

Top Biomarkers for Internal Health

Category	Biomarker	What It Indicates	Optimal Range/Considerations
Cardiovascular Health	LDL Cholesterol	Levels of low-density lipoprotein, associated with heart disease	< 100 mg/dL (lower is better)
Cardiovascular Health	HDL Cholesterol	Levels of high-density lipoprotein, protective against heart disease	> 60 mg/dL (higher is better)
Cardiovascular Health	Triglycerides	Fat in the blood, high levels can increase heart disease risk	< 150 mg/dL
Cardiovascular Health	Blood Pressure	Force of blood against artery walls, high levels strain the heart	120/80 mmHg
Metabolic Health	Fasting Blood Glucose	Blood sugar levels after fasting, indicates insulin function	70-99 mg/dL
Metabolic Health	HbA1c	Average blood sugar over 2-3 months, used to diagnose diabetes	< 5.7%
Metabolic Health	Insulin	Hormone regulating blood sugar, high levels can indicate insulin resistance	2-25 µIU/mL
Metabolic Health	C-Peptide	Marker of insulin production, helps assess pancreatic function	0.5-2.0 ng/mL
Liver Health	ALT (Alanine Aminotransferase)	Enzyme indicating liver cell damage or inflammation	7-56 U/L
Liver Health	AST (Aspartate Aminotransferase)	Another enzyme that can indicate liver damage	10-40 U/L
Liver Health	GGT (Gamma-Glutamyl Transferase)	Enzyme linked to liver function, high levels indicate liver issues	9-48 U/L
Liver Health	Bilirubin	Waste product	0.1-1.2 mg/dL

		processed by the liver, high levels indicate liver dysfunction	
Kidney Health	Creatinine	Waste product filtered by kidneys, high levels indicate kidney issues	0.6-1.2 mg/dL
Kidney Health	BUN (Blood Urea Nitrogen)	Measure of kidney function, high levels indicate impaired kidney function	7-20 mg/dL
Kidney Health	eGFR (Estimated Glomerular Filtration Rate)	Indicates how well kidneys filter blood, low levels suggest kidney disease	> 90 mL/min/1.73 m ² (optimal)
Inflammation	CRP (C-Reactive Protein)	Marker of inflammation, high levels can indicate chronic disease risk	< 1.0 mg/L (low risk), > 3.0 mg/L (high risk)
Inflammation	ESR (Erythrocyte Sedimentation Rate)	Non-specific inflammation marker	0-22 mm/hr (men), 0-29 mm/hr (women)
Inflammation	Homocysteine	Amino acid linked to heart disease, high levels indicate inflammation	4-15 µmol/L
Nutritional Status	Vitamin D (25-hydroxyvitamin D)	Indicates vitamin D status, essential for bone and immune health	30-100 ng/mL
Nutritional Status	Ferritin	Iron storage protein, low levels indicate iron deficiency	20-500 ng/mL (men), 20-200 ng/mL (women)
Nutritional Status	B12 (Cobalamin)	Indicates B12 status, essential for nerve function and red blood cells	200-900 pg/mL
Thyroid Function	TSH (Thyroid-Stimulating Hormone)	Regulates thyroid function, imbalances can indicate hypothyroidism or hyperthyroidism	0.4-4.0 mIU/L
Thyroid Function	Free T3 and Free T4	Active thyroid hormones, levels indicate thyroid function	Free T3: 2.0-4.4 pg/mL, Free T4: 0.8-1.8 ng/dL
Oxidative Stress	Glutathione	Major antioxidant, low levels indicate	400-600 µmol/L (red blood cells)

		oxidative stress	
Oxidative Stress	Uric Acid	Can indicate oxidative stress and risk for gout	3.5-7.2 mg/dL
Bone Health	Calcium	Essential for bone health, regulated by parathyroid hormone	8.5-10.2 mg/dL
Bone Health	PTH (Parathyroid Hormone)	Regulates calcium levels in the blood, high levels can indicate bone disease	10-65 pg/mL
Hormonal Balance	Testosterone	Indicates androgen status, important for muscle mass and energy	300-1,000 ng/dL (men), 15-70 ng/dL (women)
Hormonal Balance	Estrogen (Estradiol)	Key hormone in reproductive health, imbalances affect mood and bone health	15-350 pg/mL (women), 10-40 pg/mL (men)
Hormonal Balance	Cortisol	Stress hormone, high levels indicate chronic stress	6-23 µg/dL (morning levels)