

Resource

## Seropositive and seronegative

Seropositive or seronegative is a term used to describe whether you have rheumatoid factor (RF) and anti-CCP?(or ACPA) in your blood; two proteins more commonly found in people with RA

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### Introduction

The diagnosis of any disease usually progresses along a well-defined path that has three parts: a history of the complaint, blood tests and, usually, imaging (x-rays or scans).

“Seropositive/seronegative” is a term that refers to the results of blood tests.

## What is seropositive/seronegative?

The blood test that is ordered by the doctor in order to help establish the diagnosis of rheumatoid arthritis (RA) is looking for the presence of two proteins in the blood. One of them is called rheumatoid factor (RF). This is a very old but tried and tested investigation that was first introduced into rheumatology in the 1940s. The other test is called anti-CCP (or ACPA) and is more recent. Anti-CCP is more sensitive than RF and may appear much earlier in the course of RA.

## What do the test results mean?

The presence of either of these tests may indicate that RA is present. However, seropositivity is only one criterion of several that makes the diagnosis of RA likely (some of the other criteria are outlined in the next section). If the other criteria for the diagnosis are present, then seropositivity is an additional clinching factor. A positive anti-CCP test is marginally stronger than positive RF test for the diagnosis.

## Does a positive rheumatoid factor or anti-CCP mean you must have RA?

A positive RF or anti-CCP test does not mean that you have RA. Other features must be present such as symptoms of pain and swelling in the joints, involvement of many joints with inflammation, morning stiffness in the joints for longer than 45 min, x-ray evidence of the characteristic bone damage in the joints and extra-articular features of RA (meaning features that are outside the joints), such as nodules. Other blood tests commonly used prior to diagnosis include ESR and CRP, which measure the amount of inflammation in the joints. For more information on blood tests, please see our article: 'Laboratory tests used in the diagnosis and monitoring of rheumatoid arthritis.'

## Does this test tell me how severe my arthritis is likely to be?

As a rule, patients who are seropositive for RF and/or anti-CCP are more likely to have more severe RA, but neither of these tests can accurately predict the future course of the disease in an individual patient.

## What differences are there between people that are seropositive and seronegative?

As well as seropositive patients having a greater likelihood of developing a more serious disease, they are also more likely to have extra-articular complications (such as nodules and vasculitis – see individual NRAS articles for more information) than those who are seronegative. Patients seronegative for RF and anti-CCP may have a different form of inflammatory arthritis, for example, psoriasis-related arthritis or a spondyloarthropathy.

## Does this affect the medications that will work for me?

Whilst the efficacy of most medications for RA is not affected by whether someone is seropositive or seronegative, evidence suggests that patients who are seronegative for both RF and anti-CCP do not respond as well to rituximab as patients who are seropositive for one or both.

Updated: 02/04/2019

## Read more

### [What is RA?](#)

Rheumatoid arthritis is an auto-immune disease, meaning that the symptoms such as pain and inflammation are caused by the immune system attacking the joints.

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