

GI-Map Results - Reported October 2025

FOR: Shalee Bird

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SUMMARY OF MOST RELEVANT FINDING:

1. **H.pylori infection** - reduces your stomach acid affecting overall digestive capacity & gut health (page 2)
2. **Low commensal bacteria species** - 3 species affected (page 2)
3. **Some degree of various opportunistic microbe overgrowths** (page 3)
4. **High Beta-glucuronidase** - affects hormone balance by inhibiting oestrogen detox & clearance from body (page 4)
5. **Very low Secretory IgA** - reflects a poor gut immune response (this also allows microbes to overgrow (pg. 4)
6. **Moderate-high Zonulin** - a marker of 'leaky gut' activity in gut

HELICOBACTER PYLORI (H.pylori)

Your result was beneath the reference range but still a moderate presence. Best practice is to still treat this.

H.pylori causes damage to the cells in our stomach which secrete our stomach acid. This causes hypochlorhydria (ie. low stomach acid level). As a result there are a multitude of varied downstream effects such as heartburn/indigestion, compromised digestion, opportunistic overgrowths/dysbiosis, malabsorption and nutrient deficiencies (often minerals & Vit B12), compromised gut immunity, autoimmunity, skin conditions, chronic fatigue, mitochondrial dysfunction, neurotransmitter imbalances, and even sleep issues. Although H.pylori has become resistant to most antibiotic therapies, antimicrobial herbs still work.

What's so important about our stomach acid?

- It kills microbes that come into our digestive tract - like a guardian of our stomach
- It breaks down amino acids into smaller fragments - the building blocks that are essential for hormone and neurotransmitter production, energy, growth (skin, hair etc), repair, healing
- It stimulates/triggers release and flow of pancreatic enzymes and bile > both of these have huge antimicrobial properties which further inhibit bacterial overgrowths

What causes low stomach acid?

The presence of H.pylori in the stomach - as it reduces the body's ability to make stomach acid. Being in a sympathetic-dominant state (ie. stress, rushing) this affects the release of stomach acid, as opposed to a parasympathetic state which is known as 'rest and digest'. Also age, medications, PPIs, antacids.

COMMENSAL BACTERIA

These are the 'representative members' of the normal microbiome - the good bugs, essentially. They extract nutrients and energy from our diets, maintain gut barrier function, produce vitamins (biotin & vitamin K) and protect against colonisation of potential pathogens. Trillions inhabit the human intestine to make up a complex ecosystem that plays an important role in human health. We look to these results for key insights into the overall health and function of the microbiome, plus the abundance and diversity of species. Our commensal bacteria play vital roles in supporting our digestion, hormone, nutrient and neurotransmitter production.

Your report showed 3 species as LOW:

- ***Bacteroides fragilis*** - this helps repair defects in gut barrier ('leaky gut') and provides anti-inflammatory actions in the intestine

- ***Lactobacillus*** - promotes good digestion and boosts gut immune system. Low levels can also be due to low carbohydrate intake or high salt intake
- ***Enterobacter spp*** - low levels indicate reduced gut mucosal health

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OPPORTUNISTIC/OVERGROWTH MICROBES

These are considered 'opportunistic' pathogens as they only cause disease and illness in some individuals, particularly the immune-compromised. An overgrowth of opportunistic bacteria may occur due the following: reduced stomach acid, reduced digestive function, constipation, when the commensal (good) bacteria are impaired (by poor diet, medications, antibiotics) and/or a weakened gut immune system. Opportunistic microbes create imbalance in the gut microbiota, stress the gut's immunity and can even trigger thyroid antibodies.

Although the following did not reach higher than the reference ranges, their presence was **moderate** in your sample:

- *Enterococcus faecalis* - related to reduced stomach acid, constipation, SIBO
- *Desulfovibrio spp* - linked to inflammation in the intestine
- *Methanobacteriaceae* - produces methane, contributes to constipation, SIBO, IBS with higher levels
- *Enterobacter spp* - increases intestinal inflammation with higher levels
- *Escherichia spp* - increases intestinal inflammation with higher levels
- *Fusobacterium spp* - increases intestinal inflammation with higher levels
- *Prevotella spp* - associated with reduced digestive capacity or high starch diet

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INTESTINAL HEALTH MARKERS

- **HIGH Beta-glucuronidase - 2334**

Optimal is optimal 500-1000. This is an **enzyme** produced by certain species of intestinal bacteria and also cells of our body (liver, kidneys, the gut wall, reproductive organs). This result is a marker of the *activity* of the enzyme, and not the quantitative *amount* of the the enzyme.

This enzyme essentially 'undoes' what the liver did to the various toxins, hormones (our own and environmental xeno-oestrogens), xenobiotics, mould mycotoxins, medications when they when through the liver detox pathways.

The liver typically binds up these toxins (through a process called glucuronidation) in preparation for their excretion from the body via the stool. **Beta-glucuronidase** breaks this bond, undoing the liver's work and essentially frees up these toxins, allowing them to be reabsorbed and go back into the body's circulation.

High levels seen with bacterial overgrowth, lack of beneficial bacteria, antibiotics use, dietary factors, liver stress, lifestyle factors.

Having a higher colonic pH (ie. less acidic) is associated with higher Beta-glucuronidase activity.

Liver detox stress: 40-70% of medications are detoxified through the glucuronidation pathway.

High meat, high fat, low fibre diets and alcohol have been associated with higher activity levels. BPA or BPS lined cans/bottles will also contribute.

A higher level of Beta-glucuronidase activity:

- is associated with hormonal imbalance when >1000
- is associated with an imbalance of oestrogen to progesterone, and creates a back-log in the clearance of oestrogen metabolites through your liver.
- may lead to high oestrogen/excess circulating oestrogen > increases symptoms of PMS, heavy/painful periods, breast tenderness, fibroids. Excess oestrogen may lead to specific breast cancers.
- *may* increase cancer risk as hormones and toxins re-enter bloodstream instead of being eliminated. Associations with breast and colon cancer.

• LOW Secretory Ig-A < 210

Optimal is around 1200. Secretory-IgA is our most abundant immune cells produced by the intestinal mucosa. It's involved in immunological surveillance, and is our first line of defence for antigens and pathogens. It also monitors and balances the microbiome. When low, it's suggestive of a gut that's immune compromised. Often seen low with overgrowths, in your case opportunistic microbes.

• HIGH Zonulin 118

Optimal is <50. This is a marker of intestinal permeability (AKA 'leaky gut').

Zonulin is the protein that opens up the intercellular tight junctions in the mucous membranes, so it's reflective of the "degree of permeability" occurring in the mucosa of the gut wall.

High levels are linked to immune-mediated conditions, autoimmune disease, coeliac disease, food allergy, inflammatory bowel, IBS, metabolic disease, obesity,

When Zonulin is elevated, especially when combined with bacterial overgrowths, low levels of 'good' bacteria, and poor immune surveillance (as seen in your low Secretory-IGA) it allows intestinal bacteria, toxins, pathogens, and undigested food particles to enter the bloodstream, potentially triggering inflammation and immune responses - effectively burdening the body unnecessarily.

TREATMENT APPROACH

Your 'Gut Protocol' will be discussed in your next Follow-Up Consultation.

This is a staged approach (3 stages) and addresses different areas of the gut that have been highlighted through your results.

For you, these include:

- The presence of H.pylori
- The lowered commensal bacteria (i.e good bugs)
- The moderate overgrowths of opportunistic microbes
- The lowered detoxification capacity (due to high Beta-glucuronidase result)
- The lowered gut immunity (shown through low Secretory IgA)
- The poor gut wall integrity "leaky gut" (showed through high Zonulin level)

Many of these listed are connected.