Antibiotic-resistant superbugs even deadlier than previously thought

Antibiotic-resistant bacteria may be tougher superbugs than previously thought: Not only are these bacteria harder to treat, they appear to be “fitter” in general, meaning they survive better in the host and cause more deadly infections, a new study suggests.

The findings go against the prevailing view in medicine that when bacteria acquire resistance to drugs, they become less “fit” in some way, for example, they spread less easily. Although scientists have assumed this is true, evidence supporting this view is limited, the researchers said.

In the new study, the researchers examined the effect of genes on antibiotic resistance in Pseudomonas aeruginosa, bacteria that cause lung infections.

They found that mice infected with antibiotic-resistant strains of P. aeruginosa were more likely to die (without any type of treatment) during the study period than mice infected with P. aeruginosa strains that did not have antibiotic resistance.

The researchers also had similar findings for two other strains of bacteria: Acinetobacter baumannii, which causes infections in people in hospitals, and Vibrio cholera, which causes the diarrheal disease cholera. For example, V. cholera bacteria with certain genes for antibiotic resistance were better able to grow in the gastrointestinal tracts of rabbits than bacteria without these genes.

“Our results show that efforts to confront the worldwide increase in antibiotic resistance might be exacerbated by fitness advantages that enhance virulence in drug-resistant microbes,” the researchers wrote.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis. Read full, original post: Super-Superbugs: Antibiotic-Resistant Bacteria May Be Deadlier