

Leprosy: An ancient disease thrives in 21st century

January 25 2013, by Olivier Thibault

It has been called the world's oldest recorded disease, an evil that humans have known for more than 3,500 years, as papyri from ancient Egypt testify.

Yet drugs to cure [leprosy](#) are cheap, plentiful and effective.

So why is this biblical curse still around?

Doctors speaking ahead of World Leprosy Day on Sunday point to wonderful news about the bid to stamp out this nightmare—but they also acknowledge sizeable hurdles.

"There has been enormous progress in treating and controlling the leprosy epidemic," says British [microbiologist](#) Stewart Cole. "Six million people have been cured by multi-drug therapy."

Multi-drug therapy, or MDT, is a cocktail of three antibiotics designed to kill the parasitic rod-shaped germ, *Mycobacterium leprose*, that after a long [incubation](#) spreads from [nerve cells](#) to muscles and other tissues.

Several drugs are always used, as only one drug enables the germ to develop resistance to it.

Without treatment, the microbe causes crippling damage to the hands, skin, the nose and eyes. The condition goes hand-in-hand with [ostracism](#), even though scientists say *M. leprose*, transmitted by droplets from the

nose and mouth, is generally not very infectious.

According to [World Health Organisation](#) (WHO) figures, there were roughly 5.2 million people with leprosy in 1985.

The burden has fallen sharply, driven especially by free MDT treatment made available by the WHO to [poor countries](#). With it, a leper can be cured in six to 12 months.

But even as the WHO is demanding a "final push" against leprosy, the decline in new infections seems to have plateaued.

In 2004, there were around 400,000 new cases, which fell to 228,000 new cases in 2010, then to 219,000 in 2011.

"The WHO is starting to wonder why this is the case," says Cole, who chairs the scientific and medical commission of the Raoul Follereau Foundation, a French NGO inspired by a 20th-century campaigner.

"For years, they told us that if we carried on using MDT, prevalence would gradually hit zero, but this hasn't happened, and we are concerned."

Leprosy has been eliminated from 119 countries out of 122 countries where the disease was considered a public health problem in 1985.

But tenacious pockets remain in parts of Brazil, Indonesia, Philippines, Democratic Republic of Congo, India, Madagascar, Mozambique, Nepal and Tanzania, according to the UN's health body.

— Medical infrastructure to blame—

Roch Christian Johnson, a leprosy specialist from the West African state

of Benin, said one reason is poor medical facilities. Many lepers are already excluded from their communities and clinics are often located far from people in need.

As a result, many people fail to get diagnosed swiftly, and the germ incubates unseen for years.

Each year, around 12,000 people are diagnosed only after they have reached advanced stages of leprosy, when damage is irreversible, he said.

Another problem is multibacillary leprosy, a more contagious form that requires a tougher drug regimen. If undetected and untreated, it leads to more infections, which in turn may only be spotted a decade or two later.

Even though funding for research is a long-running concern, scientists say they are gaining useful insights into leprosy.

Recent evidence suggests that *M. leprosa* has a natural reservoir in armadillos.

In humans, according to a study published last week, the germ hijacks key cells in the nervous system called Schwann cells and then reprogrammes them into muscle cells, thus helping them to spread into muscle tissue.

And a team in Seattle, Washington, is seeking authorisation to carry out a leprosy vaccine on a small group of volunteers, the first in a three-phase trial process.

Ultimately, though, wiping out leprosy will come down to commitment and resources, say many.

"When I started this work 40 years ago, leprosy was so prevalent that

people used to call it 'The Disease'," said Father Christian Steunou, who works at a leprosy treatment centre at Davougou in Benin. "They never called it leprosy, they simply said, 'The Disease'."

"Nowadays, though, it's just another illness. The pity is that it's no longer a serious disease but an unrecognised one.

"Few caregivers show much interest in it, which means that it can bounce back if we don't take care."

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