

Lupus Diagnosis/Tests

Lupus Diagnosis

Diagnosing Lupus is usually a difficult process. There is no single laboratory test that exclusively proves a Lupus diagnosis. Lupus is also different for each person and there is no one set of symptoms associated with Lupus. The symptoms of Lupus can easily be mistaken for many other diseases and disorders. Also, the symptoms may be transient or just general as in weakness or fatigue.

A Lupus diagnosis is usually made after a detailed medical history and examination including many laboratory tests. Especially because of the cyclic nature of Lupus, periods of flare and remission, a diagnosis can sometimes take months or even years.

Because of the difficulty in Lupus diagnosis, the American Rheumatism Association created a list of 11 criteria to help physicians diagnose Lupus. A patient must display at least 4 of the 11 criteria to be considered to have Lupus, but it is not that simple. Many other diseases can conform to these criteria. Diagnosis of Lupus includes ruling out other conditions that may mimic Lupus. The 11 criteria are:

1. Arthritis
2. Unusual sensitivity to light (photosensitivity)
3. Butterfly or malar rash
4. Renal disorder
5. Neurological disorder
6. Oral ulcers
7. Discoid rash
8. Serositis (Pericarditis or Pleuritis)
9. Hematologic disorder (Anemia, Leukopenia, etc.)
10. Immunologic disorders (positive LE, anti-dsDNA, etc.)
11. Antinuclear antibody (positive ANA)

Diagnosing Lupus is not an exact science and we still have much to learn in this field.

Lupus Tests

Blood (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

Alamine Amino Transferase (ALT) - 4-36

Urinalysis

Color and Appearance

Specific Gravity - 1.006-1.030

pH - 4.6-8

Glucose - 0

Keytones - 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.

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.

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 thrombo-embolism or recurrent fetal deaths or thrombocytopenia is called Antiphospholipid Syndrome (APS)

Other Autoantibodies

Anti-nDNA - an antibody specifically against native (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.

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.

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.

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