



Decoding clinical utility of LifeLabs Patient Assessment Panels

Available in British Columbia

LifeLabs Patient Assessment Panels are a great tool for gaining comprehensive insights about your patient's health status, improving your understanding of the underlying imbalances that lead to disease. Here you can find the clinical relevance for each of the panels and when you might consider ordering them for your patients.

LifeLabs Patient Assessment Panels offer a:

- **Comprehensive** list of tests curated to meet your practice needs
- **Convenient** ordering process
- **Cost-effective** alternative over individual test ordering

Test name	Biomarkers tested	Clinical relevance
Healthy Living Assessment	• Complete Blood Count (CBC) + Differential • Ferritin • Iron/Total Iron Binding Capacity (TIBC) • Calcium (Serum) • Glucose • Phosphorus (PO4) • Hemoglobin A1c (HbA1c) • Thyroid Stimulating Hormone (TSH) • High-sensitivity C-reactive protein (hs-CRP) • Potassium • Sodium • Chloride • Bicarbonate (CO2) • Magnesium (serum) • Albumin • Alanine Aminotransferase (ALT) • Bilirubin (Total & Direct) • Lactate Dehydrogenase (LDH) • Alkaline Phosphatase (ALP) • Aspartate Amino Transferase (AST) • Gamma Glutamyl Transpeptidase (GGT) • Protein (Total) • Creatinine • Blood Urea Nitrogen (BUN) • Uric Acid • Cholesterol • Low-Density Lipoprotein (LDL) • High-Density Lipoprotein (HDL) • Triglycerides	The Healthy Living and Enhanced Healthy Living Assessments can effectively establish a patient baseline as well as assist to monitor progress following prescribed lifestyle changes or interventions. These comprehensive panels of blood tests provide insight into liver, kidney, blood, electrolyte, heart, and metabolic health. They may be recommended for elevated IgG to candida, abnormal cortisol levels, low DHEAS, low testosterone, suspected anemia or nutritional deficiency, low levels of essential elements, gastric or peptic ulcers, and general malaise. New additions to this panel: • <i>Magnesium</i>: Monitoring magnesium has many clinical benefits from being a cofactor in many reactions to helping relax skeletal and smooth muscle. Tests removed from this panel: • <i>Fibrinogen</i>: To better support you and your patients, fibrinogen has been removed from these panels, eliminating the need for immediate centrifugation and streamlining sample handling.

Test name	Biomarkers tested	Clinical relevance
Enhanced Healthy Living Assessment (Fasting)	Includes all tests in the Healthy Living Assessment, plus those listed below. • Vitamin B12 • Fasting Insulin • Vitamin D 25 • Erythrocyte Sedimentation Rate (ESR)	The Enhanced Health Living Assessment offers deeper insights beyond the Healthy Living Assessment, particularly into metabolic, blood, and heart health. This assessment panel should be collected while fasting.
Autoimmune Assessment	• Antinuclear Antibody (ANA) * • Rheumatoid Factor (RA) • Transglutaminase • Thyroperoxidase Antibody (TPO) • Anti-Thyroglobulin *Reflex testing of ENA and/or DNA may occur if ANA results abnormal. Additional fees apply.	The Autoimmune Assessment provides insight into levels of a variety of disease-specific antibodies. Research shows that organ-specific (e.g. thyroid peroxidase) and non-organ specific antibodies (e.g. rheumatoid factor) rise steadily in the years prior to diagnosis of autoimmune disease. By monitoring antibody levels, functional medicine practitioners may be able to identify and prevent or treat potential autoimmune disorders. ¹ The Autoimmune Assessment may be recommended in the presence of elevated gliadin antibodies or moderate or high risk for celiac disease associated with HLA antigens or other celiac markers.
Basic Thyroid Assessment	• Free Triiodothyronine (FT3) • Thyroid Stimulating Hormone (TSH) • Free Thyroxine (FT4) • Thyroperoxidase Antibody (TPO)	The Basic Thyroid Assessment is useful to assess the function of the thyroid gland by measuring levels of thyroid hormones (T3, T4) and thyroid-stimulating hormone (TSH) in the blood, to aid in diagnosis of conditions like hyperthyroidism (overactive thyroid) or hypothyroidism (underactive thyroid) and monitor treatment effectiveness for thyroid disorder. Understanding the balance between T3 and T4 allows the healthcare provider to make judgement on subclinical hypothyroidism that may not be apparent with fewer analytes.
Enhanced Thyroid Assessment (Fasting)	• Free Triiodothyronine (FT3) • Thyroid Stimulating Hormone (TSH) • Anti-Thyroglobulin (ATG) • Free Thyroxine (FT4) • Thyroperoxidase Antibody (TPO) • Reverse T3	The additional analytes in the Enhanced Thyroid Assessment increase the ability to understand thyroid dysfunction in cases where the clinical symptoms are not aligned with the previous laboratory values presenting within normal ranges for the other analytes.
Fatigue Assessment	• Complete Blood Count (CBC) + Differential • Ferritin • Iron/Total Iron Binding Capacity (TIBC) • Vitamin B12 • Thyroid Stimulating Hormone (TSH) • Mono Spot	The Fatigue Assessment provides insight into common causes of fatigue, which include anemias (macrocytic, microcytic, iron deficiency), infections (viral or bacterial), mononucleosis, and hypothyroidism. The Fatigue Assessment informs on nutritional causes of anemias including iron, B12 deficiency, thyroid function, and presence of antibodies to Epstein-Barr virus. The Fatigue Assessment may be recommended in the presence of low cortisol or when clinical signs and symptoms of general malaise are evident.

Test name	Biomarkers tested	Clinical relevance
Female Day 3 Panel <i>(Previously called Female Hormone Assessment)</i>	• Cortisol AM • Follicle Stimulating Hormone (FSH) • Progesterone • Dehydroepiandrosterone Sulphate (DHEAS) • Luteinizing Hormone (LH) • Testosterone • Estradiol (E2)	This panel is beneficial for patients showing signs of hormonal or metabolic imbalance, which can affect multiple systems and lead to conditions like polycystic ovary syndrome (PCOS), thyroid or adrenal dysfunction, metabolic syndrome, mood and cognitive issues, and menstrual irregularities. The Female Day 3 Panel may be recommended during the follicular phase of the menstrual cycle to evaluate key reproductive and regulatory hormones. It's particularly useful for diagnosing hormone imbalances and addressing concerns such as unexplained weight changes, persistent fatigue, menstrual irregularities, fertility issues, or mood disturbances. The panel includes FSH and LH to assess hypothalamic-pituitary health. <i>Note: Naturopaths are advised to use their clinical discretion to determine the most suitable testing day. The above timeline is recommended as the most common use case if the patient has a 28-day cycle. However, variations may occur based on factors such as an atypical ovulation day, or cycles that are shorter or longer than the standard 28-day period, and if a patient is going through cycle changes or is no longer menstruating.</i>
Female Day 21 Panel	• Estradiol (E2) • Progesterone	The Female Day 21 Panel is clinically useful for evaluating luteal phase adequacy, especially concerning ovarian function. It's commonly indicated for menstrual irregularities, suspected anovulation, and fertility concerns. This panel assesses key female hormones during the luteal phase, with serum progesterone measured around Day 21 to confirm ovulation and luteal phase status. Estradiol is also re-evaluated to ensure peak levels were reached during the follicular phase and maintained, providing insight into hormonal balance and the ability to support a healthy endometrial lining. <i>Note: Naturopaths are advised to use their clinical discretion to determine the most suitable testing day. The above timeline is recommended as the most common use case if the patient has a 28-day cycle. However, variations may occur based on factors such as an atypical ovulation day, or cycles that are shorter or longer than the standard 28-day period, and if a patient is going through cycle changes or is no longer menstruating.</i>
Female Fertility Assessment	• Anti-Müllerian Hormone (AMH) • Luteinizing Hormone (LH) • Progesterone • Free Thyroxine (FT4) • Testosterone (Total) • Thyroid Stimulating Hormone (TSH) • Prolactin (PRL) • Follicle Stimulating Hormone (FSH) • Bioavailable Testosterone • Estradiol (E2)	The Fertility Assessment provides insight into the most common hormone abnormalities that can affect fertility including elevated prolactin, thyroid disorders, progesterone insufficiency, and polycystic ovary syndrome. The Fertility Assessment may be recommended in the presence of decreased progesterone and elevated androgens in women or whenever infertility is a clinical concern.
Hematology Assessment	• Complete Blood Count (CBC) + Differential • Ferritin • Iron/Total Iron Binding Capacity (TIBC) • Vitamin B12	The Hematology Assessment provides insight into common markers of blood health. The Complete Blood Count (CBC) reports on the health of red blood cells, white blood cells and platelets. Iron, vitamin B12 and folate biomarkers are included to assess for anemias. The Hematology Assessment may be recommended in the presence of suspected anemias, nutritional deficiencies or any conditions related to blood health (e.g. infections, leukemias, blood clotting disorders).^{2,3,4,5}

Test name	Biomarkers tested	Clinical relevance
IV Panel	• Glucose-6-Phosphate Dehydrogenase (G6PD) • Bicarbonate (CO2) • Albumin • Sodium • Creatinine (including eGFR) • Calcium • Potassium • CBC + Differential • Magnesium (serum) • Chloride • Alanine Aminotransferase (ALT) • High-sensitivity C-reactive protein (hs-CRP)	The IV Panel provides a report on several analytes that support IV nutrient therapy. G6PD is one of the most common enzyme deficiencies and can lead to hemolysis during IV therapy with Vitamin C in susceptible individuals. ⁶ With the inclusion of G6PD, this panel can help to identify patients who might have a harmful experience with some forms of IV nutrient therapy.
Lipids Assessment (Fasting Preferred)	• Cholesterol • Low-Density Lipoprotein (LDL) • High-Density Lipoprotein (HDL) • Triglycerides	The Lipids Assessment reports on cholesterol, triglycerides and the lipid transport proteins LDL and HDL. Lipid levels are standard tests for assessing risk of cardiovascular disease. The Lipids Assessment may be recommended in the presence of low DHEAS in men or women, when androgens are high in women, or whenever cardiovascular disease is suspected.
Male Fertility Panel	• Testosterone, Total • Thyroid Stimulating Hormone (TSH) • Luteinizing Hormone (LH) • Bioavailable Testosterone • Follicle Stimulating Hormone (FSH) • High-sensitivity C-reactive protein (hs-CRP)	The Male Fertility Panel provides a thorough evaluation of the hormonal and inflammatory factors that can influence male fertility. By assessing multiple markers, it helps identify a wide range of potential issues that may affect reproductive health, offering a comprehensive and personalized approach to fertility care.
Men's Health Panel (Fasting)	• CBC + Differential • Prostate-Specific Antigen (PSA) • Testosterone, Total • Luteinizing Hormone (LH) • High-sensitivity C-reactive protein (hs-CRP) • Fasting Insulin • Alanine Aminotransferase (ALT)	The Men's Health Panel is an excellent screening assessment for male patients, helping to monitor blood cell function, hormonal balance, prostate health, inflammation, and metabolic status. The panel serves as a preventive tool by identifying risk factors for chronic diseases and can guide naturopaths in recommending appropriate treatments, lifestyle changes, and preventive measures. This panel is appropriate for men of all ages, with increased relevance for those over 40 years of age or those with specific risk factors or symptoms.
Metabolic Assessment (Fasting)	• Gamma Glutamyl Transpeptidase (GGT) • Glucose (Fasting) • Sex Hormone Binding Globulin (SHBG) • hs-CRP • Fasting Insulin • Hemoglobin A1c (HbA1c) • Triglycerides	The Metabolic Assessment informs on biomarkers commonly used to identify metabolic syndrome, which manifests with three or more of the following signs: abdominal obesity, elevated serum glucose, elevated triglycerides, high blood pressure, and low HDL levels. This assessment is recommended in the presence of certain hormone patterns linked to increased risk of metabolic syndrome. These include elevated cortisol, high androgen levels in women, and low androgen levels in men. ⁷

Test name	Biomarkers tested	Clinical relevance
Mineral Assessment	• Calcium, Ionized • Zinc (serum) • Copper (serum) • Magnesium (serum)	The Mineral Assessment provides insight into serum levels of common minerals including calcium (the active ionized form), copper, magnesium and zinc. Serum levels of minerals are generally reflective of recent intake, but a normal result does not preclude the possibility of a mild or moderate deficiency since body stores may be lower than serum levels. The Mineral Assessment may be recommended when urine essential elements are abnormal, hair element analysis exhibits a noticeable 'left shift' or whenever deficiencies or insufficiencies of key minerals are suspected.

References:

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