

# Antibiotics: Longer treatment times that benefit children may cost society

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The likelihood that the treatment of a middle ear infection will fail is slightly higher for a child who is given a shorter course of antibiotics, according to a new *Cochrane Systematic Review*. The results are conclusive, but the researchers say there are other factors that must be considered when the drugs are prescribed.

Most [children](#) suffer at some point from a middle ear infection, also called acute otitis media (AOM). It is one of the most common reasons for children being prescribed antibiotics, at a cost of up to \$5 billion each year in the US alone. Health practitioners vary in the length of course that they prescribe to treat the infection. The standard course in Britain is five days, whereas in North America it is ten. Due to concern about [drug resistance](#) caused by overuse, and the increasing cost of providing these drugs, the researchers decided to update a previous Cochrane Review carried out in 2000.

The updated review included 49 trials involving 12,045 children aged one month to 18 years, 22 of which were studies that had not been included in the original review. According to results, the likelihood of treatment failure with long course antibiotics was one in six compared to one in five with short course antibiotics. Long course was defined as more than one week, whereas short course was defined as less than one week. The researchers concluded that the policy of treating for five days might slightly increase the risk of a child experiencing further symptoms, or a relapse, in the second to third week after starting treatment.

According to the researchers, their work has not changed the findings of the original review and further updates should not be needed. "Any new studies would not change the current outcomes," said lead researcher Terry Klassen, Director of Research, Manitoba Institute of Child Health, the research division of the Children's Hospital Foundation of Manitoba.

"However, it is up to clinicians to assess whether it is worth exposing children to a longer course for the sake of a slightly reduced risk of failure in the short term," said Klassen. "Shorter courses can be safely used and generally produce fewer side effects. It is more difficult to support longer term use of antibiotics on the basis of their cost and especially considering concerns over the effects of indiscriminate use of [antibiotics](#) on resistance."

Provided by Wiley

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