

Adjunctive rifampicin to reduce early mortality from *Staphylococcus aureus* bacteraemia: the ARREST RCT

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Plain English summary

The ARREST RCT

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Plain English summary

Staphylococcus aureus is a germ that can cause serious infections, particularly when it gets into the bloodstream. Doctors use an antibiotic to cure *S. aureus*, but sometimes the antibiotic does not succeed in curing the infection and sometimes the infection comes back.

The ARREST (Adjunctive Rifampicin to Reduce Early mortality from *STaphylococcus aureus* bacteraemia) trial tested whether or not giving 2 weeks of an extra antibiotic, called rifampicin, in addition to the standard antibiotic, would help people who were ill owing to *S. aureus* blood infections. The aim was to find out if rifampicin could cure more people, possibly faster than without the extra antibiotic, and to see whether it caused fewer or more side effects. The aim was also to see if the germ that causes the infection became resistant to rifampicin.

In total, 770 patients from the UK aged 18–100 years participated. The participants all received the same standard antibiotic that they would have received if they had not joined the study. In addition, 370 patients received 2 weeks of rifampicin and 388 patients received 2 weeks of placebo (dummy).

The ARREST study found that people who had rifampicin in addition to standard antibiotic treatment did no better overall than people who had just standard antibiotic treatment, in terms of how successful their treatment was. People in the group who had rifampicin were no more likely to have serious or severe side effects than those in the group who had placebo. There was some evidence that rifampicin reduced the risk that the infection would come back again, but this did not reduce the overall deaths. In addition, *S. aureus* from only two people's blood developed resistance to rifampicin.

The results suggest that people with *S. aureus* blood infections are unlikely to benefit from adding rifampicin to standard antibiotic treatment. The study included a wide range of patients with *S. aureus* blood infections, so the results apply widely.

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