Our World in Data

Reduction of Cases and Deaths of Vaccine-Preventable Diseases in the United States after the Introduction of the Vaccine – by Max Roser

	Cases			Deaths		
	Pre-vaccine: 158 cases per million per year (1936-45)	100% Reduction	Post-vaccine: 0 cases per million per year	Pre-vaccine: 13.7 deaths per million per year (1936-45)	100% Reduction	Post-vaccine: 0 deaths per million per year
Diphtheria	All post-vaccine cases refer to 2006			All post-vaccine deaths refer to 2004		
Measles	Pre-vaccine: 3044 cases per million per year (1953-62)	99.99% Reduction	Post-vaccine: 0.2 cases per million per year	Pre-vaccine: 2.5 deaths per million per year (1953-62)	100% Reduction	Post-vaccine: 0 deaths per million per year
Mumps	Pre-vaccine: 830 cases per million per year (1963-68)	97.4% Reduction	Post-vaccine: 22 cases per million per year	Pre-vaccine: 0.2 deaths per million per year (1963-68)	100% Reduction	Post-vaccine: 0 deaths per million per year
Pertussis	Pre-vaccine: 1534 cases per million per year (1934-43)	96.6% Reduction	Post-vaccine: 52 cases per million per year	Pre-vaccine: 30.8 deaths per million per year (1934-43)	99.7% Reduction	Post-vaccine: 0.09 deaths per million per year
Acute Poliomyeltis	Pre-vaccine: 141 cases per million per year (1941-50)	100% Reduction	Post-vaccine: 0 cases per million per year	Pre-vaccine: 10 deaths per million per year (1941-50)	100% Reduction	Post-vaccine: 0 deaths per million per year
Paralytic Poliomyeltis	Pre-vaccine: 103 cases per million per year (1951-54)	100% Reduction	Post-vaccine: 0 cases per million per year	Pre-vaccine: 11.8 deaths per million per year (1951-54)	100% Reduction	Post-vaccine: 0 deaths per million per year
Rubella	Pre-vaccine: 242 cases per million per year (1966-68)	99.98% Reduction	Post-vaccine: 0.04 cases per million per year	Pre-vaccine: 0.09 deaths per million per year (1966-68)	100% Reduction	Post-vaccine: 0 deaths per million per year
Congenital Rubella Syndrome	Pre-vaccine: 0.76 cases per million per year (1966-69)	99.6% Reduction	Post-vaccine: 0.003 cases per million per year	Pre-vaccine: no data (1966-69)	no data	Post-vaccine: 0 deaths per million per year
Smallpox	Pre-vaccine: 250 cases per million per year (1900-49)	100% Reduction	Post-vaccine: 0 cases per million per year	Pre-vaccine: 2.9 deaths per million per year (1900-49)	100% Reduction	Post-vaccine: 0 deaths per million per year
Tetanus	Pre-vaccine: 4 cases per million per year (1947-49)	96.6% Reduction	Post-vaccine: 0.14 cases per million per year	Pre-vaccine: 3.2 deaths per million per year (1947-49)	99.6% Reduction	Post-vaccine: 0.01 deaths per million per year
Hepatitis A	Pre-vaccine: 465 cases per million per year (1986-95)	89% Reduction	Post-vaccine: 51 cases per million per year	Pre-vaccine: 0.5 deaths per million per year (1986-95)	88.7% Reduction	Post-vaccine: 0.06 deaths per million per year
Acute Hepatitis B	Pre-vaccine: 273 cases per million per year (1982-91)	83.9% Reduction	Post-vaccine: 44 cases per million per year	Pre-vaccine: 1 death per million per year (1982-91)	83.6% Reduction	Post-vaccine: 0.16 deaths per million per year
Haemophilus Influenza type b	Pre-vaccine: 84 cases per million per year (1980s)	99.8% Reduction	Post-vaccine: 0.17 cases per million per year	Pre-vaccine: no data (1980s)	no data	Post-vaccine: 0.02 deaths per million per year
Pneumococca Disease	Pre-vaccine: 233 cases per million per year (1997-99)	40.5% Reduction	Post-vaccine: 139 cases per million per year	Pre-vaccine: 24 deaths per million per year (1997-99)	31.3% Reduction	Post-vaccine: 16.5 deaths per million per year
Varicella	Pre-vaccine: 16018 cases per million per year (1990-94)	87.2% Reduction	Post-vaccine: 2046 cases per million per year	Pre-vaccine: 0.41 deaths per million per year (1990-94)	84.3% Reduction	Post-vaccine: 0.06 deaths per million per year

Data source: Roush and Murphy (2007) - Historical comparisons of morbidity and mortality for vaccine-preventable diseases in the United States. In The Journal of the American Medical Association, 298, 18, 2155--2163.

The data visualisation is available at OurWorldinData.org. There you find the raw data and more visualisations on this topic.