

## **Resistant TB Still Curable With Aggressive Treatment**

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The deadliest form of tuberculosis is still curable if properly treated, according to a new study that lifts hopes in the battle against bacterial infections impervious to common antibiotics.

Drug-resistant strains of tuberculosis have caused alarm in public-health circles by raising the prospect of a deadly disease that is spread from person to person and can't be killed with drugs.

But the new study, in this week's *New England Journal of Medicine*, assessed the results of an effort to improve TB treatment in Lima, Peru, and found that aggressive treatment can cure 60% of patients with the most drug-resistant form of the disease.

"The general feeling has been, up to now, that it is nearly impossible to treat," Mario Raviglione, who directs the World Health Organization's antituberculosis effort, said in an interview.

But the Peruvian experiment, funded by the Bill and Melinda Gates Foundation, demonstrates that "under pretty difficult circumstances, it is possible to achieve a high level of cure," Dr. Raviglione said.

The findings were better than previous reports from the developing world. In 2006, doctors reported on an outbreak of a strain of TB in South Africa that killed 52 out of 53 patients, almost all of whom also had the human immunodeficiency virus. That led to warnings by the World Health Organization and other agencies.

In this week's report, researchers at Harvard Medical School and Peru's health ministry studied medical records from 48 patients who had the most-deadly form of TB -- defined as an infection immune to the two most-powerful TB drugs, which are given as first-line treatment, as well as two other secondary antibiotics. The cases studied had occurred from 1999 to 2002. The 48 patients were among 810 cases studied after receiving first-line treatment and failing to recover.

Such infections are known as "extensively drug-resistant tuberculosis," or XDR TB.

By testing patients' infections in a biology laboratory and figuring out which other antibiotics might still work, and then aggressively treating patients despite severe side effects from such drugs, the Peruvian experiment reported a relatively high cure rate.

Twenty-nine out of the 48 patients were cured, the study reported, for a 60% cure rate. They were cured when no TB showed up in repeated lab tests. Eleven of the patients, or 23%, had died as of 2007.

One difference from the deadly South African outbreak was that none of the Peruvian patients had HIV.

The study's lead author, Carole Mitnick of Harvard Medical School, said the findings demonstrated that aggressive treatment should be expanded. "In wealthy countries, this is what happens," she said. "In poor countries, it doesn't."