



Accurate Clinic

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A Guide to
The 4 Domains

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Blood tests performed at Accurate Clinic

This set of blood tests is used to evaluate four key areas of one's health. These results help guide recommendations for supplements and lifestyle changes. Here's what each test measures and why it matters:

The Four Health Domains We Assess

1. **Systemic Inflammation** – chronic, low-grade inflammation throughout the body
2. **Neuroinflammation** – brain health and pain processing
3. **Oxidative Stress** – damage caused by harmful molecules called free radicals
4. **Mitochondrial Function** – cellular energy and antioxidant production

Core Laboratory Panel

hs-CRP (High-Sensitivity C-Reactive Protein)

This measures inflammation throughout your body. Chronic inflammation is linked to heart disease, chronic pain, and many other conditions. Lower levels are better—we aim for less than 1.0 mg/L.

Vitamin C

Vitamin C is the most important water-soluble antioxidant in your blood. It protects cells from oxidative damage and supports immune function. Optimal levels are above 50 µmol/L (0.9 mg/dL); levels below 28 µmol/L (0.5 mg/dL) indicate insufficiency.

Vitamin D

Vitamin D supports your immune system and helps control inflammation. Many people are deficient without knowing it. Optimal levels are between 40-60 ng/mL.

Vitamin B6 (Pyridoxal Phosphate)

Vitamin B6 is essential for over 160 enzymatic reactions in your body, including nerve function and energy metabolism. Low levels are surprisingly common. Optimal plasma levels are above 30 nmol/L; levels in the range of 50–100 nmol/L are considered ideal.

Vitamin B9 (Folate)

Folate is critical for DNA repair, methylation, and brain health. It works closely with vitamin B12. Red blood cell folate should be above 400 nmol/L; serum folate above 6.8 nmol/L (3 ng/mL) indicates adequacy.

Vitamin B12

B12 is essential for nerve health and energy production in your cells. Low levels can cause fatigue, memory problems, and nerve symptoms. We look for levels above 450 pg/mL for optimal function.

RBC Magnesium (Red Blood Cell Magnesium)

Magnesium supports nerve function, muscle relaxation, and energy production. Unlike standard magnesium tests, this measures magnesium inside your cells, giving a more accurate picture. Normal range is 4.2-6.8 mg/dL.

Zinc

Zinc supports immune function, wound healing, and acts as an antioxidant. Plasma zinc should be above 70 µg/dL (11 µmol/L); lower levels indicate deficiency.

OmegaCheck & Omega-3 Index

These measure the percentage of healthy omega-3 fats in your red blood cells. Omega-3s reduce inflammation in both the body and brain. An optimal level is above 5.5 (OmegaCheck) or 8% (Omega Index).

HbA1c (Hemoglobin A1c)

This shows your average blood sugar over the past 2-3 months. Elevated blood sugar increases oxidative stress and inflammation. Normal is below 5.7%.

BMI (Body Mass Index)

While not a blood test, BMI helps assess metabolic health and inflammation risk. Excess body fat promotes chronic inflammation.

Waist Circumference

Like BMI, this measurement helps assess metabolic health and inflammation risk. Abdominal fat is particularly inflammatory. Risk increases above 40 inches for men and 35 inches for women.

Expanded Panel (When Recommended)

GGT (Gamma-Glutamyl Transferase)

Though often associated with liver health, GGT is also a marker of oxidative stress. Elevated levels suggests increased stress from free radicals. Optimal level is below 30 U/L.

Uric Acid

High uric acid levels contribute to both oxidative stress and inflammation. While very high levels cause gout, even moderately elevated levels can be harmful. Optimal ranges differ for men (3.5-7.2 mg/dL) and women (2.5-6.0 mg/dL).

Ferritin

Ferritin reflects your iron stores. While iron is essential, excess iron acts as a pro-oxidant, generating harmful free radicals. Optimal levels are 30-150 ng/mL; levels above 150 may increase oxidative stress.

Homocysteine

This amino acid, when elevated, indicates problems with methylation—a critical process for brain health, detoxification, and DNA repair. High homocysteine is linked to neuroinflammation and cardiovascular risk. Optimal is below 8 µmol/L.

MMA (Methylmalonic Acid)

MMA is a sensitive marker of vitamin B12 function at the cellular level. It detects B12 deficiency even when blood B12 levels appear normal. Elevated MMA suggests mitochondria (cellular energy factories) aren't functioning optimally. Normal is below 260 nmol/L.

Genetic Testing (MTHFR)

If your homocysteine is elevated (elevated above 10 µmol/L) or you haven't responded well to standard supplements, your provider may recommend testing for MTHFR gene variants. This gene affects how your body processes B vitamins and can guide more personalized supplement choice