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The study by Imperial College, London, and the Christian Medical College, Vellore, announced on July 11, 2014, has reported that the Injected Polio Vaccine (IPV) which has not been used much in India due to fears of lesser performance, could provide better and longer lasting protection against infection if used in combination with the Oral Polio Vaccine (OPV).

The study was conducted on 450 children from a densely populated urban area in Vellore, all of whom had received OPV as part of a standard vaccination program. Half of the children were given a dose of the injected vaccine and rest of the half were given nothing. One month later, the children were given a "challenge" dose of the live oral vaccine to simulate re-infection.

Their stools were tested after seven days to see if the virus was present, specifically the two remaining serotypes of the virus which are resisting eradication - serotype 1 and serotype 3. In the children who had received the IPV, the researchers found that less than 38 percent had serotype 1 and lesser than 70 percent had serotype 3 compared to those who had not been given the injected vaccine.

According to Dr Jacob John, CMC, "Because IPV is injected into the arm rather than taken orally it's been assumed it doesn't provide much protection in the gut and so would be less effective at preventing faecal transmission than OPV. But we found that where the children already had a level of immunity due to OPV, the injected vaccine actually boosted their gut immunity."

"Our findings show that an additional dose of the injected vaccine is more effective at boosting immunity against infection than the oral vaccine alone," said Mr Nick Grassly, professor of vaccine epidemiology at Imperial College London.