

## Summary of diseases and vaccines, Canada

DISEASE	AVERAGE NUMBER OF CASES AND RELATED DEATHS (per year)		EFFECTS OF DISEASE	SIDE EFFECTS OF VACCINE
	Before vaccine	After vaccine		
<b>Diphtheria</b>	12,000 cases with 1,000 deaths	0-5 cases with 0 deaths	Sever sore throat, marked weakness, nerve damage, heart failure. Death in 10%	DTaP vaccine: 20% of infants have local redness, pain; less than 5% have fever, more redness and swelling with booster at 4-6 years.
<b>Tetanus</b>	60-75 cases with 40-50 deaths	0-2 cases and no deaths since 1991	Toxin affects spinal cord leading to painful muscle spasms and seizures.	See above for DTaP. Local redness and pain common with adult booster.
<b>Pertussis</b>	30,000-50,000 cases with 50-100 deaths	3,000 cases with 1-5 deaths	Sever spasms of cough lasting 3-6 weeks, pneumonia, convulsions. Brain damage or death in 1 of every 400 infants.	See above for DTaP. The risk of brain damage after pertussis vaccine is too small to be measured.
<b>Polio</b>	2,000 cases in last epidemic in 1959	0	Muscle paralysis in 1 out of 100 persons infected with polio. Death in severe cases.	Inactivated polio vaccine (IPV) is used in Canada. No risk of disease from vaccine. Given combined with DTaP (see above for side effects).
<b>Hib</b>	1,500 cases of meningitis and 1,500 cases of infections of blood, bone, lung, skin, joints	About 30 cases	Meningitis kills in 5% of cases and leads to brain damage and deafness in 10-15% of survivors.	Given in combination with DTaP/IPV (see above for side effects).
<b>Measles</b>	95% of children have measles by age 18, or 300,000 cases with 300 deaths and 300 children with brain damage	Less than 50 cases with 0 deaths	Severe bronchitis, high fever, rash for 7-14 days; death in 1 per 1,000 cases; encephalitis in 1 per 1,000 cases.	Given combined with mumps and rubella vaccines (MMR). 5-10% have fever with or without rash 8-10 days after vaccine. No risk of disease from vaccine. Risk of encephalitis 1 case per 1 million doses. 1 in 24,000 develops low platelets.
<b>Mumps</b>	30,000 cases	95 cases	Fever, swollen salivary glands. No visible illness in more than 50% of cases. Encephalitis in 1 per 200 cases; deafness in 1 per 200,000 cases.	See MMR above.
<b>Rubella</b>	85% of children have rubella by age 20, or 250,000 cases. About 200 cases of congenital rubella syndrome.	25 cases. 0-3 babies with congenital rubella syndrome born to unvaccinated mothers.	Fever, swollen glands, rash. No symptoms in about 50% of cases. Severe damage to fetus if mother infected during first trimester of pregnancy.	See MMR above. Congenital rubella syndrome has not been observed after vaccination of pregnant women. 25% of vaccinated adult women have joint pain.