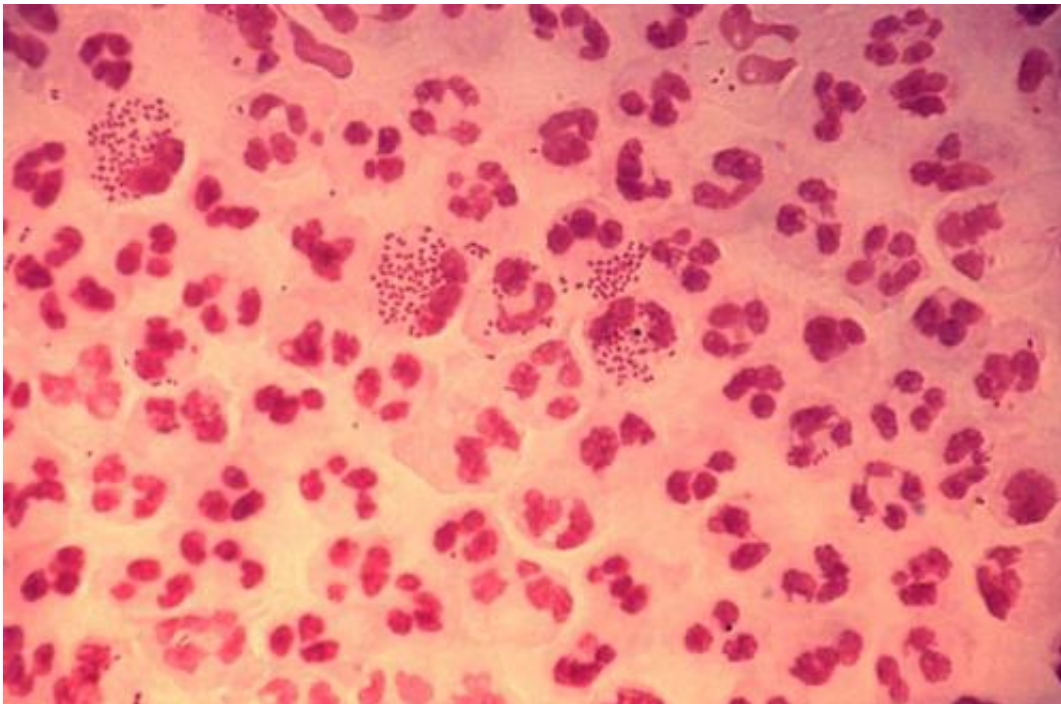


# CDC warns that gonorrhea on verge of being untreatable

March 13 2014, by Bob Yirka

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Credit: CDC

(Medical Xpress)—The CDC has issued a report detailing its findings in attempting to trace the increasing difficulty in treating gonorrhea, a sexually transmitted disease (STD) that can cause severe discomfort, serious medical problems (such as sterility) for both genders and in very rare cases, death.

Gonorrhea is a [bacterial disease](#) that has been around for thousands of years, if not longer, plaguing [human populations](#). In more recent times, it's had to evolve to survive as humans learned to treat it using penicillin and other [antibacterial agents](#). Over the past thirty years in particular, gonorrhea has evolved to the point that there are very few treatments left (ceftriaxone along with either azithromycin or doxycycline) and now, it looks like its poised to get the best of those as well, which will mean those who contract the disease in the very near future will find that doctors have no way to cure them.

To learn more about the evolutionary history of the disease, the CDC looked at data regarding 17 major cities in the United States between the years 1991 and 2006. They found that gonorrhea was more common in cities with low resistance, but ominously, they also found that rates of gonorrhea were rising faster in cities with high resistance. They note that currently, there are approximately 820,000 new cases of gonorrhea each year in this country. The real problem is that there are now so few antibiotics that are able to treat the disease, and while no strains of the bacteria that are resistant to them have been found so far in the United States, the same cannot be said for other countries.

The overriding conclusion of the researchers is that the world is now sitting on the precipice of losing the ability to fight a major bacterial infection. Worse perhaps, is that it may mark the first of many others to come. Gonorrhea infections typically only last for a few weeks or months, in most cases the immune system eventually wins over (after the disease has caused sometimes irreparable damage). The same cannot be said for some other bacterial infections that may also soon become untreatable. For that reason, scientists around the world continue to scramble to find alternatives. In the meantime, the CDC is predicting that the spread of treatment-resistant [gonorrhea](#) is imminent, and because of that the country (and the rest of the world) will soon begin to experience widespread outbreaks.

**More information:** Chesson HW, Kirkcaldy RD, Gift TL, Owusu-Edusei K Jr, Weinstock HS. Ciprofloxacin resistance and gonorrhea incidence rates in 17 cities, United States, 1991–2006. *Emerg Infect Dis* [Internet]. 2014 Apr [date cited]. [dx.doi.org/10.3201/eid2004.131288](https://doi.org/10.3201/eid2004.131288)

## **Abstract**

Antimicrobial drug resistance can hinder gonorrhea prevention and control efforts. In this study, we analyzed historical ciprofloxacin resistance data and gonorrhea incidence data to examine the possible effect of antimicrobial drug resistance on gonorrhea incidence at the population level. We analyzed data from the Gonococcal Isolate Surveillance Project and city-level gonorrhea incidence rates from surveillance data for 17 cities during 1991–2006. We found a strong positive association between ciprofloxacin resistance and gonorrhea incidence rates at the city level during this period. Their association was consistent with predictions of mathematical models in which resistance to treatment can increase gonorrhea incidence rates through factors such as increased duration of infection. These findings highlight the possibility of future increases in gonorrhea incidence caused by emerging cephalosporin resistance.

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