

## Mumps vaccine not foolproof

People can still catch and transmit mumps even if they are fully immunised, a recent outbreak in Europe confirms.

Although most mumps cases were in unvaccinated people, researchers have shown that the virus can occasionally exploit chinks in the immunity armour of people who have received the vaccine.



Their study, published last month in *Vaccine*, reviewed a mumps outbreak in the Netherlands in 2007-09.

Coverage with the two-dose MMR vaccine is generally high in the Netherlands, but the researchers studied a religious community that largely shuns vaccination, and which was blamed for the outbreak.

In this group, 341 patients were identified with clinical mumps; 171 of these had laboratory results available for the study's analysis — 60 from fully vaccinated individuals and 111 from unvaccinated patients.

The patterns of infectivity were similar: both vaccinated and unvaccinated people were most infectious immediately after the onset of disease, with their viral titres peaking over the first three days.

In most cases viral loads were far higher in unvaccinated patients, however, a few vaccinated patients were found to carry very high viral levels immediately after contracting mumps. Contact tracing confirmed they had transmitted the virus to members of their households.

**“This study shows that not only can vaccinated individuals develop mumps symptoms after infection, they can also transmit the virus,” the researchers said.**

The US and Israel have also experienced recent mumps outbreaks in student communities, which have higher vaccine coverage than the Dutch community.

It is thought people's immunity to the virus wanes over time, however, the current study was unable to assess this effect since the individual dates of vaccination were unknown. The close-knit nature of these communities also likely fuelled the spread of the virus, the researchers said.

**[Vaccine 2011; 29:9551-56.](#)**

**<http://www.sciencedirect.com/science/article/pii/S0264410X11015428>**