NATUROPATHIC PATHOLOGY REPORT

Patient name: Martin Tirzins

Practitioner: Amy Phillips

Date: 15/07/22

DISCLAIMER:

Please find attached your Naturopathic pathology report. This report is based off optimal blood test parameters to identify & address minor imbalances before they progress to disease states. This is different to conventional medicine parameters which are in place to identify disease states. Many of your results may fall within these 'normal' parameters but be highlighted here as sub-optimal due to the narrower ranges used in functional medicine. If you have any concerns regarding the information herewith, these should be raised/discussed with your practitioner. A naturopath cannot diagnose any diseases/conditions, however they can read & interpret pathology results, trends & related symptoms to provide a comprehensive & targeted treatment plan to address the concerns you are presenting with.

The information within this report is confidential & designed to educate & enhance your understanding of your body & it's symptoms, it is not to be shared or used in a diagnostic manner with any third parties, friends or family.

TO BE ADDRESSED

- Reduce oxidative stress & inflammation, bilirubin, urate & sodium & potassium.
- Increase B12, folate, vitamin D, phosphorus & cholesterol, optimise liver enzymes & T4 levels

DEFINITIONS

- **B12- low** - A deficiency in vitamin B12 can result in neuropathy - nerve damage that can cause tingling & numbness in the patient's hands & feet. B12 is needed for cell formation & cellular replication, DNA synthesis, nerve function, and metabolism of fats and proteins. If low, you may experience symptoms of a sore tongue, diarrhoea, depression, lethargy, shortness of breath, poor concentration & memory. B12 is found in animal products such as red meat, fish, poultry, milk and eggs.
- **Folate – low** - Measures the concentration of folate in the serum. B12 & folate are part of the B complex. Folate is found in leafy green vegetables, citrus fruits, dry beans & peas, liver & yeast. Both B12 & folate are necessary for normal red cell formation, tissue & cellular repair & DNA synthesis. A deficiency in either vitamin B12 or folate can lead to a form of anaemia characterised by the production of fewer, but larger, red cells (macrocytic anaemia). A deficiency in folate can cause neural tube defects such as spina bifida in a growing foetus. Low levels may be indicative of deficiency, coeliac, Crohn's or thyroid disease.
- **Vitamin D – low** - Vitamin D is an anti-inflammatory hormone. Hence it reduces inflammation of chronic disease conditions. Low levels may lead to poor immunity, respiratory & gut health.
- **Potassium – high** - Potassium is needed for heart rhythm and contraction. Potassium removes fluid wastes from the cells & the body, reduces blood pressure, supports muscle energy and nerves and helps make stomach acid. High levels from cellular or tissue damage, severe dehydration, medications, adrenal insufficiency (low cortisol) or acidosis.
- **Phosphorus - low** - Phosphate is combined with oxygen to form ATP or energy production, muscle & nerve function & bone growth. It also acts as a buffer, helping to maintain pH. About 70% to 80% of the phosphates are combined with calcium to help form bones & teeth, about 10% are found in muscle, & about 1% is in nerve tissue. The rest is found within cells where it is mainly used to store energy ATP; about 1% of total body phosphate is found within plasma. The body maintains phosphate levels in the blood by regulating how much it absorbs from the intestines & how much it excretes or conserves in the kidneys. Low levels from nutrient deficiencies or diet too high in fructose, which increases phosphate excretion.
- **Total Cholesterol – low** - Essential for life & forms the membranes for cells in all organs & tissues. It is also needed for many hormones essential in development, growth & reproduction, & forms bile acids that are needed to absorb nutrients from food. Total Cholesterol comprises various lipoproteins such as HDL, which takes excess cholesterol away for disposal, LDL which takes cholesterol TO cells so they can use it, and other subtypes of lipoproteins. Only small amount of cholesterol comes from diet, and most is made in your liver. Required to maintain artery flexibility. Low levels may be indicative of increased risk of degenerative diseases as fewer antioxidants are

available for scavenging free radicals. Cholesterol is needed to remove fat soluble toxins from the brain. Levels below 4.5 cannot manufacture hormones effectively.

- **Sodium – high -** Sodium helps regulate water balance into and out of the body and cells. High levels from too much table salt, or high water intake, or fluid loss from sweating, vomiting or diarrhoea, or medications (corticosteroids).
- **Anion Gap – high 17** - The anion gap is an indicator of overall inflammation, and is actually a calculated value: sodium + potassium - chloride + bicarbonate and other minerals. An abnormal anion gap can suggest metabolic abnormalities, such as starvation or diabetes, or the presence of a toxic substance such as alcohol. High number indicates acidity, while low number means alkalinity. To be accurate, test must have been done after a 8-10 hour fast. A high anion gap can affect insulin, cortisol and TSH by raising them, while lowering free cholesterol.
- **Bilirubin - high -** Bilirubin is a metabolic byproduct of haemoglobin breakdown from damaged or old red blood cells. High bilirubin levels can cause jaundice (yellowing skin and/or eyes). High levels can indicate use of antibiotics, codeine, many medications, gallstones and bile duct blockages, prolonged fasting, haemolytic anaemia, pernicious anaemia, Gilbert syndrome, allergies (high histamine), genetic factors (COMT or PEMT), alcohol. This can cause mental health symptoms and mood issues, predisposition to gallstones, dysbiosis and gut issues, medication intolerances, oestrogen dominance symptoms, impaired dopamine from high glutamate levels, leaky gut and leaky brain.
- **ALP – low** - Liver enzyme used as a marker for liver and bone disorders. Low levels may result from hypothyroid, malnutrition, pernicious anaemia, scurvy, coeliac disease, excess vitamin Bs, and low zinc.
- **GGT – high** - GGT is an enzyme found mainly in the liver & is normally present in low levels in blood. When liver is injured or the flow of bile is obstructed, the GGT level rises. It is therefore a useful marker for detecting bile duct problems before obvious symptoms. Can also be high in chronic alcohol abuse.
- **Urate – high** - Urea is produced when protein is broken down by the body. There is a belief that uric acid is produced by the breakdown of purines in some foods. If too much is produced or not enough is excreted, it accumulates especially in the joints and can cause gout. Most uric acid is removed by the kidneys; the remainder excreted in the faeces. High levels may indicate poor kidney function, stress, alcohol, medications, some cancers, hypothyroidism, and poor antioxidant intake.
- **T4 – low** - T4 is the inactive hormone produced by the thyroid gland which is then converted to the active thyroid hormone T3. Thyroid hormones help regulate the body's metabolism.
- **Globulins – low** - Globulins are circulating immune proteins or immunoglobulins. Low levels may indicate low immune function.

FURTHER INVESTIGATIONS & REFERRALS

- H-Pylori breath test, PCR stool test, Endoscopy
- Check Blood pressure