



**Available in Ontario
and Saskatchewan**

Why Order Patient Assessment Panels?

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. Each panel has been developed with specific clinical questions in mind. Here you can find the clinical relevance for each of the panels and when you might consider ordering them for your patients.



Healthy Living and Enhanced Healthy Living Assessment

The Healthy Living and Enhanced Healthy Living Assessments are comprehensive panels of blood tests that provide insight into liver, kidney, blood, electrolyte, heart and metabolic health. These assessments may be used as an initial screening, or ordered as a follow-up assessment. The Healthy Living and Enhanced Healthy Living Assessments may be recommended in the presence of elevated IgG to candida, abnormal cortisol levels, low DHEAS, low testosterone, suspected anemia or nutritional deficiency, low levels of essential elements, gastric or peptic ulcer, and/or general malaise.

Nutrient Assessment

The Nutrient Assessment provides insight into the serum levels of vitamins A, B6, B12, C and E. It also reports on serum levels of common minerals including calcium (the active ionized form), copper, magnesium and zinc. Serum levels of vitamins and 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 Nutrient Assessment may be recommended when nutrient deficiency or malabsorption is suspected, urine essential elements are abnormal, hair element analysis exhibits a noticeable 'left shift' or whenever deficiencies or insufficiencies of key minerals are suspected.

Metabolic Assessment (Fasting)

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. The Metabolic 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.¹

Inflammation Assessment

The Inflammation Assessment provides insight into a variety of markers of inflammation. Acute phase reactants are proteins that rise or fall in the presence of inflammation. The positive acute phase reactants CRP-hs, ESR, ferritin and fibrinogen increase in the presence of inflammation. The negative acute phase reactant, albumin, decreases with inflammation. Red blood cell distribution width (RDW) is another good biomarker of inflammation. Inflammation increases gut permeability, may interfere with steroidogenesis, promotes obesity, is a cause of cardiovascular disease and has been implicated in mood disorders. The Inflammation Assessment may be recommended in the presence of elevated IgG antibodies to food or candida, elevated fecal calprotectin, a low anabolic/catabolic hormone ratio, an elevated oxidative stress marker such as 8OHdG, and any other clinical condition that may be exacerbated by inflammation.

Methylation Assessment

The Methylation Assessment provides insight into serum levels of vitamins required for methylation as well as indicators of ability to methylate. Vitamins B12 and folate are essential for methylation and homocysteine is a good indicator of ability to methylate.² Methylation is essential for DNA/RNA production, neurotransmitter synthesis, estrogen metabolism, detoxification, histamine metabolism, fat metabolism, cellular energy and liver health. The Methylation Assessment may be recommended in the presence of high estrogens, a low ratio of 2-methoxyestrone to 2-hydroxyestrone, or whenever signs and symptoms of impaired methylation are observed.

Vitamin Assessment

The Vitamin Assessment provides insight into the serum levels of vitamins A, B6, B12, C and E. Serum levels of vitamins 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 Vitamin Assessment may be recommended when nutrient deficiencies are suspected, or when there is evidence of malabsorption.

Hematology Assessment

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).^{3,4,5,6}

Lipids Assessment (Fasting preferred)

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.



Mineral Assessment

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.

Thyroid Assessment

The Thyroid Assessment provides insight into the major thyroid hormones and thyroid antibodies that inform on thyroid disorders including TSH, free T3, free T4, reverse T3, TPO and anti-thyroglobulin antibodies. A Thyroid Assessment may be recommended when hyper- or hypothyroidism is suspected or when hormone imbalances are present that affect, or are affected by, thyroid hormone function. In particular, high cortisol, low cortisol, elevated estrogens, and low DHEAS all have important interactions with thyroid hormones.

Autoimmune Assessment

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. In addition, research has shown that removal of wheat gluten from the diet often results in a significant decline in antibody levels. By monitoring antibody levels, functional medicine practitioners may be able to identify and prevent or treat potential autoimmune disorders.⁷ 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.

Female Hormone Assessment

The Female Hormone Assessment is comprised of five major hormones. Interactions between these hormones are fundamental to overall health. Imbalances may negatively impact health and if left untreated may lead to more serious health concerns including polycystic ovary syndrome, thyroid dysfunction, adrenal dysfunction, metabolic syndrome, mental health concerns or chronic illnesses such as lupus and rheumatoid arthritis. The Female Hormone Assessment may be recommended when hormone imbalance is suspected or when the patient presents with weight management issues, chronic fatigue, or mood disorders.

Fertility Assessment

The Fertility Assessment provides insight into the most common hormone abnormalities that can affect fertility including elevated prolactin, thyroid disorders, progesterone insufficiency, low testosterone in men, and polycystic ovary syndrome. Stress can also affect fertility, so consideration may be given to ordering the Comprehensive Hormone Insights™ (CHI) for a view to cortisol production/patterns. The Fertility Assessment may be recommended in the presence of decreased progesterone and elevated androgens in women and increased alpha-reductase activity in men, or whenever infertility is a clinical concern.

Men's Health Assessment

The Men's Health Assessment provides insight via the biomarkers most relevant to men's health. Men typically suffer heart attacks about seven years earlier than women, making lipid measurements an important part of the panel. In Canada, prostate cancer represents 21% of new cancers in men^{8,9} and hyperprolactinemia is a common finding with impotence or infertility. The Men's Health Assessment may be recommended when androgens are low, estrogens are high or when signs and symptoms related to sexual or cardiac health are noted.

Fatigue Assessment

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 and folate 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.

Liver/Digestion Assessment

The Liver/Digestion Assessment provides insight into liver and gallbladder function. A broad range of liver enzymes are tested including: ALT, ALP, AST, GGT and LDH. Gallbladder function is assessed through total and direct bilirubin. Measurement of multiple markers helps determine causes of dysfunction. The Liver/Digestion Assessment may be recommended when poor liver clearance is suspected, when estrogens are high or in the presence of toxicity.

References:

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