The Truth about Tetanus

Question: “If you don’t do the DTaP (diptheria, tetanus and acellullar pertussis vaccine), what do you do if your child steps on a rusty nail? Do you choose to wait until that happens and go get a tetanus shot at that time instead of doing it as prevention?”

Answer: Antibodies Do Not Equal Immunity

According to the CDC, “Because of the extreme potency of the toxin, tetanus disease does not result in tetanus immunity.”

How is it, then, that you can vaccinate successfully against tetanus? If the purpose of vaccination is to simulate normal immune responses with weakened or dead pathogens, why would vaccination yield immunity when the actual disease can’t?

According to experts, it’s because the bacteria that causes tetanus - Clostridium tetani – produces a neurotoxin which inhibits our ability to create the antibodies that fight infection. By introducing a dead form of the toxin (which cannot block antibody production) doctors hope that patients will build up immunity to the toxin. It seems like a plausible idea, but is that possible?

Yes and no. While it is is possible that the body will create antibodies to the toxin, antibody response to a vaccine does not equal immunity or protection. (Source 1, Source 2). The presence of antibodies after a vaccination indicates exposure to a pathogen, but it alone does not confer immunity.

Here’s what I mean: Say you send your first grader to school with the answers to her second period quiz in her back pocket. When test time arrives she has to go through the hassle of digging through her folders to find the answer sheet, read your chicken scratch handwriting (or maybe that’s just mine!), and write down the answers. She had to go through *some* effort to earn that A+, but having the right answers on that test does NOT mean she learned anything.

In the case of the tetanus vaccine, injecting the body with some dead toxins to work with is essentially like handing it the answers to a quiz. Unless the whole immune system fully engages a live version of the pathogen it does not really learn anything. This is evidenced by the fact that according to this statement from the University of Chicago’s Neurology department, individuals with extremely high levels of titers (antibodies) can still contract severe – even fatal – tetanus. The idea that antibodies equal immunity is magical thinking not supported by the many documented cases of disease outbreaks among fully vaccinated populations. In fact, in one investigation into why a Corpus Christi middle school had an outbreak, researchers said that:

“We conclude that outbreaks of measles can occur in secondary schools, even when more than 99 percent of the students have been vaccinated and more than 95 percent are immune.”

Okay, you may be thinking, the tetanus vaccine probably won’t work. But what harm can a little magical thinking do, really? Why not just get the vaccine in case? Well, according to a letter published by the The New England Journal of Medicine, the tetanus booster shot can actually cause T cells (vital to immune system function) to drop below normal, with the greatest decrease up to 2 weeks later. In some cases, the researchers observed that the T-cell count fell to levels found in active AIDS patients. Scary, yes? And that’s before we consider the generous dose of aluminum potassium sulfate, bovine extract, formaldehyde or formalin and thimerosal (for adult doses) contained in each syringe!

Sadly, magical thinking is just the beginning. Much of the information we’ve been given regarding tetanus vaccination is either incomplete, misleading or flat out wrong.

You've probably heard that tetanus exposure can come from rusty nails, but I'll bet no one has mentioned that it can also come from those dust bunnies under your bed, that toy your baby just dropped in the dirt and put in her mouth, and in that cow patty you scraped off your boot after the barn dance.

Yep, Clostridium tetani is actually found in common household dust, animal droppings and about 1/3 of the soil sampled around the world – it's everywhere! (Source) In fact, the only reason rusty nails are ever a concern is that they come into contact with things like soil and have the ability to puncture skin – they don't inherently contain Clostridium tetani.

So why are we not seeing rampant epidemics?

Natural Immunity Vs. Artificial Immunity

Normally when we encounter Clostridium tetani it enters our body through our mouth or nose – by breathing dust particles that contain it or eating food that has retained some from the soil it was grown in. However, unlike with puncture wounds, ingested Clostridium tetani is unable to produce large amounts of tetanospasmin, the potent neurotoxin that causes the muscle spasms and fatalities associated with tetanus infection.
In fact, it appears that gradual exposure to tetanus in this way can create natural immunity.

Unvaccinated Populations With Proven Natural Immunity To Tetanus

In this study, "410 Indians not artificially immunised against tetanus showed that 80% had measurable antitoxin" levels against tetanospasmin. Researchers concluded this was due to ingestion of Clostridium tetani over time.

And according to these researchers,, when "adequate conditions appear, tetanus toxin is known to stimulate the immune system and produce detectable humoral antibodies [antitoxin]. . . The existence of natural immunization was unquestionably demonstrated by presence of protective levels of tetanus antitoxin in the blood of the majority of 59 surveyed subjects considering that none of them had ever received any tetanus toxoid and most of them never received a single shot of any drug."

When researchers tested the blood of 200 individuals in an isolated community it was found that 197 had measurable levels of antitoxin and about 30% had "protective levels" according to Western standards. The researchers pointed out that immunity seemed to be age related, with the youngest being the most lacking in antitoxin. It is thought that this is because the immune response occurs over a period of time.

In Mali, samples from 48 adults found 20 individuals with protective tetanus antibody titers, 23 with measurable levels of antitoxin, and 5 devoid of tetanus antitoxin. Ninety-nine unvaccinated children ages 3 and under were also tested and then retested 7 months later. When the first serum sample was taken 12.1% were found to have tetanus antitoxin. Seven months later 16.2% had antitoxins and 4 children were found to have "protective levels." According to the researchers, "The data suggest a silent oral immunization by tetanus bacilli thus boosting under unhygienic conditions the tetanus immunity with advancing age."

Here we have our answer to how the body is designed to develop immunity to tetanus – through gradual ingestion rather than direct introduction into the bloodstream.

What I want to draw attention to here is how different this scenario is from the conditions that lead to tetanus infection. Clostridium tetani needs an anaerobic environment (like a puncture wound) to replicate. Cuts and scrapes which have been exposed to oxygen are not a concern. Though the digestive tract is a low-oxygen environment it also somehow manages to disable reproduction. Researchers have not indicated why they think this is, but I believe it's because the beneficial bacteria in our digestive tracts neutralize them before they ever get established.

On the other hand, Clostridium tetani introduced through a puncture wound bypasses our natural immune defenses and flows directly into the bloodstream. In that way a tetanus vaccine is actually very similar to the most dangerous way a person can encounter tetanus – through a puncture wound! When we inject tetanus into an individual we are simulating the wrong process – the "sneak attack" on the bloodstream which overwhelms the body instead of the slow exposure through ingestion that yields immunity.

But! But! ....

According to the CDC, tetanus rates continue to drop despite the fact that about 40% of the population is not vaccinated against the disease.

What about the dramatic drop in tetanus cases since the introduction of the vaccine? Even if it makes no logical sense we can see that it's effective, right? Um, no.

According to the CDC, tetanus rates continue to drop despite the fact that about 40% of the population is not vaccinated against the disease.

As it turns out '[d]uring the mid-1800′s there were 205 cases of tetanus per 100,000 wounds. By the early 1900′s (before a tetanus vaccine became available), this rate had declined to 16 cases per 100,000 wounds - a 92% reduction. Some researchers attribute this decline to an increased attention to wound hygiene."(source)

Here's another statistic you may find interesting:

During the Second World War, there were 12 recorded cases of tetanus. Four of them occurred in military personnel vaccinated against the disease . . . The majority of those cases were over 50. During that time, no deaths occurred among any tetanus cases under 30 years of age. Tetanus vaccines are not responsible for the success, since they only immunize for 12 years or less, and most of the vaccines are given to children. Yet, in contrast, the tetanus vaccine itself results in a variety of serious complications, including recurrent abscesses, high fever, inner ear nerve damage, anaphylactic shock, loss of consciousness, and demyelinating neuropathy (progressive nerve degeneration). (See U.S. Morbidity and Mortality Weekly Reports for additional information on these statistics.)

The Vaccination Crisis

Why do most cases of tetanus occur in people over 50? According to my friend and chiropractor, Dr. Haggerton, it's because some older adults have decreased circulation in their limbs due to conditions like diabetes. If they step on a sharp reed/nail/whatever and there is not enough circulation to make the wound bleed it will not properly aerate. This, of course, makes the wound an anaerobic environment where the multiplication of Clostridium tetani becomes possible. Because some diabetics experience a condition called neuropathy – decreased sensation in the feet – they may not even know they stepped on something and, therefore, do not clean and aerate the wound properly.

How To Prevent Tetanus

Despite what we've been told, there is plenty of evidence out there that plain old oxygen-rich hydrogen peroxide is more effective at preventing tetanus than the vaccine. Experts say deep puncture wounds and other at-risk injuries should be thoroughly cleaned and not allowed to close until the inner tissues have begun to heal. Make sure the wound bleeds as much as possible because the oxygen in the blood will help to aerate the wound alongside a hydrogen peroxide solution.

What To Do If You Suspect Tetanus

There is no blood test to confirm tetanus. However, if you suspect you or someone you love has it you should immediately go to the emergency room so that a doctor can assess you. If he/she believes you have tetanus request the Tetanus Immunoglobulin (TiG) shot. The TiG is an anti-toxin serum, not a vaccine. PLEASE MAKE SURE you actually see the packaging that the anti-toxin comes in, because in many hospitals standard procedure calls for suspected tetanus patients to be given the vaccine rather than the more expensive (and honestly, painful) anti-toxin. Obviously, this makes no sense because it takes weeks for the vaccine to stimulate "protective" levels of antibodies, but that is what is currently recommended in many clinical settings.

Tetanus Toxoid = Vaccine
Tetanus Immunoglobulin = Anti-Toxin

Got it? GREAT!!!

Source: http://www.mommypotamus.com/when-to-get-a-tetanust-shot/

Please go to the above link for hotlinks to sources used in this article.