

# ERADICATION AND CONTROL OF INFECTIOUS DISEASES THROUGH VACCINATION



Vaccination is one of the most successful public health interventions in modern human history.<sup>1</sup>

The development of vaccines has changed the course of infectious diseases and prevents 2-3 million deaths each year – that's thousands of lives saved daily.<sup>2</sup>

Let's take a look at how vaccination has helped to reduce or, in some cases, eradicate the spread of infectious diseases.

1800

## SMALLPOX

If smallpox had not been eradicated in 1980, it could still be causing **5 million deaths a year.**<sup>3</sup>

In the late 18<sup>th</sup> century, British surgeon and physician, Edward Jenner, hypothesised that inoculation with cowpox could protect against smallpox.<sup>3</sup> Despite this, smallpox remained a deadly disease well into the 20<sup>th</sup> century, killing an estimated 300 million people,<sup>4</sup> until 1959 when the World Health Organization launched their global vaccination programme.<sup>5</sup> In 1980, smallpox was declared the first ever disease to be globally eradicated.<sup>3</sup>

1850

1900

## POLIO

Poliomyelitis, commonly known as polio, is an infectious disease passed from person to person through contact with faeces, saliva or mucus.<sup>6</sup> Before a vaccination was introduced, epidemics would result in up to 750 deaths in the UK each year.<sup>6</sup> The disease mainly affects children under five, and can lead to irreversible paralysis and death.<sup>7</sup> A vaccine was invented in 1955 and deployed widely,<sup>8</sup> sparing countless children from the life-limiting effects of polio or death.<sup>7</sup>

Cases of polio have decreased by **over 99% since 1988**<sup>7</sup>

1950

## MEASLES

During 2000-2018, measles vaccination prevented an estimated **23.2 million deaths, globally.**<sup>9</sup>

Before the introduction of a measles vaccine in 1963, major epidemics occurred every 2-3 years and caused an estimated 2.6 million deaths globally each year.<sup>9</sup>

2000

## TETANUS

Tetanus is an infectious disease caused by the toxin of a bacterium, and leads to painful muscle contractions.<sup>10</sup>

It caused 314,000 deaths globally in 1990.<sup>10</sup> The widespread use of a vaccine meant that in 2017, there were just over 38,000 deaths.

Vaccination resulted in an **88% reduction in deaths from 1990 to 2017.**<sup>10</sup>

2020

## VACCINES AND COVID-19

COVID-19 vaccines have been developed using this same science that has been around for decades.<sup>11</sup> While there is still a lot to learn about COVID-19, we do know that getting vaccinated against the disease can protect the people around you.<sup>11</sup>

FOR MORE INFORMATION ABOUT VACCINATION, PLEASE SPEAK TO YOUR DOCTOR.

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