

Scientists urge caution on antibiotic alternatives

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New types of drugs intended for use in place of antibiotics have been given a cautious welcome by scientists at the Universities of Liverpool and Edinburgh.

Researchers have been probing the long-term effectiveness of drugs being developed by the [pharmaceutical industry](#). These work by limiting the symptoms caused by a bug or virus in the body, rather than killing it

outright.

Becoming resistant

These treatments are designed to avoid the problem of infections becoming resistant to treatment, which has become widespread with antibiotics.

This approach is intended to enable the patient to tolerate [disease](#), and buy the immune system valuable time to get rid of the infection naturally.

Researchers at the Universities of Liverpool and Edinburgh created a [mathematical model](#) to discover how drugs that limit the damage caused by disease could affect how infections spread and evolve.

They found that for infections where the symptoms are not linked to the spread of disease, these drugs may prevent disease from evolving too quickly. They will be useful over longer periods of time.

However, parasitologist, Dr Andy Fenton, from Liverpool's Institute of Integrative Biology cautions that people given damage limitation treatments may appear healthy, but carry high levels of infection and so may be more likely to pass on disease. In addition, people with lesser symptoms could remain undiagnosed and add to the spread of disease.

Cautious

"Antibiotic resistance is a serious issue and these alternatives offer hope in solving the problem," he said.

"However we should be cautious as it's possible that in some cases these drugs may cause disease to spread."

More information: "Limiting Damage during Infection: Lessons from Infection Tolerance for Novel Therapeutics." Pedro F. Vale, Andy Fenton, Sam P. Brown. *PLOS Biology*. Published: January 21, 2014.
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