

## Pathology Analysis Summary Report

Test Date: 15/12/2023

Key Nutrients:	Deficient	Good	Excessive	N/A	Result
Iron - intake		Good			13.00
Iron - absorbed	Deficient				22.00
Iron - stores (female)			Excessive		132.00
Vitamin B12 (serum)	Deficient				180.00
Folate				N/A	
Protein		Good			74.00
Zinc (Serum)				N/A	
Copper				N/A	
Vitamin D	Deficient				69.00
Calcium				N/A	
Potassium			Excessive		4.90
Phosphorus				N/A	
Cholesterol		Good			5.40
Carbohydrates/sugar			Excessive		1.50
Sodium		Good			138.00
Chloride		Good			102.00
Anaemia risk:	Low	Good	High	N/A	Result
Haemoglobin (female)		Good			135.00
Vitamin B12 (active)				N/A	
Vitamin B12 (serum)	Low				180.00
Folate				N/A	
Zinc (Serum)				N/A	
Digestive system:				N/A	
Stomach acid	Low				
Leaky gut				Unknown	
Dysbiosis	Yes				
Liver function:	Low	Good	High	N/A	Result
Cholesterol		Good			5.40
Triglycerides			High		1.50
Bilirubin	Low				7.00
Liver enzymes - ALP		Good			88.00
Liver enzymes - ALT		Good			19.00
Liver enzymes - AST		Good			19.00
Liver enzymes - GGT		Good			22.00
Kidney function:	Low	Good	High	N/A	Result
Urea		Good			4.80
Creatinine	Low				56.00

## Analysis Summary:

**Iron absorption:** reduced due to inflammation (high CRP)**Iron stores:** high ferritin associated with increased risk of haemochromatosis >150 contributing to inflammation and oxidative stress on the cells including along the gut lining - reducing absorption of nutrients and damage to the gut. Symptoms associated are low energy, fatigue, foggy mind, poor concentration and memory.**Vitamin D:** plays a role in immune function and reducing inflammation in the body. Low levels can contribute to increased inflammation and poor immune function, increased perception of pain.**Vitamin B12:** low levels associated with low energy, poor moods, diarrhoea, poor concentration and memory.**Potassium:** high levels may be due to damage caused from excessive ferritin and/ or dehydration.**Carbohydrates/ sugar:** associated with dietary intake of processed foods and associated with oxidation of LDL (which involved glucose)

**Low stomach acid** associated with poor digestion of foods and absorption of nutrients leading to deficiencies such as vitam D, B12 (iron, calcium and B12 deficiencies can cause low stomach acid). specifically, low hydrochloric acid (HCl), which is the most powerful acid your stomach produces. Hydrochloric acid plays an important role in your digestion and immunity. It helps break down protein and absorb essential nutrients, and it helps control viruses and bacteria that might otherwise infect your stomach.

**Baking soda test for stomach acid** - baking soda combined with stomach acid produces carbon dioxide (CO<sub>2</sub>), which will cause you to burp. For the test, you'll drink half a glass of cold water combined with a quarter teaspoon of baking soda, on an empty stomach. Then time how long it takes you to burp. If it takes longer than three to five minutes, you don't have enough stomach acid.

**Dysbiosis:** Contributed to low stomach acid - required for digestion of food and nutrients - leads to microflora imbalances and increases risk of bacterial overgrowth

**Triglycerides:** increased glycogen storage (fat) in the body specifically in adipose tissue, increased risk of fatty deposits in the arteries affecting heart health/ CVD - closer look at the diet to determine fat

Urate (Uric acid)				N/A	
Estimated Kidney %		Good			90
<b>Thyroid function:</b>	Low	Good	High	N/A	Result
TSH	Low				0.64
T4 - Inactive hormone	Low				11.00
T3 - Active hormone				N/A	
T4-T3 ratio				N/A	
Thyroid antibodies					
Zinc (Serum)				N/A	
Vitamin D	Low				69.00
<b>Immune function:</b>	Low	Good	High	N/A	Result
White blood cells			High		12.00
Neutrophils	Low				8.40
Lymphocytes	Low				2.80
Neut/Lymph ratio		Good			3.00
Globulins		Good			28.00
Vitamin D	Low				69.00
Zinc (Serum)				N/A	
<b>Inflammation:</b>	Low	Good	High	N/A	Result
Short term - CRP			High		10.00
Long term - ESR	#REF!	#REF!	#REF!		#REF!
Homocysteine				N/A	
Vitamin D	Low				69.00
<b>Oxidative stress:</b>	Low	Good	High	N/A	Result
Urate (Uric acid)				N/A	
Homocysteine				N/A	
<b>Heart health:</b>	Low	Good	High	N/A	Result
Triglycerides			High		1.50
Triglyceride : HDL ratio		Some risk			1.15
Albumin		Good			46.00
eGFR		Good			90.00
Homocysteine				N/A	
<b>Stomach function:</b>	Low	Good	High	N/A	Result
Zinc (Serum)				N/A	
Vitamin B12 (active)				N/A	
Vitamin B12 (serum)	Low				180.00
Folate (serum)				N/A	
Total protein		Good			74.00
Transferrin sat %	Low				22.00

intake

**Bilirubin:** increased risk of metabolic syndrome, more common to be lower in those who are overweight and obese.

**T4:** slower metabolism, there is less available to be converted in to active form T3 therefore reduced ability to function inside the cells. Sx weight gain, poor sleep, anxiety, depression, low energy

Indicative of recent infection at time of testing. ??

Energy production:	Low	Good	High	N/A	Result
Thyroid function (TSH)			High		0.64
Cholesterol		Good			5.40
Vitamin B12 (active)				N/A	
Vitamin B12 (serum)	Low				180.00
Folate (serum)				N/A	
Haemoglobin (female)		Good			135.00
Transferrin sat %	Low				22.00
Phosphate				N/A	

Mental Health:	Low	Good	High	N/A	Result
Thyroid function (TSH)			High		0.64
Cholesterol		Good			5.40
Vitamin B12 (active)				N/A	
Vitamin B12 (serum)	Low				180.00
Folate (serum)				N/A	
Zinc (Serum)				N/A	
Vitamin D	Low				69.00

### Analysis Summary

Iron deficiency anaemia caused by B12 deficiency. Chronic inflammation as seen with high CRP, low Vitamin D. Dehydration as characterised by slightly raised RBCs and potassium. Possible history of infection at time of bloods taken as seen with high WCC count.

Nutrient deficiencies - B12, vitamin D, protein, zinc