Vaccine Illusion

How vaccination compromises our natural immunity and what we can do to regain our health

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Introduction

I know of many alternative health practitioners and even of a few pediatricians who have embraced the non-vaccination approach to health. However, I have yet to encounter one among my own kind: a scientist in the trenches of mainstream biomedical research who does not regard vaccines as the greatest invention of medicine.

I never imagined myself in this position, least so in the very beginning of my Ph.D. research training in immunology. In fact, at that time, I was very enthusiastic about the concept of vaccination, just like any typical immunologist. However, after years of doing research in immunology,

observing scientific activities of my superiors, and analyzing vaccine issues, I realized that vaccination is one of the most deceptive inventions the science could ever convince the world to accept.

As we hear more and more about vaccine injuries, many individuals are starting to view vaccination as a necessary evil that has helped us initially to overcome raging epidemics but now causes more damage than benefit to our children.

As an immunologist, I have a different and perhaps a very unique perspective. I have realized that the invention of vaccination in the 18th century has precluded us from seeking to understand what naturally acquired immunity to diseases really is. Had we pursued a different route in the absence of that shortcut, we could have gained a thorough understanding of natural mechanisms of immunity and developed a truly effective and safe method of disease prevention compared to what

vaccines can possibly offer.

The biological term *immunity* refers to a universally observed phenomenon of becoming unsusceptible to a number of infectious diseases through prior experience. Because of the phonetic similarity between the words *immunology* and *immunity*, it is tempting to assume that immunology is a science that studies the state of immunity, but this is not the case. Immunology is a science that primarily studies an artificial process of *immunization* - i.e., the immune system's response to injected foreign matter. Immunology does not attempt to study and therefore cannot provide understanding of natural diseases and immunity that follows them. The "knowledge" about the function of the immune system during the natural process of infection is nevertheless inferred from contrived immunologic experiments, which typically consist of injecting laboratory-grown microorganisms (live

or dead) or their isolated parts into research animals to represent the state of infection. Because immunologic experiments are unrealistic simulations of the natural process, immunologists' understanding of nature is limited to understanding their own experimental models. Immunologists have confined the scope of their knowledge to the box of experimental modeling, and they do not wish to see beyond that box. Thinking within the box only reinforces the notion of vaccination and cannot provide any other solution to the problem of diseases.

Despite the fact that the biological basis of naturally acquired immunity is not understood, present day medical practices insist upon artificial manipulation of the immune response (a.k.a. immunization or vaccination) to secure "immunity" without going through the natural infection process. The vaccine-induced process,

although not resembling a natural disease, is nevertheless still a process with its own risks. And it is not life-long immunity that we gain via vaccination but only temporary immunity. For this reason, vaccination at its core is neither a safe nor an effective method of disease prevention. Yet, immunologists have nothing better to offer because they can only go as far as their deeply rooted immunologic dogma allows them.

Three important factors have contributed to my gradual disillusionment with immunologic paradigms and their applications - vaccines. First, several significant inconsistencies within immunologic theory made me quite unsatisfied with its attempted explanation of immunity. Second, I observed how some seasoned immunologists would omit mentioning the outcome of crucial experiments to make their publication on new vaccine development strategies

look very promising. This made me suspicious about the vaccine development process in general and eager to take a look at the other side of the vaccination debate.

The third factor was the birth of my child. This event compelled me to take a break from laboratory research for a few years. I completely shed my identity of an immunologist and became a parent determined to raise a healthy child. I was amazed at how clueless I was about what really matters for health despite my proficiency in all those fancy immunologic theories amassed in the Ivory Tower. For the sake of my child, I had to reconsider everything I knew from my immunology education.

This book is intended to give parents essential immunologic background for making vaccination decisions for their children. Making vaccination decisions is an important personal

responsibility that should not be left to any medical or scientific authority. Parents should educate themselves about vaccines and diseases to the extent that they feel absolutely confident and well prepared for taking full responsibility for the consequences of their decisions.

It is important to estimate risks of vaccine injuries versus risks of exposure to vaccine-targeted microorganisms. But the analysis should not stop there. I urge every parent to consider *how* vaccines achieve their effects, and if the desired vaccine effects truly benefit our children and our society. The implications of vaccination were not acceptable to me, neither as a parent nor as a scientist, and this book is my effort to tell other parents why.

Another goal of this book is to raise awareness in our society about the urgent necessity to change basic immunologic research in a way that

will bring us full understanding of natural immuno-protective mechanisms and acquired immunity. It is up to future generations of immunologists to rescue this science and put it on the right track. The benefits for humankind will be enormous, as this would make both vaccine injuries and fear of diseases a matter of the past. But to make this happen, the field of immunology must first be cleared from the weeds of immunologic dogma.

And finally, this book is my attempt to heal the schism in our society between those who oppose vaccines due to vaccine safety concerns and those who oppose the anti-vaccine movement due to the fear of diseases. We must realize that we, the parents, all have the same goal: we all want to raise our children healthy. It is only a matter of how best to achieve this goal.

1. How We Got Married to the Idea of Vaccination

To understand the root of the vaccination problem, the first question we must ask is how the science of immunology came into existence. It all goes back to the ancient folk practice of *variolation*, an injection of pus from a smallpox pustule of a sick person into a healthy one. This folk practice was meant to give a milder form of the disease to prevent naturally acquired smallpox. But this practice was unsafe and its effectiveness was not well documented.

At the end of the 18th century, a British physician

Edward Jenner attempted to make the practice of *variolation* a bit safer by substituting the pus from a smallpox pustule with that from a cowpox pustule. To distinguish his modified procedure from variolation, Jenner called it *vaccination* (from a latin term *vaccinia*, which stands for cowpox). The term *vaccination* originally referred only to this particular Jennerian procedure. Modern *vaccines* have co-opted the term, although they have nothing to do with the *vaccinia* virus.

Cowpox disease was similar to smallpox, but it was generally mild, and people who acquired cowpox naturally (usually milkmaids) were afterwards immune to smallpox. Jenner's idea was that the state of natural immunity to smallpox following natural cowpox disease could be circumvented by vaccination.

To test his idea, Jenner vaccinated healthy subjects with no prior history of smallpox. Soon after

vaccination, he injected his subjects with pus from a smallpox pustule, as in the variolation procedure. If left unvaccinated, these subjects were expected to develop smallpox pustules from variolation. However, his vaccinated subjects did not. Jenner concluded that his vaccinated subjects were immune from smallpox, just like milkmaids who had the cowpox disease. He convinced the British authorities to make good use of his vaccine invention. The rest is history.

Yet, Jenner was fooled by the apparently successful results of his experiment. He tested his vaccinated subjects only for their resistance to variolation. He did not test them for their resistance to natural smallpox. Had he done the latter, he would have discovered that the protection from natural smallpox conferred by his vaccine was wearing off, merely postponing a person's susceptibility to smallpox but not eliminating it for good the way

natural disease experience does. The impermanent duration of protection happens to be the case for modern vaccines as well.

Overestimation of the duration of protection conferred by the Jennerian vaccine might have resulted in a horrible smallpox epidemic in fully vaccinated communities in England at the end of the 19th century and in the Philippines in the beginning of the 20th century. Quarantine, a measure that was subsequently introduced world-wide in addition to vaccination, might have done more for smallpox eradication than what vaccination alone is given credit for.

Because the limitations of the vaccination approach in disease prevention were so grossly overlooked, the first important lesson we failed to learn is that vaccination does not lead to permanent immunity. Nevertheless, scientists proceeded with further research and vaccine development assuming

that it does. The science of immunology was formed with the primary purpose to study what happens in the body following injection of foreign matter under the pretext of studying immunity. Every new generation of immunologists is initiated into this illusion and inadvertently takes immunologic research in the direction that is further and further away from understanding the true basis of naturally acquired immunity.

2. Horse Anti-serum Mystery

After the smallpox vaccine, the next major breakthrough in immunologic research came with Emil von Behring's and Shibasaburo Kitasato's use of horse anti-serum for treating diphtheria and tetanus. This breakthrough was deemed so important that it earned the German scientist the first ever Nobel Prize in Physiology or Medicine in 1901.

Diphtheria and tetanus are now very rare diseases associated with bacteria *C. diphtheriae* and *C. tetani,* respectively. The symptoms of these diseases are caused not by the bacteria themselves, but by the

toxins they secrete under very specific conditions. These toxins can be collected from the media in which bacterial cultures are grown.

Von Behring and Kitasato had documented an amazing property of the serum (the liquid component of the blood) from animals that had been inoculated with toxin-containing media: their serum had acquired anti-toxic properties. When given to patients with diphtheria or tetanus, anti-toxic serum (*anti-serum*, for short) led to the recovery from these diseases. It acted as if it were an antidote to these toxins.

The original method of anti-serum production for therapeutic use involved animals. Large animals, such as horses, were initially injected with a fraction of a lethal dose of the diphtheria or tetanus toxin. The toxin dose was gradually increased with each subsequent injection. Ultimately, the horses were injected with a dose that would

be lethal, but the slow build up of the doses had made them tolerant to the toxin. Their serum was then collected and used as a treatment of diphtheria or tetanus in humans.

Although the original anti-serum method of diphtheria and tetanus treatment, albeit not validated by a placebo-controlled trial, was a discovery worthy of the Nobel Prize, it nevertheless had a huge practical problem. Animal serum was not well tolerated by many humans. It frequently generated serious side effects called serum sickness in the recipients. It became imperative to switch to anti-serum of human origin, but injecting prospective human donors of anti-serum with graduated doses of the toxin would have been impractical and unethical due to the risk of inflicting the disease.

In 1924, a lucky immunologist found a shortcut. It was discovered that if the diphtheria or

tetanus toxins were treated with formaldehyde (a chemical crosslinking agent), they would not cause the disease symptoms even if injected in large doses at once. Formaldehyde-treated toxins were named *toxoids*. These toxoids became the basis both for tetanus and diphtheria vaccines (Td or DT portion of DTP/DTaP) and for the production of the human anti-serum therapeutic product called tetanus immunoglobulin (TIG).

Does the injection of modified toxins (toxoids) induce the state of tolerance to natural toxins in humans the way the original von Behring-Kitasato's method did in horses? Immunologists do not know this for sure but bet on it to be the case. What exactly do they bet on?

Immunologists attribute the anti-toxic effects of the von Behring-Kitasato's horse anti-serum therapy to molecular entities called antibodies (or immunoglobulins). Antibodies are Y-

shaped molecules that can bind to a great variety of toxins and pathogens. Immunologists believe that by virtue of their toxin-binding capacity some antibodies can *neutralize* the toxins - that is, prevent the toxins from causing the symptoms of diphtheria or tetanus. Antibodies to the toxins are indistinguishable from antibodies to the toxoids by a lab test. Hence, immunologists do not see any reason to doubt that toxoid injections induce antibody production that provides adequate protection against the corresponding toxins, just like the original horse anti-serum did. The weakest link in this chain of assumptions, however, is the lack of any experimental proof throughout the history of immunologic research that the original horse anti-serum's therapeutic effect in tetanus treatment actually depended on toxin-binding antibodies.

Why don't we have an experimental proof of such

an important postulate in immunology? To test this postulate properly would require graduated toxin inoculation of animals not capable of producing anti-toxin antibodies. Due to advanced molecular engineering technology, we are now able to produce mice that are genetically deficient in antibody production. However, it has been impossible to produce such animals before, and therefore the postulate matured into the dogma without anyone ever attempting to test it properly.

The supremacy of the antibody-centered dogma is so strong that anyone who dares to suggest testing it now would be viewed as a heretic. I made this mistake myself by suggesting to one of my research advisors to let me test the antibody requirement. I got yelled at and was told to keep my focus strictly on the "bread-and-butter" science.

Nevertheless, speaking of the unspeakable, the

biological basis for the therapeutic effect of the original horse anti-serum in tetanus treatment remains an unacknowledged mystery to this day. But the bigger issue is, perhaps, why would the modern field of immunology be so resistant to re-evaluation and re-integration of its theories? What does it gain by disallowing free-thinking and free experimentation?

3. Natural Immunity to Tetanus - What a Surprise!

In addition to the von Behring-Kitasato's anti-serum therapy, which focused mainly on tetanus treatment, a line of investigation by another group of researchers addressed natural immunity to tetanus. These experiments were published in a prestigious medical journal, the *Journal of Experimental Medicine* in 1920s. Until the age of digitization, however, these publications were collecting dust in the basements of medical schools, and there was no practical way of locating them. After digitization of these old archival publications, I was finally able to retrieve

them online.

I was astounded by what I found. These experiments demonstrate how natural immunity to tetanus can be acquired. Furthermore, they show that natural immunity to tetanus has nothing to do with antibodies to the toxin itself.

First, let us take a look at the properties of *C. tetani*, the bacteria that produce the infamous tetanus toxin. There are many different *C. tetani* strains, but they all produce the same type of toxin called tetanospasmin. If this toxin gets into the central nervous system of animals or humans, it inhibits the activity of the neurotransmitter gamma-aminobutyric acid (GABA). This inhibition results in the symptoms of the tetanus disease: rigid muscular spasms, such as lockjaw, sardonic smile, and general convulsions.

C. tetani bacteria normally live in animal manure

and intestines without causing the tetanus disease. *C. tetani* bacteria require anaerobic conditions to be active - that is, they cannot function in the presence of oxygen. Upon contact with oxygen from the air, they turn into very resilient and long-lived spores. Spores themselves are inactive and do not produce any toxin. However, when anaerobic conditions are present again, spores germinate back into bacterial cells capable of toxin production.

The risk of tetanus comes primarily from deep wounds that have been contaminated with *C. tetani* spores or bacteria. If not well cleaned and maintained, such wounds create anaerobic conditions that allow *C. tetani* spores to germinate and start producing the toxin. If the toxin molecules are able to get through the peripheral nerves into the central nervous system, the symptoms of tetanus ensue. However, this is not the whole story.

In the experiments documented in the 1920s, researchers were able to establish the state of tetanus immunity in guinea pigs such that even after purposefully introducing tetanus spores into poorly maintained wounds, immune animals did not develop tetanus symptoms, while control animals did.[1] Natural immunity from tetanus was established simply by feeding the animals food containing *C. tetani* spores. Natural immunity, however, was strain-specific, as the animals would still get tetanus symptoms if their wounds were contaminated with spores from a mismatched strain.

After having *C. tetani* spores in their diet for six months, animals developed natural antibodies to these spores (*agglutinins*) and some animals also developed anti-toxin antibodies. However, the levels of anti-toxin antibodies, even when present, did not correlate with natural immunity to tetanus

the way strain-specific agglutinins did. Other papers reported that humans too could harbor *C. tetani* spores in their stool and produce agglutinins to *C. tetani* without succumbing to tetanus.[2-3]

Because this important line of research on tetanus has for a long time disappeared from the radars of immunology, we failed to learn that natural immunity to tetanus is possible. Instead, we were left with a spurious idea that the toxoid-based vaccine is our only salvation.

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4. Double Standard of Scientific Scrutiny

How do we know that the tetanus toxoid vaccine currently in use is effective in tetanus prevention? Actually, we do not know that. The scientific way of knowing (a.k.a. evidence-based science) is through conducting randomized controlled trials (RCT). Tetanus toxoid vaccine has not been subjected to an RCT to test its effectiveness in tetanus prevention. The vaccine was introduced into the civilian U.S. population in 1947 simply because its use in the U.S. military during World War II has been deemed "successful."

The conclusion of "success" was based on the following reasoning. During World War I, 70 unvaccinated U.S. soldiers have contracted tetanus, which amounted to 13.4 cases per 100,000 wounds. On the other hand, in World War II 12 U.S. soldiers were reported to contract tetanus, which amounted to only 0.44 cases per 100,000 wounds.[1] Although the reduction in tetanus frequency among wounded soldiers during WWII compared to WWI is apparent, any conclusion about the role of the tetanus vaccine in this reduction is scientifically invalid. Only an RCT could have established whether the vaccine should receive the credit. Otherwise, we can reasonably speculate that the reduction in tetanus during WWII compared to the previous war was simply due to better wound hygiene or lower risk of *C. tetani* wound exposure.

In the civilian U.S. population, tetanus mortality had been dropping dramatically during the first

half of the 20th century before the vaccine introduction, and it continued to drop further after the vaccine introduction.[2] Therefore the vaccine's role in tetanus reduction in the U.S. population cannot be inferred from the tetanus mortality statistics either.

Finally, medical literature contains numerous case reports on tetanus victims (including fatal cases) who had been vaccinated and had high levels of presumably protective antibodies in the blood. A section on tetanus on the ***Beyond Conformity*** website provides an ample list of references to such medical reports.[3] According to the dogma of antibody-mediated protection against the toxin, these tetanus victims should have been protected by antibody, but they were not. Explanation?

Let us now take a look at another procedure for tetanus treatment: intravenous (i.v.) vitamin C administration.

A controlled non-randomized trial of i.v. vitamin C treatment of tetanus was conducted in Bangladesh in 1984.[4] The control group received standard care for tetanus, which included TIG (human tetanus immunoglobulin), antibiotics, and sedatives. The test group received one gram per day of i.v. vitamin C in addition to the standard care. The outcome measure of the trial was survival versus death. In the control group, about 70% of patients died on standard care (which included TIG!). In the vitamin C test group, 0% of patients below the age 12 died, and about 30% of patients above the age 12 died.

Based on the critical evaluation of this clinical trial, vitamin C was not recommended for introduction into standard medical practice for tetanus treatment.[5] Because the trial was not reported as randomized, it provided only preliminary evidence of vitamin C effectiveness in tetanus treatment.

Randomization of patients to the treatment versus the placebo group is indispensable to assure the general validity of the trial outcome. Therefore, there is no question about the necessity to repeat this promising vitamin C trial correctly to satisfy stringent requirements of modern evidence-based science before we can be absolutely certain that i.v. vitamin C administration is an effective cure of tetanus.

The question, however, is why stringent requirements of evidence-based science have been applied to the safe, cheap, and non-profitable treatment, such as i.v. vitamin C administration, whereas the tetanus toxoid vaccine and TIG treatment have made it into the standard care for tetanus prevention and treatment bypassing any requirement of the modern evidence-based process. The vaccine and TIG treatment are backed up by no clinical trials whatsoever, they rely upon

a hypothetical mechanism of action, and there are plenty of studies attesting their failure. How can this be? Why is there such a double standard of scientific scrutiny when it comes to vaccines and its derivatives?

The field of vaccine development, backed up by immunologic theory, has for a long time maintained that as soon as some mishmash of biological matter has acquired the label *vaccine* by virtue of its ability to induce antibody production, it is immediately assumed to be effective in long-term disease prevention without much further effort to demonstrate this for a fact. For the purposes of demonstrating vaccine's effectiveness in disease prevention, one random half of the trial participants would be given a placebo instead of the vaccine blindly - that is, without the subjects or the doctor knowing what has been received, and such a trial would have to be continued for many

years.

This practice is deemed unethical, because in principle the placebo control group would be left to potentially contract the disease during the course of the trial. Modern biomedical ethics simply cannot let this happen. Therefore, vaccine effectiveness in disease prevention is rarely studied directly. When the disease is not so serious and the vaccine can indeed be studied in this manner, it is done for short-term only.

But most often, vaccine effectiveness in disease prevention is inferred from its demonstrated efficacy in inducing antibody production and from the interpretation of the disease statistics after the vaccine is introduced into general population. If the disease incidence goes down after the vaccine introduction, the vaccine takes the credit. If the disease incidence goes up after the vaccine introduction (see the example of whooping

cough in Chapter 11), well… Then the conclusion is reached that the vaccine is effective, but simply needs to be given more often.

It is unethical and politically incorrect to demand that vaccine effectiveness in prevention of deadly diseases be established by an RCT. But we might want to ask ourselves: is it ethical to approve a biologically invasive and clinically risky procedure, such as vaccination, without direct evidence for its effectiveness in disease prevention? Is it ethical to have a healthy baby with no imminent threat of contracting a rare deadly disease, risk undergoing an adverse vaccine reaction, without even guaranteeing the protection from this disease in future? Is it ethical to have a properly vaccinated person die from a disease the vaccine was intended for, but not proven to prevent? Who accepts liability for such outcomes?

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5. Immunologic Memory Debunked

Immunologists think they have a solid theoretical explanation of immunity. They claim that natural immunity is the result of immunologic memory to previously encountered pathogens. Equating immunity with immunologic memory is the most important aspect of immunologic dogma. Without this pillar, immunology would have no theory-based grounds for imposing vaccination as a measure of long-term disease prevention. In previous chapters, we saw that immunology has no evidence-based grounds either. Therefore, the theory is its only asset. But even this highly cherished asset has a fatal flaw.

What exactly is immunologic memory? The textbook defines immunologic memory as the ability of the immune system to generate faster and more robust antibody production to a previously injected antigen - a biomolecule or a particle of non-self origin - after this antigen is encountered again. Since immunologists typically avoid working with pathogens, the concept of immunologic memory was established without testing it on real bacteria or viruses, but only on isolated proteins.

Immunologists have figured out that purified protein antigens do not have an ability to induce antibody production in humans or animals (the recipients) on their own. To induce antibody production, a protein antigen needs to be mixed with an adjuvant - a cytotoxic substance, like an aluminum salt or *alum* - before being injected into the recipients. To generate a boost in antibody

production, the recipients need to receive a second injection of the same protein antigen, but this time the inclusion of the adjuvant is optional. The primary response to protein antigens is slow, weak, and adjuvant-dependent, whereas the secondary or tertiary responses (boosters) are faster, greater in magnitude, and adjuvant-independent. This difference between the primary and secondary immune responses forms the concept of immunologic memory.

One would hope that if the immune system can respond faster the second time around, then maybe this faster immune response forms the basis of life-long immunity. However, despite being so attractively logical, this idea turned out to be erroneous upon further investigation. Once immunologists started testing non-protein antigens for induction of immunologic memory, such as polysaccharides or complex particles with

repetitive structures, it turned out that these antigens behave entirely differently. They do not elicit a memory response - that is, faster or higher levels of antibody production - even when injected multiple times.

Most problematic bacteria carry polysaccharide capsules on their surface and all viruses are complex particles with repeating surface molecules. Does this mean that real pathogens do not elicit immunologic memory? Exactly! How is then life-long immunity to infections acquired naturally, if not through immunologic memory? After 200 years of research, immunologists still do not have a clear answer. Moreover, most of them do not want to acknowledge that they do not have the answer.

The dogma that equates natural immunity with immunologic memory persists in immunology despite the fact that it is not applicable to real

pathogens, and few immunologists warn the rest of the field about this confusion.[1] Meanwhile, the rest of the field apparently ignores those warnings. The number one priority of modern immunologic research has become precisely to perpetuate this false dogma, as it gives rationale to the modern adjuvant-dependent strategy in vaccine design and ensures the monopoly of immunologic paradigms in public health policies.

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6. The Trojan Horse of Vaccination

If the experimental model of immunologic memory does not provide an adequate explanation of naturally acquired immunity, does it represent any other phenomenon we might be familiar with? Yes, it does. I am talking about a deregulated immune process called allergy.

Just like the model of immunologic memory predicts, allergic responses get stronger with each subsequent exposure to an allergen. Furthermore, most allergens are proteins or protein pieces called *peptides*, which again fits well into the model of immunologic memory. Primary exposure to an

allergen is adjuvant-dependent and is called sensitization. Once this sensitization has taken place, subsequent exposures to the same allergen generate more antibodies and trigger allergic reactions, which at this stage are adjuvant-independent.

Allergy is a complex process composed of several stages. The model of immunologic memory happens to describe only one of the stages - the process of antibody production. It leaves out the consequences of such antibody production. Antibodies then bind to their receptors on the surface of granulocytes - specialized cells of the immune system - and stay bound there ready to react to the allergen they were produced against. As soon as surface-bound antibodies sense the presence of that allergen, they trigger granulocytes to discharge irritating substances from their granules. The activity of granulocytes leads to

various symptoms of allergy. Depending on the type and location of granulocytes engaged in the response, allergic reactions can be manifested as atopic dermatitis (in the skin), eosinophilic esophagitis (in the esophagus), an asthma attack (in the respiratory tract), or a deadly systemic anaphylactic shock (in the blood).

Typical food allergens are proteins or peptides capable of inducing memory responses - i.e., immune or allergic reactions that get more severe with each subsequent exposure. But to start this process of exacerbation, an incompletely digested protein or peptide needs to get from the gut into the lymphoid tissue while adjuvant is hanging around. Without an adjuvant, there will be no immune response to a food protein or peptide, and it will not become an allergen.

The good news is that we do not react to every possible protein we eat or breathe in because

they are normally not accompanied by any adjuvant. Even problematic hard-to-digest peptides, such as those derived from nuts or grain, do not by themselves become allergens. When they do, we have to identify an adjuvant that allows them to turn into allergens. Aluminum salts have a strong adjuvant effect. Perhaps, when trying to figure out the cause of some food allergies, we should look into aluminized baking powder or into aluminum-containing anti-acid medications.

Aluminum salts are also included in vaccines precisely for the purpose of making vaccines immunogenic - i.e., able to induce antibody production. Not surprisingly, alum-containing vaccines are based on the principle of immunologic memory. As expected, a booster (secondary or tertiary injection of the same vaccine) generates a potent memory response to vaccine components.

However, some children also develop adverse allergy-like reactions that intensify with each round of vaccination, such as skin rashes, gastro-intestinal or respiratory issues, even anaphylactic shock. This pattern of exacerbation is totally consistent with the unintended but entirely anticipated consequence of immunologic memory.

The number of alum-containing vaccines has increased throughout the decades. Currently, they include the Hepatitis B (HepB) vaccine, the Diphtheria-Tetanus-acellular Pertussis (DTaP) vaccine, the Hepatitis A (HepA) vaccine, the *Haemophilus influenzae* type B (Hib) conjugate vaccine, and the pneumococcal conjugate vaccine (PCV). These vaccines are injected multiple times during the first year of life and some continue to be injected periodically in adulthood (e.g. Td or Tetanus-diphtheria). One of the newer vaccines for teenagers and young adults, Gardasil®, also

contains alum.

Alum was found to have adjuvant properties in the 1920s. Because no immediate gross reactions to alum injection were apparent, for almost a century alum was considered a safe and biologically inert substance suitable for human use. Its adjuvant effect was wrongly attributed to its insoluble nature and the propensity to form stable protein-trapping depots that persist for a long time after injection.

It all changed in the late 2000s, when scientists determined the actual mechanism of alum's adjuvant effect. First of all, it was found that the formation of stable depots was unnecessary for alum's adjuvant effect.[1] Furthermore, far from being a biologically inactive substance, alum was capable of activating granulocytes[2] and antigen-presenting cells that prime the immune system for antibody production.[3]

In animal experiments, oral or parenteral administration of alum rendered animals allergic to the food proteins consumed[4] or injected at the same time.[5] In light of these relatively recent biological findings, alum's alleged safety in vaccines and its general effect on allergy development is due for major re-evaluation.

Let us ask ourselves why life-threatening allergies are becoming more prevalent in our children? Doctors do not seem to have a clue, but the answer might be right under their nose - in alum they generously load our children with on a regular basis. We might have gotten ourselves the Trojan Horse under the disguise of vaccination.

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7. Evasive Definition of Vaccine Safety

Regarding general vaccine safety, why are vaccine adverse effects monitored for about two to three weeks at the most? Is it a coincidence that most infectious diseases have an incubation period of two to three weeks as well?

Many vaccines are made with modified viruses. When a disease-causing virus is isolated, it is rendered attenuated by a trial-and-error procedure to make a vaccine. Since the attenuation procedure is error-prone, there is a risk that the vaccine virus might remain virulent enough to induce the

disease itself. For example, the oral poliovirus (OPV) vaccine causes poliomyelitis (*polio*) in about one out of half a million of the vaccine recipients. Once the incidence of polio caused by the OPV vaccine exceeds the incidence of polio associated with the wild poliovirus, the use of the OPV vaccine can no longer be justified.

For this reason the OPV vaccine was replaced with the inactivated poliovirus (IPV) vaccine in the U.S. in 1987: to avoid vaccine-induced cases of polio. The IPV vaccine remains on the childhood vaccination schedule in the U.S. to this day despite the fact that the wild poliovirus has been declared eradicated in the Americas almost 20 years ago. The older OPV vaccine is still used in countries where the wild poliovirus has not been completely eradicated, and where the IPV vaccine is apparently useless. Incidentally, the effectiveness of the IPV vaccine in protection from polio has

never been tested.

But not all vaccines are composed of live attenuated viruses. Many vaccines are composed of isolated viral or bacterial components (proteins or polysaccharide-protein conjugates) and the adjuvant alum. Pathogen components (with the exception of some bacterial toxins) are not capable of inducing the disease of the corresponding pathogen. Therefore, when parents are assured that the HepB vaccine, for example, is very safe, all that is meant by this assurance is that there is a zero chance that the HepB vaccine can cause hepatitis B. And this is absolutely true, since this vaccine does not contain the whole virus, but only its components grown in yeast cells.

Similarly, Gardasil® (a vaccine made with components of human papillomavirus) has a zero chance of causing genital warts or cervical cancer, compared to live papillomavirus. By this

standard, Gardasil® is also a very safe vaccine. But does this reasoning constitute a valid basis for the frequently misused statement that it is safer to vaccinate than to contract a natural infection?

The potential risks associated with alum-containing vaccines, including the HepB vaccine and Gardasil®, are of a different nature from those of live attenuated viral vaccines, such as OPV, and therefore their safety has to be evaluated differently. Alum-containing vaccines pose a risk of sensitization, which is a silent process with no immediately observable symptoms. A booster vaccination in susceptible individuals, however, might precipitate an allergic or even autoimmune reaction with life-long consequences. Susceptibility to serious vaccine injuries might be genetic or metabolic. If given a chance to study vaccine injuries, scientists would be able to predict susceptibility and prevent vaccine injuries in

future. However, for as long as vaccines are proclaimed to be safer than natural infections, no federal funding will be available for such research.

8. False Proof of Immunity

In previous chapters, we have examined alum-containing vaccines and the consequences of immunologic memory they induce. Another class of vaccines without alum is made with live attenuated or inactivated viruses: the MMR (Measles/Mumps/Rubella) vaccine, the Varicella (Chickenpox) vaccine, the Rotavirus vaccine, the OPV/IPV (Oral Poliovirus/Inactivated Poliovirus) vaccine and, last but not least, a flu shot. These vaccines do not contain alum because viruses are complex particles that do not need any added adjuvant to induce antibody production. These vaccines work differently from alum-containing

vaccines.

Attenuated or inactivated viral vaccines induce antibody production to the corresponding wild viruses. The detection of virus-specific antibodies in the serum officially constitutes serological "proof" of immunity to the corresponding disease. However, this "proof" is somewhat misleading. A positive serological test is a proof of immunity only *in the absence of vaccination*. In vaccinated individuals, a serological test of immunity is biologically meaningless.

In the absence of vaccination, a positive serological test can be reasonably taken as an indication of immunity. In this case, the presence of virus-specific antibodies means that natural exposure to the virus (with or without a clinically observable disease) has taken place in the past. Because natural exposure typically leads to life-long immunity, an indication that such exposure has

happened is very likely to correlate with immunity.

Why doesn't a positive serological test guarantee immunity after vaccination? The answer can be gleaned from the following research observation: in mice immunized with vesicular stomatitis virus (VSV) that had been attenuated by UV irradiation, *virus-neutralizing* (protective) antibodies against live VSV were produced for a much shorter period of time than virus-specific antibodies.[1] This discrepancy in the duration of virus-specific versus virus-neutralizing antibody production demonstrates that the detection of virus-specific antibodies after vaccination does not necessarily indicate protection against the wild virus.

Serological tests that provide the "proof" of immunity in humans are not designed to assess virus-neutralizing capacity of antibodies; they only measure the levels of virus-specific antibodies. Therefore, these tests cannot tell when the

vaccine-induced neutralizing antibodies disappear and the protection against the disease wanes.

The so-called "vaccine-preventable" viral diseases can occur as early as two to five years after vaccination in some individuals.[2] I myself contracted measles at the age of 11 despite being twice-vaccinated for measles at the age of two and five.

Vaccines do not protect most of us for a lifetime, as we are used to believe. They simply postpone the susceptibility to the corresponding diseases but do not extinguish this susceptibility completely. When children are vaccinated against chickenpox, for example, they become vulnerable to it again once the vaccine's protective effect expires. By that time they might be adolescents or adults, when chickenpox is much more difficult to bear. Additionally, other mild childhood diseases, if pushed into adulthood, can have dire

consequences. Mumps is dangerous for males after puberty due to the potential of causing sterility, and rubella is dangerous for pregnant women due to the potential of causing birth defects in the developing fetus. But do doctors inform us about the consequences of the vaccine-induced delay in susceptibility to viral diseases when they vaccinate our children?

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9. The Vaccine Paradox

We have so far examined how vaccines manipulate the immune system to achieve temporary protection from viral diseases. It is now time to examine how natural immunity to viral diseases works in the population and how vaccination erodes natural immunity and interferes with maternal immuno-protection of infants.

The immune system of infants is immature and not capable of effectively dealing with natural viruses or even with artificially attenuated vaccine viruses. Naturally immune mothers - i.e., those who had viral diseases during their own childhood - protect

their babies from those diseases by passive transfer of their immunity via the placenta during pregnancy and via breast milk after birth. Immunologists believe that passive immunity transfer depends on virus-neutralizing antibodies in the serum and on secreted IgA (sIgA) antibodies in breast milk of immune mothers. Interestingly, females of the mammalian species are capable of much higher levels of antibody production than males. This might have been an evolutionary adaptation for the need to protect their young via passive antibody transfer throughout the childbearing age.

Maternal immunity shields a baby from the virus while she is being breastfed by a naturally immune mother. When exposed to the virus after weaning, a child would experience the infection and acquire life-long immunity to protect her own baby.

Many viral diseases are sometimes referred to as

childhood diseases, because prior to the routine childhood vaccination, these diseases occurred mainly in children. Infants were protected from these diseases by maternal immunity, whereas adults were protected by their own life-long immunity, which they had acquired in the childhood. The use of vaccines changed this pattern.

Vaccinated mothers have lower levels of virus-specific antibodies in the serum compared to naturally immune mothers. Therefore, vaccinated mothers can transfer fewer, if any, protective antibodies to the baby than naturally immune mothers. For these reasons, an increased risk for measles had been observed in infants born to younger (presumably vaccinated) mothers compared to older (presumably naturally immune) mothers in the early 1990s, when measles was still endemic in the U.S.[1]

Acquiring measles in infancy is a risk factor for developing a fatal measles infection of the brain called subacute sclerosing panencephalitis (SSPE). The frequency of SSPE in the U.S. was much higher in the early 1990s (about 12 cases of SSPE linked to the outbreak of measles involving only 55,622 cases) compared to the 1960-70s, when 8.5 cases of SSPE per 1,000,000 cases of measles occurred.[2] This 25-fold increase in the frequency of SSPE per measles cases can be explained by an increased likelihood for infants to contract measles in the early 1990s compared to previous decades due to the lack of maternal immuno-protection. The absence of maternal immuno-protection can in turn be attributed to the vaccination of mothers in their childhood. In the U.S., routine childhood vaccination against measles started in early 1960s. Vaccination took away the chance of many mothers-to-be to experience measles at a safe age and to acquire natural immunity that would

protect their babies as well.

The persistent use of the MMR vaccine has deprived a generation of mothers and their infants of natural immunity to the corresponding viral diseases. The vaccine itself cannot be used to protect infants, because it is dangerous and futile to inject live attenuated viruses at a very young age. Let us ask public health officials: what now? What solution do they have now up their sleeve?

Although measles, mumps, and rubella are no longer endemic in the U.S., there is a chance of contracting these diseases when traveling to countries where they are still common. It is therefore prudent for mothers without natural immunity from these diseases to avoid traveling to such countries during pregnancy or with infants until they are older than two and fully capable of withstanding childhood diseases without developing complications. In

addition, measles, mumps, or rubella immunoglobulin (but not the vaccine itself) can provide immediate short-term protection after viral exposure has already happened, as an emergency measure.

Live attenuated viral vaccines reduce the overall incidence of the corresponding viral diseases by making our bodies off-limits to wild viruses for some time after vaccination. Viruses are molecular parasites that cannot survive without access to the host. By limiting their habitat (i.e., the number of susceptible human hosts), vaccines turn viruses into endangered species. But vaccines alone are not efficient at viral eradication. Without strict quarantine measures, vaccination campaigns tend to stretch over many decades and span several generations. They prevent the majority of the human population from developing natural immunity without achieving complete eradication

of the virus by the time a generation of babies without natural maternal immunity is born. In well nourished societies, measles, mumps, and rubella were mild childhood diseases in the not-so-distant past. But they are now diseases to be dreaded and to be referred to as a scare tactic for promoting further vaccination. And for a good reason, just not for the one being told! These mild childhood diseases are now dangerous, because we, humans, made them so.

What other *still* mild childhood disease is next in line to join the ranks of the dreaded diseases? Ah, chickenpox, of course. In the U.S., we have started vaccinating for the *varicella* (chickenpox) virus in the mid-1990s and we will soon establish a generation of mothers and their infants without natural immunity to chickenpox before complete eradication of the *varicella* virus is achieved. We have to stop mass vaccination against chickenpox

before this happens. Otherwise, chickenpox will become a dangerous disease for the generation of our grandchildren, just like measles is today for our babies.

Disrupting the natural cycle of the mother-infant immunity transfer is an unintended consequence of prolonged vaccination campaigns. The risk of contracting the disease is simply pushed from childhood into adulthood, while vulnerable infants are left without any protection whatsoever. The vaccine paradox is that vaccines reduce the overall incidence of childhood diseases, yet make them infinitely more dangerous for the next generation of babies.

We have come to accept that although vaccines may cause injury to a rare individual, they are still beneficial to the society as a whole. They are *for the greater good*, we are told. Are they really?

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10. Playing Russian Roulette with Flu Shots

Antibodies have an unusual property - their effect on the immune system is different depending on whether they bind to a protein or to a complex particle. When pre-existing antibodies bind to a protein, they cause the immune system to develop more antibodies to that protein. This process is called *antibody-mediated enhancement* (or boost) of the immune response. This process is the basis of immunologic memory or sensitization to proteins.

However, when pre-existing antibodies bind to a complex particle (e.g. a virion or bacterium), they

act in the opposite way: they prevent the immune response to that particle. This process is called *antibody-mediated suppression*.

Antibody-mediated suppression prevents unnecessary spikes in antibody production after sufficient levels have been reached. However, this mechanism can incur a serious problem - a phenomenon called *the original antigenic sin*. This phenomenon occurs when pre-existing antibodies *cross-react* with but do not perfectly match the pathogen, which results in their low binding capacity (or *low affinity*) to the pathogen. Their cross-reactivity allows these antibodies to suppress the immune response against the pathogen, but their low affinity prevents them from clearing the pathogen. Antigenic sin freezes up the immune response and aids the pathologic condition.

Because of the rapid evolution of viral influenza strains, pre-existing antibodies against flu

viruses have the potential to create the condition for a severe flu disease by inducing the state of antigenic sin. This might have happened in 2009. The atypical characteristic of the 2009 H1N1 flu disease was its extreme severity and high mortality among otherwise healthy adults, a population not normally at risk of flu complications. Interestingly, an epidemiological study in Canada has documented an increased risk of medically attended 2009 H1N1 flu disease in those who received the 2008 seasonal flu shot compared to those who did not.[1] In addition, antigenic sin to the 2009 H1N1 vaccine strain of the flu virus has been experimentally documented in the recipients of the 2008 seasonal flu vaccine.[2] Therefore, it is very likely that seasonal flu shots in 2008 might have contributed to establishing the state of antigenic sin to the 2009 H1N1 virus in some people.

Flu shots are given yearly to prevent seasonal flu.

Their effectiveness in flu prevention is mere 30% compared to the placebo in children older than two, and not different from the placebo in children younger than two.[3] The effectiveness of flu shots in adults has also been questioned.

Given that a seasonal flu shot might potentially contribute to the state of antigenic sin to a new strain of the flu virus, taking a flu shot is analogous to playing Russian Roulette. At best, it might do a little for seasonal flu prevention. At worst, it might help create conditions in the immune system that can turn the next flu into a deadly disease. It is unacceptable that annual flu shots are recommended for children as young as six months old, in whom they have no effect on flu prevention, and are required for health professionals to maintain their employment - unacceptable perhaps, but not surprising after all.

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11. Winning Battles but Losing the War

Why do we fear viral diseases? Do we fear acute symptoms they induce, such as fever, aches, cough, rash, or swollen lymph nodes? These symptoms are transient and although uncomfortable, they are not deadly and do not leave any permanent damage for most of us. Viral diseases can result in deadly complications only in infants deprived of maternal immunity and in individuals who are severely malnourished or immuno-suppressed.

On the other hand, invasive *bacterial* diseases, such as pneumonia or meningitis, pose a serious

problem. It is these bacterial diseases that we should know how to avoid. They are most prevalent in non-breastfed infants and in some native tribes, such as Alaskan natives in the U.S. or Aborigines in Australia.

Can we ensure protection from invasive bacterial diseases by means of vaccination? After all, anti-bacterial vaccines do a great job at eliminating bacterial strains they are designed for.

The problem is that vaccines cover only a small fraction of the great biodiversity of bacterial strains. When vaccine-targeted strains are eliminated, other bacterial strains take over. For example, after the introduction of the Hib vaccine, there was a drop in invasive diseases caused by *H. influenzae* type B, which is the sole target of the Hib vaccine. This reduction in Hib-associated diseases was accompanied by the increase of invasive diseases caused by other *H. influenzae* types.[1-2] By

using vaccines against bacteria we are *winning battles but losing the war*.

Whooping cough is another example of a mismanaged war campaign against bacteria. In the U.S., whooping cough had been in decline in previous decades when the whole cell pertussus (wP) vaccine was used. The wP vaccine had a poor safety record and was replaced with the acellular pertussis (aP) vaccine in the mid-1990s. Following the switch to the aP vaccine, whooping cough started to re-emerge in the U.S. despite extensive vaccination coverage.

The aP vaccine includes isolated proteins from bacteria *B. pertussis*. However, there is another bacterial strain that can cause whooping cough: *B. parapertussis*. The new aP vaccine is protective only against *B. pertussis*, but not against *B. parapertussis*, whereas the old wP vaccine was protective against both strains.[3] Therefore, the re-emergence of

whooping cough in the U.S. following the switch to the aP vaccine might in part be due to the selective elimination of vaccine-sensitive strains of *B. pertussis*, which has allowed vaccine-resistant strains to take over.

B. parapertussis infection normally results in mild whooping cough. However, in research animals injected with the aP vaccine and subsequently infected with *B. parapertussis*, a 40-fold greater infection was observed compared to animals infected with *B. parapertussis* in the absence of the aP vaccination.[4] In other words, the aP vaccine impaired the host's immune response and facilitated the infection instead of preventing it.

If *B. parapertussis* has become the predominant whooping cough strain in the U.S. in the last decade, then we might be turning the mild *B. parapertussis* whooping cough into a more severe disease by means of the aP vaccine.

Incidentally, the emergency response of public health officials to the growing epidemic of whooping cough was to introduce more boosters. *Let's just keep doing more of what does not work and hope it will start working*.

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12. Changing Our Relationship with Germs

Have you ever asked yourself why our current conventional model of health and disease regards germs as enemies?

This concept stems from the legacy of Louis Pasteur, the father of microbiology and the discoverer of microorganisms such as yeasts and bacteria. His tremendous contribution to medicine was to provide evidence for the inkling of his less recognized predecessors, including Ignaz Semmelweis, that much of the death resulting from medical procedures in previous centuries was due

to wound contamination with germs, which could have been avoided with better hygiene. Sterilization of surgical instruments and proper wound hygiene made an enormous difference in the field of medicine by lowering the mortality resulting from medical procedures in hospital wards.

However, Pasteur's discovery, perhaps against his own views, has been taken as an indication of the *inherent* dangers of microorganisms, not of their *conditional* dangers. It is our human tendency to blame something other than ourselves for our problems. We blame microorganisms for causing disease. We have declared the war on them and use more and more vaccines as weapons of their extermination. But should we be fighting this war? What chances do we stand to win it? It is no secret that microorganisms are adaptable and rapidly evolving - we can eradicate some, but many more

will appear to cause problems. Why can't we realize that microorganisms cause us problems only when we, humans, create conditions that allow them to do so?

Oxidative stress is one of the conditions that makes some bacteria dangerous to our lives. Oxidative stress generally refers to the state when the cellular damage done by reactive oxygen species or free radicals exceeds the cellular capacity to repair it. The immune system does not function properly under conditions of oxidative stress, especially in its task of eliminating potentially dangerous bacteria. If left to proliferate, these bacteria might give rise to ear, sinus, or other more invasive infections.

Our immune cells can avoid the state of oxidative stress when they are replete with a special anti-oxidant called *glutathione*. The function of glutathione is to reverse the damage done by

free radicals and to return cells into their healthy functional state. When our supply of glutathione is sufficient, we do not incur oxidative cell damage and therefore avoid creating conditions for invasive bacterial diseases.

If glutathione is so important for our protection against invasive bacterial diseases, how can we obtain it? For better or worse, taking glutathione as a supplement is worthless, because dietary glutathione is digested by stomach juices and does not directly contribute to the body's pool. Therefore we need to look into how the body makes glutathione and provide it with the necessary precursor in our diet.

The rate-limiting nutrient for glutathione synthesis is an amino acid called cysteine. Cysteine is a part of any protein. It contributes to maintaining tertiary structures of protein molecules by forming disulphide bonds between two cysteine

molecules. When heat destroys these bonds during cooking or pasteurization of food, proteins are denatured - they lose their structure. The gut cannot absorb cysteine molecules that have been denatured by heat; it absorbs cysteines only in their native undenatured form. But due to our cultural tendencies and the FDA regulations to cook or pasteurize every possible food source of raw protein, we constantly deprive ourselves of usable cysteine, and as a result, we are chronically low on glutathione. It is time to take a serious look at how to introduce undenatured protein safely into our everyday diet, be it with certified raw milk, sushi-grade raw fish, or lacto-fermented drinks and vegetables.

It is especially crucial for babies to be breastfed, as mother's milk is the safest source of undenatured protein for babies. Commercial formula is no substitute. It is not surprising that breastfeeding

has been shown to reduce the risk of invasive bacterial diseases in young children.[1-2]

Glutathione does not work in isolation. It requires other nutrients, such as vitamin C, to function properly. Therefore, it is extremely crucial to maintain a nutrient-rich diet overall. Some of the serious complications of viral diseases, such as blindness acquired during measles, are due to chronic deficiency in vitamin A, which is depleted even further during the course of measles. Vitamin D is also absolutely crucial for the immune system's function in the production of anti-microbial peptides. Great food sources of vitamins A and D are grass-fed animal foods, such as butter or liver, fermented cod liver oil, and for vitamin D - sunshine as well. The Appendix lists the sources of crucial information regarding the type of nutrition we need to maintain on a daily basis to prevent serious disease complications.

We have come to the point when we have to make a conscious choice: either we fight the never ending war with germs and viruses using vaccines while incurring collateral damage in the form of vaccine injuries, allergies, and decimation of natural immunity; or we simply keep our bodies in a well-nourished and glutathione-balanced state that prevents germs from becoming a danger to our lives. The choice is yours.

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13. Why Homeopathy Is Better Than Tylenol®

In Chapter 12, we have learned how important glutathione is for our health and resistance to invasive bacterial diseases. If a consistently low supply of usable glutathione precursors in the standard American diet isn't bad enough, we frequently use an over-the-counter drug that rids our body of glutathione. This drug is *acetaminophen* (also known by the numerous brand names, including Tylenol®).

In the liver, 10-20% of acetaminophen is converted to a highly toxic reactive metabolite called N-

acetyl-p-benzoquinone imine, or NAPQI.[1] NAPQI binds glutathione and gets excreted with it. If all of the liver glutathione is depleted by NAPQI, fatal liver damage ensues due to acute oxidative stress in the liver cells. Therefore, the use of acetaminophen to ease the discomforts of the immune response (natural or vaccine-induced) can have very undesired consequences.

Tylenol® or other anti-fever drugs are given to children mainly to suppress fever. We have low tolerance of fever in children, fearing it might induce brain damage or death. In our fear, we forget that there is a reason why our bodies produce fever in the first place - it is our defense against actual insults that can cause brain damage or death, such as invasive bacteria or toxic substances. Fever creates an uncomfortable temperature zone that restricts proliferation of bacteria, it augments antibody production, and it

speeds up the rate of enzymatic reactions in the liver to eliminate toxic substances. When we use fever-reducing drugs, we simply interfere with the mechanism of fever without removing its cause. Moreover, the use of drugs creates an additional toxic burden on our body that has to be dealt with by using up crucial protective nutrients, such as glutathione. For these reasons, fever-reducing drugs make it more difficult for the immune system to deal with infections.

Is there a way to treat fever or pain without creating obstacles for the immune system to do its job? Yes, there is. It can be done by means of homeopathy. A randomized trial was conducted in India to compare the effect of conventional fever- and pain-reducing drugs with that of homeopathic treatment on the outcome of ear infections (*acute otitis media*) in children.[2] Almost all of the children (39 out of 40) on the conventional

fever- and pain-reducing drug regimen required antibiotics to help resolve their ear infections after day three. In stark contrast, none of the 38 children on homeopathic treatment required any antibiotics to resolve their ear infections. Their immune system did it on its own.

What is homeopathy and why is it superior to conventional drugs for treating fever, pain, and numerous other minor ailments? Homeopathic treatment differs from conventional drugs in that it works with, not against, the recovery process during the illness. It helps speed up the recovery. Homeopathy, when used correctly, provides a safe and effective alternative for the management of fever and other acute symptoms. The crucial point that needs to be emphasized here is - *when used correctly* - that is, according to the principles of homeopathy. If these principles are not followed, then a homeopathic remedy is not going to bring

any relief and will simply be a disappointment. It requires some time and commitment to learn homeopathic principles and utilize them successfully. But once mastered, there is no temptation to go back to pharmacology (see the Appendix for information on homeopathic resources). Parents are encouraged to rely on the help of a professional homeopath in choosing the correct homeopathic remedy for their children for any acute condition.

Homeopathy has been denied the status of a legitimate science based on the fact that we still do not understand how homeopathic remedies work. They are prepared by a special process of *succussion* (shaking) and diluted to the degree that hardly leaves in any original molecule of the substance they are derived from. Pharmacologically oriented minds cannot conceive of any mechanism by which such dilutions can

have any biological effect. Yet, homeopathy is based on painstaking observation, derivation and validation of its principles - what more to ask of a legitimate empirical science? Many individuals dismiss homeopathic treatment as being just a psychological placebo. Yet, the effect of homeopathic treatment beyond mere placebo effect has been documented both in children[3] and in research animals.[4] Why do we then continue to cling to our limited pharmacological notions despite this evidence? It is time to finally acknowledge that there is more to the nature of cure than the current scope of biomedical science can ever attempt to explain.

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14. Making Vaccination Decisions

When making vaccination decisions for your children, you are encouraged to examine each disease individually and find answers to these questions:

a) Has the disease-causing microorganism been eradicated?

b) Is the disease mild in children and worth preventing at all?

c) If prevention of the disease is crucial, are there measures that are safer and more effective in preventing this disease than the vaccine?

d) Is there adequate scientific evidence that

the vaccine actually prevents the disease and not just induces antibody production?

e) If so, does the short duration of the vaccine-induced protection work for or against your child's benefit, if given now?

f) If choosing to vaccinate, is your child in good health at the time of taking the shot?

g) Do you know how to recognize and report vaccine's adverse effects?

If your well-researched vaccination choices differ from your state's vaccination mandates, you will then need to address a few more issues.

First, you will need to find a pediatrician who is supportive of your vaccination choices. Some pediatricians might refuse to accept unvaccinated children into their practice or might put pressure on you using scare tactics.

One of the most commonly used scare tactics

employed by doctors is the alleged compromise of *herd immunity*. Parents are told that unvaccinated children "parasitize" on the herd immunity established by vaccinated children and endanger everyone else. Sadly, this issue then becomes an unwarranted source of strife between families with opposing views on vaccination.

The truth is that for most communicable viral diseases there is *no* herd immunity in post-elimination era. Herd immunity exists only when the proportion of individuals who are not susceptible to the virus is above 68%. Because live attenuated viral vaccines are given routinely only twice - at the age of one and five - and their protective effect against viral infections expires before adolescence, only vaccinated pre-adolescent children are resistant to viral infections. The adult population gradually becomes more and more susceptible, except those adults who had natural

infection. Needless to say, pre-adolescents do not comprise 68% of the whole population, and cannot maintain herd immunity for the rest of the population.

The apparent absence of major viral epidemics in the U.S. is now due to the absence of *endemic* viral exposure, not herd immunity. Sporadic outbreaks, typically on university campuses, occur due to the virus brought from abroad. By the time children reach high school or college age, the protective effect from vaccines given in early childhood is over for many of them. For this reason, once the eradication of the endemic virus is achieved, further routine childhood vaccination becomes futile - it does not prevent sporadic outbreaks introduced from abroad, even in communities with close to 95-97% of childhood vaccination compliance.

Continuing to vaccinate all of the young

children or none at all would make absolutely no difference for attempting to maintain non-existent herd immunity in post-elimination era. Therefore, the herd immunity argument is irrelevant for making personal vaccination decisions.

Next, you will need to use appropriate legal vaccine exemptions for your child's school attendance. This will ensure that your carefully made vaccination decisions will not be trampled by the state.

And finally, you might encounter pressure and disapproval of your vaccination choices from friends and relatives who are still misguided by the vaccine propaganda. Make an effort to educate them. Perhaps once made aware of the *Vaccine Illusion*, they will take your side.

Afterword

Why are we stuck with this archaic and brute force medical procedure - vaccination? Why can't we get out of the box and start doing research that will give us a safer and more effective method?

The truth is that scientists in the U.S. are not free to pursue research they deem important. They can only pursue research that government deems important. This system got established via funding mechanisms that come from the National Institutes of Health (NIH), a federal entity that operates on taxpayers' money. Scientific advisory committees at those Institutes decide what research directions

are to be funded. Individual scientists then have to apply for grants and match the goals of their grant proposals with the directions established by the National Institutes.

If the committees at the National Institutes have decided that it is politically incorrect to study vaccine injuries, then they will turn down any grant application that proposes to do that, no matter how well scientifically justified. If the committees have decided that developing new vaccines is what the world needs, then this is where the U.S. taxpayers' money will go, even if these particular diseases do not even occur in the U.S.

The salaries of biomedical researchers in the U.S. universities and medical schools mainly come from NIH grants. Therefore, for one to make a career in science, obtaining grants is of primary importance. This means that one is restricted to doing only

"bread-and-butter" research, something that is most likely to be funded.

During my research training, I attended a seminar on successful grant writing skills. It was clearly laid out to us, young and aspiring scientists, that grants that get the highest priority for funding are the ones that propose to investigate already available medical applications in the context of other diseases. Say, there is a drug X that is used to treat condition Y. Now, let us investigate if the same drug X is going to be useful in treating condition Z. This way, biomedical researchers are being used as a cheap labor force for expanding markets for pharmaceutical drugs. This is our *status quo*.

Research that attempts to shake off the *status quo* and open up new directions will not be pursued by modern biomedical science in the U.S. as long as scientists depend on and compete for the

NIH funding. For this to change, we need private sponsorship of science that is radically different from the existing funding mechanisms. We have to let the Scientist, not the Bureaucrat, do the science.

Appendix

Scientific and Medical Databases

PubMed

http://www.ncbi.nlm.nih.gov/pubmed/

A database of abstracts from biomedical reports and scientific reviews from the U.S. National Library of Medicine. You can find vaccine-related publications by typing in appropriate keywords.

Google Scholar

http://scholar.google.com/

Google Scholar encompasses PubMed and other sources of scientific information. It is an easy-to-use alternative to PubMed.

Clinical trials

http://clinicaltrials.gov/

An official site for U.S. clinical trials. Vaccine trials can be found by typing in appropriate keywords. Here you can find out vaccine trial details: the outcome measures investigated, the criteria that constituted the placebo control, number of participants, *etc.*

Vaccine Adverse Event Reporting System (VAERS)

http://www.medalerts.org/

The VAERS database is based on self-reporting of vaccine adverse effects. It is estimated that less than 10% of adverse events are reported. This database represents the range of possible adverse effects associated with vaccines. Some serious adverse effects are also disclosed on inserts that come with vaccine vials.

Homeopathy and Nutrition Resources

Impossible Cure by Amy Lansky, *Ph.D.*

Impossible cure provides an essential introduction to the scope and the goal of homeopathic approach to health and narrates one family's journey in overcoming disease by means of homeopathy.

The Complete Homeopathy Handbook by Miranda Castro, *R. S. Hom.*

The important principle in homeopathic prescription is the selection of a *single* remedy that best matches the patient's condition. This concise practical guide assists in selecting the right remedy for first aid situations and acute conditions.

Weston A. Price Foundation

http://www.westonaprice.org

Weston Price, a dentist and an anthropologic researcher, explored nutritional traditions of a number of primitive and modernized cultures around the world. His research led him to formulate the

principles of nutrition that account for good health in humans. The Weston A. Price Foundation (WAPF) is a repository of this valuable knowledge.

Healing Our Children by Ramiel Nagel

Healing our children explains the principles of the Weston Price research and serves as a practical guide for selecting nourishing foods for expectant parents and children.

Curing the Incurable: Vitamin C, Infectious Diseases, and Toxins by Thomas Levy, *M.D., J.D.*

This book details the work of a medical pioneer Dr. Frederick Klenner (1907-1984) in administering megadoses of intravenous vitamin C to promptly cure virtually any infectious disease he encountered in his practice. The message of the book is that the fear of infectious disease needs not to exist, when one has access to proper medical treatment with vitamin C.

About the Author

Tetyana Obukhanych earned her Ph.D. in Immunology at the Rockefeller University in New York, NY with her research dissertation focused on understanding immunologic memory, perceived by the mainstream biomedical establishment to be crucial to vaccination and immunity.

During her subsequent involvement in laboratory research as a postdoctoral fellow within leading biomedical institutions, such as Harvard Medical School and Stanford University School of Medicine, Dr. Obukhanych realized the flaws and limitations of current immunologic paradigms. Key to her realization was taking a broader look at scientific findings from many related disciplines, rather than confining her search, as customary in her professional circles, strictly to basic immunologic literature.

After parting with the mainstream biomedical

establishment and dissolving her prior allegiance to its doctrines, Dr. Obukhanych continues her independent in-depth analysis of peer-reviewed scientific findings related to vaccination and natural mechanisms of immunity. Her aim is to bring a scientifically-substantiated and dogma-free perspective on vaccination and natural immuno-enhancing approaches to parents and health care practitioners involved in making vaccination decisions. Dr. Obukhanych has been a frequent guest speaker on natural immunity and vaccines and is available for private consultations to share her accumulated knowledge.