

Childhood Immunization and Vaccine Preventable Diseases

The percentage of African American children who are immunized is lower compared to other race/ethnic groups.

Contra Costa has not met the Healthy People 2010 objective of having at least 90% of all two year olds fully immunized.

Percent fully immunized at 24 months

Table 1. All residents 2 years of age 2006

	Percent
Contra Costa	75.5
California	77.7
Healthy People 2010	90.0

Note: Fully immunized means 4 DTP, 3 Polio and IMMR by 24 months.

The percentage of fully immunized 2-year old children in Contra Costa has fluctuated between 2001 and 2006.

African Americans continue to have a low percentage of immunizations in both Contra Costa and California.



Percent fully immunized at 24 months

Table 2. Contra Costa and California, 2001–2006

	2001	2002	2003	2004	2005	2006
Contra Costa	70.5	79.2	76.6	81.6	73.9	75.5
California	71.0	72.2	71.4	71.8	76.3	77.7

Percent fully immunized at 24 months by race/ethnicity

Table 3. Contra Costa and California, 2006

	Contra Costa	California
White	85.4	76.7
Hispanic	71.5	77.9
African American	64.5	65.9
Total	75.5	77.7

Immunization is among the most effective preventive measures known. Vaccines protect against several diseases such as diphtheria, tetanus, pertussis and polio.



Brief summary of some vaccine-preventable diseases:

Diphtheria	Bacterial infection that produces a toxin that interferes with normal heart and brain function. It has a 20% case fatality rate.
Hepatitis B	Viral infection that attacks the liver and is the leading cause of liver cancer. One in four persons with chronic hepatitis will die of chronic liver disease prematurely.
Tetanus (lockjaw)	Bacterial infection that can cause convulsive muscle spasms and interferes with breathing.
Pertussis (whooping cough)	Bacterial infection that can cause severe respiratory complications, pneumonia and death in infants.
Polio	Viral infection that attacks the motor neurons and causes a crippling paralysis

Hepatitis B virus is an established cause of chronic liver disease. It is the cause of up to 80% of liver cancer cases and is second only to tobacco among known human carcinogens. Approximately 23,000 infants are born to Hepatitis B infected mothers in the US each

year. About 5,600 of these births are in California. Without appropriate immunization 30% of these infants will develop chronic Hepatitis. Hepatitis B immunization is 80-100% effective in preventing infection in those who receive the complete series of vaccine.

Pertussis is not only a disease of infants but may present at any age, even well into adulthood. Often it is the grandparent or adolescent babysitter who has been coughing that proves to be the source of infection for many infants. The disease is often difficult to distinguish from other common respiratory illnesses such as bronchitis. Immunization with a Pertussis vaccine is the best strategy for prevention. Contra Costa County had 43 cases of Pertussis in 2005 and 15 cases in 2006.

Vaccines not only protect the immunized child, but the community as well. California requires that children be up-to-date on their shots before entering kindergarten and seventh grade, and before enrolling in licensed childcare programs.

For some vaccine-preventable diseases there are only a small number of cases reported in the county each year. Still, immunization remains an important part of the strategy to maintain the reduction in cases. Because a new case is always possible, it is important to be vigilant.

Data Sources: Immunizations

Tables

Table 1-3 Local data about immunization levels is analyzed by the Immunization Branch of the State Department of Health Services (DHS). A random survey of schools is used to assess the immunization levels of students in kindergarten. DHS uses these immunization records to estimate the percentage of children who were up-to-date when they were two years old. Not all race/ethnicity groups were available due to small numbers.

“Fully immunized” in this survey means receiving 4 DTaP (diphtheria, tetanus, pertussis), 3 Polio and 1MMR (measles, mumps, rubella) vaccines before 24 months of age.