

COMPREHENSIVE BLOOD WORK GUIDE

This is a list of blood markers I suggest you get tested at least once yearly. I've also provided you with the functional optimal ranges. In conventional (allopathic) medicine, lab test "normal ranges" are derived from the average values of the general population, which often includes people with undiagnosed or developing health issues; these ranges are primarily designed to detect overt disease, not early dysfunction. Functional optimal blood ranges, on the other hand, are narrower target zones based on research into where physiological processes operate most efficiently, aiming to identify subtle imbalances before they progress into diagnosable conditions. Practitioners using functional ranges focus on prevention and optimization, seeking to correct borderline or subclinical shifts in lab markers that may be missed by conventional ranges, with the goal of supporting long-term wellness and reducing the risk of chronic disease.

MARKER	FUNCTIONAL RANGE
Complete Blood Count (CBC)	
White blood cell	3.5 - 6.0 x 10E3 / uL / 3.5 - 6.00 x x10^9/L
Lymphocytes	30 - 35%
Neutrophils	50 - 60%
Monocytes	0 - 7%
Eosinophils	0 - 3%
Basophils	0 - 1%
Red blood cell	4.3 - 4.8 x 10^6/uL / 4.3 - 4.8 10^12/L
Hemoglobin	135 - 145 g/L / 13.5 - 14.5 g/dL
Hematocrit	35 - 39%

Mean corpuscular volume	84 - 92 fL/cell
Mean corpuscular hemoglobin	28 - 32 pg/cell
Mean corpuscular hemoglobin concentration	32 - 35 g/dL / 320 - 350 g/L
Red cell distribution width	11 - 13%
Platelet count	225 - 275 x 10 ³ mm ³ / 225 - 275 x 10 ⁹ /L
Sex Hormones	
Follicle Stimulating Hormone (FSH)	5-10 mIU/mL
Luteinizing Hormone (LH)	Follicular phase: 1.68–15 IU/L Mid-cycle peak: 21.9–56.6 IU/L Luteal phase: 0.61–16.3 IU/L For females who have gone through menopause, the normal range is 14.2–52.3 IU/L
Estradiol	Day 3 of cycle: < 293 pmol/L Mid-cycle: 550 -1828 pmol/L When on HRT, to protect brain and bones we like to see E2 between: 239-312 pmol/L. But it may go as high as 367 pmol/L or higher. Day 3 E < 80 pg/mL Mid-cycle: 150 - 498 pg/mL When on HRT to protect brain and bones minimum: 65-85 pg/mL. But may go as high as 150 pg/mL.
Progesterone	Luteal: 47.7 - 105 nmol/L When on HRT: 47.7 nmol/L Luteal: 15 - 33 ng/ml When on HRT: 5-15 ng/mL
Free Testosterone	Total: 0.52 - 2.95 nmol/L Free: 0.04 - 0.08 nmol/L

	Total: 15-85 ng/dL Free: 1.1-2.2 pg/ml / 0.11 - 0.22 ng/dL
Sex Hormone Binding Globulin (SHBG)	6.74-8.99 ug/mL / 60-80 nmol/L
Full Thyroid Panel	
Thyroid Stimulating Hormone (TSH)	1 - 1.5 uIU/mL
Free T3	5.22 - 6.75 pmol/L / 3.4 - 4.4 pg/mL
Free T4	18 - 23 pmol/L / 1.4 - 1.8 ng/dL
Reverse T3	<193 pmol/L / <15 ng/dL
Thyroid Peroxidase antibodies (TPO Ab)	Undetectable
Thyroglobulin antibodies (TgAb)	Undetectable
Metabolic Markers	
Fasting insulin	6.9 - 34.7 pmol/L / 1 - 5 uIU/mL
C-peptide	1.1 - 1.8 ng/mL
Glycomark	>15 ug/mL
HbA1C	4.5% - 5.2%
Inflammatory Markers	
High-sensitivity C-reactive protein (hs-CRP)	<0.3 mg/L

Erythrocyte sedimentation rate (ESR)	0-15 mm/hour
Lipids	
Cholesterol	3.11 - 6.22 mmol/L / 120 - 240 mg/dL
LDL	2.07-4.40 mmol/L / 80-170 mg/dL (<60 years old) 3.11-4.40 mmol/L / 120-170 mg/dL (>60 years old)
HDL	1.68 - 2.2 mmol/L / 65-85 mg/dL
Triglycerides	0.57 - 1.02 mmol/L / 50 - 90 mg/dL
Lipoprotein(a)	<75 nmol/L
Apolipoprotein B	<80 mg/dL / 0.8 g/L
FULL IRON STUDIES	
Iron	15.2 - 19.7 umol/L OR 85 - 110 ug/dL (mcg/dL)
Ferritin	50 - 100 ug/L or ng/mL (units are the same)
Soluble Transferrin Receptor	1.9 - 4.4 mg/L or 22.35–51.76 nmol/L
Total Iron Binding Capacity	44.7 - 62.6 umol/L OR 250-350 ug/dL (mcg/dL)
% Transferrin Saturation	25 - 35 (~35 for females)

