before retesting after treatment?
3. Is it recommended for asymptomatic patients?
4. What is the best way to reduce b-glucoronidase besides supplementing with calcium-d-glucarate?
5. Why not offer a 3 day stool test to increase accuracy of results (even if a client wants to pay extra)?



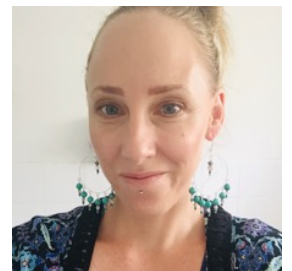
Questions | 4

6. Are there test accuracy issues by having to send sample back to US?
7. Can you add fecal fats to the test (believe this is available in US)?
8. How to reduce steratocrit?
9. How do you recommend introducing clients to GI-Map Test, as I struggle to get the message across?
10. Have you thought about adding Akkermansia, Prauznitzii, Methanobrevibacter to your test? What about more markers for digestion, SCFA's and graphs showing actual amounts of everything tested?



Questions | 5

11. How is the GI map similar/different to microbiome analysis?
12. Can we please include a mouth buccal swab as part of the complete GI-Map? To test for mouth bugs that effect the teeth and gums
13. Recently I had a patient GI MAP (via Nutripath) with very high calprotectin reading. Didn't make too much sense with symptom picture and decided to run another calprotectin only via one of our regular pathology companies in Adelaide. Came back low/ negative so we were confused and asked question of Nutripath as to why this would be so different, no real answer. So brings us to why there would be such a high reading with GI MAP?
We were inclined to believe the standard lab as it matched symptoms but this was concerning.



Clinical Trends Rx

- When to consider a GI-Map Test
- GI-Map protocol & ingredients
- Notable ingredients comments
- Clinical feedback from practitioners

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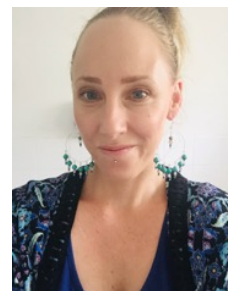
Clinical Trends Rx

When to consider the GI-Map Test

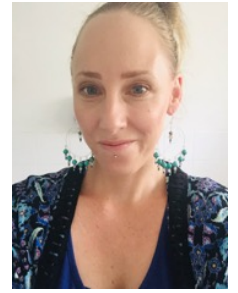
The GI-Map was designed to detect microbes that may be disturbing normal microbiota balance or contributing to illness as well as indicators of digestion, absorption, inflammation, and immune function.

PATHOLOGY INDICATIONS TO CONSIDER A GI-MAP TEST:

- High or low lymphocytes may indicate viral or bacterial infection
- High monocytes may indicate intestinal parasites
- High Eosinophils can indicate intestinal parasites or food sensitivities
- High fasting Glucose - can indicate a chronic gut infection which can drive insulin issues and the breakdown of glucose
- Elevated Thyroid Antibodies - can be triggered by several bacterial and viral gut infections
- High Cholesterol or Triglycerides - may indicate chronic bacterial or viral infections (especially H. Pylori)



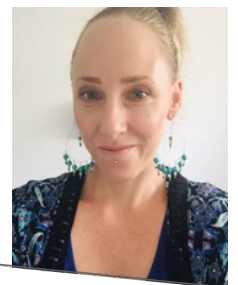
When to consider the GI-Map Test cont.



CLINICAL INDICATIONS TO CONSIDER A GI-MAP TEST:

- Chronic or acute GIT symptoms - bloating flatulence, diarrhoea, constipation, pain, indigestion
- Inflammatory bowel disease
- Irritable bowel disease
- Autoimmune Disease
- SIBO
- Suspected Intestinal permeability issues
- Recurrent infections - bacterial, fungal, viral
- Skin conditions
- Hormone imbalances
- Stress conditions/poor adrenal function

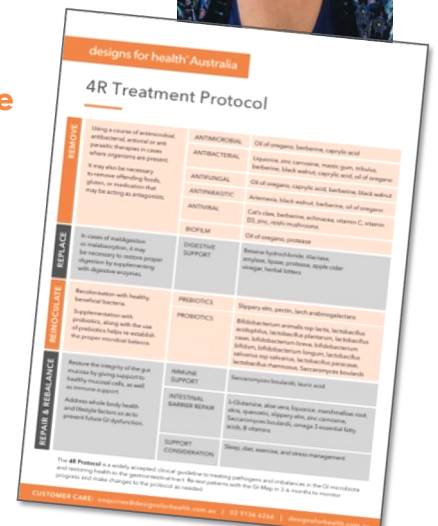
DFH Products & Prescribing



To help you with your treatment selection, Designs for Health have formulated the **4R Protocol** which is commonly used in the integrative medicine space.

The **4R** refers to **Remove, Replace, Reinoculate & Repair/Rebalance**

- **Remove:** Use anti-microbial, anti-bacterial, anti-viral or anti-parasitic therapies to rid the GIT of problematic microbes
- **Replace:** Use digestive enzymes to help restore proper digestion
- **Reinoculate:** Use broad spectrum pre and probiotics to help re-establish proper microbial balance
- **Repair/Rebalance:** Restoring the integrity of the gut mucosa



Designs for Health GI Ingredients to Consider

Berb-Evail: Berberine (berberis aristata)

Floramyces: Saccharomyces cerevisiae (Boulardii)

Gastromend HP: Mastic Gum, Zinc carnosine, liquorice

GI Microb-x Berberis vulagaris, Tribulus terrestris, juglans nigra, artemisia annua, Berberis aristata, caprylic acid

GI Revive: glutamine, pectin, zinc carnosine, cats claw, slippery elm, Quercetin, MSM, liquorice, chamomile, aloe vera, marshmallow, okra

Zymegest: protease, amylase, tilactase, cellulase, lipase, Betaine Hydrochloride

ProbioMed 50+100: Bifidobacteria animalis, Lactobacillus platarum, lactobacillus acidophilus, lactobacillus casei, Bifidobacterium breve, lactobacillus salvarius, lactobacillus paracasei, lactobacillus rhamnosus, Bifidobacterium bifidum, Bifidobacterium longum

Oregano oil: Origanum vulagre

Evidence-based Ingredients for GI Rx

Consider the 4R protocol with **Oil of Oregano** and **Proven Antimicrobials**. These ingredient groups support the combatting even the most complex of pathogens seen on the GI-Map.

Proven Antimicrobials – Tribulus, berberis, black walnut, sweet wormwood, and caprylic acid. Together these ingredients offer antibacterial, antimicrobial, antiparasitic and antiviral properties.

Oil of Oregano is a well known antibacterial, antifungal, antiparasitic and antimicrobial.

These ingredients are unique to the Australian practitioner market and we are seeing fantastic results using them together.

Also well-researched with strong evidence:

Berberine

Dairy-free Saccharomyces

Combination of mastic gum and zinc carnosine

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Resources

- How to Order the GI-Map Test
- Using the 4R Protocol
- GI-Map Resources
- Clinical Feedback

- Download Webinar Slides & Case Studies here:
designsforhealth.com.au/slides

A person is performing a yoga tree pose (Vrikshasana) on a rocky cliff. They are standing on their left leg, with their right foot resting on the inner thigh of the left leg. Their arms are raised straight up, with their hands clasped together. The background features a sunset over a body of water, with a small island visible in the distance. The sun is low on the horizon, creating a warm, golden glow. The word "POLL" is overlaid in large, white, sans-serif capital letters on the left side of the image.

POLL



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