

# Japan confirms its first case of new superbug gene

September 7 2010, By SHINO YUASA , Associated Press Writer

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(AP) -- Japan has confirmed the [nation's first case of a new gene in bacteria](#) that allows the microorganisms to become drug-resistant superbugs, detected in a man who had medical treatment in India, a Health Ministry official said Tuesday.

The gene, known as NDM-1, was found in a Japanese man in his 50s, Kensuke Nakajima said.

Researchers say the gene - which appears to be circulating widely in India - alters bacteria, making them resistant to nearly all known antibiotics.

Drug-resistant bacteria are not new. Many bacteria are resistant to the world's first antibiotic, penicillin, as well as successive generations of drugs. Excessive use and improper use of antibiotics have exacerbated the problem and led to the emergence of superbugs.

"The potential of NDM-1 to be a worldwide public health problem is great, and coordinated international surveillance is needed," according to a widely publicized report in the [British medical journal](#) Lancet in August.

The gene has been seen largely in the deadly E. coli bacteria and on DNA structures that can be easily copied and passed onto other types of bacteria.

The man was hospitalized in April 2009 after returning from India where he had medical treatment. Nakajima declined to say what kind of treatment the man had received in India, citing the man's privacy.

The man had a high fever while staying at a hospital in Tochigi, north of Tokyo. He was discharged in October last year.

The hospital - Dokkyo Medical University Hospital - kept a preserved sample of the suspected [superbug](#) from the man. The hospital examined the sample after the Lancet report.

The Tochigi hospital notified the Health Ministry about the detection of the NDM-1 gene. It told the ministry that no in-hospital infections were found. Following the confirmation of the discovery - Japan's first NDM-1 case - the Health Ministry launched a nationwide survey, asking local health authorities to check on hospitals for evidence of more infections.

Along with India, the new superbug gene has been detected in small numbers in Australia, Canada, the United States, the Netherlands, Sweden and the U.K. Researchers say since many Americans and Europeans travel to India and Pakistan for elective procedures like cosmetic surgery, it was likely the superbug gene would spread worldwide.

Antimicrobial resistance - the ability of microorganisms to escape drugs' efficacy - is an increasing global health problem that could affect control of diseases such as respiratory infections and dysentery, according to the World Health Organization.

The WHO says NDM-1 requires monitoring and further study. With effective measures, countries have successfully battled multi-drug resistant microorganisms in the past.

It recommends that governments focus their efforts in four areas: surveillance, rational antibiotic use, legislation to stop sales of antibiotics without prescription, and rigorous infection prevention measures such as hand-washing in hospitals.

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