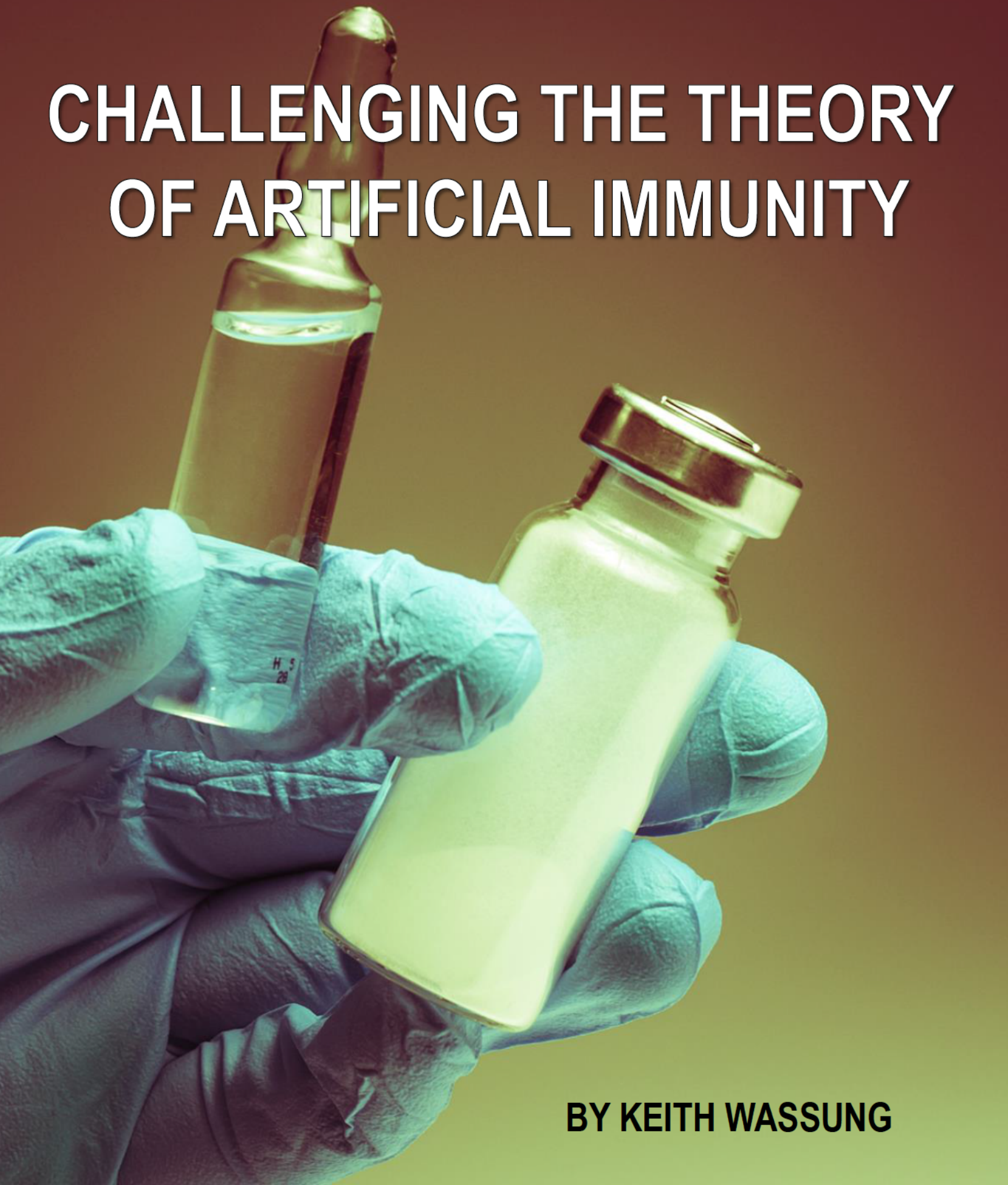
HEALTH RESEARCH REPORT #8

CHALLENGING THE THEORY OF ARTIFICIAL IMMUNITY



BY KEITH WASSUNG

The practice of vaccination against disease began in 1796 by Edward Jenner, who used the pus of blisters from cowpox to vaccinate people against smallpox.

Despite the fact that vaccination is perhaps viewed as the strongest preventive measure against disease in modern health care, its practice and protocol has been challenged in recent years by a growing number of doctors and scientists, as well as a large number of parents. Recent immunology research and the availability of health information have caused the challenge of the foundational tenets of vaccination.

"The control or even eradication of childhood disease has been heralded as one of medicine's finest accomplishments, yet there is a growing suspicion that infection intervention may have an adverse effect on the patients. As childhood infections have decreased, chronic afflictions have increased." [1]

The Economist

"Lately, there has been a swell of complaints from groups and individuals about vaccine side effects and the lack of long-term scientific studies and safety data on vaccines. And, at a time when there are more than 200 vaccines in the pipeline, concern is mounting that high-profile vaccine advocates and the lobbies they represent, exert an inordinate influence on the setting of government vaccine policy." [2]

ABC News

It may seem incredulous to challenge the practice of vaccination. After all, it has claimed responsibility for the eradication of many diseases in the past 100 years including polio, smallpox, whooping cough and diphtheria. But these claims are largely based on epidemic studies, rather than on clinical evidence of effectiveness. Europe for example, experienced the same rise and decline of polio cases yet never had the polio vaccine. In addition, many diseases that were once thought to be eradicated simply take on different forms and are given different names. For example, spinal meningitis and polio have almost identical symptoms.

We have learned an incredible amount of information in recent years about the complex workings of the immune system, mostly due to advances in cancer, genetics and AIDS research.

This has shed new light on the inner workings of the immune system and the most effective ways to strengthen the host resistance.

One thing we have learned is that simply altering the natural physiology of the body may temporarily give the appearance of resolution of disease, but may actually create more problems in the end. Virtually all studies of effectiveness of vaccines are based on statistical data and the presence or absence of disease. There have never been any medical studies that have been performed that clearly demonstrate that vaccines increase the immune system competence of the human body, nor has there been any medical study on the long-term effects of vaccines.

It must be understood that vaccine studies are economically influenced by the pharmaceutical industry, which has tremendous influence on the outcome of these studies. Vaccine sales represent a huge profit for these companies and a certain amount of economic bias will always be involved.

The Advisory Committee on Immunization Practices, (ACIP) a group of individuals hand-picked by the Center for Disease Control (CDC), recommends which vaccines are administered to American children. Working mainly in secret, ACIP members frequently have financial links to vaccine manufacturers. Dependent on CDC funding, state vaccination programs follow CDC directives by influencing state legislatures to mandate new vaccines. Federal vaccine funds can be denied to states which do not "vigorously enforce" mandatory vaccination laws. Conversely, the CDC offers financial bounties to state health departments for each "fully vaccinated" child." [3]

The Medical Sentinel

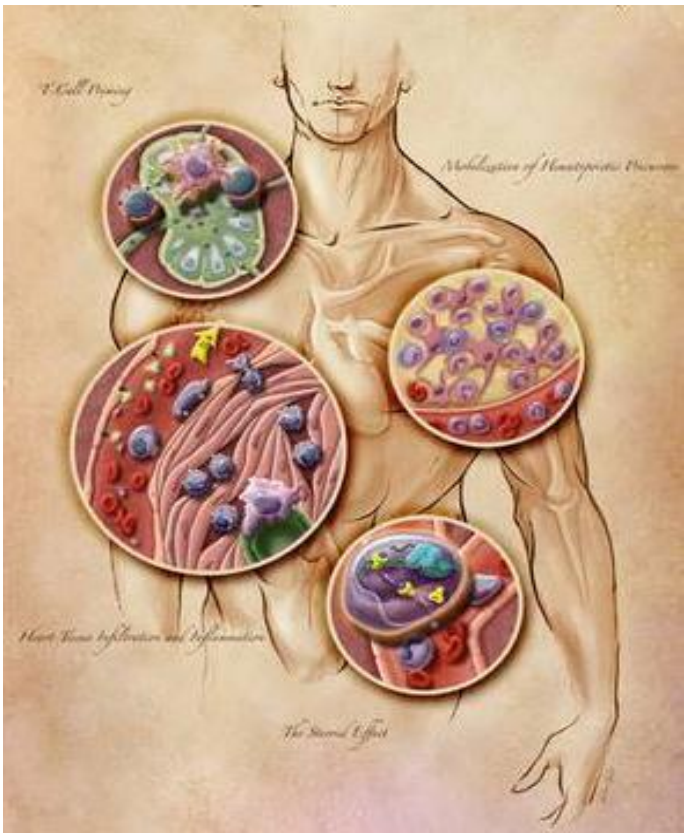
The past decade has seen a number of books and articles written which challenge the practice of vaccinations, mostly on the grounds of the potential side effects and long term latent effects of the vaccine.

These topics are certainly a factor in the vaccination debate, but the real issue is whether or not vaccines actually produce lasting immunity that is at least equal or superior to immunity that is obtained via natural exposure.

This article provides the last scientific evidence in addressing that particular question.

Fundamentals of the Immune System

The Immune System is the name of a collection of molecules, cells, and organs whose complex interactions form an efficient system that is usually able to protect an individual from both outside invaders and its own altered internal cells, which lead to cancer.

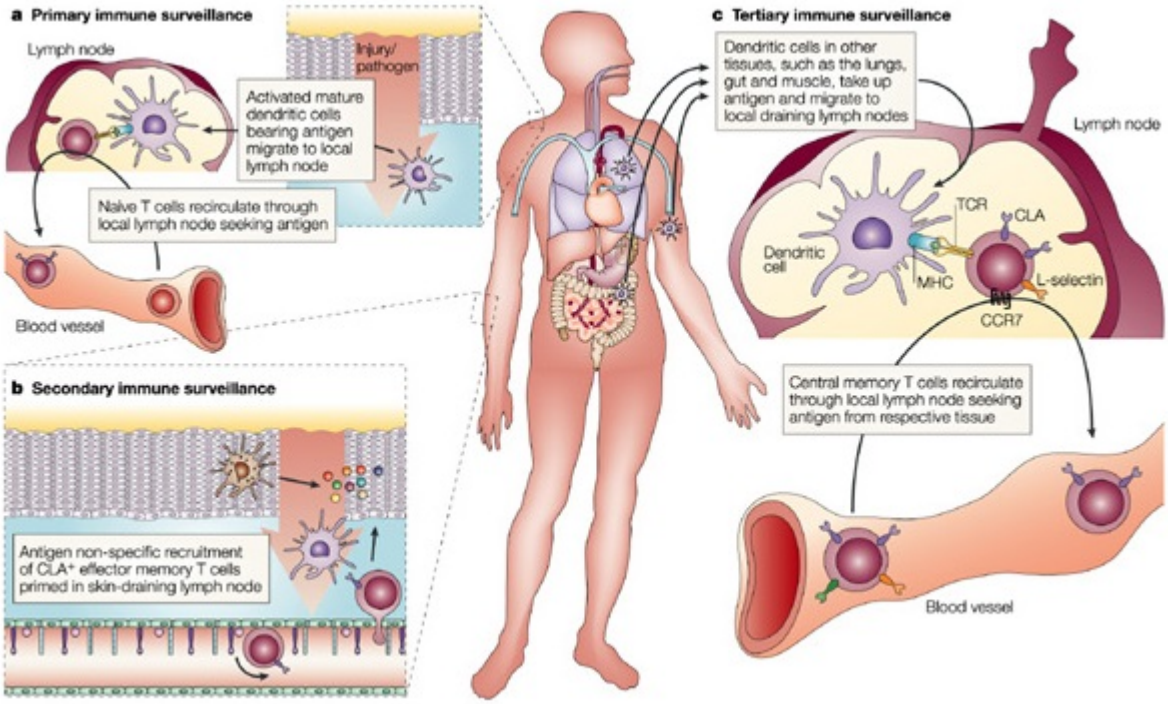


The immune system is comprised of the lymphoid tissues and organs of the body. Lymphoid tissues are widely distributed. They are concentrated in bone marrow, lymph nodes, spleen, liver, thymus, and Peyer's patch scattered in the linings of the GI tract.

The lymphoid system is encompassed by the system of mononuclear phagocytes (equivalent to the reticuloendothelial system or RES) Lymphocytes are the predominant cells, but macrophages and plasma cells are present also.

Lymphocytes are cells, which circulate, alternating between the circulatory blood stream and the lymphatic channels of the body.

The immune system is divided into two components, *non-specific,* also referred to as innate or non-adaptive immunity and *specific* which is also known as acquired or adaptive immunity. The breakdown into non-specific and specific is for classification purposes only as there is a constant and complex interaction, coordination and communication between all parts of the immune system. The majority of the immune resistance occurs in the non-specific components.



"The non-specific defense system responds immediately to protect the body from all foreign substances, whatever they are. The non-specific system reduces the workload of the specific defense system, by preventing entry and spread of micro-organisms throughout the entire body." [4]

Essentials of Anatomy and Physiology

"In the 1980's Paola's team at the Pasteur Institute in Paris showed that 98% of the immune response triggered at the early stages of infection is non-specific." [5]

Nature Medicine

Lines of Defense

1st lines of defense are the physical barriers which include the skin, mucosal membrane, tears, ciliary elevator, and urine. Chemical barriers include sebum sweat, stomach acid and lysozymes.

2nd lines of defense are the macrophage system, complement, fever, interferon and inflammation. The macrophage system attacks and consumes pathogens by engulfing them, a process known as phagocytosis.

Complement cooperates with macrophages by attaching to foreign cells and initiating the ingestion of the cells by phagocytosis. Interferons are a class of proteins; activated by fever that prevent viral replication in surrounding cells and also inhibit the growth of cancer cells.

Nonspecific defense mechanisms		Specific defense mechanisms (immune system)
First line of defense	Second line of defense	Third line of defense
• Skin • Mucous membranes • Secretions of skin and mucous membranes	• Phagocytic white blood cells • Antimicrobial proteins • The inflammatory response	• Lymphocytes • Antibodies

"The antiviral action of interferon provides a major host defense against viral infections." [6]

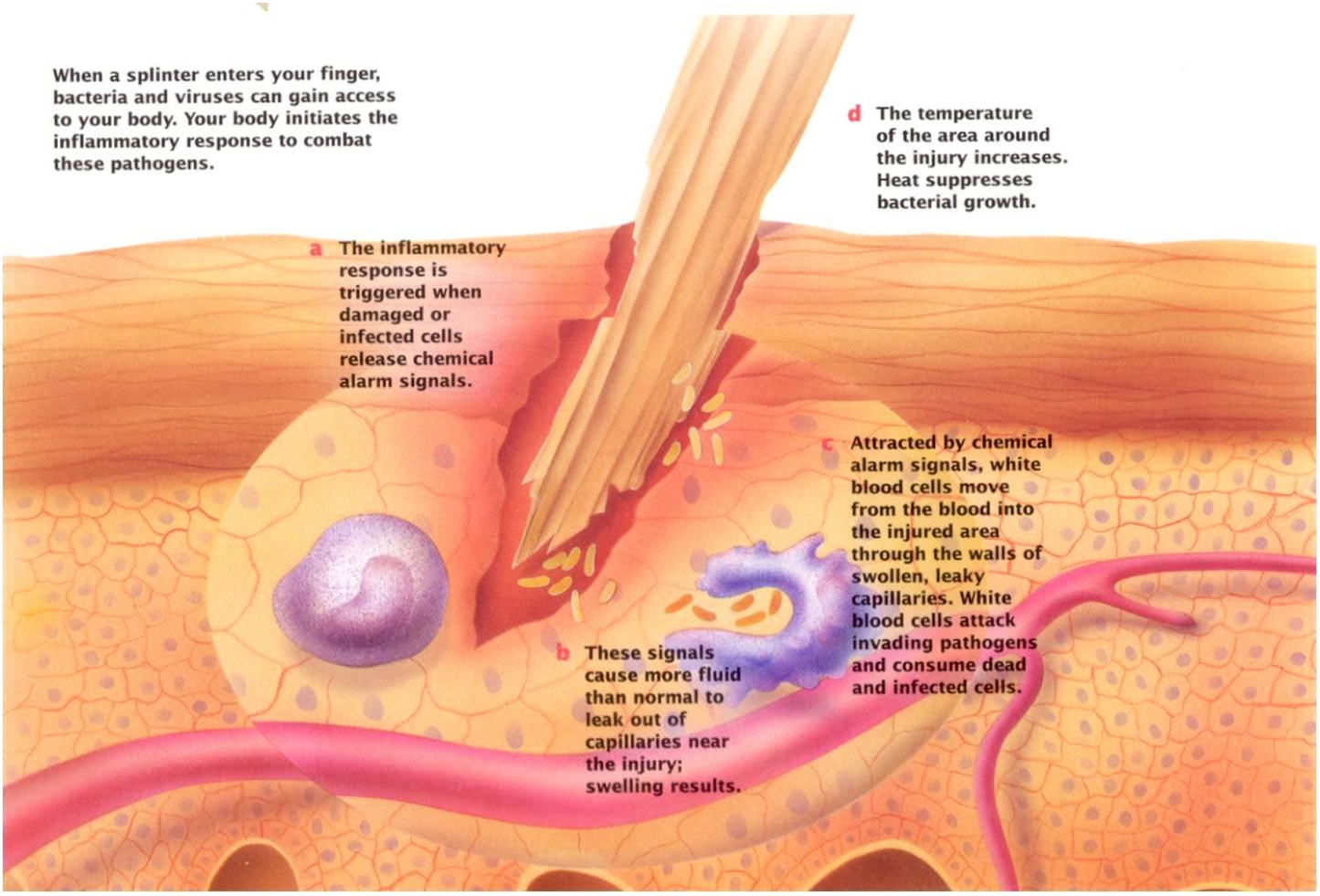
Essentials of Medicine

Fever is a powerful part of the immune system, as it interferes with pathogen growth, inactivates many pathogen toxins, and facilitates a more intense immune system response. Many physicians now recommend allowing fevers to run their course.

“Fever is a systematic response to infection. It is generally agreed that moderate elevation of body temperature improves the body’s disease fighting capacity.” [7]

Human Physiology

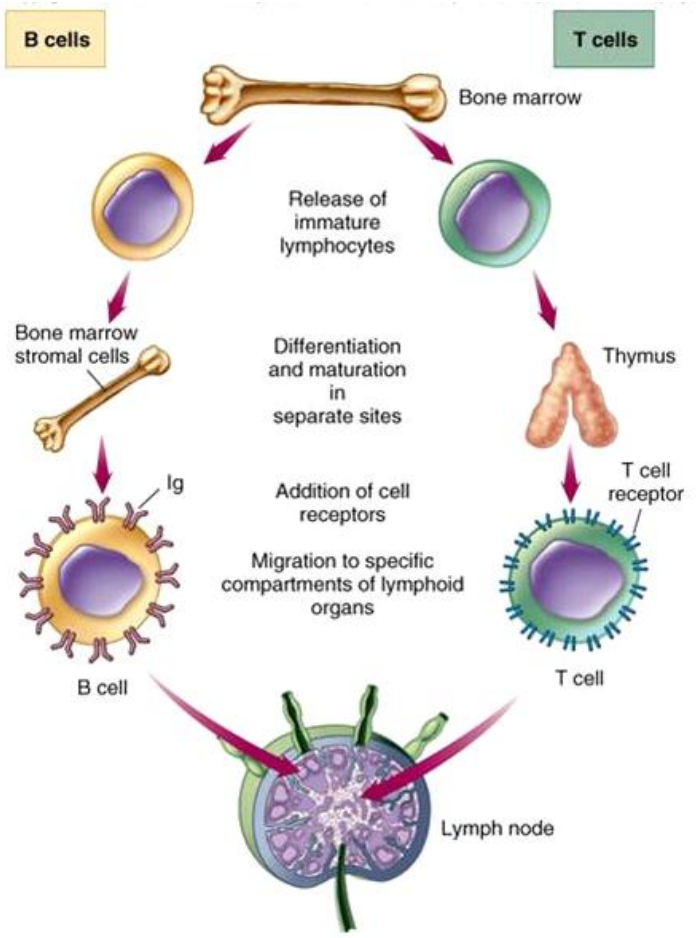
When tissue injury occurs, whether caused by bacteria or viruses, etc, substances such as bradykinins, complement, and histamines are released. This process is called inflammation and it strongly activates the macrophage system to remove damaged cell tissue. Inflammation is a vital part of the healing and repair process of the immune system and when it is delayed or inhibited, healing and repair is incomplete.



“Inflammation is one of the most important mechanisms of host defense since it marshals the attack on the injurious agent and leads to repair of the affected tissue.” [8]

The Cell Biology of Inflammation

The third lines of defense are the specific systems, also known as acquired or adaptive immunity. The specific system consists of B cells (humoral), and T cells (cell-mediated). These cells have mechanisms for selecting a precisely defined target and for developing memory to the antigen, so that subsequent exposures will result in a more efficient and effective response.



Definition of Immunity

Immunity: 1. Protection against infectious disease by either specific or non-specific mechanisms.
2. Pertaining to the immune system or immune response. [9]

Dorland's Medical Dictionary

Every standard definition of immunity involves the overall competence of both the non-specific and specific components of the immune system to recognize, isolate and eliminate foreign pathogens. This competence also involves the ability of the immune system to be able to distinguish between self and non-self. Immunity is the body's ability to establish and maintain molecular identity. There is a huge difference between true immunity and the absence of symptoms of disease.

Theory and Practice of Vaccines

Vaccines are suspensions of infectious agents used to artificially induce immunity against specific diseases. The aim of vaccination is to mimic the process of naturally occurring infection through artificial means. Theoretically, vaccines produce a mild to moderate episode of infection in the body with only minor side effects. They are said to work by causing the formation of antibodies, which are proteins that defend the body from an invasion by harmful germs.

Vaccines are grouped into three different types:

Attenuated microbes, in which the antigen is diluted or weakened. Attenuated vaccines include those to prevent measles, mumps, rubella, polio and chicken pox.

Killed organisms, fragmented organisms, or antigens produced by *recombinant DNA technology.* Examples of these include pertussis, Hib, Hepatitis-B, and many of the experimental HIV vaccines.

Toxoids, which are comprised of the toxins of particular infections such as tetanus or diphtheria and have been partially detoxified by heat or chemical treatment.

Vaccines contain chemical preservatives such as mercury, formaldehyde, and aluminum, which prevent contamination. Mercury has been linked to numerous central nervous system and developmental disorders.

"The Center for Disease Control recognizes a "small but statistically significant association between cumulative mercury from vaccines and neurological disorders, such as autism, tics, attention deficit disorder, language and speech disorders, and other neurological development delays." [10]

Portals of Entry

The human body is designed to be able to defend itself against foreign invaders, much like a castle or a fortress with outer and inner walls and then interior perimeter barriers. The majority of pathogens that enter the body do so via the mouth and nose.

The upper respiratory area is packed with powerful defense mechanisms designed to combat and filter these foreign invaders.

Every possible portal of entry in the human body is lined with mucous membrane, a defense mechanism loaded with powerful secretory IgA.

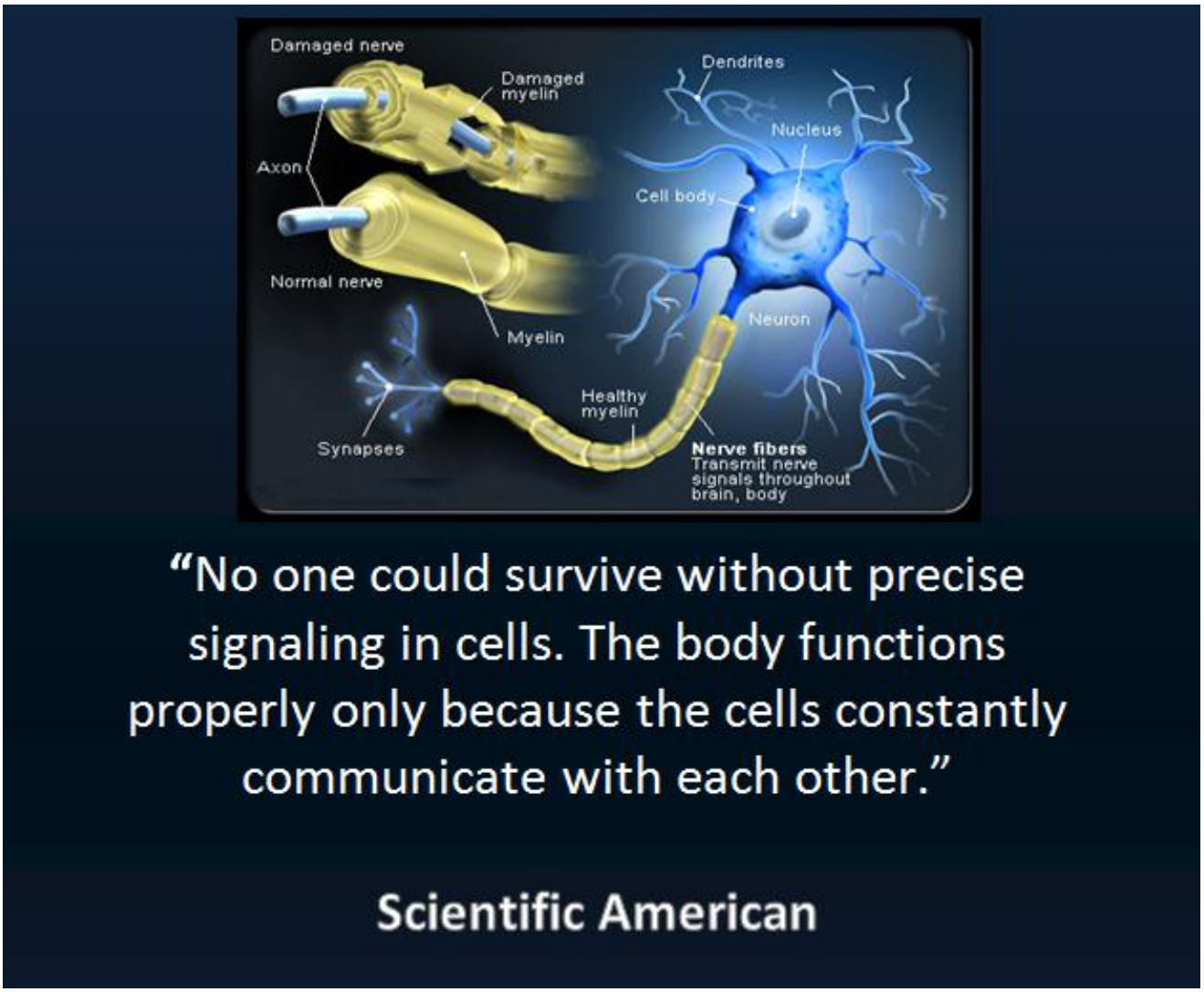
"IgA is the key defender against viral infections." [11]

Essentials of Medicine

Natural (and lasting) immunity occurs only after actually recovering from the actual disease. When naturally exposed to pathogens, the organism has to pass through the body's natural defense systems in the body before it ever reaches the bloodstream. A tremendous amount of biological events are triggered which are essential in developing true immunity long before the pathogen ever comes into contact with the bloodstream.

Vaccination by direct injection into the bloodstream bypasses much of the normal defenses of the immune system, which produces only partial immunity.

There is a greater quantity of biological communication in the human body than all of the man-made communication systems in the world combined. Signaling is essential to the development of immunity.



Cytokines are low-molecular weight proteins that control, coordinate, and regulate various immune or inflammatory responses. The importance of cytokines in the host response to infection cannot be overstated. Full protection against disease requires the involvement of many different systems of the body and it is the cytokines that coordinate them. Vaccines inhibit the normal function of cytokines, and in fact new vaccines specifically target cytokine activity.

"Recently, gene therapy and DNA vaccination has been used to produce memory against a number of cytokines that promote inflammation. Antibodies to the product of each inserted gene were produced. These antibodies were found to prevent the effects of the cytokines." [13]

Immunology

Vaccine and Antibody Production

The clinical evidence for vaccines is their ability to stimulate antibody production in the recipient, a fact that is not disputed. What is not clear, however, is whether such antibody production produces immunity

The most predominant forms of life are viruses, bacteria and fungi, each with countless numbers of varieties and strains. When the weight and number of these organisms are multiplied together, they are the greatest biomass in existence on earth.

"Infection with viruses does not always result in disease. In fact, a great majority of virus infections remain asymptomatic. Even before the introduction of the polio virus vaccination, about 98% of infected humans developed only minor flu-like illness or no illness at all. Of 45,000 U.S. military personnel inoculated in 1942 with a yellow fever vaccine inadvertently contaminated Hep-B virus, only about 900 developed clinical hepatitis and only 33 had severe disease." [14]

New York University Medical School

Scientific evidence questioning the role of antibodies in disease protection can be found in research performed by Dr. Alec Burton, published in a study by the British Medical Council. The study investigated the relationship between the incidence of diphtheria and the presence of antibodies. The purpose of the research was to determine the existence or nonexistence of antibodies in people who developed diphtheria and in those who did not. The conclusion was that there was no relation whatsoever between antibody count and incidence of disease. The researchers found people who were highly resistant with extremely low antibody counts, and people who developed the disease who had high antibody counts.

Dr. Burton also discovered that children born with a-gamma globulinemia (inability to produce antibodies) develop and recover from measles and other infectious or contagious disease almost as quickly as other children.[15]

"Natural Immunity is a complex phenomenon involving many organs and systems. It cannot be duplicated by the artificial stimulation of antibody production." [16]

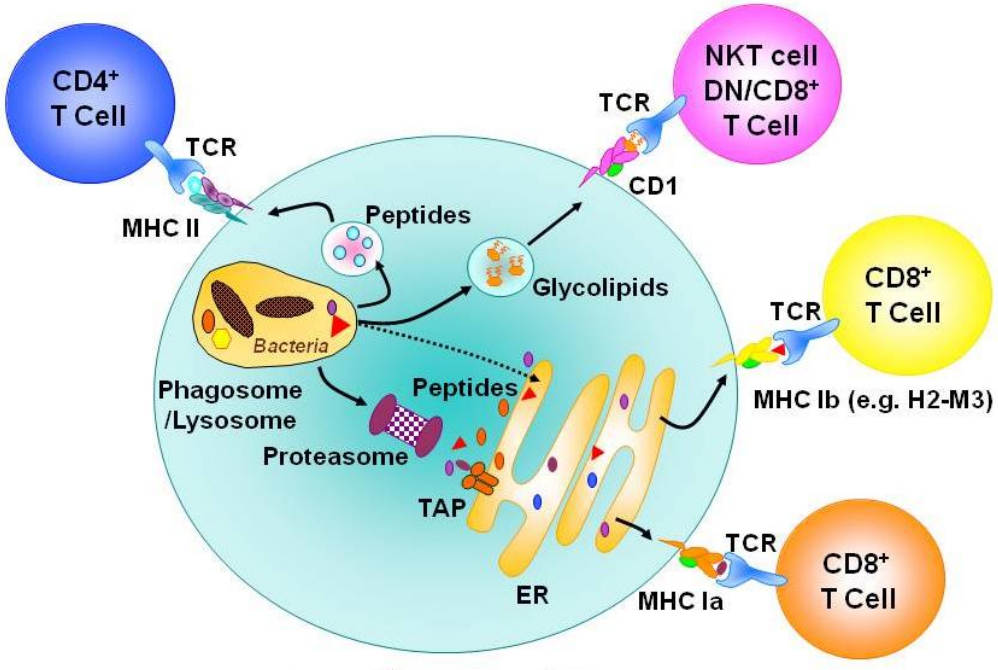
Dispelling Vaccine Myths

There exist a finite number of immune system cells that are able to respond to foreign antigens. Once a specific immune cell responds to a particular antigen it becomes committed to that specific antigen and is unable to respond to any other pathogen. Vaccination results in a greater commitment of specific immune cells that would be utilized in natural exposure, which may actually weaken the repertoire of immune cells.

Cause of Long Term Immunity

Recent research by Dr. Rafi Ahmed and his colleagues has shown that the stable maintenance of total memory cells may be dictated by the principle of homeostasis. Models suggest that the total number of cells in the immune system is constant and the long-term maintenance of cellular immunity may be regulated by competition for space by memory cells. As an individual is exposed to new pathogens, some memory cells may need to make way for new ones. Since the total number of memory cells can be very large, the immune system is normally capable of maintaining immunity to many pathogens at once. The impact of new pathogens could govern the loss of existing memory cells, and might explain the loss of memory to certain viruses. [17]

Emory Vaccine Research Center



The ability to remember and respond to invading organisms, even years later, is one of the fundamental features of the immune system.

Traditionally, it was thought that memory cells were developed after initial exposures, but new research demonstrates that multiple exposures are required to develop T cell memory

Scientists figure out how immune system remembers

Reuters-media: Scientists have figured out how the immune system "remembers" enemies it has encountered in the past. A report in the journal Science shows that so-called memory T cells are extremely slow learners. Scientists knew that one particular type of T cells, known as CD8 cells, could either become vicious attackers that immediately kill invaders, or could become "memory" cells that help to quickly flag invaders if they ever show up again. Scientists at the University of Chicago found that the process by which memory cells are made are excruciatingly slow. They found that several generations of the cells must be exposed to the troublemaker before some of them can become memory T cells specific for it. "This finding suggests that the basic approach to vaccines is not likely to produce the desired result" said Phillip Rickhardt, one of the researchers. [18]

Lasting Immunity

The notion that vaccines create a life-long immunity that is equal or superior to natural immunity is not even claimed in medical literature. They only claim that vaccines reduce the symptoms of diseases.

"The practice of DPT vaccination has played a major role in markedly reducing the incidence rates of cases from each of those diseases." [19]

Connaught Laboratories

"It is true that natural infection almost always causes better immunity than vaccines. Whereas immunity from disease often follows a single, natural infection, immunity from vaccines occurs only after several doses." [20]

Children's Hospital of Philadelphia

"One problem with inactivated influenza vaccines is that the immunity generated is only partial. In the presence of a strong adjuvant, antigens can stimulate B cells and induce a good humoral response, however, there is little cell-mediated immunity generated by a killed product. This means that the difference between disease and protection or at least a more rapid recovery from disease. Also, the immunity provided by a killed product is short lived." [21]

Center for Biologics Laboratory

"The antigens contained in many injectable vaccines will not produce an immune response sufficient enough to confer protection against infection. Of the 23 vaccines currently in routine use, 20 are delivered by injection and stimulate only systemic immunity." [22]

Avant Immunotherapeutics

If it cannot be demonstrated that vaccines create lifelong immunity by strengthening the immune system, then they must achieve their objective of reducing case numbers of disease by actually weakening or suppressing the normal function of the immune response.

The idea that vaccines work by subtle immune suppression is receiving rapid support within the scientific and research community

It is dangerously misleading and indeed the exact opposite of the truth to claim that a vaccine makes us “immune’ or protects us against an acute disease, if in fact it only drives the disease deeper into the interior and causes us to harbor it chronically, with the result that our responses to it become progressively weaker and show less and less tendency to heal or resolve themselves spontaneously. [23]

Dr. Richard Moskowitz, *Dissent in Medicine*

Over time, the term vaccine has evolved to include all preparations used to generate protective immunity to microbial pathogens or their toxins. More recently, the definition of vaccine has been further expanded to include antigenic materials used to tolerate or turn off antigen-specific immune responses to prevent or treat immune mediated diseases. A variety of approaches are being pursued to induce T cell tolerance. These include blocking the activation of T cells by antigen presenting cells focusing on the interactions of the T cell receptor (TCR) with peptides presented by the major histocompatibility complex (MHC). Other strategies target costimulatory pathways in T cells, or the interaction of cell surface adhesion molecules and their counter ligands. Some of these experimental therapies are currently being developed as vaccines. [24]

American Autoimmune Research Association

“The later part of the 20th century has witnessed an unprecedented rise in the number of individuals with impaired immunity. There is considerable experience with most vaccines in those with impaired immunity.” [25]

Clinical Microbiology Review

Recent vaccine research and development has focused on recombinant DNA vaccines as a way of duplicating natural immunity, but the findings demonstrate that they work by suppressing the immune system as well.

Could DNA Vaccines Undermine Immunity?

DNA vaccines consist of a bit of DNA containing a gene for a marker from the pathogen. The idea is that when the DNA is injected into the muscle tissue, it works its way into cells where it is incorporated into cellular DNA. The body "learns" to recognize the pathogen and mount a strong defense to it in the future. But research published in the *Journal of Clinical Investigation,* shows that instead of being immunized to the protein encoded by a DNA vaccine, it actually learns to tolerate it. In fact, when later injected with the same protein, no antibodies were developed at all. This finding raises the possibility that a DNA vaccine could convert someone who normally would be able to clear a pathogen-albeit they might get sick first, to someone who would be unable to clear it at all. [26]

Science

The paradigm shift in health care is gradually moving from a symptom based model, to one in which the function, performance and innate healing potential of the human body is maximized. With this change in understanding comes the concept that not only are many diseases normal and natural, they may actually benefit the body by strengthening the immune system.

"Through the process of developing and then conquering infection, the child gets rid of acquired toxins and poisons from the body and receives a boost to the immune system." [27]

Healing Arts Press

"Whenever the immune system successfully deals with an infection, it emerges from the experience stronger and better able to confront similar threats in the future. Our immune system develops in combat. If at the first sign of infection, you always jump in with antibiotics, you do not give the immune system a chance to grow stronger." [28]

Andrew Weil, MD

Several studies have shown that the incidence of asthma and allergies tend to rise in countries where childhood immunization rates are high. This has prompted researchers to suggest that certain infections may trigger immune changes that protect children from developing asthma and allergies later. Preliminary studies have shown a protective effect of measles and infections with intestinal parasites. [29]

Science News

With the rise of vaccines and antibiotics, people in developed countries have experienced fewer childhood diseases than ever before and scientists suspect that an immune system with no serious work to do is likely to become a renegade army, attacking whatever it encounters. [30]

Newsweek

In a study of 58 children under the age of 16 with insulin dependent diabetes and 172 non-diabetic controls, infection during the 1st year of life was associated with a reduction in diabetic risk. Infection during the first year of life may have a protective effect by modifying the lymphocytic response to subsequent immunological challenges. A link with decreasing early exposure to common infectious disease could account for the increased risk of diabetes over the past thirty years. [31]

Archives of Childhood Disease

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THE EDUCATION AND TRAINING OF A DOCTOR OF CHIROPRACTIC

Educational requirements for doctors of chiropractic are among the most stringent of any of the health care professions. The typical applicant at a chiropractic college has already acquired nearly four years of pre-medical undergraduate college education, including courses in biology, inorganic and organic chemistry, physics, psychology and related lab work. Once accepted into an accredited chiropractic college, the requirements become even more demanding — four to five academic years of professional study are the standard. Because of the hands-on nature of chiropractic, and the intricate adjusting techniques, a significant portion of time is spent in clinical training.

Doctors of chiropractic — who are licensed to practice in all 50 states, the District of Columbia, and in many nations around the world — undergo a rigorous education in the healing sciences, similar to that of medical doctors. In some areas, such as anatomy, physiology, rehabilitation, nutrition and public health, they receive more intensive education than their MD counterparts.

Like other primary health care doctors, chiropractic students spend a significant portion of their curriculum studying clinical subjects related to evaluating and caring for patients. Typically, as part of their professional training, they must complete a minimum of a one-year clinical-based program dealing with actual patient care. In total, the curriculum includes a minimum of 4,200 hours of classroom, laboratory and clinical experience. The course of study is approved by an accrediting agency which is fully recognized by the U.S. Department of Education. This has been the case for more than three decades.

Records from insurance and court cases have constantly shown that chiropractic is the safest portal of entry health care available to the public today. Although no healthcare procedures are 100% safe, chiropractic stands on its record of safety and effectiveness unmatched in healthcare.

The chiropractic adjustment is a safe, efficient procedure which is performed nearly one million times every working day in the United States.

There is a singular lack of actuarial data that would justify concluding that chiropractic care is in any way harmful or dangerous. Chiropractic care is non-invasive, therefore, the body's response to chiropractic care is far more predictable than its reactions to drug treatments or surgical procedures. Of the nearly one million adjustments given every day in this country, complications are exceedingly rare.

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