

To *Your* HEALTH *Fresno County*

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Why We Vaccinate

February 10, 2015

The horrible toll of human suffering and death taken by epidemics of infectious diseases such as smallpox and diphtheria have been recognized and accurately described for centuries, even millennia. Only in relatively recent history has the ability to protect populations against transmission of certain infectious diseases been possible. The scientific breakthrough which allows this achievement is termed “vaccination”.

The [history of vaccination](#) is remarkable. The concept of vaccination and development of vaccines to protect against human diseases is considered one of the greatest success stories in modern public health.

Vaccination utilizes the body’s natural immune system to mount a protective response to organisms foreign to the body that would otherwise reproduce uncontrolled and cause illness.

Vaccines use killed or weakened organisms, or even portions of organisms, to mimic natural exposure but limit the possibility of illness. The body will manufacture “antibodies” and will remain healthy. The vaccine thus generates immunity to that disease. This immunity may last for a lifetime or may wane over the course of months or years, requiring additional vaccination or “boosters.”

The success of vaccination is apparent and has been documented widely.

Many diseases such as polio and diphtheria, which previously caused large numbers of deaths nationally and globally, are now rarely seen because of vaccination.

Smallpox is a painful, disfiguring, and often fatal disease which affected 10 – 15 million people and caused 2 million deaths worldwide every year prior to 1967. To eliminate the disease, a global vaccination campaign was initiated that year and the last natural case of smallpox in the world was recorded on October 22, 1977.

Polio is another severe and often fatal disease which left 13,000 to 20,000 people paralyzed and caused 1,000 deaths in the United States (U.S.) annually prior to national vaccination efforts begun in the 1950s. The last case of polio acquired in the U.S. was in 1979.

Measles is a vaccine-preventable disease which is in the news currently. "In the decade before 1963 when a vaccine became available nearly all children got measles by the time they were 15 years of age. It is estimated 3 to 4 million people in the United States were infected each year. Also, each year an estimated 400 to 500 people died, 40,000 were hospitalized, and 4000 suffered encephalitis (swelling of the brain) from measles." ¹

In 2000, measles was declared eliminated in the US. Elimination, in this instance, is defined as "no continuous disease transmission for greater than 12 months."

Measles cases continue to occur in this country from exposure to individuals from other countries where measles vaccination rates are low

Secondary cases of measles from these international exposures are becoming more common as measles vaccination rates drop here in this country.

As of January 30th of this year, this nation has seen 102 cases of measles across 14 states. Most of these cases were reported in California and most of them have been linked to original exposure at Disneyland late last year.

This number of cases already exceeds the number of measles cases reported in the U.S. during the entire year in 2014.

Late last month, an infectious individual visited Fresno County and unknowingly exposed county residents to measles in several locations. As of February 10th, no secondary cases of measles have been identified and reported from exposures in Fresno County. It is hoped that no cases are identified before February 15th (which is the last day anyone exposed by the visitor would begin to show signs or symptoms characteristic of measles), or shortly thereafter. Should there be none, it will be the direct result of our county's relatively high vaccination rates and the rapid response made by public health and health care providers to identify individuals exposed, monitor them, and give preventive treatment to those at highest risk for illness.

Vaccination protects you and your loved ones from serious illness. But the benefits of vaccination do not stop there. With enough of us in the community vaccinated from illness, those unable to receive vaccination due to age or medical problems are also protected by the reduction in possible exposures.

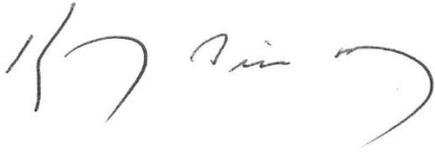
Act now to take one of the easiest and surest steps to assure your own health and the health of those you love. You will also help to assure the health of our community. Talk to your medical provider about vaccination (no matter what your age). Be sure you are fully vaccinated.

[CDC Immunization Schedules for Infants and Children](#)

[CDC Immunization Schedules for Adults](#)

E-mail me at ToYourHealth@co.fresno.ca.us.

Here's to your health!

A handwritten signature in black ink, appearing to read "Ken Bird". The signature is written in a cursive style with a large initial "K" and a long, sweeping underline.

Dr. Ken Bird, Fresno County Health Officer

References:

- 1 [CDC Measles History](#)