

Possible Whooping Cough Epidemic in Europe

LONDON (Reuter) - Public health officials across Europe are preparing for a continent-wide epidemic of whooping cough following an outbreak in the Netherlands that is resistant to a leading vaccine.

The new strain of the infectious disease is a mutation of the bacterium *Bordetella pertussis* that attacks mainly children but can also hit adults. Eighty-nine percent of the Dutch children who contracted it had been vaccinated.

"The mutation appeared in the early 1980s, but now occurs in 90 percent of circulating strains," Dr. Johannes Schellekens of the Dutch National Institute of Public Health told *New Scientist* magazine Thursday.

Nearly 3,000 cases have already been reported in the Netherlands, compared to just 321 in 1995. Danish health officials have treated 179 children so far, more than double last year's figure.

The same mutation has already been spotted in Finland, Italy, Germany, France and possibly Belgium.

Schellekens said the mutation changes one of the amino acids in pertactin, a protein the bacterium carries on its surface. It tricks the human immune system that has been primed by the vaccine to recognize normal strains of the *Bordetella pertussis*.

The likelihood of the mutant strain of the disease spreading across the continent will depend on which type of vaccine a country uses.

The whole cell vaccine used by the Dutch has been ineffective. But other vaccines in England and Finland which give immunity to pertactin and other proteins will help sufferers fight the disease.

"In such cases the mutation may cause a smaller or later epidemic," said Schellekens.

During the last epidemic in Britain in the late 1970s, 102,500 cases were reported, including 36 deaths.