Comprehensive Medical Parameters for Medivire AI Predictor

This document provides a comprehensive table of medical parameters used in the Medivire AI Predictor module. These parameters are essential for assessing an individual's health status and predicting potential risks for various conditions. The table includes parameter names, normal ranges, units of measurement, and their clinical significance.

Parameter Name	Normal Range	Unit	Indicates / Related Conditions
Age	—	Years	General risk increases with age
Gender	Male / Female / Other	—	Affects risk for many conditions
Blood Pressure (Systolic)	90–120	mmHg	High: Hypertension; Low: Hypotension
Blood Pressure (Diastolic)	60–80	mmHg	
Heart Rate (Pulse)	60–100	bpm	High: Stress, fever, heart issues
Respiratory Rate	12–20	breaths/min	Lung function
Body Temperature	97.8–99.1	F	Fever, infection
Blood Sugar (Fasting)	70–100	mg/dL	Diabetes
Blood Sugar (Postprandial)	<140	mg/dL	
Hemoglobin (Hb)	M: 13.8–17.2, F: 12.1–15.1	g/dL	Anemia
Platelet Count	150,000–450,000	cells/µL	Bleeding/clotting disorders
White Blood Cell (WBC) Count	4,500–11,000	cells/µL	Infection, immunity
Red Blood Cell (RBC) Count	M: 4.7–6.1, F: 4.2–5.4	million cells/µL	Anemia, polycythemia
Cholesterol (Total)	<200	mg/dL	Heart disease risk
LDL (Bad Cholesterol)	<100	mg/dL	
HDL (Good Cholesterol)	>40 (M), >50 (F)	mg/dL	
Triglycerides	<150	mg/dL	
Body Mass Index (BMI)	18.5–24.9	kg/m^2	Obesity, malnutrition

Parameter Name	Normal Range	Unit	Indicates / Related Conditions
Oxygen Saturation (SpO$_2$)	95–100	%	Hypoxia, respiratory problems
Creatinine (Serum)	M: 0.74–1.35, F: 0.59–1.04	mg/dL	Kidney function
Urea (Blood Urea Nitrogen)	7–20	mg/dL	Kidney health
Liver Enzymes (ALT / AST)	ALT: 7–56, AST: 10–40	U/L	Liver function, hepatitis
Calcium	8.6–10.3	mg/dL	Bone health, thyroid issues
Vitamin D	20–50	ng/mL	Bone health, immunity
Thyroid Stimulating Hormone (TSH)	0.4–4.0	μIU/mL	Hyperthyroidism, hypothyroidism
C-Reactive Protein (CRP)	<10	mg/L	Inflammation, infection, heart disease
HbA1c (Glycated Hemoglobin)	<5.7% (Normal), 5.7–6.4% (Pre-diabetic)	%	Long-term blood sugar control
ECG Result (Normal/Abnormal)	—	—	Heart rhythm, ischemia, etc.
Smoking Status	Smoker / Non-Smoker	—	Cardiovascular and respiratory risk
Alcohol Intake	Occasional / Regular / None	—	Liver and metabolic health
Exercise Level	Sedentary / Moderate / Active	—	Overall fitness and heart health
Sleep Hours	6–8	Hours	Overall health and mental well-being

Parameter Name	Normal Range	Unit	Indicates / Related Conditions
Stress Level (Self-rated)	Low / Moderate / High	—	Mental and cardiovascular health

Usage in AI Predictor

These parameters can be categorized into Vitals, Metabolic Health, Organ Function, Blood Profile, Lifestyle, and General Information for use in the AI Predictor module. The module can output a Health Score (0–100), Health Status (Healthy / Needs Attention / At Risk), and Suggested Actions such as lifestyle changes or medical follow-ups.