Immunizations in California

### What It Is
On kidsdata.org, immunizations are measured by the number and percentage of kindergartners who receive all required immunizations by the time they enter school, along with the number and percentage of kindergartners who are exempt from immunization requirements, by type of exemption.

Also provided are numbers and rates of reported cases of vaccine-preventable childhood diseases—diphtheria, hepatitis A, hepatitis B (acute), measles, meningococcal disease, mumps, pertussis, polio, rubella, tetanus, and varicella—in the total population.

### Why This Topic Is Important
Immunizations are among the most successful and cost-effective preventive health care interventions, protecting millions of children worldwide from serious and potentially fatal infectious diseases. For U.S. children born between 1994 and 2021 who receive recommended vaccinations, it is estimated that more than a million lives will be saved and 472 million illnesses prevented, at a savings of nearly $2.2 trillion in direct and indirect social costs. Current immunization schedules recommend that children receive vaccinations for diseases such as measles, mumps, whooping cough (pertussis), polio, chickenpox (varicella), and hepatitis. Annual immunization against influenza also is recommended.

Vaccinations are important for the protection of the individual child as well as for the protection of others with whom an infected child might come into contact, as most vaccine-preventable diseases are spread through air or direct contact.

Vaccine hesitancy—identified by the World Health Organization among its top public health threats—has been linked to an increase in vaccine-preventable disease outbreaks in the U.S. Equitable access to vaccines is another major issue, with U.S. data showing persistent disparities in children's vaccination coverage by region, income level, health insurance status, and race/ethnicity.

### How Children Are Faring
In 2020, 94.3% of California kindergartners had received all state-required immunizations by the time they entered school, up from a low of 90.2% in 2014. Across counties with data in 2020, the share of kindergartners with all required immunizations ranged from more than 97% to less than 80%. In some school districts, fewer than half of children entering

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**Pertussis Infections per 100,000 Californians**
Definition: Number of reported cases of vaccine-preventable childhood diseases per 100,000 population, by disease (e.g., in 2020, there were 1.8 cases of pertussis (whooping cough) per 100,000 Californians).

Data Source: California Dept. of Public Health, Immunization Branch, Vaccine Preventable Disease Cases by County and Year; U.S. Centers for Disease Control and Prevention, National Notifiable Diseases Surveillance System, Notifiable Infectious Disease Data Tables; California Dept. of Finance, Population Estimates and Projections (Feb. 2023).

In 2020, 1,073 cases of vaccine-preventable childhood diseases—hepatitis A, hepatitis B (acute), measles, meningococcal disease, mumps, pertussis, tetanus, and varicella (hospitalizations and deaths only)—were reported to the state department of public health. Pertussis (whooping cough) accounts for a majority of infections reported each year—698 (65%) in 2020, a rate of 1.8 cases per 100,000 Californians of all ages. These figures are down from 2019, when there were 4,849 cases—12.2 per 100,000 Californians. Statewide rates of pertussis in the total population peaked in 2014 (29 cases per 100,000) and 2010 (24.5 cases per 100,000). Pertussis outbreaks are cyclic, with peaks every three to five years.

View references for this text and additional research on this topic:
https://www.kidsdata.org/topic/53/immunizations/summary

Statewide, 31,669 kindergartners (5.7%) were exempt from immunization requirements in 2020. Among these children, 5,268 (1%) had permanent medical exemptions, 8,227 (1.5%) were overdue for one or more required doses, and 9,188 (1.7%) were conditional entrants, i.e., children who have temporary medical exemptions or are missing (but not overdue for) required doses. Personal belief exemptions peaked in 2014 at 3.2%, but are no longer permitted as of 2017. The share of California kindergartners overdue for one or more required immunizations jumped from 0.2% to 1% between 2016 and 2017, and from 1.1% in 2019 to 1.5% in 2020—the first year a second dose of varicella vaccine was required.

kindergarten had completed all immunization series.