

# Risk of tuberculosis infection following tumour necrosis factor inhibitor treatment for chronic inflammatory arthritis – a systematic review and meta-analysis

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## Aims

Tumour necrosis factor-alpha inhibitors (TNFi) increase the risk of reactivation of latent tuberculosis (TB).

The objective of this review was to assess the risk of tuberculosis in patients receiving TNFi therapy and to compare the risks among the different anti-TNF agents.

## Methods

We searched the electronic databases Medline and Embase using the combination of following terms biologic\*, anti-TNF, etanercept, adalimumab, infliximab, golimumab and, certolizumab against 'rheumatoid arthritis' or RA, 'psoriatic arthritis' or PSA, 'ankylosing spondylitis' or AS, 'inflammatory arthritis' or IA with tuberculosis or TB.

## Results

We came across a total of 34 relevant studies; of which 10 were included in the review after the application of STROBE checklist. The review included 41,127 subjects across three continents.

TNFi therapy significantly increases the risk of reactivation of TB and the reactivation risk is significantly influenced by the TB risk of background population. The relative risk of TB with the monoclonals is considerably higher compared with etanercept.

## Conclusion

We recommend meticulous screening for latent TB and prophylaxis where necessary before commencing TNFi therapy. The screening tools and the prophylaxis should be decided based on the background TB risk and the prevalence of multidrug-resistant tuberculosis. ■

## Conflict of interest statement

None

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