

Some antibiotic-resistant bacteria can become even more virulent

We used to think that antibiotic resistance came at a cost for bacteria, making them weaker. It turns out that for some bacteria, resistance can make them stronger and more virulent.

Antibiotics are wonderful drugs for treating bacterial infections. Unfortunately, disease-causing bacteria can become resistant to antibiotics that are meant to kill them. This is called selective pressure — the bacteria that are susceptible to the drug are killed, but the ones that withstand the antibiotic survive and proliferate. This process results in the emergence of [antibiotic-resistant strains](#).

Bacteria can become drug-resistant in two ways — resistance can be natural, meaning that the genes conferring resistance are already present in the bacterial chromosome, or they can be acquired through mutation or by picking up antibiotic-resistance genes from other microbes.

It is now possible to use new DNA-sequencing technologies to take a closer look at how the antibiotic resistance can make some bacteria weaker or stronger. And in a [new study](#), we found that — contrary to conventional wisdom around antibiotics — resistance can actually make some bacteria fitter and even more virulent.

Our team used DNA sequencing techniques to tease apart the relationship between antibiotic resistance and fitness cost in infections in laboratory animals. It turns out that for some bacteria, drug resistance actually makes them fitter.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis. Read full, original post: [Antibiotic Resistance Actually Makes Some Bacteria Stronger](#)