

Raised antibody levels linked to greater long term risk of rheumatoid arthritis

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Men and women with raised levels of an antibody known as rheumatoid factor in their blood have up to a 26-fold greater long term risk of developing rheumatoid arthritis, finds a study published in the *British Medical Journal* today.

These findings suggest the need for early referral for examination after a positive rheumatoid factor test – even in the absence of typical arthritic symptoms like pain and swelling in the [joints](#), say the authors.

Rheumatoid arthritis is a chronic inflammatory joint disorder that affects around 1% of the world's population - women three times more often than men.

No [blood test](#) can definitively diagnose rheumatoid arthritis, but a positive rheumatoid factor test can indicate the condition. However, it is not clear whether high levels of this antibody in people without rheumatoid arthritis is associated with later development of the condition

So a team of researchers based in Denmark set out to test whether raised levels of rheumatoid factor is associated with long term development of rheumatoid arthritis.

They measured rheumatoid factor levels in 9,712 white Danish individuals aged 20 to 100 years without rheumatoid arthritis at the start of the study and followed them for up to 28 years.

Raised rheumatoid factor levels of 25-50 IU/mL, 50.1-100 IU/mL and more than 100 IU/mL were compared with normal levels (less than 25 IU/mL).

During the study period, 183 individuals developed rheumatoid arthritis.

After taking account of several other possible [risk factors](#), a doubling of rheumatoid factor level was associated with a 3.3-fold increased risk of developing rheumatoid arthritis. The highest rheumatoid factor level (100 IU/mL or more) was associated with a 26-fold increased risk of developing the condition.

In absolute terms, the highest 10 year risk of rheumatoid arthritis of 32% was seen in 50-69 year old women who smoked and had rheumatoid factor levels of 100 IU/mL or more.

The lowest absolute 10 year risk of rheumatoid arthritis of 0.1% was seen in men aged 70 years and over with rheumatoid factor levels of less than 25 IU/mL.

The authors stress that their study cannot prove that rheumatoid factor plays a causal role in the development of rheumatoid arthritis, but they conclude that the findings "may lead to revision of guidelines for early referral to a rheumatologist and early [arthritis](#) clinics based on a positive rheumatoid factor test – even in the absence of the typical arthritic joint symptoms."

In an accompanying editorial, Dr Simard from the Karolinska Institutet in Sweden suggests that although the Nielsen study monitored people with a rheumatoid factor positive result, this information may not yet be "that useful in clinical practice" as rheumatoid factor testing rarely happens in the absence of signs or symptoms. Simard suggests that future research should focus on the link between rheumatoid factor and

[rheumatoid arthritis](#) as well as extend such work to other important autoantibodies such as anti-citrullinated protein antibody.

More information: Elevated rheumatoid factor and long term risk of rheumatoid arthritis: a prospective cohort study, *British Medical Journal*, 2012.

Editorial: Rheumatoid factor positivity in the general population, *British Medical Journal*, 2012.

Provided by British Medical Journal

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