

Alcohol reduces the severity of rheumatoid arthritis

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Drinking alcohol may reduce the severity of rheumatoid arthritis according to new research published today. It is the first time that this effect has been shown in humans. The study also finds that alcohol consumption reduces the risk of developing the disease, confirming the results of previous studies.

The study which is published online today in the journal *Rheumatology*, looked at 873 patients with [rheumatoid arthritis](#) and compared them with 1004 people without RA (the control group). The researchers, led by Gerry Wilson, Professor of Rheumatology at the University of Sheffield (Sheffield, UK), asked the two groups how frequently they had drunk alcohol in the month preceding their inclusion in the study. The study participants completed a detailed questionnaire, had x-rays and blood tests, and an experienced research nurse examined their joints.

The first author of the study, Dr James Maxwell, a consultant rheumatologist at the Rotherham Foundation NHS Trust and an honorary senior clinical lecturer in the Academic Rheumatology Group at the University of Sheffield, said: "We found that patients who had drunk alcohol most frequently had symptoms that were less severe than those who had never drunk alcohol or only drunk it infrequently. X-rays showed there was less damage to joints, blood tests showed lower levels of inflammation, and there was less joint pain, swelling and disability. This is the first time that a dose dependent inverse association between frequency of alcohol consumption and severity of RA has been shown in humans."

Dr Maxwell and his colleagues also found that non-drinkers were four times more likely to develop RA than people who drank alcohol on more than ten days a month. The risk of developing RA decreased according to the frequency of alcohol consumption. "This finding agrees with the results from previous studies that have shown a decreased susceptibility to developing RA among alcohol drinkers," said Dr Maxwell.

The researchers found that their findings applied regardless of gender and in both the anti cyclic citrullinated peptide (CCP) positive and negative forms of RA. "Anti-CCP antibodies are not present in most 'normal' people without arthritis," explained Dr Maxwell. "We know that these antibodies develop prior to the onset of RA, and are probably directly linked to the process which causes RA. Some patients have RA without having anti-CCP antibodies, but we know that the disease is much more severe in patients who do."

It is not fully understood why [drinking alcohol](#) should reduce the severity of RA and people's susceptibility to developing it. "There is some evidence to show that alcohol suppresses the activity of the immune system, and that this may influence the pathways by which RA develops. We do know that the changes in the immune system that lead to RA happen months and maybe even years before the arthritis actually develops," said Dr Maxwell. "Once someone has developed RA, it's possible that the anti-inflammatory and analgesic effects of alcohol may play a role in reducing the severity of symptoms."

"Further research is needed to confirm the results of our study and to investigate the mechanisms by which alcohol influences people's susceptibility to RA and the severity of symptoms. It is also possible that different types of alcoholic drinks may have different effects on RA."

The authors point out that there are some limitations to their study. These include the fact that they only recorded the frequency rather than

the amount of alcohol consumption in the month before people joined the study; there might be bias due to people recalling inaccurately how often they drank alcohol and also the information represents a snapshot of drinking behaviour at one point in time, rather than giving information about fluctuating [alcohol consumption](#) over a longer period; and, finally, there were marked differences in age and gender between the RA and the control groups, although the researchers did adjust their results for these factors.

Writing in their paper, the study authors conclude: "While there are a number of limitations to the methodology of this study, the results do suggest that the consumption of [alcohol](#) may modify RA, influencing both risk and severity."

More information: "Alcohol consumption is inversely associated with risk and severity of rheumatoid arthritis". Rheumatology. Published online under advance access. [doi:10.1093/rheumatology/keq202](https://doi.org/10.1093/rheumatology/keq202)

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