When people who aren’t vaccinated against measles or haven’t had measles disease are exposed to the virus, **90% of them** will be infected.

Thankfully, most people in the United States have been vaccinated against measles, but outbreaks can occur in communities with pockets of unvaccinated people. During outbreaks or international travel, vaccinated people may also develop measles. This is because approximately 3% of people who have received two doses of MMR vaccine and approximately 7% of those who have received one dose remain susceptible to measles. Experts aren’t sure why, but it could be that the immune systems of these people didn’t respond as well as they should have to the vaccine. When people who are susceptible to measles are exposed to the virus, 90% of them will become infected. Fortunately, vaccinated people who develop measles are much more likely to have a milder illness. In addition, vaccinated people are less likely to spread measles to other people, including people who can’t get vaccinated because they are too young or have weakened immune systems. Here is a graphic that explains why measles cases can occur in vaccinated people.

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**Why do measles cases occur in vaccinated people?**

90% have received two doses of MMR vaccine = 90

100 people closely exposed to measles

~3% of people with 2 doses of MMR vaccine will get measles

~90% of people with no MMR vaccine will get measles

3 vaccinated cases

9 unvaccinated cases

3/12 (25%) cases will have been vaccinated