# Blood Reference Levels ............ in progress ...........

## > Sort by one column: click "Category" or "Component"

> Sort Components within Categories: click "Category", hold down Shift key, click "Component"

> Links to more info: [**W**](http://en.wikipedia.org/wiki/Main_Page) Wikipedia, [**M**](http://www.nlm.nih.gov/medlineplus/) MedlinePlus, [**P**](http://www.ncbi.nlm.nih.gov/sites/entrez?db=pubmed) PubMed

| Category | Component | Reference Range (*Harrison's Manual of Medicine, 17th ed*) | Analyte |
| --- | --- | --- | --- |
| Cardiac Function | Brain natriuretic peptide (BNP)     [W](http://en.wikipedia.org/wiki/B-type_natriuretic_peptide) [M](http://www.nlm.nih.gov/medlineplus/ency/article/007509.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Brain+natriuretic+peptide%22) | age and gender specific: <167 ng/L, <167 pg/mL | plasma |
| Cardiac Function | Creatine (phospho)kinase, activity (CPK)     [W](http://en.wikipedia.org/wiki/Creatine_kinase) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003504.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22creatinine+kinase%22+OR+%22creatinine+phosphokinase%22) | Males: 0.87-5.0 μkat/L, 51-294 U/L  Females: 0.66-4.0 μkat/L, 39-238 U/L | serum |
| Cardiac Function | Creatine (phospho)kinase-MB, mass     [W](http://en.wikipedia.org/wiki/Creatine_kinase) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003504.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22creatinine+kinase%22+OR+%22creatinine+phosphokinase%22) | 0-5.5 μg/L, 0-5.5 ng/mL | serum |
| Cardiac Function | Creatine (phospho)kinase-MB, pct. of total activity     [W](http://en.wikipedia.org/wiki/Creatine_kinase) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003504.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22creatinine+kinase%22+OR+%22creatinine+phosphokinase%22) | 0-4% | serum |
| Cardiac Function | Myoglobin     [W](http://en.wikipedia.org/wiki/Myoglobin) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003663.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=myoglobin) | Males: 19-92 μg/L  Females: 12-76 μg/L | serum |
| Cardiac Function | Troponin I     [W](http://en.wikipedia.org/wiki/Troponin_I) [M](http://www.nlm.nih.gov/medlineplus/ency/article/007452.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22troponin+I%22) | Normal, 99th%: 0-0.08 μg/L, 0-0.08 ng/mL | serum |
| Cardiac Function | Troponin T     [W](http://en.wikipedia.org/wiki/Troponin_T) [M](http://www.nlm.nih.gov/medlineplus/ency/article/007452.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22troponin+T%22) | Normal, 99th%: 0-0.1 μg/L, 0-0.1 ng/mL | serum |
| Coagulation | D-dimer     [W](http://en.wikipedia.org/wiki/D-dimer)   [P](http://www.ncbi.nlm.nih.gov/pubmed?term=D-dimer) | 0.22-0.74 μg/mL, 0.22-0.74 μg/mL | plasma |
| Coagulation | Fibrinogen     [W](http://en.wikipedia.org/wiki/Fibrinogen) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003650.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=fibrinogen) | 2.33-4.96 g/L, 233-496 mg/dL | plasma |
| Coagulation | Fibrin degr. products     [W](http://en.wikipedia.org/wiki/Fibrin_degradation_product) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003655.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22fibrin+degradation+product%22) | 0-1 mg/L, 0-1 μg/mL | plasma |
| Coagulation | Partial thromboplastin time, act. (aPTT)     [W](http://en.wikipedia.org/wiki/Partial_thromboplastin_time) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003653.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Partial+thromboplastin+time%22) | 26.3-39.4 s | plasma |
| Coagulation | Plasminogen, antigen     [W](http://en.wikipedia.org/wiki/Plasminogen)   [P](http://www.ncbi.nlm.nih.gov/pubmed?term=plasminogen) | 84-140 mg/L, 8.4-14.0 mg/dL | plasma |
| Coagulation | Plasminogen, functional     [W](http://en.wikipedia.org/wiki/Plasminogen)   [P](http://www.ncbi.nlm.nih.gov/pubmed?term=plasminogen) | 70-130% | plasma |
| Coagulation | Plasminogen activator inhibitor-1     [W](http://en.wikipedia.org/wiki/Plasminogen_activator_inhibitor-1)   [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Plasminogen+activator+inhibitor+1%22) | 4-43 μg/L, 4-43 ng/mL | plasma |
| Coagulation | Protein C, total antigen     [W](http://en.wikipedia.org/wiki/Protein_C) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003659.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22protein+C%22) | 70-140% | plasma |
| Coagulation | Protein C, functional     [W](http://en.wikipedia.org/wiki/Protein_C) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003659.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22protein+C%22) | 70-130% | plasma |
| Coagulation | Protein S, total antigen     [W](http://en.wikipedia.org/wiki/Protein_S) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003660.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22protein+S%22) | 70-140% | plasma |
| Coagulation | Protein S, functional     [W](http://en.wikipedia.org/wiki/Protein_S) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003660.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22protein+S%22) | 65-140% | plasma |
| Coagulation | Protein S, free antigen     [W](http://en.wikipedia.org/wiki/Protein_S) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003660.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22protein+S%22) | 70-140% | plasma |
| Coagulation | Prothrombin time     [W](http://en.wikipedia.org/wiki/Prothrombin_time) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003652.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22prothrombin+time%22) | 12.4-15.4 s | plasma |
| Coagulation | Thrombin time     [W](http://en.wikipedia.org/wiki/Thrombin_time)   [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22thrombin+time%22) | 15.3-18.5 s | plasma |
| Hematology, red cell | Erythrocyte count     W M P | Males: 4.30-5.60 x 1012/L, 4.30-5.60 x 106/mm3  Females: 4.00-5.20 x 1012/L, 4.00-5.20 x 106/mm3 | whole blood |
| Hematology, red cell | Erythrocyte sed. rate     W M P | Males: 0-15 mm/h  Females: 0-20 mm/h | whole blood |
| Hematology, red cell | Hematocrit (HCT)     W M P | Males: 38.8-46.4%  Females: 35.4-44.4% | whole blood |
| Hematology, red cell | Hemoglobin, glycosylated (HbA1C)     W M P | 4-6% | whole blood |
| Hematology, red cell | Hemoglobin     W M P | 0.6-5.0 mg/dL (6-50 mg/L) | plasma |
| Hematology, red cell | Hemoglobin     W M P | Males: 133-162 g/L, 13.3-16.2 mg/dL  Females: 120-158 g/L, 12.0-15.8 mg/dL | whole blood |
| Hematology, red cell | Hemoglobin A     W M P | 95-98% | whole blood |
| Hematology, red cell | Hemoglobin A2     W M P | 1.5-3.1% | whole blood |
| Hematology, red cell | Hemoglobin F     W M P | 0-2.0% | whole blood |
| Hematology, red cell | Mean corpuscular hemoglobin (MCH)     W M P | 26.7-31.9 pg/cell, 323-359 g/L, 32.3-35.9 g/dL | whole blood |
| Hematology, red cell | Mean corpuscular volume (MCV)     W M P | 79-93.3 fL, 79-93.3 μm3 | whole blood |
| Hematology, red cell | Mean corpuscular Hb of reticulocytes (CH)     W M P | 24-36 pg | whole blood |
| Hematology, red cell | Reticulocyte count     W M P | Males: 0.8-2.3% RBCs  Females: 0.8-2.0% RBCs | whole blood |
| Hematology, thrombocyte | Mean platelet volume (MPV)     W M P | 9.00-12.95 fL, 9.00-12.95 μm3 | whole blood |
| Hematology, thrombocyte | Platelet aggregation     W M P | > 65% in response to ADP, EPI, collagen, ristocetin, AA | platelet-rich plasma |
| Hematology, thrombocyte | Platelet count     W M P | 165-415 x 109/L, 165-415 x 103/mm3 | whole blood |
| Hematology, thrombocyte | Platelet mean volume     W M P | 6.4-11 fL, 6.4-11 μm3 | whole blood |
| Hematology, white cell | Leukocyte count     W M P | 3.54-9.06 x 109/L, 3.54-9.06 x 103/mm3 | whole blood |
| Hematology, white cell | Neutrophils     W M P | 40-70% | whole blood |
| Hematology, white cell | Bands     W M P | 0-5% | whole blood |
| Hematology, white cell | Lymphocytes     W M P | 20-50% | whole blood |
| Hematology, white cell | Monocytes     W M P | 4-8% | whole blood |
| Hematology, white cell | Eosinophils     W M P | 0-6%, 150-300 cells/μL, 150-300 cells/mm3 | whole blood |
| Hematology, white cell | Basophils     W M P | 0-2% | whole blood |
| Ion, trace metal, etc. | Calcium, total     W M P | 2.2-2.6 mmol/L, 8.7-10.2 mg/L | serum |
| Ion, trace metal, etc. | Calcium, ionized     W M P | 1.12-1.32 mmol/L, 4.5-5.3 mg/dL | whole blood |
| Ion, trace metal, etc. | Ceruloplasmin     [W](http://en.wikipedia.org/wiki/Ceruloplasmin) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003662.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=Ceruloplasmin) | 250-630 mg/L, 25-36 mg/dL | serum |
| Ion, trace metal, etc. | Chloride     W M P | 102-109 mmol/L, 102-109 meq/L | serum |
| Ion, trace metal, etc. | Ferritin     W M P | Males: 29-248 μg/L, 29-248 ng/mL  Females: 10-150 μg/L, 10-150 ng/mL | serum |
| Ion, trace metal, etc. | Iron     W M P | 7-25 μmol/L, 41-1141 μg/dL | serum |
| Ion, trace metal, etc. | Iron-binding capacity, total (TIBC)     W M P | 45-73 μmol/L, 251-406 μg/dL | serum |
| Ion, trace metal, etc. | Iron-binding capacity, saturation     W M P | 16-35% | serum |
| Ion, trace metal, etc. | Magnesium     W M P | 0.62-0.95 mmol/L, 1.5-2.3 mg/dL | serum |
| Ion, trace metal, etc. | Phosphorus, inorganic     W M P | 0.81-1.4 mmol/L, 2.5-4.3 mg/dL | serum |
| Ion, trace metal, etc. | Potassium     W M P | 3.5-5.0 mmol/L, 3.5-5.0 meq/L | serum |
| Ion, trace metal, etc. | Sodium     W M P | 136-146 mmol/L, 136-146 meq/L | serum |
| Ion, trace metal, etc. | Transferrin     W M P | 2.0-4.0 g/L, 200-400 mg/dL | serum |
| Lipid | HDL cholesterol     W M P | Low: <40 mg/dL, 1.03 mmol/L; High: > 60 mg/dL, 1.55 mmol/L | serum |
| Lipid | LDL cholesterol     W M P | Optimal: <100 mg/dL, 2.59 mmol/L; High: 160-189 mg/dL, 4.14-4.89 mmol/L | serum |
| Lipid | Triglycerides     W M P | 30-200 mg/dL, 0.34-2.26 mmol/L | serum |
| Lipid | Total cholesterol     W M P | Desirable: <200 mg/dL, 5.17 mmol/L; High: >240 mg/dL, 6.21 mmol/L | serum |
| Liver function | Alanine transaminase (ALT, SGPT)     W M P | 0.12-0.70 μkat/L, 7-41 U/L) | serum |
| Liver function | Albumin     W M P | Male: 40-50 g/L, 4.0-5.0 g/dL  Female: 41-53 g/L, 4.1-5.3 g/dL | serum |
| Liver function | Aspartate transaminase (AST, SGOT)     W M P | 0.20-0.65 μkat/L, 12-38 U/L | serum |
| Liver function | Bilirubin, total     W M P | 5.1-22 μmol/L, 0.3-1.3 mg/dL | serum |
| Liver function | Bilirubin, direct     W M P | 1.7-6.8 μmol/L, 0.1-0.4 mg/dL | serum |
| Liver function | Bilirubin, indirect     W M P | 3.4-15.2 μmol/L, 0.2-0.9 mg/dL | serum |
| Liver function | Phosphatase, alkaline     W M P | 0.56-1.63 nkat/L, 33-96 U/L | serum |
| Liver function | Protein, total     W M P | 67-86 g/L, 6.7-8.6 g/dL | serum |
| Liver function | Protein, Albumin     W M P | 35-55 g/L, 3.5-5.5 g/dL, 50-60% | serum |
| Liver function | Protein, Globulin     W M P | 20-35 g/L, 2.0-3.5 g/dL, 40-50% | serum |
| Liver function | Protein, Alpha1     W M P | 2-4 g/L, 0.2-0.4 g/dL, 4.2-7.2% | serum |
| Liver function | Protein, Alpha2    W M P | 5-9 g/L, 0.5-0.9 f/dL, 6.8-12% | serum |
| Liver function | Protein, Beta     W M P | 6-11 g/L, 0.6-1.1 g/dL, 9.3-15% | serum |
| Liver function | Protein, Gamma     W M P | 7-17 g/L, 0.7-1.7 g/dL, 13-23% | serum |
| Metabolite | Acetoacetate     [W](http://en.wikipedia.org/wiki/Acetoacetate)   [P](http://www.ncbi.nlm.nih.gov/pubmed?term=acetoacetate) | 20-99 μmol/L, 0.2-1.0 mg/dL | plasma |
| Metabolite | Ammonia as NH3     [W](http://en.wikipedia.org/wiki/Ammonia) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003506.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=ammonia) | 11-35 μmol/L, 19-60 μg/dL | plasma |
| Metabolite | Creatinine     [W](http://en.wikipedia.org/wiki/Creatinine) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003475.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=creatinine) | Males: 53-106 μmol/L, 0.6-1.2 ng/mL  Females: 44-80 μmol/L, 0.5-0.9 ng/mL | serum |
| Metabolite | Fatty Acids, free non-esterified     [W](http://en.wikipedia.org/wiki/Free_fatty_acids)   [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22free+Fatty+Acids%22) | <0.28-0.89 mmol/L, <8-25 mg/dL | plasma |
| Metabolite | Fructosamine     [W](http://en.wikipedia.org/wiki/Fructosamine)   [P](http://www.ncbi.nlm.nih.gov/pubmed?term=fructosamine) | <285 μmol/L | serum |
| Metabolite | Glucose, fasting     [W](http://en.wikipedia.org/wiki/Glucose) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003482.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22fasting+glucose%22) | 4.2-6.1 mmol/L, 75-110 mg/dL | plasma |
| Metabolite | Homocysteine     [W](http://en.wikipedia.org/wiki/Homocysteine)   [P](http://www.ncbi.nlm.nih.gov/pubmed?term=Homocysteine) | 4.4-10.8 μmol/L | plasma |
| Metabolite | Beta-hydroxybutyrate     [W](http://en.wikipedia.org/wiki/Beta-hydroxybutyrate)   [P](http://www.ncbi.nlm.nih.gov/pubmed?term=Beta-hydroxybutyrate) | 0-290 μmol/L, 0-3 mg/dL | plasma |
| Metabolite | Lactate     [W](http://en.wikipedia.org/wiki/Lactic_acid) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003507.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=Lactate) | arterial: 0.5-1.6 mmol/L, 4.5-114.4 mg/dL  venous: 0.5-2.2 mmol/L, 4.5-19.8 mg/dL | plasma |
| Metabolite | Lipoprotein(a)     [W](http://en.wikipedia.org/wiki/Lipoprotein%28a%29) [M](http://www.nlm.nih.gov/medlineplus/ency/article/007262.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=Lipoprotein(a)) | 0-300 mg/L, 0-30 mg/dL | serum |
| Metabolite | Metanephrine     [W](http://en.wikipedia.org/wiki/Metanephrine)   [P](http://www.ncbi.nlm.nih.gov/pubmed?term=metanephrine) | <0.5 nmol/L, <100 pg/mL | plasma |
| Metabolite | Pyruvate (arterial or venous)     [W](http://en.wikipedia.org/wiki/Pyruvate)   [P](http://www.ncbi.nlm.nih.gov/pubmed?term=pyruvate) | arterial: 40-130 μmol/L, 0.35-1.14 mg/dL | plasma |
| Metabolite | Pyruvate     [W](http://en.wikipedia.org/wiki/Pyruvate)   [P](http://www.ncbi.nlm.nih.gov/pubmed?term=pyruvate) | 67-86 g/L, 6.7-8.6 g/dL | serum |
| Metabolite | Urea nitrogen (BUN)     [W](http://en.wikipedia.org/wiki/Urea_nitrogen) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003474.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22urea+nitrogen%22+OR+BUN) | 2.5-7.1 mmol/L, 7-20 mg/dL | serum |
| Metabolite | Uric Acid     [W](http://en.wikipedia.org/wiki/Uric_acid) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003476.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22uric+acid%22) | Males: 0.18-0.41 μmol/L, 3.1-7.0 mg/dL  Females: 0.15-0.33 μmol/L, 2.5-5.6 mg/dL | serum |
| Misc. enzyme | Aldolase (Fructose-bisphosphate aldolase)     [W](http://en.wikipedia.org/wiki/Aldolase) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003566.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=aldolase) | 26-138 nkat/L, 1.5-8.1 U/L | serum |
| Misc. enzyme | Alpha 1-antitrypsin     [W](http://en.wikipedia.org/wiki/Alpha_1-antitrypsin) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003715.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Alpha+1-antitrypsin%22) | 1.0-2.0 g/L, 100-200 mg/dL | serum |
| Misc. enzyme | Amylase     [W](http://en.wikipedia.org/wiki/Amylase) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003464.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=amylase) | 0.34-1.6 μkat/L, 20-96 U/L | serum |
| Misc. enzyme | Angiotensin converting enz. (ACE)     [W](http://en.wikipedia.org/wiki/Angiotensin-converting_enzyme) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003567.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Angiotensin+converting+enzyme%22) | 0.15-1.1 μnkat/L, 9-67 U/L | serum |
| Misc. enzyme | Cholinesterase     [W](http://en.wikipedia.org/wiki/Cholinesterase) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003358.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=cholinesterase) | 5-12 kU/L, 5-12 U/mL | serum |
| Misc. enzyme | Gamma-glutamyltransferase     [W](http://en.wikipedia.org/wiki/Gamma-glutamyltransferase) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003458.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=Gamma-glutamyltransferase) | 0.15-0.99 μkat/L, 9-58 U/L | serum |
| Misc. enzyme | Lactate dehydrogenase     [W](http://en.wikipedia.org/wiki/Lactate_dehydrogenase) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003471.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Lactate+dehydrogenase%22) | 2.0-3.8 μkat/L, 115-221 U/L  Fract 1: 14-26%, Fract 2: 29-39%, Fract 3: 20-26%, Fract 4: 8-16%, Fract 5: 6-16% | serum |
| Misc. enzyme | Lipase     [W](http://en.wikipedia.org/wiki/Lipase) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003465.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=lipase) | 0.51-0.73 μkat/L, 3-43 U/L | serum |
| Tumor marker | Alpha-fetoprotein (adult)     [W](http://en.wikipedia.org/wiki/Alpha_fetoprotein) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003573.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=Alpha-fetoprotein) | 0-8.5 μg/L, 0-8.5 ng/mL | serum |
| Tumor marker | CA-125 (MUC16)     [W](http://en.wikipedia.org/wiki/CA-125) [M](http://www.nlm.nih.gov/medlineplus/ency/article/007217.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=CA-125) | 0-35 kU/L, 0-35 U/mL | serum |
| Tumor marker | CA19-9     [W](http://en.wikipedia.org/wiki/CA_19-9)   [P](http://www.ncbi.nlm.nih.gov/pubmed?term=CA19-9) | 0-37 kU/L, 0-37 U/mL | serum |
| Tumor marker | CA 15-3 (MUC1)     [W](http://en.wikipedia.org/wiki/CA_15-3)   [P](http://www.ncbi.nlm.nih.gov/pubmed?term=CA+15-3) | 0-34 kU/L, 0-34 U/mL | serum |
| Tumor marker | CA 27-29     [W](http://en.wikipedia.org/wiki/Ca_27-29)   [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22CA+27-29%22) | 0-40 kU/L, 0-40 U/mL | serum |
| Tumor marker | Calcitonin     [W](http://en.wikipedia.org/wiki/Calcitonin)   [P](http://www.ncbi.nlm.nih.gov/pubmed?term=calcitonin) | Males: 3-26 ng/L, 3-36 pg/mL  Females: 2-17 ng/L, 2-17 pg/mL | serum |
| Tumor marker | Carcinoembryonic antigen (CEA)     [W](http://en.wikipedia.org/wiki/Carcinoembryonic_antigen)   [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Carcinoembryonic+antigen%22) | Nonsmokers: 0-3.0 μg/L, 0-3.0 ng/mL  Smokers: 0-5.0 μg/L, 0-5.0 ng/mL | serum |
| Tumor marker | Prostate specific antigen (PSA), males     [W](http://en.wikipedia.org/wiki/Prostate_specific_antigen) [M](http://www.nlm.nih.gov/medlineplus/ency/article/003346.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Prostate+specific+antigen%22) | <40 yrs: 0-2.0 μg/L, 0-2.0 ng/mL  >40 yrs: 0-4.0 μg/L, 0-4.0 ng/mL  Free PSA in males 45-75 yrs w/ PSA of 4-20 μg/mL: >25% suggestive of BPH | serum |
| Vitamin | Vitamin A     [W](http://en.wikipedia.org/wiki/Vitamin_A) [M](http://www.nlm.nih.gov/medlineplus/ency/article/002400.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22vitamin+a%22) | 0.7-3.5 μmol/L, 20-100 μg/dL | serum |
| Vitamin | Vitamin B1 (thiamine)     [W](http://en.wikipedia.org/wiki/Vitamin_B1) [M](http://www.nlm.nih.gov/medlineplus/ency/article/002401.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22vitamin+b1%22) | 0-75 nmol/L, 0-2 μg/dL | serum |
| Vitamin | Vitamin B2 (riboflavin)     [W](http://en.wikipedia.org/wiki/Vitamin_B2) [M](http://www.nlm.nih.gov/medlineplus/ency/article/002411.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22vitamin+b2%22) | 106-638 nmol/L, 4-24 μg/dL | serum |
| Vitamin | Vitamin B6     [W](http://en.wikipedia.org/wiki/Vitamin_B6) [M](http://www.nlm.nih.gov/medlineplus/ency/article/002402.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22vitamin+b6%22) | 20-121 nmol/L, 5-30 ng/mL | plasma |
| Vitamin | Vitamin B12     [W](http://en.wikipedia.org/wiki/Vitamin_B12) [M](http://www.nlm.nih.gov/medlineplus/ency/article/002403.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22vitamin+b12%22) | 206-735 pmol/L, 279-996 pg/mL | serum |
| Vitamin | Vitamin C (ascorbate)     [W](http://en.wikipedia.org/wiki/Vitamin_C) [M](http://www.nlm.nih.gov/medlineplus/ency/article/002404.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22vitamin+c%22) | 23-57 μmol/L, 0.4-1.0 mg/dL | serum |
| Vitamin | Vitamin D3 (1,25-dihydroxy)     [W](http://en.wikipedia.org/wiki/Vitamin_D) [M](http://www.nlm.nih.gov/medlineplus/ency/article/002405.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22vitamin+d3%22) | 60-108 pmol/L, 25-45 pg/mL | serum |
| Vitamin | Vitamin D3 (25-hydroxy)     [W](http://en.wikipedia.org/wiki/Vitamin_D) [M](http://www.nlm.nih.gov/medlineplus/ency/article/002405.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22vitamin+d3%22) | Summer: 37.4-200 nmol/L, 15-80 ng/mL  Winter: 34.9-105 nmol/L, 14-42 ng/mL | plasma |
| Vitamin | Vitamin E     [W](http://en.wikipedia.org/wiki/Vitamin_E) [M](http://www.nlm.nih.gov/medlineplus/ency/article/002406.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22vitamin+e%22) | 12-42 μmol/L, 5-18 μg/mL | serum |
| Vitamin | Vitamin K     [W](http://en.wikipedia.org/wiki/Vitamin_K) [M](http://www.nlm.nih.gov/medlineplus/ency/article/002407.htm) [P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22vitamin+k%22) | 0.29-2.64 nmol/L, 0.13-1.19 ng/mL | serum |

    Made with [tablesorter](http://tablesorter.com/docs) and [jquery](http://www.jquery.com) and inspired by [Reference ranges for blood tests](http://en.wikipedia.org/wiki/Reference_ranges_for_blood_tests)

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