Understanding the Immune System and Vaccinations

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Introduction: The Great Paradox

Lurking behind all discussions and decisions in the realm of health and medicine today is a great scientific contradiction, a great paradox. Medicine acknowledges the basic facts of this paradox but it recoils from accepting its disturbing, far-reaching implications. Therefore the media and the general public are uninformed, and medicine and public health continue about their business as if this paradox didn't exist.

The paradox has two parts:

1. The disease process of *inflammation*, universally and commonly appearing in humans and animals, is a *healing process.*
2. The basic and primary function of the human or animal *immune system* is to *create inflammatory processes* of different intensities and durations as needed to maintain the health of the organism. When these health maintenance processes occur in short, intense bursts, they are *healing crises*, but they are today regarded as acute infections.

The purpose of the following discussion is to examine and attempt to clarify how this two-part paradox plays out in human health and illness today, especially as it relates to the concept and practice of vaccination.

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The remarkable capacity of humans and animals to maintain their health despite injuries, illnesses and fevers is attributed to a clearing and healing function residing in blood and in all bodily tissues supplied by blood. This special healing/clearing function, and the components of the body through which it works, have been given a name: the immune system.

The immune system is composed of two functional branches that may work together in a mutually cooperative way or in a mutually antagonistic way. In this article I will use the original descriptive names for these two branches, the humoral and the cellular branches, named for the two components of blood.

Our blood is composed of a liquid (humoral) part, the serum, in which are suspended red blood cells and white blood cells. The blood serum can easily be separated from the blood cells by spinning a tube of whole blood in a centrifuge. The humoral immune system was named for the particular healing capacity first found in human and animal blood-serum, while the cellular immune system is

the somewhat different healing capacity of the white cells found in blood and in all the lymphatic tissues and organs of the body.

The humoral immune function primarily produces antibodies in the blood circulation as a sensing or recognizing function of the immune system to the presence of foreign antigens in the body. An antigen is any substance which, on entering the body, is unable to be integrated into the body's individual inner environment.

In order to evaluate the role of vaccines in human health, we need to understand exactly how they work. Vaccines are designed to cause an increase in antibody levels (titers) against a specific bacterium or virus, thus preventing the particular illness associated with that bacterium or virus. But exactly how does a vaccine prevent its human recipient from manifesting the specific illness the vaccine has been designed to prevent?

The great Renaissance physician Paracelsus famously said that every substance, including our usual food and drink, that enters us acts as a poison which requires us to digest and transform it in order to make it compatible with our own individual inner environment. Thus the task of our digestive system is to process all our food and drink to be compatible with our individual human ecosystem, to remove all foreignness, i.e. all *antigenicity* from everything entering our body. Any entering substance which our digestive system fails to divest of its foreign antigenicity then becomes a challenge and a target for our immune system. Our immune system is really like a backup digestive system that extends throughout our body in our blood and in our lymphatic tissues and organs. The task of the humoral branch is to create specific antibodies which "tag" and to some extent neutralize specific foreign antigens within us as a preliminary step to the more thorough processing of our foreign antigens by the other branch of our immune system.

The other branch is the cellular or cell-mediated immune system, which primarily destroys, digests and expels foreign antigens out of the body through the amoeba-like activity of its cells found in the blood and in the thymus, tonsils, adenoids, spleen, lymph nodes and lymph system throughout the body. This process of destroying, digesting and discharging foreign antigens from the body never rests: it creates a continual stream of waste matter that eventually joins the other waste streams that exit the body through bowels, bladder, mucus production and through the pores of our skin. Everything from our environment that enters our body with our food and drink, and through the inbreathed air, that our immune system perceives as being unsuitable for incorporation into the tissues of our individual human organism, is excreted from our body. Our body transforms what is useful and discards the rest.

In addition to this continual ingress of matter from the world, there is another source which feeds the waste streams of our body, and that is the continual aging and dying of all our cells and tissues.

In the life-span of a human being, all the cells and tissues of his body have turned over many times, i.e. they have died and been fully replaced about every seven years, with the exception of nerve tissue. If we are to remain healthy, then all the waste and debris from our continually dying cells and tissues must be fully eliminated from our body. It is our cellular immune system, composed of various white blood cells and lymph cells, which accomplishes this task just as it accomplishes the elimination of foreign antigens which have entered us from our environment.

But no biological process in the human body is 100% efficient. There are always "left-over crumbs" from the body's processing and eliminating of its waste streams. In its great wisdom, Nature has seen to it that these left-over crumbs also have a role to play in the cycle of life: they feed and sustain our 100 trillion bacteria and other micro-organisms which normally and beneficially inhabit our body from a few weeks after our birth until after our death.

These indigenous microbes of the healthy human body, our "microbiome", include several disease-causing strains, yet we are seldom disturbed by their presence if we have learned to maintain a healthy lifestyle.

In contrast to the above facts, most of us believe, when we come down with a cold or flu, that invading predatory germs from our environment have breached the defenses of our immune system and are now attacking us from within. This frightening scenario is false, but it is repeatedly invoked by media, governments and especially by the pharmaceutical industry, as Dr. Marc Siegel exposes in his important book <u>False Alarm: The Truth about the Epidemic of Fear.</u>

The truth is that all the frightening symptoms of an acute Infectious/inflammatory illness, i.e. fever, pain, weakness and prostration *are caused by our own cellular immune system.*

It was stated above that the process of expelling foreign or useless matter from the human body never rests. This process is a maintenance-level continual housecleaning activity that we seldom notice, just as we seldom notice our breathing, blood circulation and food digestion when they are functioning normally. If we wake up in the morning with a little mucus in our eyes, nose, or throat, this mucus is actually a discharge of waste matter accomplished by our cellular immune system in the course of its normal ongoing maintenance housecleaning activity. This activity intensifies slightly during sleep and rest. In

medical terms, this unnoticed housecleaning activity is a *subclinical* inflammatory process in the human body.

When we become ill with a cold, flu or with what is mistakenly called an "acute infection," it is a sign that the above-mentioned maintenance housecleaning process is now shifting into high gear, i.e. is greatly accelerating and intensifying its normal activity and is crossing the threshold from normal physiology into the realm of pathology, but is not changing at all the essential nature of its digesting, eliminating activity. (See the article at www.philipincao.com, "Understanding infection: Not a Battle but a Housecleaning.") This shifting into high gear of our cellular immune system is called *the acute inflammatory response.*

So while we are led to believe, when we take to our bed with a fever, cough and pounding headache, that germs are wreaking havoc in our body, the reality is that our own cellular immune system is making us sick through the acute intensification of its normal activity of breaking down and expelling unusable and toxic foreign matter, and the germs feeding on that matter, from our body.

With this in mind, let us now turn to the question of how the cellular immune system works together with its partner the humoral immune system in human health and illness.

These two functional branches of the immune system may be compared to the two functions in eating: tasting and recognizing the food on the one hand, and digesting the food and eliminating the food waste on the other hand. In the same way, the humoral antibody-producing branch of the immune system tastes and recognizes foreign antigens, and the cellular branch of the immune system digests and eliminates the foreign antigens from the body. But just as too much repeated tasting of food will ruin the appetite, so also too much repeated or prolonged stimulation of the tasting-sensing humoral immune system by antigens will inhibit the digesting and eliminating function of the cellular immune system. In other words, overstimulating antibody production through repeated or prolonged exposure to antigens, *especially antigens accompanied by vaccine adjuvants*, will suppress the digesting and discharging acute inflammatory response of the cellular immune system to those antigens.(1) That is exactly what vaccines do. (With the lone exception of the smallpox vaccine. For a discussion of the distinctly different action of this vaccine, see "Reflections on Immunity, Vaccinations and Smallpox" at www.philipincao.com)

This becomes clearer if we imagine the immune system to be like a balance beam or a see-saw. At one end of the beam is antibody production. At the other end is the acute inflammatory response of the cellular immune system. In a healthy person the beam freely swings to the cellular side when the organism

needs to destroy, digest and discharge unusable matter, and the germs scavenging that matter, out of the body.

When this has been accomplished, then the beam freely swings back to the humoral side to produce antibodies, which then help to suppress the cellular immune system and to *shut down* the acute inflammatory response before exhaustion sets in, so the ill person can begin recuperating. That is why antibodies become detectable in the blood only *after* an acute illness, and not in its early stages. A vaccination is like a straitjacket for the immune system because it holds the balance beam permanently (or until it wears off) on the humoral side continually stimulating antibody production which "prevents" the illness because it prevents our own cellular immune system from reacting to and discharging out of the body the virus or bacterium and other toxic material associated with that particular illness!

This explains the polar opposite relationship between acute discharging inflammations on the one hand and allergies and autoimmune inflammations on the other hand. The more a person has of one, the less he or she will have of the other! A growing number of scientists believe that the large global increase in allergic and autoimmune diseases is caused by unresponsiveness of the cellular branch of the immune system induced by the lack of acute inflammatory illnesses and discharges in childhood.(2, 3, 4, 5) We need to identify the factors which cause this shift in the function of the immune system and which cause allergies and autoimmune diseases in childhood to increase! Two of the most obvious of these factors are the overuse of vaccines and antibiotics.

A vaccination consists of introducing a disease agent or disease antigen into an individual's body without causing the disease. If the vaccination provoked the cellular immune system into action it would cause all the symptoms of the disease! The symptoms of an acute infectious/inflammatory disease are caused by the acute inflammatory response of the cellular immune system. This response brings about the destruction and discharge from the body of the specific toxins and microbes related to the illness in question. Though this inflammatory response makes us sick, it is a healing response! It needs a strenuous rethinking to confront the fact that the symptoms of the most feared "infections" are caused by the reactions, and in some cases the overreactions, of our own cellular immune system.

So the trick of a vaccination is to stimulate the humoral branch of the immune system in an artificial way just enough so that it makes antibodies to the disease antigen but not so much that it provokes an acute inflammatory response by the cellular immune system and makes us sick with the disease we're trying to prevent! Thus a vaccination works by stimulating antibody production very much, usually by using an irritating aluminum adjuvant, while holding back the

digesting and discharging function of the cellular immune system. This is exactly equivalent to placing a tickling irritant in the nose while preventing the patient from sneezing. This also describes the inner experience of many children suffering from the common adverse effects of vaccination: a persistent inner restlessness and a great difficulty concentrating and learning.

Perhaps it is not difficult to see then why the use of vaccinations would shift the functional balance of the immune system toward the antibody-producing side and away from the acute inflammatory discharging side (the cell-mediated side). This has been confirmed by observation especially in the case of Gulf War Illness where the multiple, highly stimulating vaccinations received by most soldiers caused a shift in their immune function from the cellular side (acute inflammatory discharging response) to the humoral side (chronic auto-immune or allergic response), and made them chronically ill with the autoimmune manifestations of Gulf War Illness.(6)

Contrary to medical teaching, vaccinations do not strengthen or boost the entire immune system. Instead vaccinations, with their aluminum or other adjuvants, *overstimulate* the tasting-sensing function of the antibody-mediated branch of the immune system, which simultaneously *suppresses* the cellular immune system, thus preventing the usual *appearance* of the disease the vaccine was designed to prevent. In its place an increased tendency to chronic allergic and autoimmune conditions is created by the vaccination.

What in reality is prevented is not the disease but the ability of our cellular immune system to manifest, to respond to and to heal the disease! A vaccine does not prevent a disease germ from entering our body, it only hinders our immune system from creating a strong and sometimes dangerous acute inflammatory healing *reaction* to the germ. But the germ does not disappear, it goes underground and lingers in the body. Since our immune system has been prevented by the vaccine from reacting *acutely,* instead it reacts *chronically*, causing allergic and autoimmune conditions, which have increased steadily in children, and in adults too, as the number of vaccines in use has increased.

There is no system of the human being, from mind to muscles to immune system, which gets stronger through avoiding challenges, but only through overcoming challenges. The wise use of vaccinations would be to use them selectively, and not on a mass scale. In order for vaccinations to be helpful and not harmful, we must know beforehand in each individual to be vaccinated whether the cellular function or the humoral function of the immune system predominates.

In individuals in whom the cellular function predominates, causing many acute inflammations because the cellular immune system is over-reactive, a vaccination

could have a balancing effect on the immune system and be helpful for that individual. In individuals in whom the humoral function predominates, causing few acute inflammations but rather the tendency to chronic allergic or autoimmune inflammations, a vaccination would cause the humoral function to predominate even more, aggravating the imbalance of the immune system and harming the health of that individual. This is what is happening to our children today.

The current use of vaccinations in medicine today is essentially a shotgun approach that ignores differences among individuals. In such an approach some individuals may be helped and others may be harmed. If medicine is to evolve in a healthy direction, we must learn to understand the particular characteristics of each individual and we must learn how to individualize our treatments to be able to heal each unique human being in our care.

Epidemiologic studies (7, 8, 9) have shown that as families improve their living conditions, hygiene, nutrition, literacy and education, the risk of life-threatening, acute, infectious, inflammatory diseases very much decreases. Families with very stressful living conditions and poor hygiene, nutrition and literacy could possibly benefit from selected vaccinations. Families with good living conditions, hygiene, nutrition and education would be unlikely to benefit from vaccinations, because their immune systems are already capable, with appropriate supportive and medical care, to achieve healing of the great majority of infectious/inflammatory illnesses that might befall them. Individuals with a tendency to allergic or autoimmune diseases can only be harmed by vaccinations.

Adverse effects of vaccines include all the allergic, autoimmune and neurotoxic (autism, seizures, learning disabilities) conditions which have increased so very much in the past 60 years in all vaccinating populations, in correlation with the increasing rate and number of vaccinations during these years.

In the 1950's, U.S. infants received few vaccines and had one of the lowest death rates in the developed world. Today, U.S. infants receive 26 vaccine doses, more than in any other nation, and the U.S. infant death rate is the *highest* among the 34 developed nations studied. This study (10) found a significant correlation in infants of 34 nations between the number of vaccines doses they received and their risk of dying before age one.

While a scientific correlation such as this is not proof of causation, it certainly points to where further research is needed. Yet modern medicine has not scientifically measured the risk/benefit ratio of any vaccine.(11) Research into the risks of vaccines is very inadequate, according to two comprehensive reports on vaccines by the U.S. Institute of Medicine in 1991 and 1994. This is still true today.

That vaccines are still widely accepted by the public testifies to the enormous fear-based power and influence of the scientifically false but economically highly valuable germs-as-predators paradigm and of those interests supporting it and controlling the dissemination of knowledge to the populace.

It is important to remember that the entry into the body of a particular virus or bacterium rarely causes illness unless the inner environment of the individual is already toxic. Individuals living in stressful conditions, with poor hygiene, nutrition and education are at higher risk of serious illnesses because of the toxicity of their inner and outer environments. Also, individuals living in good conditions who happen to be undergoing very stressful life events will become more vulnerable to illness because the effect of stress is to cause more toxicity to accumulate in the body. And the immune system will sooner or later react in order to clear the accumulated toxicity, a reaction that may cause acute or chronic illness.

The world's leading expert on autoimmunity, Israeli physician Yehuda Shoenfeld published a ground-breaking article in the Journal of Autoimmunology in 2011 that establishes that vaccine adjuvants cause a wide variety of autoimmune conditions grouped under the heading of the ASIA syndrome i.e., Autoimmune Syndrome Induced by (vaccine) Adjuvants.(12) In 2015, Dr. Shoenfeld published an academic textbook Vaccines and Autoimmunity (13) that includes 37 medical research articles from research teams in medical centers in several different countries, all linking vaccines to many different autoimmune diseases.

This should be front-page news, but instead our mainstream media has been silent about the above recent developments which directly affect the vitally important issue of our children's health.

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References

1. Parish, C.R. "The Relationship Between Humoral and Cell-Mediated Immunity." Transplant Rev. 13 (1972): 3.
2. Ronne, T. "Measles Virus Infection without Rash in Childhood is Related to Disease in Adult Life." The Lancet. (1985): 1-5.
3. Odent, M.R., Culpin, E.E., Kimmel, T. "Pertussis Vaccination and Asthma: Is There a Link? The Journal of the American Medical Association 272(1994): 588.
4. Cookson, W.O.C.M., and Moffatt, M.F. "Asthma: An Epidemic in the Absence of Infection?" Science 275(1997): 41-42.
5. Martinez, F.D. Role of viral infections in the inception of asthma and allergies during childhood: could they be protective? Thorax 1994;49: 1189-91.
6. Rook, G.A.W., Zumla, A. "Gulf War Syndrome: Is It Due to a Systemic Shift in Cytokine Balance Towards a Th2 Profile?" The Lancet 349 (1997): 1831-1833.

7. McKeown, T. The Modern Rise of Population. New York: Academic Press, 1976.
8. McKeown, T. The Role Of Medicine: Dream, Mirage, or Nemesis? New Jersey: Princeton University Press 1979.
9. Sagan, L.A. The Health of Nations. New York: Basic Books, Inc., 1987.
10. Miller NZ, Goldman Gs. "Infant mortality rates regressed against number of vaccine doses routinely given: is there a biochemical or synergistic toxicity?" *Hum Exp Toxicol* 2011; 30(9): 1420-28
11. Robin, Eugene, M.D. "Some Hidden Dimensions of the Risk/Benefit Value of Vaccine" from the First International Public Conference on Vaccination. Alexandria, Virginia September 1997.
12. Shoenfeld, Y. and Agmon-Levin, N. (2011). "ASIA" – autoimmune / inflammatory syndrome induced by adjuvants. J Autoimmun, 36(1): 4-8.
13. Shoenfeld, Agmon-Levin and Tomljenovic, editors, Vaccines and Autoimmunity. Hoboken: Wiley-Blackwell, 2015.