

# Minocycline for negative symptoms of schizophrenia and possible mechanistic actions: the BeneMin RCT

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## Plain English summary

### The BeneMin RCT

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## Plain English summary

**W**e have completed a clinical trial in 207 people who had received a diagnosis of schizophrenia in the previous 5 years. These participants agreed to add a well-known antibiotic called minocycline to their usual treatment for 1 year. The aim was to check previous evidence that minocycline may improve symptoms of schizophrenia such as self-neglect, social withdrawal, apathy and unemployment (so-called negative symptoms) that can develop and persist after treatment with current antipsychotic medication. We also tested the idea that minocycline might work by supporting the functioning of brain cells, perhaps through its anti-inflammatory actions.

Interested patients in early intervention and community services in 11 UK NHS trusts were taken through the study by local research teams. Neither the participants nor the researchers knew who was taking real minocycline and who was taking matching dummy (placebo) capsules. Clinical interviews and questionnaires were used to follow any changes in psychotic and negative symptoms as well as general health and social functioning over the 12 months of treatment. Brain functioning was assessed using magnetic resonance imaging scans and performance tests. Molecules associated with inflammation called cytokines were measured in blood samples.

When we decoded the results after the last participant had completed the study, we found that there were no differences in any of the clinical measures between those who had taken minocycline and those who had taken the placebo capsules. Further analyses are under way, but we found that there was no general tendency to worsening of symptoms, brain function or inflammation over the 12 months of standard care and that taking minocycline provided no additional benefit. The results make it unlikely that there is an inflammatory process that gives rise to negative symptoms in recent schizophrenia that is modifiable by minocycline. We cannot exclude the possibility that minocycline would benefit a more severely ill group who have not responded to standard treatments.



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