

# Pertussis Microbe Outsmarts the Vaccines As Experts Argue About Why A Referenced Article

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For the past decade, Americans have been subjected to dire warnings that B. pertussis whooping cough cases are on the rise and it is the fault of parents who don't vaccinate their children.<sup>1 2 3</sup> That myth actually goes back to the early 1980's,<sup>4</sup> when parents of DPT vaccine injured children in the U.S. were asking for a safer pertussis vaccine while, at the same time, discovering that whole cell pertussis vaccine in DPT shots did not prevent infection<sup>5</sup> and vaccine immunity lasted for only two to five years.<sup>6 7</sup>

Today, there is compelling scientific evidence that B. pertussis bacteria have evolved to survive vaccine pressure. Now, there are more virulent pertussis strains that are more efficiently transmitted by vaccinated children and adults with waning immunity.

Now, here is the rest of the story in more detail.

## High Child Pertussis Vaccination Rates in U.S. for 35 Years

Child pertussis vaccination rates in the U.S. have remained very, very high for the past 35 years.<sup>18</sup> Consistently, more than 94 percent of kindergarten children have had four to five pertussis-containing shots either in whole cell DPT or acellular DTaP vaccines.<sup>19</sup> There is a 94 percent pertussis vaccination rate for children under 35 months old<sup>20</sup> and, today, 88 percent of teenagers attending high school have gotten a sixth pertussis booster shot.<sup>21</sup>

That's a lot of pertussis vaccination going on in America for a long time among children of all ages, many of whom are now adults in their 20s, 30s and 40s. So why are public health officials reporting that large numbers of fully vaccinated preschoolers in Florida,<sup>22</sup> and fully vaccinated teenagers in California,<sup>23</sup> and fully vaccinated sisters and brothers of newborn infants are spreading pertussis whooping cough<sup>24</sup> - even though most have gotten every pertussis shot recommended by the CDC?

Before we examine why the experts are fighting with each other about the answer to that question, let's do a quick review of the history of pertussis and pertussis vaccine.

## DPT Licensed in 1949 and DTaP in 1996 for U.S. Babies

B. pertussis whooping cough has been around since at least the 16<sup>th</sup> century, and it can be especially serious for babies who cannot breathe when the sticky mucus produced by the gram negative bacteria clogs their tiny airways.<sup>25 26</sup> The first crude whole cell pertussis vaccine was licensed in 1914,<sup>27</sup> but was not given widely to children until after 1949, when it was combined with diphtheria and tetanus vaccines into the DPT shot<sup>28</sup> and

## The Myth



The same old excuse - "it's the parent's fault" - is being invoked again in the 21<sup>st</sup> century by forced vaccination proponents who want to eliminate vaccine exemptions,<sup>8 9 10 11</sup> just as another generation of parents are discovering that acellular pertussis vaccine in DTaP shots *also* does not prevent infection<sup>12 13 14</sup> and vaccine immunity is waning, lasting at best for two to five years.<sup>15 16 17</sup>

## Time to Dispel Myths and Lies About Pertussis and Pertussis Vaccines

What's old is new again. And it is time to dispel the myths and lies being told about pertussis and pertussis vaccines.

In brief:

- **FACT:** *Both the reactive whole cell DPT vaccine licensed 1949 and the less toxic acellular DTaP vaccine licensed in 1996 do not prevent infection or transmission, and only provide two to five years of temporary immunity at best;*
- **FACT:** *Millions of vaccinated children and adults are silently infected with pertussis in the U.S. every year and show few or no symptoms but spread whooping cough to vaccinated and unvaccinated children - without doctors identifying or reporting cases to the government;*
- **FACT:** *In response to mass pertussis vaccination campaigns beginning in the 1950s, the B. pertussis microbe evolved to evade both whole cell and acellular pertussis vaccines, creating new strains producing more toxin to suppress immune function and cause more serious disease.*

used until 1996, when a less reactive DTaP vaccine was licensed in the U.S.<sup>29</sup>

By 2014, public health officials reported that 86 percent of the world's children had gotten at least three pertussis shots,<sup>30</sup> but estimate there are still about 16 million pertussis cases and 195,000 pertussis-related deaths every year globally.<sup>31</sup>

## 75% Drop in Pertussis Deaths Before DPT Licensed in 1949



But what about deaths in the U.S. from pertussis whooping cough?

In our country, deaths from pertussis infections dropped by more than 75% between 1922 and 1948, the year *before* the DPT vaccine was licensed. In 1948, the mortality rate was less

than 1 pertussis death per 100,000 persons and would never be higher than that again.<sup>32 33</sup> In 2013, there were about 29,000 reported pertussis cases and 13 pertussis-related deaths in America, with nine of those deaths in infants under age one.<sup>34</sup>

However, *reported* numbers of pertussis cases do not match the total number of *actual* cases of pertussis that are happening in America. Most pertussis cases, like most vaccine reactions, are *not* being diagnosed or reported by doctors to the government.<sup>35</sup> Public health officials admit they still don't have reliable lab tests to measure pertussis immunity and can't agree about how to diagnose pertussis when infected people, especially vaccinated people, show up in doctor's offices with mild symptoms.<sup>36 37 38</sup>

## Millions of U.S. Pertussis Cases in Vaccinated Persons Not Identified or Reported

But what public health officials *have* known for a long time - and do not publicly talk about - is that *millions* of vaccinated children and adults living in the U.S. get pertussis whooping cough and are never identified.<sup>39 40 41 42</sup> That's right: there are millions of pertussis infections going on in America among vaccinated people but doctors are not diagnosing or reporting them.

In fact, whether you or your child have been vaccinated or not, you can get a silent asymptomatic pertussis infection and transmit it to someone else without even knowing it.<sup>43 44 45</sup> That child or adult sitting next to you in the bus, classroom, movie theater or doctor's office, who has a little cough or no cough at all, could be infected with B. pertussis whooping cough, even though he or she has gotten *every* federally recommended dose of pertussis vaccine.

## No Herd Immunity: Vaccines Do Not Block Infection, Carriage or Transmission

When there are a lot of people with silent asymptomatic pertussis infections, it is impossible to know who is a carrier and who is not, which means that reported cases of pertussis are just the tip of a very big iceberg. It also means that articles blaming whooping cough cases on unvaccinated or partially vaccinated children are nothing more than wishful thinking and scapegoating.<sup>46</sup>

**Bottom Line: *Both natural and vaccine acquired immunity is temporary<sup>47</sup> and while vaccination may prevent clinical symptoms, it does not block infection, carriage or transmission. If vaccinated people can get silently infected and transmit infection without showing any symptoms - even after getting four to six pertussis shots - then pertussis vaccine acquired "herd immunity" is an illusion and always has been.***

So the big question is: Why has more than a half-century of pertussis vaccination failed to produce true herd immunity like public health officials insist it theoretically can if only more and more pertussis shots are given to more people more of the time?<sup>48 49</sup>

## Extremely Reactive DPT and Less Reactive DTaP both Have Low Efficacy

The answer is simple and the emerging scientific evidence is compelling: the B. pertussis microbe has evolved over the past 65 years to evade whole cell and acellular pertussis vaccines, which drug companies have marketed and medical doctors have aggressively promoted in a crusade to kill a species of bacteria they still know very little about.<sup>50 51</sup> A review of the medical literature reveals that the experts are unhappy with how much they still don't know about the B. pertussis microbe<sup>52</sup> and are arguing with each other about if, when, how and why pertussis vaccines have consistently failed to do the job of achieving herd immunity to prevent B. pertussis whooping cough from circulating in highly vaccinated populations around the world.<sup>53 54 55</sup>

The inconvenient set of scientific facts they have to work with are these:

- **FACT:** The efficacy of whole cell pertussis vaccine in the DPT shot was measured to be between 30 and 85 percent, depending upon the type of DPT and vaccine manufacturer,<sup>56 57 58 59 60</sup> and protection lasted two to five years.<sup>61</sup>
- **FACT:** After a low of about 1,000 cases of pertussis were reported in the U.S in 1976,<sup>62</sup> it was obvious all through the 1980s and 90's that whole cell pertussis vaccine in DPT shots was *not* preventing infection or transmission.<sup>63 64 65 66 67</sup> Pertussis cases increased in highly vaccinated populations in cycles of three to five years - just like

before DPT vaccine was widely used in the 1950s.<sup>68 69 70 71 72</sup>

- **FACT:** The whole cell DPT vaccine used until the late 1990's in the U.S. was an extremely reactive vaccine. DPT vaccine reactions like fever, pain, and irritability were experienced by between 50 and 85 percent of children and seizures and collapse/shock reactions followed one in 875 DPT shots.<sup>73 74</sup> Brain inflammation was reported following 1 in 110,000 DPT shots with permanent brain damage after 1 in 310,000 DPT shots.<sup>75 76</sup> Finally, in 1996, the marginally effective and extremely reactive whole cell DPT vaccine was replaced with a far less reactive but marginally effective acellular DTaP vaccine.<sup>77</sup> Similar to whole cell pertussis vaccines, acellular pertussis vaccine efficacy in clinical trials was measured to be between 40 and 89 percent, depending upon the DTaP vaccine manufacturer.<sup>78 79 80</sup>
- **FACT:** Acellular pertussis vaccines do not prevent infection,<sup>81 82</sup> just like whole cell pertussis vaccines do not prevent infection. In the 21<sup>st</sup> century, pertussis outbreaks and cyclical increases have continued,<sup>83 84 85</sup>— even after a pertussis booster shot was added to the schedule for all adolescents and adults in 2006.<sup>86 87</sup> By 2010, the Tdap pertussis booster shot was found to be only about 66 percent effective in providing temporary immunity for teenagers and adults.<sup>88</sup>

## Pertussis Microbe Evolved to Evade Both DPT and DTaP Vaccines

Eighteen years ago, in 1998, molecular biologists and other basic science researchers began warning that the B. pertussis microbe started to evolve to evade whole cell pertussis vaccine after DPT shots were given on a mass basis to children in the 1950's.<sup>89 90 91 92</sup> For the past two decades, these bench scientists have been publishing hard evidence that over the past 65 years, B. pertussis bacteria have efficiently adapted to both whole cell and acellular pertussis vaccines.<sup>93 94 95</sup>

## New Pertussis Strains with More Toxin Causing More Serious Disease

In a fight to survive, the B. pertussis microbe has created new strains that produce more pertussis toxin to suppress the human immune system and cause more serious disease. Today, the pertussis strains included in the vaccine no longer match the pertussis strains causing whooping cough disease.<sup>96 97 98 99 100</sup>

**Bottom line: There is compelling scientific evidence that B. pertussis bacteria have evolved to survive vaccine pressure. Now, there are more virulent pertussis strains that are more efficiently transmitted by vaccinated children and adults with waning immunity.**

As one research scientist commented in 2009, "An important question is whether other childhood vaccines

also select for pathogens that are more efficiently transmitted by primed hosts, resulting in increase virulence."<sup>101</sup>

## War on B. Pertussis Bacteria & Vaccine Policies Not Driven By Hard Science

The crusade by public health officials to kill the B. pertussis microbe by adding more and more doses of ineffective vaccines to the child and adult schedule – now even invading the once sacred place of the womb and insisting all pregnant women be vaccinated<sup>102 103</sup> - is a cautionary tale. As we witness a bacterial species efficiently adapting in an effort to survive a war that has been declared on it, what has become painfully clear is that the history of mass vaccination has not been driven by hard science transparently shared with the people.<sup>104</sup> It has been driven by the politics of a public health profession working a lucrative government-industry public private partnership to protect failed vaccine policies, while ignoring the hard science.<sup>106 107</sup>

We, the people, are not going to pretend the science doesn't exist. It is up to each one of us to inform public health officials and legislators that it is their responsibility *to show us the science and give us a choice* when it comes to vaccines, especially when no vaccine manufacturer, no public health official and no doctor is liable in a civil court of law when vaccine reactions and failures lead to injury and death.<sup>108</sup>

**It's your health. Your family. Your choice.**



### About the Author

Barbara Loe Fisher is co-founder and president of the National Vaccine Information Center and is a leading informed consent advocate and non-medical expert on vaccine science, policy, law, and ethics.

Ms. Fisher is also the co-author of the seminal book *DPT: A Shot in the Dark* (Harcourt Brace Jovanovich, 1985) and author of *The Consumer's Guide to*

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She has served as the consumer representative on two U.S. Federal Advisory Committees – the National Vaccine Advisory Committee (1988-1991), and the FDA Vaccines and Related Biological Products Advisory Committee (1999-2002). Ms. Fisher has also been a consumer representative for the Institute of Medicine's Vaccine Safety Forum (1995-1998), the Vaccine Policy Analysis Collaborative (2002-2005), and the National Vaccine Advisory Committee's Vaccine Safety Working Group (2009-2010).

**About NVIC:** Founded in 1982, the National Vaccine Information Center (NVIC) is the largest and oldest consumer led charitable non-profit organization advocating for informed consent protections in vaccine related public health policies and laws. NVIC does not promote or advise against the use of vaccines and supports the right of consumers to make educated, voluntary health care choices. Learn more at [www.NVIC.org](http://www.NVIC.org).

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