Peaks

🟠 **PhenoAge Markers**
🟦 **Core Markers In-APP**
🟩 **Core Markers In-APP Alternatives (more accessible)**

BLOOD TESTS

System	Test	Description	Clinical Significance
Haematology	Red Blood Cells (RBC)	Count of oxygen-carrying cells	Anemia, dehydration, blood loss
Haematology	Hemoglobin (Hb)	Oxygen-carrying protein in RBCs	Anemia, polycythemia
Haematology	Hematocrit (Hct / PCV)	Percentage of blood volume made up by RBCs	Anemia, dehydration
Haematology	🟠 **Mean Corpuscular Volume (MCV)**	Average size of RBCs	Microcytic or macrocytic anemia
Haematology	Mean Corpuscular Hemoglobin (MCH)	Average amount of hemoglobin per RBC	Type of anemia
Haematology	Mean Corpuscular Hemoglobin Concentration (MCHC)	Concentration of hemoglobin in RBCs	Hypochromic or hyperchromic anemia
Haematology	🟠 **Red Cell Distribution Width (RDW)**	Variation in RBC size	Mixed anemia types
Haematology	Platelet Count	Number of platelets involved in clotting	Bleeding disorders, thrombocytopenia/thrombocytosis
Haematology	🟠 **White Blood Cells (WBC)**	Count of immune cells	Infection, inflammation, immune disorders
Hematology	🟠 **Lymphocyte %**	The % of lymphocytes (a type of white blood cell) in relation to the total white blood cell count.	Reflects immune system status. Abnormal values can indicate infection inflammation, immune deficiency, stress, or hematologic disorders.
Haematology	Peripheral Blood Film	Microscope examination of the morphology of blood cells	Aids in the diagnosis of anemia, infections, and hematologic malignancies.
Metabolic	HbA1c	Glycated hemoglobin	Long-term glycemic control
Metabolic	🟠 **Glucose**	Blood sugar level	Diabetes diagnosis and monitoring
Metabolic	Insulin	Hormone regulating glucose	Insulin resistance, metabolic syndrome

Metabolic	🟦**Homocysteine**	Amino acid linked to B-vitamin status	Cardiovascular and nutritional status
Metabolic	🟦**HOMA-IR**	Calculated score that estimates how effectively the body responds to insulin.	Helps identify insulin resistance, a key factor in the development of type 2 diabetes, metabolic syndrome, and cardiovascular disease.
Metabolic	🟩 **TG:HDL Ratio (alternative to HOMA-IR)**	Ratio of triglycerides to high-density lipoprotein cholesterol.	Strong predictor of insulin resistance, metabolic syndrome, and cardiovascular risk. Lower ratios (<2) are generally favorable.
Renal	Sodium	Sodium helps regulate fluid balance, nerve signals, and muscle function.	Abnormal levels can indicate dehydration, kidney issues, or neurological dysfunction.
Renal	Potassium	Potassium is essential for muscle contractions, nerve transmission, and heart rhythm.	Clinical Significance: Imbalances may lead to muscle weakness or life-threatening cardiac arrhythmias.
Renal	Chloride	Chloride maintains acid-base balance and supports fluid regulation.	Deviations can signal metabolic disturbances or kidney dysfunction
Renal	🟠 **Creatinine**	Waste product filtered by kidneys	Kidney function assessment
Renal	Blood Urea Nitrogen (BUN)	Nitrogen in blood from urea	Kidney function and hydration status
Renal	eGFR	eGFR estimates how well the kidneys are filtering waste from the blood.	Key indicator of kidney function and is used to detect and monitor chronic kidney disease (CKD)
Renal	Uric Acid	A waste product from the breakdown of purines, found in certain foods and cells.	Elevated levels may indicate gout, kidney dysfunction, or increased risk of cardiovascular and metabolic diseases.
Thyroid	Free T4	Free Thyroxine	Thyroid function
Thyroid	Free T3	Free Triiodothyronine	Thyroid function
Thyroid	TSH	Thyroid Stimulating Hormone	Thyroid function
Bone / Joint	Calcium	Mineral for bone and muscle function	Bone health, parathyroid function
Bone / Joint	Phosphate	Mineral involved in bone metabolism	Bone and kidney health
Immune	Rheumatoid Factor	Autoantibody	Autoimmune disease diagnosis
Immune	🟦🟠 **hsCRP**	Inflammatory marker	Acute inflammation
Iron	Ferritin	Iron storage protein	Iron stores

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Iron	Serum iron	Circulating Iron level (not necessarily reflective of iron stores)	Anemia, iron deficiency
Iron	Total iron binding capacity	TIBC reflects the blood's capacity to bind iron with transferrin.	Elevated TIBC suggests iron deficiency, while low levels may indicate chronic disease or iron overload.
Iron	Transferrin saturation	% of transferrin that is bound to iron and available for use by the body.	Helps assess iron availability and is used to diagnose iron deficiency or iron overload conditions.
Nutritional	Folate	Folate status	Anemia, neural health
Nutritional	Vitamin B12	Vitamin B12 status	Neurological and hematological health
Nutritional	Vitamin D	Vitamin important for bone health	Bone density and calcium absorption
Nutritional	Copper	A trace mineral involved in iron metabolism, connective tissue formation, and nervous system function.	Abnormal levels may indicate Wilson's disease, malnutrition, or inflammatory conditions.
Nutritional	Zinc	Trace element essential for immune function, wound healing, and enzyme activity.	Deficiency can impair immunity and healing, while excess may cause toxicity and interfere with copper absorption
Nutritional	Magnesium	Supports muscle and nerve function, energy production, and bone health.	Imbalances can lead to muscle cramps, arrhythmias, or neurological symptoms.
Lipid / Heart	Total cholesterol	Measures the combined levels of HDL, LDL, and other lipid components in the blood.	Elevated levels are associated with increased risk of atherosclerosis and cardiovascular disease.
Lipid / Heart	Triglycerides	A type of fat stored in the blood and used for energy.	High levels are linked to metabolic syndrome, pancreatitis, and cardiovascular risk.
Lipid / Heart	High-Density Lipoprotein (HDL)	"Good" cholesterol because it helps remove excess cholesterol from the bloodstream.	Higher HDL levels are protective against heart disease.
Lipid / Heart	Low-Density Lipoprotein (LDL)	LDL is considered "bad" cholesterol as it can deposit cholesterol in artery walls.	Elevated LDL increases the risk of plaque buildup and cardiovascular disease
Lipid / Heart	Cholesterol / HDL ratio	This ratio compares total cholesterol to HDL levels to assess cardiovascular risk.	A higher ratio suggests greater risk of heart disease.
Lipid / Heart	🟦 **Apolioprotein B (ApoB)**	A protein in atherogenic particles, reflecting the number of cholesterol-carrying particles.	Elevated ApoB is a strong predictor of cardiovascular risk, often more accurate than LDL alone.

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Lipid/Metabolic	🟩 **Non-HDL Cholesterol (alternative to ApoB)**	Total cholesterol minus HDL cholesterol (i.e., all atherogenic particles).	Better predictor of cardiovascular disease than LDL alone, since it includes all apoB-containing lipoproteins (LDL, VLDL, IDL, Lp(a)).
Lipid/Inflammatory	🟦 **Omega-3 Index**	% of EPA + DHA in red blood cell membranes.	Reflects long-term omega-3 intake and cardiovascular protection. Higher values (≥8%) linked to reduced risk of sudden cardiac death, lower inflammation, and better brain health.
Liver	Total bilirubin	Pigment from red blood cell breakdown	Liver function and bile flow
Liver	🟠 **Alkaline Phosphatase (ALP)**	Enzyme related to bile ducts and bone	Liver or bone disorders
Liver	Aspartate aminotransferase (AST)	Liver enzyme indicating liver damage	Liver disease, muscle damage
Liver	Alanine aminotransferase (ALT)	Liver enzyme indicating hepatocellular injury	Liver disease, hepatitis
Liver	Gamma-glutamyl transferase (GGT)	GGT is an enzyme involved in liver metabolism and bile transport.	Elevated levels may indicate liver disease, bile duct obstruction, or alcohol use.
Liver	Total protein	Total protein measures the combined levels of albumin and globulin in the blood.	Abnormal levels can reflect nutritional status, liver function, or chronic disease.
Liver	🟠 **Albumin**	A protein produced by the liver that helps maintain oncotic pressure and transport substances.	Low levels may indicate liver disease, kidney dysfunction, or malnutrition
Liver	Globulin	Globulin includes various proteins involved in immune function and transport.	Changes in globulin levels may signal immune disorders, liver disease, or chronic inflammation.
Liver	Albumin/Globulin ratio	This ratio compares albumin to globulin levels to assess protein balance.	An abnormal ratio may suggest liver dysfunction, immune imbalance, or chronic disease.

BLOOD TESTS MALE

System	Test	Description	Clinical Significance
Hormones	Total Testosterone	Measures the overall level of testosterone in the blood.	Low levels may indicate hypogonadism, fatigue, reduced libido, and risk for metabolic issues.

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Hormones	Free Testosterone	The fraction of testosterone not bound to proteins (active form).	More reflective of symptoms than total T; low free T can drive energy, mood, and muscle loss.
Hormones	Sex Hormone Binding Globulin (SHBG)	Protein that binds testosterone and estradiol, regulating bioavailability.	High SHBG lowers free T; low SHBG may suggest insulin resistance, obesity, or metabolic syndrome.
Hormones	Luteinizing Hormone (LH)	Hormone from the pituitary that stimulates testosterone production in the testes.	Helps distinguish testicular vs pituitary cause of low testosterone.
Hormones	Estradiol (E2)	Main form of estrogen in men, produced from testosterone conversion.	Too high can cause gynecomastia and low libido; too low affects bone, joints, and mood.
Hormones	Dehydroepiandrosterone sulfate (DHEA-S)	Precursor steroid mainly from adrenal glands.	Marker of adrenal function and overall vitality; low levels linked to aging and fatigue.
Hormones	Insulin-like Growth Factor 1 (IGF-1)	Reflects growth hormone activity in the body.	Important for muscle repair, strength, and longevity; low levels may suggest GH deficiency.

BLOOD TESTS FEMALE

System	Test	Description	Clinical Significance
Hormones	Estradiol (E2)	Main female estrogen varies by cycle/menopause.	Key for fertility, bone health, heart health, and mood regulation.
Hormones	Progesterone	Produced after ovulation, it balances estrogen.	Low levels affect fertility, PMS, cycle regularity, and mood.
Hormones	Follicle Stimulating Hormone (FSH)	Pituitary hormone driving egg development.	High levels can indicate menopause transition or low ovarian reserve.
Hormones	Luteinizing Hormone (LH)	Triggers ovulation, works with FSH.	Imbalance with FSH may point to PCOS or pituitary issues.
Hormones	Anti-Müllerian Hormone (AMH)	Reflects ovarian reserve (egg supply).	Useful for fertility and menopause planning.
Hormones	Testosterone (Total + Free)	Present at lower levels but crucial in women too.	Important for energy, libido, muscle, and bone.
Hormones	Thyroid Stimulating Hormone (TSH)	Pituitary hormone that tells your thyroid how much hormone to make, helping regulate metabolism and energy.	Thyroid dysfunction often mimics hormone issues — helpful for context.

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URINE TEST

System	Test	Description	Clinical Significance
Renal	🟦**Urine microalbumin / creatinine ratio (UACR)**	Ratio of albumin to creatinine in urine	Early detection of kidney damage

DEXA SCAN

System	Test / Measure	Description	Clinical Significance
Body Composition	DEXA – Fat Mass %	Proportion of body weight as fat tissue.	Excess body fat, particularly visceral fat, raises risks of metabolic syndrome, diabetes, cardiovascular disease.
Body Composition	DEXA – Lean Mass	Amount of muscle tissue in the body.	Low lean mass (sarcopenia) is linked to frailty, insulin resistance, and poor aging outcomes.
Skeletal	DEXA – Bone Mineral Density (BMD)	Measures bone density (spine, hip).	Low BMD = osteoporosis risk, higher fracture risk. Important especially with aging and menopause.
Fat Distribution	DEXA – Visceral Adipose Tissue (VAT)	Direct measure of fat stored around abdominal organs.	Strong predictor of insulin resistance, cardiovascular disease, and metabolic dysfunction.

OTHER

System	Test / Measure	Description	Clinical Significance
Metabolic / Body Composition	🟦 **Waist-to-Height Ratio (WHtR)**	Measure waist circumference and divide by height. Tracked as a ratio (e.g., 0.52).	Simple marker of central fat; higher values link to higher cardiometabolic risk (T2D/CVD). Often outperforms BMI for “risk” signaling.

Musculoskeletal	🟦**Grip Strength (Dynamometer)**	Handheld device. Best of 2–3 max squeezes per hand	Strong proxy for overall strength/frailty; lower grip links to higher disability + mortality risk.
Musculoskeletal	🟩 **Dead Hang (alternative to dynamometer)**	Max time hanging from a bar with good form.	Proxy for grip endurance + shoulder capacity; useful functional benchmark (less clinically validated than dynamometer).
Cardiovascular	🟦**Average Resting Heart Rate (RHR)**	7-day average of true resting HR (waking/wearable).	Higher sustained RHR can signal lower fitness, higher stress/illness, poorer recovery..
Cardiovascular	🟦**VO_2 Max**	Maximal oxygen uptake (ml/kg/min). Lab-measured or wearable-estimated; track trend.	Powerful indicator of cardiorespiratory fitness; higher VO_2 max = lower mortality/CVD risk.
Cardiovascular	🟦**Blood Pressure (BP)**	Home cuff averages (ideally multiple readings	Key driver of stroke/heart/kidney risk; lowering BP reduces
Sleep / Recovery	🟦**Average Sleep Score**	7-day average from the same wearable/app.	Low scores suggest poorer recovery and are associated with worse metabolic/cognitive outcomes over time.