

# Lupus Blood Tests

## Blood Tests (w/ normal values) (normal values may vary from lab to lab)

- CBC - Complete Blood Count
  - Red Blood Cells - men 4.6-6.2, women 4.2-5.4
    - Low levels are common in lupus patients due to anemia
  - White Blood Cells - 4.5-11.0
    - Low levels are common in lupus patients
  - Hemoglobin - men 8.7-11.2, women 7.4-9.9
    - Low levels are common in lupus patients due to anemia
  - Hematocrit - men 40%-54%, women 37%-47%
    - Low levels are common in lupus patients due to anemia
  - Mean Corpuscular Volume - 80-100
  - Mean Corpuscular Hemoglobin - 28-32
  - Mean Corpuscular Hemoglobin Concentration - 32-36
  - Red cell Distribution Width - 1.7%-14.2%
  - Platelet - 150-400
    - Low levels are common in lupus patients
  - Neutrophils - 47%-77%
  - Band Neutrophils - 0-3%
  - Lymphocytes - 16%-43%
  - Monocytes - 0.5%-10%
  - Eosinophils - 0.3%-7%
  - Basophils - 0.3%-2%
- Comprehensive Metabolic Panel
  - Sodium (Na) - 135-145
  - Potassium (K) - 3.5-5
  - Calcium (Ca) - 9-10.5
  - Chloride (Cl) - 95-103
  - Carbon Dioxide - 23-29
  - Glucose - 70-125
  - Blood Urea Nitrogen (BUN) - 8-20
  - Creatinine - 0.7-1.2
  - Total Protein - 5.5-9
  - Albumin - 3.5-5.5
  - Total Bilirubin - 0.3-1.0
  - Alkaline Phosphatase Transferase (ALP) - 38-126
  - Aspartate Amino Transferase (AST) - 8-35
  - Alanine Amino Transferase (ALT) - 4-36
- Urinalysis
  - Color and Appearance
  - Specific Gravity - 1.006-1.030
  - pH - 4.6-8
  - Glucose - 0
  - Ketones - 0
  - Protein - 0
    - Proteinuria can indicate nephritis

- White Blood Cells - 0
- Red Blood Cells - 0
  - Hematuria can indicate nephritis
- RBC or WBC casts - 0
  - Blood cell casts can indicate nephritis
- ESR or Sedimentation Rate - women 0-30, men 0-20
  - This test measures how quickly red blood cells settle in a test tube.
  - High rates indicate inflammation, but this is a very non-specific test, the inflammation can be anywhere in the body.
  - This test is used to help monitor disease activity. more...
- The Antinuclear Antibody (ANA) Test - titer below 1:20 or 1:40
  - 97% of Lupus patients have a positive ANA
  - A positive ANA is not however proof of lupus, many other diseases and infections can cause a positive ANA, users of certain medications as well as some otherwise healthy people may also have a positive ANA.
  - The titer indicates how many times the lab technician had to dilute plasma from the blood before the antinuclear antibodies are undetectable.
  - The pattern of the ANA test is used to help determine which autoimmune disease it may be. more...
- Antiphospholipid Antibodies (APLs)
  - These antibodies react to phospholipids as well as phospholipid-binding plasma proteins
  - APLs are usually detected in three types of laboratory assays
    - Anticardiolipin Antibody (ACA)
    - Lupus Anticoagulant
    - Syphilis Serology - certain blood tests for syphilis may be falsely positive in Lupus patients
  - A positive APL test along with the presence of arterial or venous thrombosis or thromboembolism or recurrent fetal deaths or thrombocytopenia is called Antiphospholipid Syndrome (APS)
- Other Autoantibodies -
  - Anti-dsDNA - an antibody specifically against double stranded DNA, these are found primarily in SLE patients
  - Anti-Sm - ribonucleoproteins found in the cell nucleus, are found almost exclusively in SLE
  - Anti-Ro (SS-A) and Anti-La (SS-B) - these are found in people with either lupus or Sjogren's Syndrome. Anti-Ro is strongly associated with photosensitivity.
- Complement Levels
  - Complement is a blood protein that destroys bacteria as well as helps mediate inflammation.
  - The most common complements are C3, C4, and CH50
  - Low levels of C3 and C4 with a positive ANA lends weight to a lupus diagnosis as well as may signify active Lupus. more...
- CRP or C-reactive Protein Test - less than 10mg/liter
  - A rise in this protein, that is produced by the liver, can indicate disease activity. more...
- CPK - men 55-170, women 30-135
  - A rise in this muscle enzyme can indicate active Lupus
- Biopsy
  - A sample of tissue from different parts of the body such as the kidneys may be taken and examined under a microscope for inflammation or scarring. This can aid in both diagnosis as well as determining the proper course of treatment.