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IIT-D team develops faster typhoid diagnostic method

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A group of scientists at the Indian Institute of Technology, Delhi (IIT-D) has developed a rapid and accurate method for diagnosis of Salmonella typhi bacteria which causes enteric fever and typhoid.

Most serological methods, which look for antibodies in the body, are unable to pick up an infection in the early stages as the numbers are low. The lack of specific, rapid and affordable diagnostic tests leads to inappropriate use of antibiotics in all fevers cases.

The new method uses magnetic nanoparticles coupled with antibodies. In tests, it was found that over 65 per cent bacteria cells got bound to nanoparticles within 30 minutes.

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According to the study, the method has the potential for clinical use due to its high detection levels and ability to identify cells which can cause disease in a quicker turnaround time. In future, it can be developed into a handheld and portable device.