



About the Author

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Dr. Lau is internationally recognized for his research focusing on lifestyle medicine with the use of phytonutrients and natural remedies. He and his associates have been actively involved in phytochemical research for more than three decades.

Dr. Lau maintains a clinical practice in which health education and lifestyle modification play an integral part in the treatment program. He has traveled extensively throughout the U.S., Europe, and Asia conducting health seminars and classes. His research and health educational programs have been featured on many TV networks and radio stations. He has published over 200 scientific papers, written articles and books for the general public.

Dr. Lau received his M.D. degree from Loma Linda University and his Ph.D. in Immunology and Medical Microbiology from the University of Kentucky.

- **60,000 Americans die from complications of flu each year**
- **More than 120,000 Americans die from other respiratory diseases each year**
- **A simple effective treatment can prevent these deaths**
- **The methods described in this book offer an effective treatment for colds, flu, and other respiratory infections**



HYDROTHERAPY FOR FLU AND RESPIRATORY INFECTIONS

Benjamin Lau, M.D., Ph.D.

A Clinically Proven Modality for H1N1, Swine Flu, Bird Flu or any flu.



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Learn the effective method for treating all types of respiratory infections.

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Inside of front cover
(this page will not print in the final book)

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PREFACE

With the frenzy and fear of swine flu spreading over the world, I decided to publish this book to share with the public an effective modality to prevent and treat swine flu or any flu. There is really no need of fear of flu. The methods described in this book are effective for treating colds, flus, and all other common respiratory infections

A good portion of this book was written seven years ago during the media hysteria of the Severe Acute Respiratory Syndrome (SARS) around the world. At that time, I stated that “SARS can be severe in some individuals, but it is not a disease to be feared. A person with an intact immune function need not fear SARS or other respiratory infections. Even in SARS patients with immune dysfunctions, there is still an effective treatment for them.”

When I heard of reports of SARS from China, Hong Kong, and other countries in early part of 2003, I decided to send a letter to the Editor of the New England Journal of Medicine (NEJM) to share my humble but effective treatment methods for severe respiratory infections with the medical communities.

NEJM allows only 400 words for a letter to the editor. The following is the 400 words of my Letter to NEJM:

“April 14, 2003

To The Editor:

I have successfully used hydrotherapy for more than two decades to treat patients with symptoms of Severe Acute Respiratory Syndrome (SARS). Some patients acquired the infection while traveling abroad, others developed tracheobronchitis and pneumonia after returning from overseas visits, and still others acquired the disease without foreign travel. Each year, several of my medical students come down with symptoms of SARS just before their final examinations. With the proper use of hydrotherapy, they fully recover within 48 hours.

The hydrotherapy is called “fomentation” meaning the use of moist heat. The process begins by heating a wet towel in a microwave oven for three minutes, wrapping this hot towel in a dry towel, and placing it directly on the chest and/or the back. Fresh hot towels should be prepared approximately every five

minutes, and total treatment lasts 15-20 minutes. Treatment is given every 4 to 6 hours.

Moist heat penetrates the tissues to a depth of 2 to 5 inches killing all microbes including viruses. Moist heat also loosens mucus so that patients will be able to cough it out. Two months ago, a medical student came to me with an annoying and persistent dry cough, fever, malaise and myalgia. Ten days of amoxicillin and codeine cough syrup had done nothing. After three moist heat treatments, he coughed up more than a cup of sputum (his own estimate), and he was completely well.

With lower respiratory infection, alveoli can fill with mucous secretions so thick that the person is unable to cough it up. Left untreated, the mucus can eventually cause breathing problems and hypoxia. Mucus accumulation may also cause bronchospasm giving the appearance of asthma. I have used this moist heat method to cure childhood asthma. Moist heat enhances blood circulation, recruiting leukocytes, NK cells, and cytokines (interferons) to destroy viruses. Moist heat also encourages perspiration allowing toxic waste products to be

eliminated through skin. When appropriately applied, SARS is cured in a few days.

While I realize that this treatment modality may be foreign to many, I invite readers to try this method and compare it to conventional treatments currently in use for SARS.

Benjamin Lau, M.D., Ph.D.

Professor of Microbiology, Immunology, and Medicine

School of Medicine, Loma Linda University

Loma Linda, CA 92350”

In two weeks, I received the following response from the Senior Deputy Editor Edward W. Campion, M.D. of the New England Journal of Medicine:

“April 29, 2003

Dear Dr. Lau:

I am sorry that we will not be able to print your recent letter to the editor. The space available for correspondence is very limited, and we use our judgment to present a representative

selection of the material received. Many worthwhile communications must be declined simply for lack of space.

Sincerely,

Edward W. Campion, M.D., Senior Deputy Editor”

I then decided to send the letter to another medical journal that has a large circulation. This journal allows 500 words for a Letter to the Editor, so I was able to elaborate a bit more and I was hoping this time I could convey my suggestions a bit better with 100 extra words. The following is my letter to the *Lancet*, a British journal:

“May 2, 2003

To The Editor of The Lancet:

Severe Acute Respiratory Syndrome (SARS) has baffled the medical community and the general public. SARS may be SEVERE, but is NOT a disease to be feared. Death in SARS occurs only in those with impaired immune function. Fatal cases reported from Canada occurred in elderly individuals with underlying diseases such as diabetes and coronary heart disease.

Smoking and alcoholism are known predisposing factor for SEVERE, life-threatening respiratory diseases. Both of these habits are rampant in China. Persons with intact immune functions need not fear of this type of infection. Even in SARS patients with immune dysfunction, there is still an effective treatment for them.

I have successfully used **hydrotherapy** for more than two decades to treat patients with symptoms of SARS. Some patients acquired the infection while traveling abroad, others developed tracheobronchitis and pneumonia after returning from overseas visits, and still others acquired the disease without foreign travel. Each year, several of my medical students come down with symptoms of SARS just before their final examinations. With the proper use of hydrotherapy, they fully recover within 48 hours.

The hydrotherapy is called “fomentation” meaning the use of moist heat. The process begins by heating a wet towel in a microwave oven for three minutes, wrapping this hot towel in a dry towel, and placing it directly on the chest and/or the back. Fresh hot towels should be prepared approximately every five

minutes, and total treatment lasts 15-20 minutes. We also use Hydrocollator® Steam Pack manufactured by Chattanooga Group (Hixson, TN, USA) which stays hot for 30 minutes. Treatment is given every 4 to 6 hours.

Moist heat penetrates the tissues to a depth of 2 to 5 inches killing all microbes including viruses. Moist heat also loosens mucus so that patients will be able to cough it out. Two months ago, a medical student came to me with an annoying and persistent dry cough, fever, malaise and myalgia. Ten days of amoxicillin and codeine cough syrup had done nothing. After three moist heat treatments, he **coughed up more than a cup of sputum** (his own estimate), and he was completely well.

With lower respiratory infection, alveoli can fill with mucous secretions so thick that the person is unable to cough it up. Left untreated, the mucus can eventually cause breathing problems and hypoxia. Mucus accumulation may also cause bronchospasm giving the appearance of asthma. I have used this moist heat method to cure childhood asthma. Moist heat enhances blood circulation, recruiting leukocytes, NK cells, and cytokines (interferons) to destroy viruses. Moist heat also

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Benjamin Lau, M.D., Ph.D.

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Loma Linda, CA 92350, U.S.A.”

Also in about two weeks, I received an email from the senior editor of The Lancet:

“15 May 2003

Dear Dr. Lau:

Thank you for your communication on “SARS is not to be feared,” which you sent for publication in our Correspondence columns. I am afraid we have decided not to accept your letter for publication on this occasion. Well over 3000 letters are submitted every year, and our criteria for acceptance are

therefore very stringent. I wish you luck with acceptance in another forum.

Yours sincerely,

Abigail Pound, Senior Editor”

Obviously I was not able to reach my medical fraternity with the simple message. I recognized it was difficult to sell (even though it costs nothing) this effective treatment modality to the medical community. Now we hear no more about SARS.

As I predicted seven years ago, SARS would have a short history and it turned out to be so. However, in the past few years, there's hysteria and fear of flu. This fear and hysteria continue, first the Hong Kong flu, then bird flu, and now swine flu. Just about every year, people are scared and rushed into taking flu shots and drugs, while many are dying from viral respiratory infections. Last year while lecturing in China, I had a small book titled “Hydrotherapy for Respiratory Infections” printed in China, mainly for in-house use in my health seminars. Many doctors and health professionals have used this simple method to treat their patients with severe respiratory infections. I also

taught this method to thousands of lay public. They were amazed with the effectiveness of the method.

Each year in the U.S. more than 60,000 persons die of flu complications and other respiratory infections. Many elderly individuals with flu die in the hospitals in spite of modern high-tech treatments. On the other hand, none of my patients with flu have died when they followed the simple treatments I recommended to them. Last year, a patient of mine—we will call her Dorothy—went on a trip to China with two of her friends. All three ladies were in their seventies. They came home with severe colds which developed into tracheobronchitis and pneumonia. When Dorothy came to my office, she had difficulty breathing. She had nonproductive cough meaning dry cough without any sputum coming out. My staff gave her hydrotherapy called fomentation (moist heat) and instructed her husband to give this type of treatment at home. At the same time we encouraged her to drink cups of hot peppermint tea to make sure that she would not become dehydrated. Dorothy was able to cough up a half bowl of thick mucus/sputum and was well in three days. Her two girl friends went into the hospital and were

treated by pulmonologists (doctors who specialize in treating lung disease). They were admitted to Pulmonary ICU, hooked up to the monitors, oxygen, IV (intravenous) antibiotics, cough suppressants, decongestants, sedatives, antiviral drugs, etc. During this time, the air sacs in their lungs filled with mucous secretions so thick that they were unable to cough it up. The mucus eventually caused breathing problems and hypoxia. Both of Dorothy's friends died in the hospital with pneumonia as the cause of death. It has been estimated that more than 50% of the elderly patients in the hospitals die of pneumonia during the flu season. In my opinion, one of the chief flaws in modern medical practice is the wrong paradigm of cough suppression resulting in the fatal build-up of mucus!

I have given copies of "Hydrotherapy for Respiratory Infections" as a Christmas gift to a number of friends, colleagues and relatives. Several of them have read it and have urged me to officially publish this book for larger audience. The result is the book you now have in your hand. I hope you will learn the simple techniques in this book to help you overcome any flu and other respiratory infections.

Chapter 1

INTRODUCTION

I am a professor of microbiology and immunology. I have taught these subjects to more than 10,000 medical and dental students, and a good number of nursing and allied health students as well. To show my students the importance of the subject microbiology, I often ask them two questions in the first hour when I meet them. I tell them these are multiple choice questions. I ask them to answer these questions by raising their hands, using the “answer keys” I have written on the board:

- A. 20%
- B. 40%
- C. 60%
- D. 80%
- E. 100%

This is the first question: What percentage of patients seen by a general physician (family doctor, pediatrician, or an internist) is associated with microbes (germs)?

As you are reading this book, I invite you to take this quiz also. Did you pick A or 20% as the answer? or B, or C, or D? The right answer is D or 80%. So you can see it is very important for the doctors to know the subject microbiology as the great majority of patients they see in their offices have some thing to do with the microbes.

The second question I ask is: What percentage of these patients should get antibiotic treatment? Many of my students pick C (60%) as the answer. The correct answer is A (20% or less). Most of the infections are caused by viruses and antibiotics really don't do any good. Now in real life, do you know what percentage of patients who see their doctors for infections are treated with antibiotics? You are right—almost 100%!

Very often I also ask a third question: In developed countries, the most common type of infections involves which organ system?

The answer choices are:

- A. Central nervous system
- B. Digestive system
- C. Skin
- D. Respiratory system
- E. Genitourinary organs

What is your answer? If you have picked D as the answer, you are right. How serious are the respiratory infections? Fortunately, most of the time, they are not too serious. Do people die from respiratory infections? How effective is modern medicine in treating respiratory infections? In this book, you will find answers to these and other important questions.

Colds and flu--Epidemic

National Center for Health Statistics reveals that Americans now suffer with over one billion colds and flu each year (1, 2). That is an average of three colds and flu for every man, woman, and child. The U.S. Center for Disease Control (CDC) says since reporting influenza cases is voluntary, that the numbers are not accurate. They are actually higher. Conservative estimates

reveal that during “flu season” each year, about 150 million Americans will be infected with flu virus, 200,000 will be hospitalized, and 60,000 will die in spite of high-tech medical care (3). Checking CDC’s mortality statistics again, I note that the number of deaths associated with flu and other chronic respiratory diseases has been around 185,000 each year (2). This means an average of 500 deaths each day, or 20 deaths each hour, or one death every three minutes!

Can anything be done to prevent these deaths? In this book I am going to share with you a simple natural method that I have used for three decades to help my students, friends and patients. While thousands have died in the hospitals because of complications of flu and/or pneumonia, all of my patients who utilized hydrotherapy (treatment with water) have recovered completely from their respiratory disease. Before I share with you the details of the treatment method, I want to give you some background in immunology so that you will understand why the water treatment works while the conventional treatments often fail.

Chapter 2

IMMUNITY—GOD'S GIFT TO HUMANKIND

The human body consists of several important organ systems, each of which carries on a special function. Of these various systems, the one most extensively studied in recent years is the "immune system." The organs comprising this system are: the thymus, a small organ behind the breastbone; the bone marrow, particularly abundant in the long bones; the spleen, situated in the left side of the belly; and the lymph nodes, scattered in strategic places throughout our body.

The defense system

Our immune system is very much like the United States Department of Defense. When it functions properly, it protects against foreign invaders and maintains national peace. The Department of Defense employs various branches—the Army,

Navy, Air Force, and Marines, to name just a few—that help it do its job. Likewise, our immune system employs several major branches—the B lymphocytes (B for bone marrow, the T lymphocytes (cells which are “educated” in the “Thymus University”), the phagocytes, (neutrophils, monocytes, and macrophages), and the natural killer cells. Macrophages are the “national guards” stationed in various parts of our body while other cell types are found in the blood circulation as a part of the white blood cells.

Function of the immune cells

The B lymphocytes respond to various stimuli by producing antibodies, which help fight off many common infections. Phagocytes ingest foreign particles and destroy them by using either oxygen radicals or special types of enzymes. The other types of immune cells directly attack foreign invaders, such as cancer cells, bacteria, viruses, or fungi. Some carry out their attack by secreting powerful chemicals called cytokines (cyto = cell, kine = active ingredients). We now recognize at least four subtypes of T lymphocytes: the helper T lymphocytes, which are always ready to help other cells; the cytotoxic T lymphocytes, whose main job is to control foreign invaders; the suppressor T cells, which act as military police to ensure that other cell types do

not transgress their limit. The fourth type of T cells has the ability to destroy parasites. Unfortunately, it is also involved in certain undesirable allergic reactions such as contact dermatitis in persons allergic to poison oak or cosmetics.

Immune cells recognize foreign intruders

The various types of cells circulate many times each hour throughout the body in the blood vessels, spleen, liver, and lymph nodes. Each cell type has detector molecules on its surface to identify foreign intruders such as viruses and misbehaved members such as cancer cells. Scientists call these detector molecules the CDs, for clusters of differentiation. I would just simply call them clusters of detectors. The CDs are designated by numbers. For example, CD4 is associated with helper T cells, and CD8 with suppressor T cells. In AIDS patients, the virus destroys CD4 cells. As a result, there is a shortage of helpers and too many suppressors causing a weakening of the body's defense.

As mentioned before, these immune cells can secrete powerful cytokines to keep intruders under control. It turns out that these cells also use cytokines to communicate with one another. Some of the cytokines are called interleukins—meaning substances secreted by various types of cells to be used in

“talking” to one another. Under normal conditions, these cells work together in an orderly manner, thus protecting the body from harm and danger. If these members of the defense department are doing so well, why, then, do some of us get sick with colds, flu, and even life-threatening respiratory diseases? We may ask the same question of why a national defense department fails. The reason may be lack of ammunition, lack of strong leadership, or just poor quality of military personnel. By the same token, if members of our body defense system are not strong, if they are malnourished, or stress out, then they too are unable to carry out their proper responsibility.

Today we know that lifestyle habits are the major causes of cancer, coronary heart disease, infections, and many other diseases as well. How we live has a direct influence, either positively or negatively, on our immune system.

Lifestyle habits that intimidate the immune system

1. *Alcohol* – Most of you are probably aware of the severe problems associated with alcoholism. A computer search of relevant literature reveals more than 100 scientific reports published in recent decades showing that alcohol consumption

“down-regulates” the immune system (1). Several studies show that alcohol profoundly decreases the normal function of B lymphocytes, cytotoxic T lymphocytes, natural killer cells, and phagocytes (2, 3). If you can imagine how a person behaves under the influence of alcohol—careless, indifferent, unsteady—that is how researchers discovered immune cells behave when they are bathed in an environment of alcohol. They don’t seem to care about their responsibilities.

How much alcohol is needed to produce a harmful effect? Antibody production levels dropped more than threefold in individuals consuming only two drinks. In other words, after just two drinks, your antibody defenses operate at less than one third of the normal. In another study, cytotoxic T lymphocytes lost their resistance to viruses after individuals drank an average of four beers. The immune down-regulating effect of alcohol persisted for days, even after the alcohol was eliminated from the body (4, 5). It is a textbook knowledge that alcoholics may suffer deadly bacterial pneumonia (6).

Studies have shown that “social drinking” in pregnant women not only harms the immune system, but also causes fetal abnormalities (7, 8). Other studies show that alcohol abuse during

sexual activity increases the risk of catching the AIDS virus (9). Furthermore, once a person is infected with a virus, alcohol hastens the development of the disease. All in all, the studies have shown that even small amounts of alcohol are harmful and can increase the likelihood and severity of infections (1). Incidentally, one needs to be aware of the hidden alcohol found in cough syrup and various beverages by reading bottle labels.

In recent years, alcohol, particularly the red wine, has been touted as having health benefits of reducing the risk of coronary heart disease. Such publicity has been made based on several publications (10-13). Red wine and some alcoholic beverages have antioxidants polyphenols (the flavonols) which indeed reduce cardiovascular risks. However, the alcohol in these drinks is toxic to the brain and the liver. Since polyphenols are present in many vegetables and fruits such as grape, one will be better off to drink unfermented grape juice instead of fermented alcoholic beverages (14). Cardiologist Dr. R.A. Vogel of University of Maryland stated in a review article: “Despite the wealth of observational data, it is not absolutely clear that alcohol reduces cardiovascular risk, because no randomized controlled trials have been performed. Alcohol should never be recommended to patients to reduce cardiovascular risk as a substitute for the well-

proven alternatives of appropriate diet, exercise, and drugs. Alcohol remains the number three cause of preventable premature death in this country, and the risk of alcohol habituation, abuse, and adverse effects must be considered in any patient counseling.” (15).

2. *Tobacco* – One large study involving 4,462 male subjects showed that smokers had lower antibody levels and CD8 (cells patrolling virus-infected or cancer cells) counts (16). During beginning periods of smoking, there may actually be a slight enhancement of immune function (cells are more active, attempting to rid the irritant), but soon after follows a suppression of T cells, NK cells, and phagocytes (17, 18). Passive smoking has also shown its effect on the immune system. Children of smoking parents suffer more allergies because of derangement of a type of B lymphocyte that makes IgE antibodies responsible for allergic reactions such as hay fever, asthma, and chronic sinus problems (19). They are also more prone to respiratory infections.

One of my younger patients suffered from chronic ear and sinus infections. Different methods of treatment were unsuccessful. Learning that the father smoked, I encouraged him to quit. Initially dubious that his smoking had anything to do with

his son's poor health, he finally did quit and was pleasantly surprised to find that his son's chronic infection and allergy cleared. Needless to say, the father's health also greatly improved.

3. *Marijuana* – Following tobacco, marijuana is the second most widely smoked substance in our society. We now know that marijuana suppresses the immune system, impairs reproduction, produces respiratory disease, and increases the risk of lung cancer. Research shows that the use of marijuana depresses T lymphocyte and macrophage activity (20). Its use during pregnancy carries significant risks, including low birth weight and abnormalities of the fetus. Of the 20 recently published reports that I have reviewed, only four showed absence of harmful effects on the immune system, while the remaining 16 studies reported suppression.

Marijuana has a detrimental effect not only on the immune system, but also on the central nervous system (21). I know a bright young man who smoked marijuana only for a short period of time and developed such severe depression and emotional disturbance that he was not able to function for years. His parents sought help from many physicians, but unfortunately his condition did not improve.

4. *Cocaine* – Research has now shown the suppressive effect of cocaine on cytotoxic T lymphocytes, NK cells, B cells, and phagocytes. There is evidence that cocaine can adversely affect the outcome of infectious diseases, particularly the illnesses caused by viruses including AIDS (22-26). Cocaine causes intense vasoconstriction, which potentially causes damage to all organ systems. Cocaine toxicity causes multisystem organ failure involving brain, heart, lung, kidneys, gastrointestinal tract, musculature, and other organs (24). Cocaine is one of the leading substances causing depression in humans (27). Cocaine abuse precipitates life-threatening arrhythmias and is responsible for cases of sudden death (28).

In addition to these so-called recreational drugs, bear in mind that prescription as well as over-the-counter drugs can also hurt the immune system, and other body systems such as the digestive and the central nervous systems. Many times I have found professional colleagues suffering from anxiety attacks, severe depression, and persistent flulike symptoms after taking a drug intended to help with sleep disorders or stress.

A colleague called early one morning and told me that her uncle had recently experienced severe depression and was suicidal.

This gentleman had nightmares, a lot of anxiety, loss of appetite, and trouble sleeping. She gave the name of a new drug he was taking and wondered if per chance that could be the cause. Looking up the information, I read: “Rare (less than 0.5 percent) adverse reactions include nightmares, insomnia, confusion, hallucinations, anorexia (no appetite), depersonalization. . .” Statistics do not mean much to the person who experiences the side effects. To that person, it is 100 percent, not less than 0.5 percent. I told this young lady to bring her uncle to my office, and we would begin to help him get off the medication. The take-home message from this experience is that drugs used to combat anxiety or insomnia may ironically produce anxiety, depression, and insomnia as side effects.

In general, unless absolutely necessary, I caution people to take any kind of drug. When drugs are required, I make it a point to help patients understand as much as they can about drugs they are taking—the intended use and possible side effects. I encourage them to read the *Physicians’ Desk Reference (PDR)* or the inserts that come with the drugs. This practice enables the patient to be better informed.

5. *Coffee* – Caffeine has been shown to lower the response of T lymphocytes in both men and women. Both B cell and NK cell activity is decreased during coffee consumption (29). These cells are needed for antibody production and natural defense, respectively. What many people may not be aware of is that caffeine is also present in many soft drinks, chocolate, and over-the-counter drugs.

A dentist friend of mine suffered from chronic fatigue syndrome with repeated viral infections. Since he realized that antibiotics do not help, he decided to get advice from my wife, who is a dietitian. She tried to help him improve his diet, but he still was not feeling well. Finally he was persuaded to give up coffee, and to his pleasant surprise, he overcame his chronic viral problem and enjoyed more energy.

6. *Poor Diet* – Both the American Cancer Society and the National Cancer Institute have recommended a reduction of total fat intake and an increase of vegetables, fresh fruits, and whole grains (30, 31). Foods from plants are known to prevent cancer. Interestingly, our immune cells cannot tolerate high fat, either. High fat makes these cells lazy so that they cannot function at full capacity. On the other hand, green and yellow

leafy vegetables and fresh fruits contain special vitamins, and minerals that make healthy immune cells. With a good diet, our immune cells are alert, active, and responsible in carrying out both their defensive and offensive functions. When the immune cells are healthy, enemies such as pathogenic bacteria, viruses, and cancers have less chance for survival.

A few years ago my colleagues and I published a study showing that sugar impairs the function of neutrophils, the type of white blood cells that destroy disease-producing bacteria (32). We now know that refined sugar lowers our resistance and make us vulnerable to all types of common infections. Children catch colds after eating rich desserts or candy. When mothers eliminate sweets from their children's diet, these youngsters no longer suffer frequent colds. I teach my students that 80 to 90 percent of the time when children get upper-respiratory infections (sore throat, sinus, or ear infection), it is because of a virus. A culture should be taken. If the culture does not show pathogenic bacteria, the child should not be given antibiotics. Antibiotics do not kill viruses, but will kill the good bacteria and will further lower the youngster's resistance. The best treatment and prevention for colds is a good diet with no junk food and sweets.

7. *Stress* – Studies in the 1960s suggested that stress may affect the immune system. Early studies carried out in animals showed that either physical or psychological stress increases blood levels of corticosteroid, or “stress hormone.” The stress hormone in turn causes the depression of all the immune cells—B cells, T cells, NK cells, and phagocytes. Human studies done in the past few years support this hypothesis (33). For example, medical students have decreased NK cell activity and decreased helper T lymphocytes just before a major examination (34). A study involving more than 400 subjects shows that psychological stress increases susceptibility to the common cold (35). Individuals under stress experience more frequent and severe respiratory infections than those who experience less stress. Sleep deprivation, as a stress, has been shown to decrease T lymphocyte function (36). Stress *per se*, however, is not necessarily detrimental to the person or the immune system. Rather, what matters is how the individual copes with the stress. Studies have shown that breast cancer patients who cope poorly with stress often have a poor prognosis, and vice versa (37).

Lifestyle habits that boosts the immune system

1. *Plant-based diet* – In terms of diet, more and more scientific studies have confirmed the wisdom of the “original diet”

prescribed by our Creator recorded in the Bible in Genesis 1:29: “God also said, ‘I give you all plants that bear seed everywhere on earth, and every tree bearing fruit which yields seed: they shall be yours for food’” (New English Bible). This “original diet” consists of grains, legumes, fruits, and vegetables. Scientific studies have now shown that these plant-based foods are not only adequate for proper nutrition, but extremely beneficial.

A German study showed that the total number of white blood cells, lymphocytes, and other subpopulations did not differ between vegetarians and nonvegetarians. However, the natural killer cells of the vegetarians had a significantly greater ability to kill cancer cells than the omnivorous controls by a factor of two. These researchers suggested that the enhanced NK cells activity may be one of the factors contributing to the lower cancer risk among the vegetarians (38).

A large-scale collaborative nutrition study was conducted by Chinese researchers, British nutritionists, and American scientists under the leadership of Dr. Colin Campbell of Cornell University (39). The study involved large populations in China and revealed that meat and milk are not necessary for good health. All the nutrients needed by the human race can be supplied by

plant sources. The study shows that the plant-based diet is protective against cancer and coronary heart disease. Dr. Campbell found the data so convincing that he became a vegetarian himself.

A few years ago a prospective cohort study involving 122,261 Japanese men over a period of 16 years compared four lifestyle habits: smoking, drinking (alcohol), meat consumption, and the liberal use of green and yellow vegetables. The study concluded that those who did not smoke or drink and consumed a vegetable rather than a meat diet had the lowest incidence of cancer, hypertension, heart disease, and a variety of other illnesses as well (40).

2. *Exercise* – Pleasurable exercise provides not only enjoyment and relaxation, but also beneficial strength to the immune cells (41). Aerobic exercise nullifies emotional distress and increases the activity of NK cells which are important in fighting cancer and viruses, including the flu virus and the AIDS virus. Moderate exercise increases interleukin 2 (a cytokine produced by T lymphocytes) and tumor necrosis factor (a cytokine produced by macrophages) (42). Both of these factors are needed for a normal host defense. Exercise also increases the total

number of phagocytes. Individuals adhering to regular exercise programs experience fewer infectious episodes.

Speaking of the AIDS virus, you may have wondered why Magic Johnson's doctors recommended retirement for the basketball superstar. The explanation is that stress of any kind may impair the immune function. Intense, vigorous, competitive exercise depresses both cell-mediated and antibody-mediated immunity (43). Especially with today's win-at-all-cost attitude, competitive exercise is stressful to athletes. This type of immune suppression is also seen with exercising to exhaustion or overtraining.

All in all, it appears that pleasurable and moderate exercise such as walking, gardening, swimming, and cycling benefits the immune function. At the same time, it may also lower the blood pressure, improve digestion, tone muscles, and provide over-all physical and emotional health benefits.

3. *Stress management* – “Courage, hope, faith, sympathy, love, promote health and prolong life. A contented mind, a cheerful spirit, is health to the body and strength to the soul. “A merry heart doeth good like a medicine’ (Prov. 17:22).”

This quotation from page 241 of the book *The Ministry of Healing* (44) has been applied to the field of Psychoneuroimmunology.

Stress, as mentioned before, is not necessarily detrimental to the person or the immune system. Appropriate stress management can actually benefit our defense mechanisms. In one controlled study, the enhancement of immune competence (an increase of NK cell activity) was demonstrated in 45 geriatric residents by providing relaxation and social contact (45). In another study, medical students who were given stress management had an increase of helper T lymphocytes compared with the control group (46).

There are different ways one can reduce daily stress. For me, I find reading and meditating on the book of Proverbs to be most rewarding. I also find it useful to transform negative feelings into positive creative activities. My graduate students often experience frustrations because of busy schedules or failure in getting research done. During their time of “low spirit,” I encourage them to read an enlightening book or write something that is of special interest to them. Some of the most creative and thought-provoking write-ups have been produced during these times of discouragement. Most important of all, I have witnessed

a restoration of positive emotions as a result of converting negative energy into positive activity.

A simple prescription

How can we best maintain a healthy immune system?

Here's a prescription:

1. Eat wholesome, unrefined foods. Each day include whole grains, fresh vegetables, legumes, and fresh fruits. Avoid fats, sweets, and stimulants. Drink plenty of water between (rather than during) meals.

2. Follow a regular exercise program. Remember, purposeful exercise is the most beneficial. If you live close to your office, try walking to work. If you cannot walk to work, perhaps you can walk around your house for 15 to 20 minutes in the morning and again in the evening after supper. Short-interval moderate exercise several times throughout the day is more beneficial than a long exhausting workout. Daily walking is a good time to have pleasant conversations with a loved one, so invite your spouse or friend to come along.

If you walk alone, this is a wonderful time to meditate with nature. Take time to enjoy the natural surroundings of your home or workplace. This form of exercise is guaranteed to relax you and reduce stress. WALK, WALK, WALK—walking is the best exercise.

3. Maximize your spiritual strength. If you do not have a “routine” devotional program, I strongly urge you to begin developing one. In addition, I am now suggesting that you have a mobile altar where you can have communication with the Lord on your walks. We can ask the Lord to help us cope with negative feelings of discouragement, bitterness, and hostility, and to give us peace. A devotional life full of love will aid in building a strong immune system.

Chapter 3

A MINI-REVIEW OF BASIC IMMUNOLOGY

In this chapter, I would like to give you a mini-review of the subject immunology. For those of you who have not had a formal course in immunology, the information in chapter 2 may give you some background information.

Immunology is the study of the immune function. In the textbook we call it Immunity or Host Defense; we use these terms interchangeably. There are two types of immunity: the Native and the Adaptive Immunity. The Native Immunity is also referred to as the Natural Immunity or Innate Immunity. Again, these terms are used interchangeably. The Adaptive Immunity is also known as the Acquired Immunity. Table 1 compares the Native and Adaptive Immunity.

Table 1

Native versus Adaptive

Native (natural, innate)	Adaptive (acquired)
Present at birth	Acquired in life
Non-specific	Specific
Not driven by antigen	Antigen-driven
No memory	Memory

The Native Immunity is the type that you and I are born with whereas the Adaptive or Acquired Immunity is the type that you and I acquire in our life time. One of the unique properties of the Acquired Immunity is that it is **Specific**. The reason it is specific is because it is antigen-driven. Let me illustrate. If a child has measles, in about two weeks his body will develop immunity against the measles virus which is the Antigen. But this immunity is specific for measles virus only, not for influenza virus or common cold viruses; that is what we mean by being specific.

The Native Immunity, on the other hand, is **Non-Specific** because it is **not** driven by an antigen. Therefore, the Native Immunity is effective against different microorganisms—different bacteria and different viruses including influenza, measles, and common cold viruses (1). When I teach medical students, at this point of time I would usually ask my students “Which of these two types of immunity is more useful?” I believe you can easily see that the Native or Natural or Innate Immunity is indeed more versatile. That is probably one of the reasons why my associates and I have devoted more than three decades of our time to study the natural immunity. Rather, means to boost the natural immunity. We have found our time well spent.

Another very important difference between these two types of immunity is that Acquired Immunity has memory. Let me illustrate again. The child with measles virus infection, developed immunity against the virus in about two weeks and the immunity waned in a few months or a year. However, few years down the road, if this child encounters measles virus again, in a matter of 48 hours or less his body will mount a strong immunity against the measles virus. Remember the first time it took two weeks for the immunity to develop but this time it takes only two days, why? Because there are memory cells that recognize the virus, and right

away, elicit a response to activate the immune system. The native immunity does not have memory. It does not need to have memory because the cells in the native immunity system are always there to protect us, I mean, all the time, day and night.

Table 2

Native Immunity

Present at birth / Non-specific/ No memory

Intact skin and mucous membranes

Normal microbial flora

Complement, Interferons

Defensins, Lactoferrin

Lysozyme and other lysosomal enzymes

Neutrophils, Monocytes, Macrophages

Natural killer (NK) cells

Table 2 gives some examples of various factors which are a part of the Native Immunity. Your skin and mucous membranes are a part of your Native Immunity. Those germs you have in your body cavities are also a part of the Native Immunity; they actually protect us from foreign intruders. As you will see very soon, why I do not want us to use antibiotics indiscriminately to

kill our friendly microbes and destroy a part of our Native Immunity. Complement is a protein we are born with it and plays an important role in fighting some of the bacteria for us. Interferons are the glycoproteins made by our cells after virus infection. They interfere with virus growth. Once when the interferons are produced, they are effective against different viruses in addition to the original virus that induces its production. So the action is non-specific and that's why it is a part of the Native Immunity. Defensins are proteins secreted by neutrophils (white blood cells) that kill bacteria. Lactoferrin is an iron binding protein that inhibits bacterial growth. Lysozyme and lysosomal enzymes lyze Gram-positive and Gram-negative bacteria, respectively (2).

Then, there are four types of cells that are parts of the Native Immunity: neutrophils, monocytes, macrophages, and natural killer cells. Natural killer cells are particularly important in killing viruses and cancer cells.

Table 3 shows the Adaptive Immunity which is subdivided into Humoral Immunity consisting of B lymphocytes and antibodies and Cellular Immunity consisting of T lymphocytes and their products.

Table 3

Adaptive (acquired) Immunity

*Specific (antigen -driven)/ Memory
Subdivided into*

1. Humoral immunity:
B lymphocytes and antibodies
2. Cellular immunity:
T lymphocytes and their products

Please take a look of Figure 1 listing various factors such as lysozyme in tears and other secretions, commensals (friendly microbes that reside in our body), mucus, cilia, etc. Are these factors a part of the Native or Adaptive Immunity? The answer is: They are a part of the Native Immunity of course. Note the word “Non-specific” which is the characteristic of Native immunity. Before I leave this subject, allow me to re-emphasize one more time: I just want to remind you that the friendly bacteria, the commensals in the figure, are a part of our defense mechanisms. When one has a viral infection, antibacterial antibiotics **should**

never be used. When we kill the friendly bacteria, we kill our faithful unseen soldiers.

Figure 1

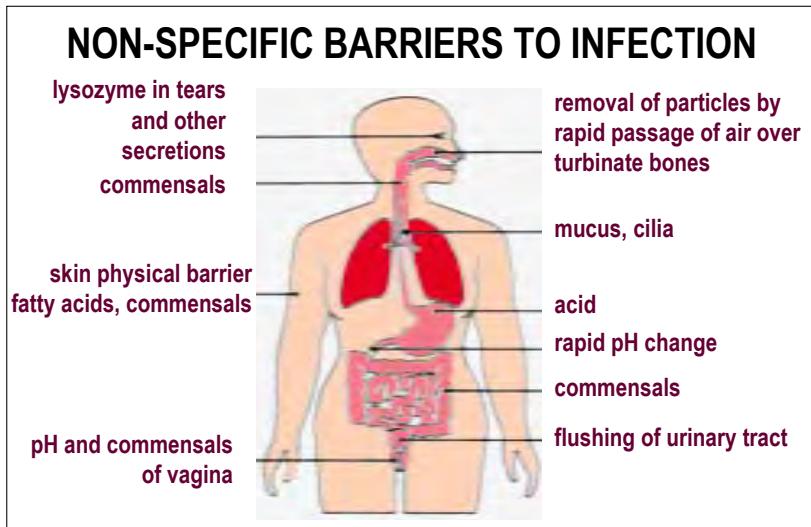


Figure 2 shows the two types of lymphoid organs. The Primary Lymphoid Organs refer to where lymphocytes are developed. The Secondary Lymphoid Organs are the sites where the activities of lymphocytes are being carried out. The two Primary Lymphoid Organs are the thymus and the bone marrow. Thymus gives rise of T lymphocytes and bone marrow is where

the B lymphocytes are derived. The Secondary Lymphoid Organs include various lymph nodes and the spleen.

Figure 2

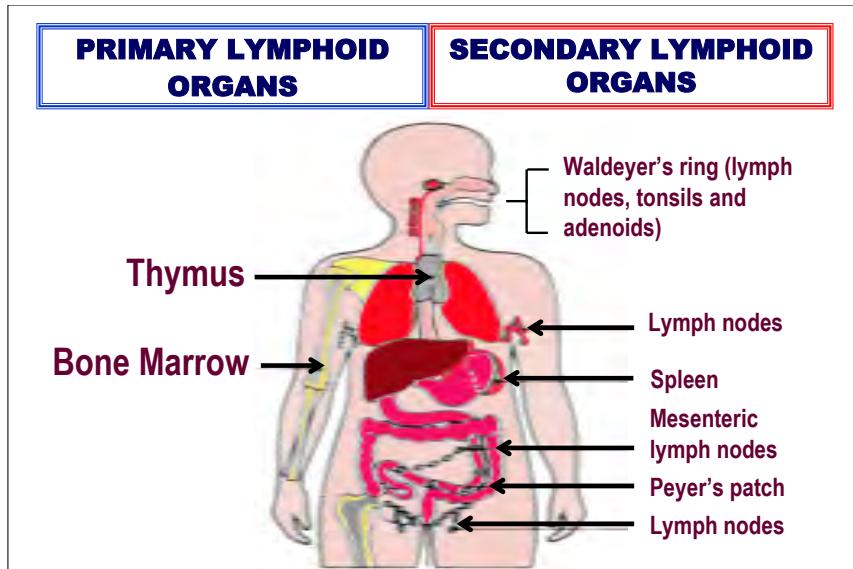


Table 4 compares the Native versus Acquired Immunity one more time. In the table, you see the expressions “Not improved or improved by repeated infection.” Can you find another way to express this quotation? If you said “memory” versus “no memory,” you are absolutely right. In other words, Native Immunity has no memory and Adaptive Immunity has memory.

Table 4

Comparison		
	Native Immunity	Adaptive Immunity
	Not improved by repeated infection	Improved by repeated infection
Soluble factors	C', defensins, lysozymes, interferons, etc.	Immunoglobulins (IgM, IgA, IgG, IgE), lymphokines
Cells	Phagocytes, NK cells	B lymphocytes T lymphocytes

Table 5 describes the functions of immune cells. Phagocytes refer to neutrophils, monocytes and macrophages which are important for fighting bacteria, viruses, parasites, and any unwanted particles in our body. B cells are needed to fight bacteria, viruses, and parasites. T cells are important in fighting viruses, intracellular microbes, and cancer cells. As mentioned before, natural killer cells are important for fighting viruses and cancer cells (3).

Table 5**Functions of Immune Cells**

Phagocytes: bacteria, viruses, parasites, and any unwanted particles

B cells: bacteria, viruses, and parasites

T cells: viruses, intracellular microbes, and cancer cells

NK cells: viruses and cancer cells

Figure 3 is a cartoon my wife made for me for a meeting I presented to a group of physicians a few years ago. The meeting was at 1 p.m., right after lunch. I wanted to use a slide that would keep the audience awake. Please look at this figure and tell yourself which one has memory and which one does not.

In the last chapter, I described to you the things that weaken our immune system. In Figure 4, I used the two words “FAT CAT” to describe the six most important factors that suppress the immune function. What is the fat cat?

Figure 3

Arm Forces (cells) of the Immune System

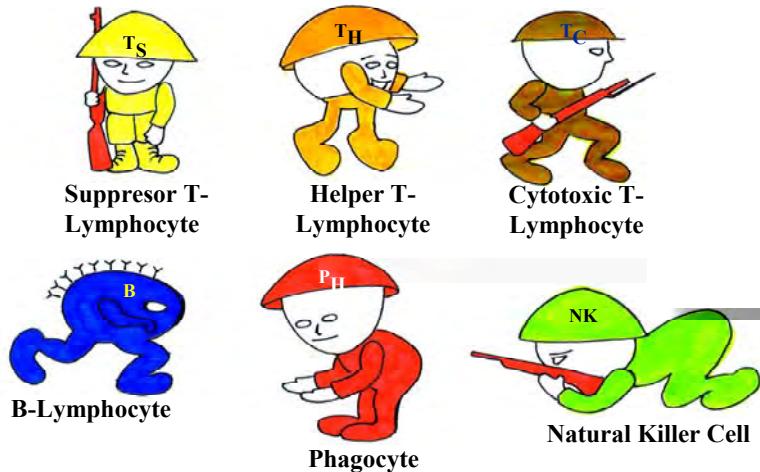


Figure 4

Factors that suppress the immune functions

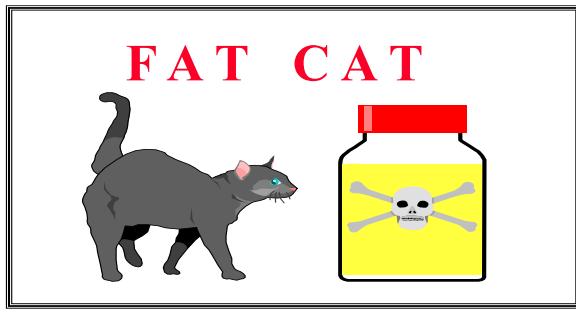
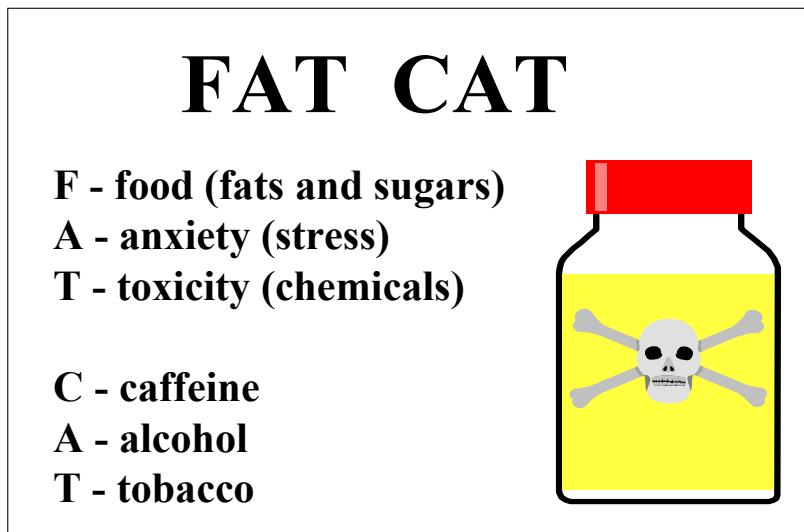


Figure 5 lists these six factors: FAT refers to food (rich food with a lot of fats and refined sugars), anxiety (stress), and toxicity (chemicals). CAT refers to three legalized drugs used by the general public: caffeine, alcohol, and tobacco (4, 5). Do these six factors contribute to colds, flu, and other respiratory infections? You bet they do. Taking flu shot or drug Tamiflu may not protect you. Flu virus mutates and changes its antigen very rapidly. By the time vaccine is manufactured, the virus (whether it is swine flu or any flu virus) has already changed its face. Hence vaccine may not protect us from mutated new virus. Tamiflu is a prescription antiviral medication that is supposedly to reduce symptoms of flu. However, it has quite severe side effects in some individuals, such as hallucination, encephalitis, and suicide (6). On the other hand, change your lifestyle is your guarantee of protection. What if you do develop colds, flu, or other respiratory diseases. Are you going to die? The answer depends on what type of treatment you choose to receive. If you learn to use the simple treatment modalities I am going to share with you in this book, you are going to do alright. If you are treated by a doctor who does not know about the method described in this book, please tactfully educate your doctor and ask him or her to be sure to include moist heat treatment. You do not have to become a statistics. Our loving Heavenly Father has given us this simple method. And He wants

you to use this method to save your life. When you get well, thank our Heavenly Father for healing you.

Figure 5



Chapter 4

AN EFFECTIVE TREATMENT FOR RESPIRATORY INFECTIONS

Figure 1 describes the respiratory organs which include 1. Nose, 2. Mouth, 3. Nasopharynx (junction between nose and throat), 4. Pharynx or throat, 5. Larynx (voice box) – these organs are a part of the Upper Respiratory Tract. 5. is also the Trachea or the windpipe. The broken line cutting through the windpipe divides the respiratory tract into the upper and the lower tract. Bronchi and the lungs are organs in the Lower Respiratory Tract. In addition, we also include paranasal sinuses, middle ears, and epiglottis as part of the respiratory tract.

Figure 1

THE RESPIRATORY ORGANS

- Nose, mouth, pharynx, larynx, trachea, bronchi and the lungs; in addition,
- Paranasal sinuses, middle ears, and epiglottis are also included.

1. Nose

2. Mouth

3. Nasopharynx

4. Throat

5. Larynx

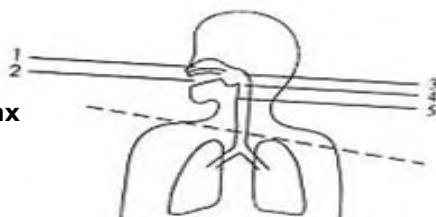


Figure 2 depicts some of these organs in an anatomical model.

Figure 2

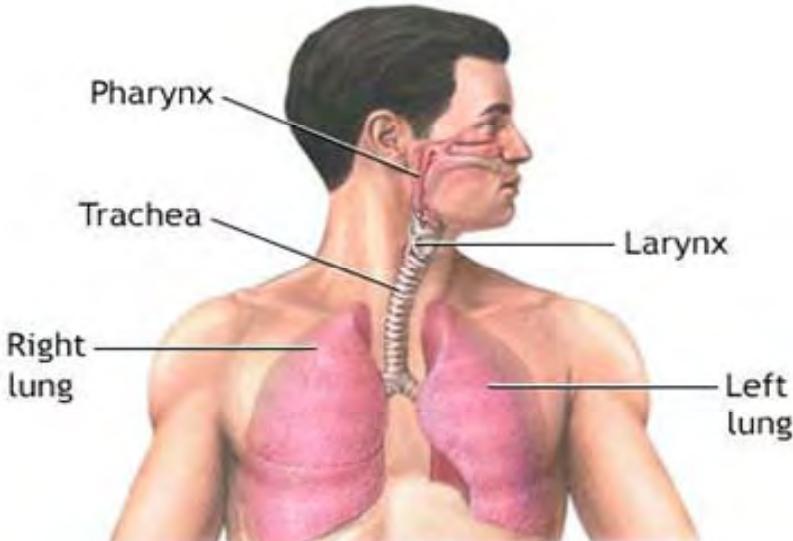


Table 1 gives the microorganisms that are normally present in the upper respiratory tract.

Table 1

NORMAL (INDIGENOUS) MICROORGANISMS

A. Upper Respiratory Tract

Under normal conditions, the paranasal sinuses and middle ears are sterile. The rest of the upper airways is, however, inhabited by a wide variety of microbes—cocci, bacilli, and yeasts.

**B. Lower Respiratory Tract (bronchi & lungs)
Sterile**

The upper respiratory tract is inhabited by a large variety of microbes under normal condition. Remember now, these are **commensals**. “Com” means “same,” “mensa” means “table.” **Commensals** are friendly people “eating at the same table.” In old countries, when we go out to eat, some one (the host) will pay for the rest of the people who are guests. The microbes in our upper respiratory tract are our guests and you and I are the hosts. The host of course is nice to the guests and the guests, in turn, are courteous to the host and will show their gratitude by doing something nice to the host. Nowadays, when young people go out

to eat, they go on Dutch and pay for their own meals and this is of course not Commensals. At any rate, the microbes in the upper respiratory tract actually protect us in one way or the other and they are a part of the **Natural Immunity**. Now, just think for a moment, when you have a viral infection, you take antibiotics which kill these friendly bacteria. Are you doing yourselves a favor? Or are you harming yourselves by destroying your **Natural or Native Immunity**?

Under normal situation, the lower respiratory tract is sterile, meaning there are no live organisms. Any bacteria or viruses enter the lower respiratory tract are either removed by coughing or by small hair-like structures called cilia on the epithelial cells in the trachea and bronchi that sweep them out of the system. If microbes happen to settle down in the terminal parts (the air sacs) of the lungs, they are instantly killed by the macrophages. That's why there are **no live microbes** in the bronchi and lungs. There may be microbes there but they are dead. However, if a person's immune function is no good, there is then a different story. That means we have to help our body to kill the germs, not by antibiotics, but rather, by the hydrotherapy you are going to learn in this book.

Table 2 lists the four clinical entities that may encompass the infections of the respiratory system. Most of us have experienced symptoms of common colds, so called because they are so common. Some of us may have sore throat or pharyngitis. With viral infection, sinuses and middle ears may also be the sites of inflammation leading to sinusitis and otitis media (middle ear infection). In those with poor immunity the trachea (wind pipe), the bronchi, and the lungs may be infected. Tracheobronchitis and pneumonia need to be treated wisely otherwise, death often is the outcome. The current protocol for treating these clinical entities is flawed and ineffective at best, and far from being desirable and is thus in dire need of reevaluation.

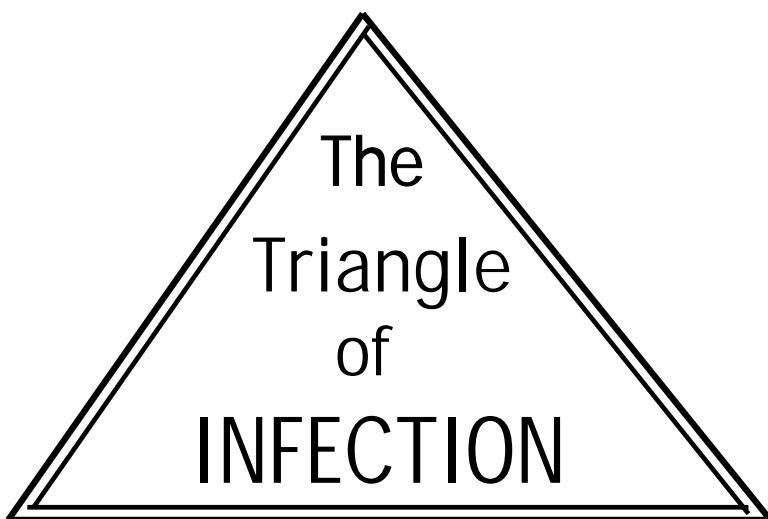
Table 2

FOUR CLINICAL ENTITIES

- A. COMMON COLD**
- B. PHARYNGITIS**
- C. SINUSITIS/OTITIS MEDIA**
- D. TRACHEOBRONCHITIS
AND PNEUMONIA**

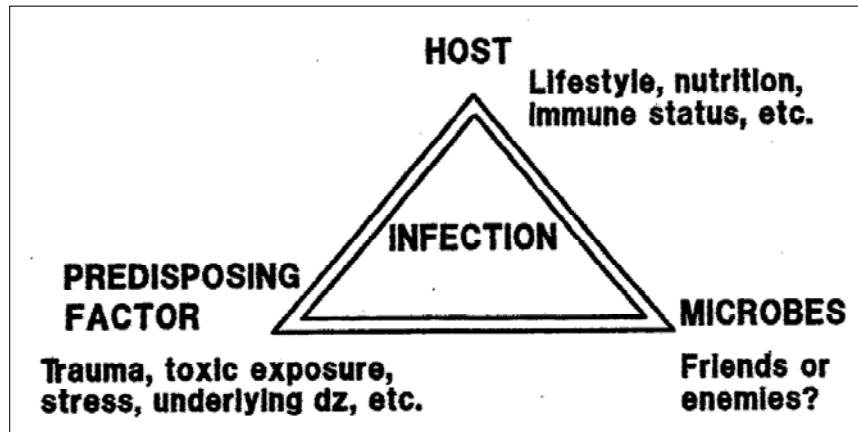
In the remainder of this chapter, I would like to share with you a very important concept that I have taught my medical students for more than three decades. So please sit back, relax, and pretend you are in an auditorium with 160 or more of my students. The class has just begun. My energetic students have their eyes wide open wondering what knowledge their teacher has to convey to them today. The concept is called "The Triangle of Infection" (1, 2). I usually will flash on the screen a slide showing the triangle which you can now see on Figure 3.

Figure 3



The disease process can be illustrated using this triangle. The three angles are: the etiology (Webster defines it as "the assignment of a cause or reason"), the susceptible host, and predisposing factors. If we use infection as an example, the three angles are: 1) microbes as the etiologic agent, 2) a susceptible host or a person who is susceptible because of impaired immunity, impaired phagocytic function, poor nutrition and/or a risky lifestyle determining the susceptibility, and 3) certain factors such as trauma, toxic exposure, stress and underlying disease (such as diabetes) which predispose a person to infection (Figure 4).

Figure 4



Looking at the triangle, one needs to recognize that microorganisms alone do not usually cause infection unless there is a susceptible host, even though we give the textbook definition of infection as an invasion of the body by microorganisms. The concept that I want to emphasize is that **microorganisms alone do not usually cause infection** unless there is a susceptible human being or animal. Having said that, let me hasten to add that even with a susceptible host and the presence of microbes, there still may not be an infection unless the process is triggered by certain predisposing factors. For this reason, in the prevention or treatment of an infectious disease, we need to look at all three angles rather than just one of these angles. Merely killing the microbes may not be the best solution. Indeed often carried with it is the price of unwanted side effects. Typical examples are yeast infections such as *Candida* oral thrush and *Candida* vaginitis following the use of a broad spectrum antibiotic.

In the case of infection we obviously need to consider the microbes as the primary factor, and the host and predisposing factors as secondary factors. However, it is equally important to bear in mind when considering a disease that all three angles have equal weight or significance. An example of a clinical entity I often use with my medical students is diarrhea. It has been

estimated that in the world each day there are 20 million people suffering from diarrhea. We all know that often our diarrhea is simply due to eating the wrong kind of food. In other words, it may not have anything to do with the microbes. In the figure under microbes, I have "friends or enemies." The point is that it may not be easy to know which microbe is the enemy and which is the friend. For example, a person eats the wrong kind of food and has diarrhea. If he consults a physician and gets a course of antibiotic, he will then be killing the friendly bacteria without touching the enemy at all, since there isn't any enemy to begin with.

Looking at the third angle, the predisposing factors, it is my practice to constantly remind my students that this angle is a very important one. It too may be the primary reason of a complaint, rather than secondary. Again, take the complaint of diarrhea. It is true that we do not want to miss those germs like *Salmonella*, *Shigella*, *Campylobacter*, and *Vibrio* that are famous intestinal pathogens. What I want to remind my students is that before they write a prescription for a potent drug, find out and *study* what drugs the patient has been taking. In my own experience, I have seen case after case of patients complaining of diarrhea or other gastrointestinal discomfort due to one or more

drugs received from a doctor. An assignment I have given my students is to check the *Physicians' Desk Reference* (PDR) to make a list of drugs without gastrointestinal side effects. The current PDR has more than 3000 pages. The lesson to be learned from this exercise is that there are very few drugs in the big book without gastrointestinal side effects! So let me make a short conclusive remark regarding the triangle: each of the three angles can have equal importance.

It is important to point out that this triangle and its basic principle applies not only to infection but also to most, if not all, major diseases inflicting the human race. For example, we can change the entity from infection to cancer and all we need to modify is just one of the triangles — adding chemical carcinogens and radiation to the microbes. It is now recognized that the three best-known causes of cancer are chemical carcinogens, radiation, and viruses. With that in mind, the prevention and treatment of cancer should thus encompass all three angles. Merely killing the viruses is not the solution. For that matter, current methods of aiming only at killing cancer cells is not adequate. One needs to strengthen the host and to remove the predisposing factor in order to obtain a satisfactory and lasting result.

What about colds, flu and other respiratory infections? The same principle applies here. The main culprits are viruses (microbes). But I need to remind all of us that there is the HOST—lifestyle, nutrition, and the immune status; and there are predisposing factors—toxic exposure such as smoking, alcohol, recreational drugs, refined sugar; trauma, stress, and an underlying disease such as diabetes. In my experience, I find refined sugar to be the most frequent predisposing factor for viral infections. So to prevent colds and flu and to help individuals with respiratory infection, we need to consider all the three angles.

Methods aimed at only killing viruses are not useful. Whatever kills viruses most likely will also harm our body cells including immune cells. Each year millions of people receive flu vaccine. Unfortunately, flu vaccines are not very effective. Influenza viruses mutate very rapidly. By the time vaccines are available, the virus has already changed its face. Hence vaccine may not protect us from mutated new virus. One needs to strengthen the host through lifestyle modification and proper nutrition. Stay away from refined sugar which lowers the host resistance. Oh, yes, other predisposing factors, which are equally important, need to be removed. Drugs (recreational, "over the

counter", prescription, legal, or illegal) and toxic materials that suppress the immune system can no longer be tolerated.

Do we have some thing that will kill the flu virus? The answer is YES. In the subsequent chapters you are going to learn this simple hydrotherapy method called "fomentation" meaning the use of moist heat. Applied locally, in this case to the chest and/or the back, it selectively kills microbes (it does not matter whether it is cold or flu virus or whatever viruses) in the chest. This method spares the friendly microbes (the commensals) in other parts of our body. When we use the antibiotics, if they are effective in killing microbes, they will kill both the commensals and the trouble makers in all our body. Very few antibiotics can selectively kill only the trouble makers. As far as viruses are concerned, antibiotics don't do any good. The moist heat also helps to clear the mucus removing the offending debris that may kill the person.

Quite a few years ago, I came across a book entitled *The Ministry of Healing* written by Ellen G. White a century ago (3). I was impressed with a statement on page 127 of this book where she says, "In case of sickness, the cause should be ascertained. Unhealthful conditions should be changed, wrong habits corrected.

Then nature is to be assisted in her effort to expel impurities and to re-establish right conditions in the system." Let us apply this statement to our triangle: In case of sickness (again, let's say in this case we are dealing with colds or flu), we are to do five things:

1. Cause should be ascertained (not just the microbes but the whole triangle).
2. Unhealthful conditions should be changed (this means maybe we need to change our lifestyle).
3. Wrong habits should be corrected (smoking, drinking, and refined sugar).
4. Assist nature to expel impurities (such as mucus accumulation).
5. Re-establish right conditions in the system (we need to cooperate with nature and allow our body to heal itself).

Maybe at this moment the question you have in your mind is "What does hydrotherapy have to do with this?" Please read point number four again. Hydrotherapy can help our bodies expel impurities and toxic waste products. It can strengthen our natural immunity and kill those microbes causing trouble in our chest. The beauty of moist heat treatment is that it kills all the microbes

in the right place. We don't even have to know the specific names of the viruses. Instead of spending millions of dollars to look for the name of a virus or its nucleic acid (gene) and billions of dollars to develop the drugs and/or vaccine, let us get rid of the virus NOW with the simple hydrotherapy! Looking at the triangle again, we see that hydrotherapy actually encompasses all three angles; won't you agree?

Chapter 5

TREATMENT FOR FOUR CLINICAL ENTITIES

The clinical entities that may be associated with the respiratory system are: Common colds, pharyngitis, acute sinusitis and otitis media, and tracheobronchitis and pneumonia.

Common Colds

Table 1 gives the symptoms of common colds: sneezing, running nose, watery eyes, and just plain miserable!

Table 1

Common Cold	
S/S: Sneezing Running nose Watery eyes Miserable	Treatment: Fomentation Hot foot bath Stay away from refined sugar Rest

What kinds of microbes cause these symptoms? Just about any kind of viruses. In my practice, I see mostly the three groups of viruses: Rhinoviruses—more than 100 types; Influenza A, B, and C with many subtypes, and Coxsackie A and B also many subtypes (Table 2).

Table 2

Common Cold	
S/S: Sneezing Running nose Watery eyes Miserable	What microbes cause these symptoms? Viruses Rhinoviruses—100+ Influenza viruses Coxsackie viruses

For treatment, we use fomentation with hot moist towel over the face. Patient will also do hot foot bath (Figure 1). Fill a basin or bucket with hot water about 104 degree Fahrenheit. Some people can take hotter water up to 107 degree. But don't burn yourself. Put both feet in the hot water which should cover

the ankles. Stay in the hot water for 10 to 15 minutes. You may have to replenish the hot water. After 10 to 15 minutes, run cold water over your feet and dry your feet. Put on socks. If you can lie down and sleep for 1 or 2 hours, by the time you get up your cold is already over. We advise the person to stay away from refined sugar which feeds the viruses and make our immune cells lazy. Rest is very healing as it conserves the energy to fight the infection.

Figure 1

Common Cold

Hot foot bath
104° F
10-15 min
Cold water 1 min
Dry

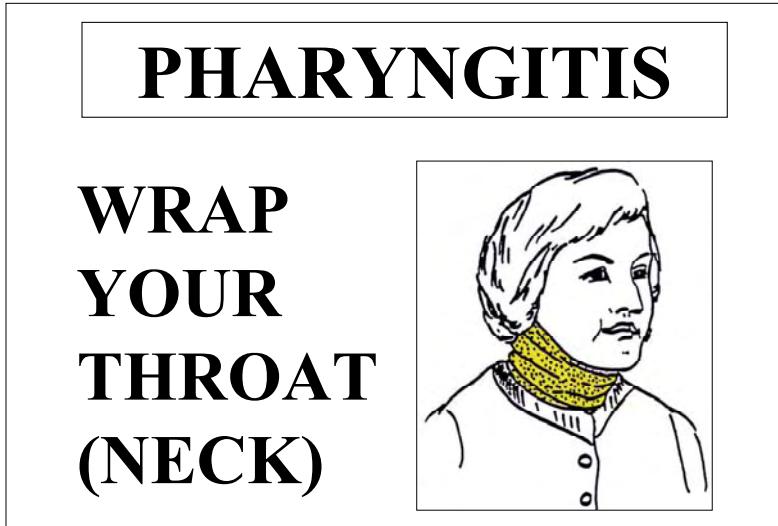


Pharyngitis

With sore throat, we perform a rapid culture test to rule out *Streptococcus pyogenes* which may lead to glomerulonephritis or rheumatic fever in a small percentage of infected people who are not treated. 90 to 95% of the time when people have sore throat it is caused by a virus. With sore throat the hydrotherapy is to wrap a wet towel (start out with a towel wetted in tap water), around the neck. You can use a safety pin to keep the towel in place. I usually use a clean cotton sock instead of towel for this purpose.

See Figure 2.

Figure 2



It is more convenient to do this procedure at night and sleep through the night with the wrap. By morning, the towel or cotton sock is dry and the throat is better. If not, repeat the procedure another time. This procedure is also good for laryngitis when a person loses the voice.

Sinusitis and otitis media

For these conditions, hot foot bath is most powerful (Figure 3). One can also apply moist heat over the sinuses and outside the ears. One of the young doctors, my former student in the medical school, had terrible sinusitis for three to four weeks. He took antibiotics and decongestants but still his nose was plugged and he was miserable. He did not like it as he was too embarrassed when patients asked what was wrong with him. He answered them “nothing,” obviously, that was not a good answer. In desperation, he called and wondered if I had anything to offer. I told him about the hot foot bath. He said his grandmother used to do that. I told him that his grandmother was a wise woman. He tried hot foot bath and was so happy that he could breathe with his nose again instead of his mouth.

Figure 3

Sinusitis/Otitis

Fomentation

Hot foot bath



Tracheobronchitis/Pneumonia

Fomentation (moist heat) is applied over the back and the chest (Figure 4). In female with large breasts, the back is more effective for this type of treatment. We use eucalyptus oil one or two drops taken by mouth to encourage expectoration of the sputum and ease up the cough. In the book *Selected Message—Volume 2*, pages 300-301, by E.G. White it describes many cases of chronic cough cured by eucalyptus oil (1).

Figure 4

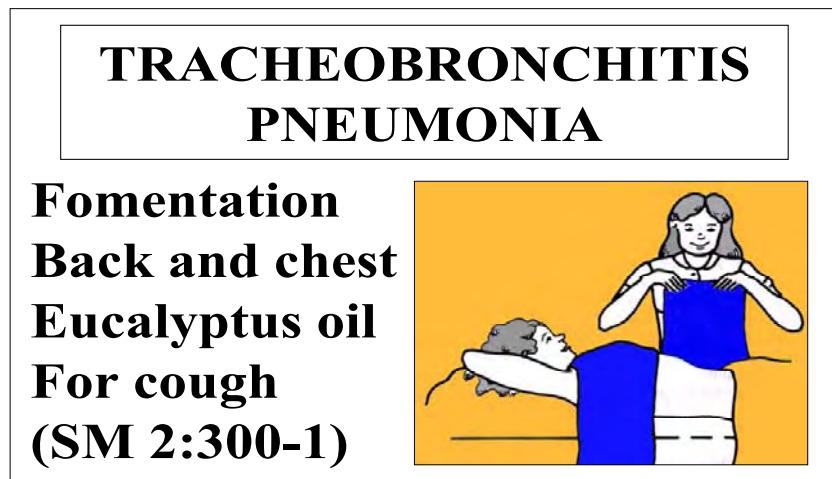
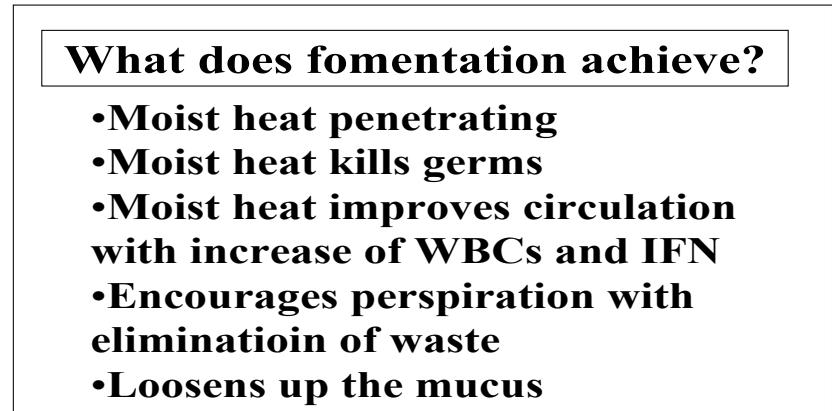


Table 3 shows the five important benefits derived from fomentation:

Table 3



Moist heat penetrates the tissue 2 to 5 inches. In a non-obese person this reach deep down to the chest. Depending on individuals, some can tolerate as hot as 120-130°F of the moist heat. Most of us have no problem with 110°F. Even at this temperature, microbes including influenza virus are easily killed. Moist heat improves circulation with increase of white blood cells and interferons to the local cite to kill the viruses. Moist heat encourages perspiration with elimination of waste products and toxins through the skin. It also loosens the phlegm so the person can cough up the mucous secretions.

During the time of treatment, we encourage the patient to drink hot herbal tea. Teas can be made from *Echinacea*, red clover, peppermint, elderberry, or ginger roots. Any one of these teas is good for fighting the viral infection and preventing dehydration. We do not suppress the fever. If temperature is above 103°F, we place an ice bag over the person's forehead. Ideally, this fomentation treatment should be given for 30 minutes but at least 15 minutes. It can be given every 4 to 6 hours until patient is well.

To prevent respiratory infection, I give my patients an herbal formula called Cold Remedy (Figure 5). This formula has

Echinacea, garlic, *Astragalus* (a Chinese herb), *Sambucus* (elder berries), and cayenne pepper. My patients take one dropperful of the cold remedy whenever they have the first sign of cold. They are usually able to abort the cold right away.

Figure 5



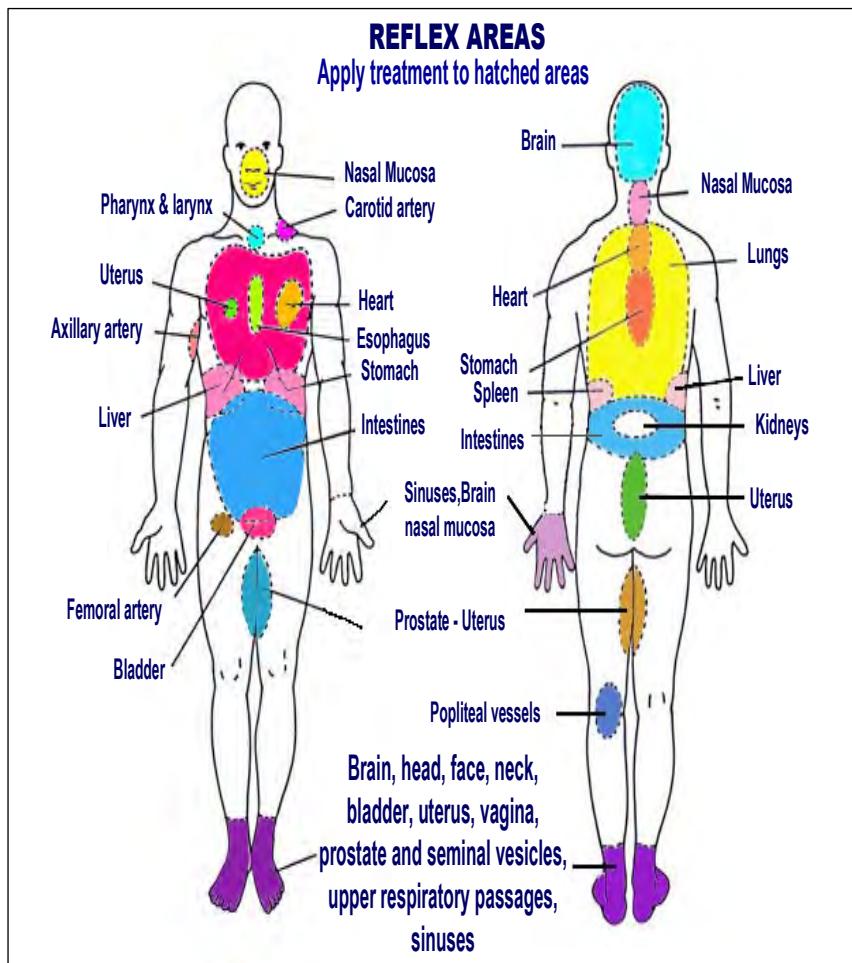
You can also have a home-made Cold Remedy with ingredients you can purchase from your local grocery store. These are the ingredients: Garlic, onion, cayenne pepper, ginger root, and horse radish. Place equal amount of these ingredients in a blender and add apple cider vinegar or fresh fruit juice a little

above the ingredients. Blend the mixture to fine suspension. Strain the suspension and save the liquid as cold remedy. When you have the first sign of cold, take one or two spoons of this liquid every hour until you abort the cold. Keep this liquid in the refrigerator. It will stay good for several months.

General guidelines on hydrotherapy

Figure 6 gives the body sites where hydrotherapy may be effectively applied (2). Generally speaking, one can apply moist heat to the body site where there is a problem. For example, a person has sinus problem, you can apply moist heat to the sinuses. But with the hot foot bath, one can treat sinuses even more effectively. Hot foot bath is probably one of the most versatile hydrotherapy treatments. From Figure 6, you can see that the hot foot bath is good for treating problems related to the brain, head, face, and neck. It is also effective for problems related to the genitourinary tract, e.g., bladder, uterus, vagina, and prostate. In addition, we use it to treat upper respiratory passages and sinuses. That's why I said Hot Foot Bath is one of the most versatile hydrotherapy modalities.

Figure 6



Adapted from Thrash, A. and Thrash, C.: Home Remedies.

Chapter 6

THE HOW OF HYDROTHERAPY

Historical background

Hydrotherapy (water therapy) is not new. It has been used by healers throughout the human history. From earliest times, people have used hydrotherapy for the treatment of diseases. The bath chambers may have been created by the Egyptians. The Jews, Greeks, Romans all were proponents of hydrotherapy. Most of the earlier civilizations used baths for health and sickness. Particularly the Romans used the bath houses for treating illnesses. The eminent Greek physician Hippocrates (460-370 BC), known as the Father of Medicine, advocated the use of baths for healing of diseases. Another well known physician, Dr. John Harvey Kellogg, over 100 years ago, in Battle Creek, Michigan, treated thousands of patients with hydrotherapy. He successfully treated serious infections and pneumonia with the use of hydrotherapy.

and proper diet. Other physicians in the early 20th century also were successful in treating a variety of infections, chronic diseases, and pneumonia. For those of you who are interested in learning more about this treatment modality, I would recommend four excellent books.

1. *The Complete Book of Water Healing*, by Dian D. Bachman, Ph.D. 1994. Instant Improvement, Inc. New York.
2. *Simple Remedies for the Home*, by Clarence W. Dail, M.D. and Charles S. Thomas, Ph.D. 1991. Teach Services, 182 Donivan Road, Brushton, NY, 12916.
3. *Home Remedies*, by Agatha Thrash, M.D. and Calvin Thrash, M.D. 1981. Thrash Publications, Rt. 1, Box 283, Seale, AL 36875
4. *Simple Water Treatment for the Home*, by Charles Thomas, Ph.D. 1977. University Press, Loma Linda, CA 92354.

Hydrotherapy is the use of water inside and outside of the body for treating diseases.

Drinking water

Drinking pure water is the best way of delivering nutrients to and removing toxic wastes from the cells. Patients with colds and flu generally have fever. They must be encouraged to drink plenty of pure water. Drinking 2-3 pints of cold water often can reduce a high fever from one to three degrees in about ten minutes. Cold water not only lowers the body temperature, but also helps the skin and kidneys to eliminate toxins. More importantly, it helps to remove the mucus from the respiratory tract thereby relieves coughing, congestion, and improves breathing.

Local application of water

Not only must one drink plenty of pure water during respiratory infection but also it is important to apply water to the body during this illness. In the following pages I will describe step by step a variety of hydrotherapy methods on different parts of the body for the treatment of respiratory infections. When hydrotherapy is applied intelligently, it is one of the most

powerful tools that can affect a complete recovery. The two important points to consider in the use of water therapy or hydrotherapy are: one, the temperature, and two, the location of application.

It is my hope that you will be able to learn to use these procedures. In doubt, it is always wise to consult a health care professional who is experienced in these methods to guide you.

I will describe three hydrotherapy procedures useful for persons with respiratory infections:

Hot Foot Bath

A Hot Foot Bath is just an immersion of the feet and ankles in hot water with a temperature between 103 and 110°F. It will cause an increase of blood flow through the feet, and also will help with decongestion to the internal organs such as the head, and chest. The Hot Foot Bath not only provides relaxation to the patient, but more importantly, it helps to increase the activity of the white blood cells to enhance the person's immunity. The Hot Foot Bath is one of the most useful of all hydrotherapy techniques.

It is convenient, does not require any special equipment, and can be applied by anyone, any time, and anywhere.

General instructions:

Use the Hot Foot Bath with precaution on anyone with circulatory problems of the feet and legs or where there is loss of sensation to that area. Be sure check the water temperature with a thermometer before putting the patient's feet in the bath. Try to keep the water at about 104°F.

The patient can lie in bed with the foot tub or a large container placed on the bed protected by towel or plastic sheet. Or the person may be seated on the side of a bathtub with a basin inside the bathtub, under the spigot to replenish the hot water; or sit on a chair with the feet in a basin.

Materials needed:

Thermometer (an inexpensive kitchen thermometer will do)

Foot basin or a trash can or dish pan

Smaller basin with ice cubes and water

Large towels and wash cloths

Procedures:

1. Fill the basin with hot water about half full. The temperature of the water should be 103 to 110°F. More important, it should be comfortable to the patient.
2. Carefully place the feet in the water, making sure the water is not too hot. Continue to fill it so the water level is about two inches above the ankles.
3. After the patient is warmed, place wash cloths in ice water. Wring out and place the cool wash cloth on forehead. Change it every 2-3 minutes. If patient's fever is not high, this step can be omitted.
4. Add hot water frequently during the treatment to maintain the desired temperature and as tolerated by the patient.
5. Stay in the foot bath for approximately 15 minutes or longer as tolerated.
6. End the Hot Foot Bath by pouring cold water over the feet.

7. Immediately dry the feet thoroughly, especially between the toes. Put on warm sox.
8. If the patient is perspiring, dry the body thoroughly and quickly. Do not allow the patient to get chilled.
9. Allow the patient to lie down and rest for 30 to 60 minutes to complete the treatment.
10. Give large glass of water to drink during this time.

A modified Hot Foot Bath can be carried out in persons with general good health and who are able by climbing up to the counter of household sink and place the feet in the sink with hot water. This is the way I give myself hot foot bath.

Cold Moist Compress to the Throat/Neck

Patients with respiratory infections may also complain of sore throat, laryngitis, tonsillitis, and swollen glands. The cold moist compress to the throat and neck is one of the most effective water treatments for these conditions. It's simple and results are quick.

Procedure:

1. Fold a cotton or flannel cloth, a old tee shirt, cotton sox or old strip of towel about 3 inches wide.
2. Dip it in cold tap water. Wring out, leaving it still damp but not dripping wet.
3. Wind the cloth once around the neck.
4. Wrap another dry cloth (slightly larger piece) over the wet cloth. Cover it completely. Tuck the ends or use a safety pin to hold it in place.
5. Sleep with it all night. Next morning the cloth is dry and the sore throat is gone. If not, repeat the process the next day or night.

Fomentation to the Chest and/or Back

Fomentation is a local application of moist heat to the body surface. The moist heat promotes an increase in the blood flow to the skin, thereby relieving internal congestion. It also

relieves muscle spasm and increases elimination of toxins by promoting the body to sweat.

For congestion of the lower respiratory tract, a moist heat compress to the chest and/or the back (back is a better site for women with large breasts) will produce excellent results in hastening the recovery. The procedure should be repeated several times a day. If desired, both the Hot Food Bath and the Fomentation to the chest can be applied simultaneously. Regardless whether Hot Foot Bath is used, fomentation to the chest and/or back is a MUST as this is the most important modality.

Procedure:

1. Keep the room warm and avoid draft. Have the patient disrobe from waist up. Cover the chest with a dry towel. Then cover the whole body with sheets and blankets as needed.
2. Wet a large towel and fold it to fit the chest. Squeeze out excess water, but still somewhat wet.

3. Place the wet towel in microwave oven for 3-5 minutes. Or place the towel in a pan of boiling water if no microwave is available.
4. Immediately wrap this hot moist towel in a dry towel and place it on the upper chest of the patient. Be careful not to burn the person. If still too hot, place another dry towel between the skin and the hot towel. Have several extra towels handy to be quickly placed between the skin and the hot towel to avoid burns. In case the skin is burned, apply a thin layer of burn cream (Unguentine Ointment for Burn is very good to use. Get a tube from the pharmacy and keep it in the house.)
5. If patient has fever, apply cold wash cloth on the forehead after the patient is warmed by the fomentation; change the cold wash cloth every few minutes.
6. Leave it on for few minutes until the towel cools. Quickly replace with another fresh hot wet towel wrapped in a dry towel. Do three changes so that a total treatment of about 15 to 20 minutes.

7. Finish the treatment with a cold wash cloth rubbing briskly and gently over the chest. Dry the area. If the patient is perspiring, dry the body thoroughly. Avoid chilling the patient.
8. Quickly cover the patient and let him/her rest for at least one hour.
9. Drink a large glass of warm water when the patient is awake.
10. Treatment can be given to the patient's back to achieve the same results.

Hydrocollator®

One can purchase a silica gel Hydrocollator® Steam Pack (Manufactured by Chattanooga Group, Inc., Hixson, TN 37343) from the drugstore. Follow the manufacture's instructions. When using the Hydrocollator, if it is thoroughly heated, it will retain the heat for 30-45 minutes. Since the Hydrocollator can get extremely hot, be especially cautious not to burn the patient by providing extra towels between the Hydrocollator and the

patient's skin. As it cools down, one may remove one towel at a time. Always keep the Hydrocollator submerged in a pan of water when it is not in use. For storage for future use, be sure to place the Hydrocollator in a plastic bag and store it in the freezer. It is good for many years.

Thermophore® (Automatic Moist Heat Pack, by Battle Creek Equipment, Battle Creek, MI 49017-2385)

This device is most convenient to giving fomentation. One can even give this treatment him/herself with this device. It can also be purchased from a pharmacy. It can be used quite effectively by first wetting a towel with hot water from the tap, wring out and place on the chest or the back. Then place the Thermophore directly on top of the hot towel. By holding down the switch on the heating pad, the heat is thus maintained. One can give the treatment for 20 to 30 minutes easily. This treatment can be done by the patient himself or herself. The treatment can be repeated several times a day as desired.

Other moist heat packs are available in the drug stores. But I find Battle Creek product the best in that it gives adequate heat. It costs a bit more than other brands. If you use other brands,

be sure to check out it will give enough heat. It is important to wet the towel in water as hot as possible. Then use the electric heating pad to maintain rather than to increase the temperature.

This method of using hot moist towel and the electric heating pad is the most efficient and easiest way of giving the fomentation treatment. My son, a musician, had severe bronchitis a few years ago. He was not able to cough out anything and had difficulty to breathe. He did microwave moist heat for a whole week and still suffered choking for air. He thought he was going to die. When he called, my wife told him to buy a Battle Creek Moist Heat Pack. He did this modified fomentation with Battle Creek Moist Heat Pack for the entire four hours instead of 30 minutes every four hours as we usually instruct our patients to do. At any rate, after 4 hours of treatment, he coughed and spitted sputum during the next 4 hours. He estimated that two cups of mucus came out. And he was completely well after that. The advantage of using this electric moist heat pad is one can give this treatment to himself or herself with ease. Treatment can be given for 40 minutes to one hour or longer; and as often as needed.

Chapter 7

NUTRITION TO PREVENT COLDS AND FLU

Good nutrition is the corner stone for building up one's immune system. It is especially important during colds and flu season. Every morsel of food and drink ingested must contribute to the health of the cells. Foods to consume freely as tolerated are: unprocessed whole grains; whole legumes such as peas, lentils, and a variety of beans; fresh fruit in season; fresh vegetables in season. Drink plenty of pure water and freshly extracted fruit and vegetable juices.

Foods to avoid during respiratory disease are: any item that contains refined sugar, corn syrup, fructose, artificial sweeteners, and food additives such as preservatives, artificial flavors and food colorings. Avoid all dairy products such as milk,

yogurt, ice cream, cheeses. Also avoid any animal products, meat, fish and chicken and its byproducts. Avoid all caffeinated beverages such as coffee, tea, colas, soft drinks and alcoholic beverages. Do not use or minimize the use of canned and processed foods.

Learn to read labels — many food items in the grocery store contain sugar and milk. Just to name a few: all breads, crackers, energy bars, dry cereals, cookies, cakes, pies, muffins, cupcakes, doughnuts, croissants, many frozen dinners and processed food packages. Most soft drinks and liquid nutritional drinks (often given in the hospitals) are loaded with sugar. *Remember to read the ingredients in the labels!* Do not have to read the “Nutrition Facts,” it does not do any good. It is more important to know you do not have ingredients that are not good for you.

Sugar lowers the immune function

People love sugar. So do the germs! The sugar in your body attracts the germs, including the cold and flu viruses. These viruses quickly attack the cells where they can make themselves

quite comfortably at home. As mentioned in Chapter 2, my colleagues and I showed that refined sugars lower our natural resistance to fight infections (1).

Sugar is a common ingredient in many foods. Since the refining process, sugar is easily consumed in large quantities without realizing it. For instance, it takes a three-foot sugar cane to produce one teaspoon of sugar. Most of us probably will not have the energy or patience to chew a three-foot sugar cane. Yet, it is very easy to put one teaspoon of sugar in one's beverage or on top of cereal. It is estimated that the average consumption of sugar in the United States is 35 teaspoons per day. Thirty-five teaspoons of table sugar a day! This is only the average consumption. Thirty-five teaspoons of sugar is equivalent to $35 \times 3' = 105$ feet of sugar cane!!! Probably not too many of us are willing to chew 105 feet of sugar cane a day.

You may wonder how any person can consume 35 teaspoons of sugar in a single day. It is quite easy. Look at the following commonly consumed items:

Contains Approximately:

1 can of soft drink	13 teaspoons sugar
1 can of liquid nutritional drink	10 teaspoons sugar
Non-fat yogurt	4 -6 teaspoons sugar
1 can slim drink	9 teaspoons sugar
1 cup sport drinks	3-4 teaspoon sugar
1 serving dry cereal	2-3 teaspoons sugar
1 candy bar	7 teaspoons sugar
1 doughnut or cupcake	6 teaspoons sugar
1 slice pie	10 teaspoons sugar
1 slice cake	15 teaspoons sugar
1 scoop ice cream	6 teaspoons sugar
1 tablespoon jams or jelly	3 teaspoons sugar
1 cookie	2 teaspoons sugar

Remember, viruses love sweets. So don't feed them. Sweets make our immune cells lazy. Feed your body with only good nutrients that will safe guard any invasion from germs.

Just a brief note about artificial sweeteners. As a general rule, do not use them. They can be toxic to the body. One may use some unprocessed natural sugars such as raw honey, date

sugar, pure maple syrup, raw agave nectar or any unprocessed raw sugar. Again, use them sparingly as they are concentrated foods.

Why avoid milk and dairy products?

It is a known fact that milk is one of the most mucus forming foods (2, 3, 4). Often those who consume dairy foods on a regular basis may lay down layer upon layer of mucus in the respiratory tract, and colon. With colds and flu, one is especially reminded of the respiratory discomforts, and therefore, must avoid milk and dairy products. In the earlier chapters, we have discussed the use of hydrotherapy as an effective way to get rid of this accumulated mucus. Always remember to read the labels for listed ingredients such as: milk, casein, whey. When one's respiratory tract is clear of any mucus, all breathing difficulties, coughing, and wheezing will be minimized.

Herbs to strengthen the immune system

Garlic—Garlic is an excellent expectorant for persons with cough. Since the active ingredient of garlic is eliminated via the lungs, this helps the lungs to give off a more watery secretion, enabling one to more readily expectorate thick, dry and heavy mucus.

Garlic is known for its anti-viral and anti-bacterial properties which provides additional benefit for persons with respiratory infections. My associates and I have conducted garlic research for more than two decades and have published more than 30 papers on garlic (5-15).

Echinacea—this herb has antibacterial, antiviral properties and is an immunity booster. It prevents infection from spreading. More than 80 clinical studies showing its immune enhancing property have been published by European and American researchers (16-20).

Astragalus—widely used in China as a tonic. Twenty years ago my associates and I studied this herb and found it to be one of the most potent immune enhancers for both the natural and the adaptive immunity. We have published several papers on this herb (21, 22).

I have included these and some additional herbs in my Cold Remedy.

You can actually have a home-made cold remedy right in your own kitchen. Here's how you do it with ingredients you can

get from your grocery stores. I am including the following information just in case you did not read the previous chapters.

Put in a blender equal part of:

1. Garlic cloves, peeled
2. Ginger root, peeled
3. Cayenne pepper
4. Onion, chopped in chunks

Cover with organic apple cider vinegar. You can also add maple syrup or raw honey as desired. Blend until smooth. You can use this as a salad dressing or topping on pasta or rice and at the same time to prevent and/or treat colds and flu. Some people have strained this mixture with kitchen wash towel or filter paper and store the liquid in dropper bottles, and take 1 or 2 dropperfuls when they have the first sign of cold. By adding horseradish to this recipe, one can use it to treat sinus problems.

Chapter 8

CONCLUSIONS

In this book I have described a simple and effective treatment for respiratory infections. This treatment modality can save the lives of those with flu and severe pneumonia. The beauty of moist heat treatment is it can kill all kinds of viruses whether it is influenza or whatnot. It will kill only viruses in the chest that cause the trouble. Unlike antibiotics it spares the good germs in other part of our body, namely, it spares the commensals which are a part of our natural immune system.

For more than a century the medical profession has suffered the consequence of the wrong paradigm of worshiping the “Germ theory” (3, 4, 5) as put forth by Louis Pasteur (1822-

1895). Pasteur viewed the body as a sterile machine that will function properly until a foreign substance is introduced. Therefore, it is thought that when specific microbes enter the body, they produce a specific disease. In an attempt to correct the imbalance, antibiotics and other drugs are used to destroy these germs. No germs, no disease. It was believed that health is restored only if there are no germs present. Please do not get me wrong. As a microbiologist, I have great respect for the work of Louis Pasteur. This giant scientist made more contribution in medical science and technology than any other men I can think of. I admire Louis Pasteur because, among other things, he was a Godly man who had a strong faith in the Omnipotent and Omniscient God. Many books have been written about Louis Pasteur. The ones by his grandson (4) and his son-in-law (6) are particularly informative and delightful to read.

In contrast, the prominent French physiologist, Claude Bernard (1813-1878) focused on the importance of the body's internal environment (7). In contradiction to the doctrine of Pasteur, he taught that microbes could not produce disease unless the body's internal environment was disrupted and became susceptible to the development of disease. Bernard's theory was that the whole person must be sick before any germ can make us

ill. This theory is very much in line with the “Triangle of Infection” concept that I presented in this book.

Throughout this past century, various scientists including several renowned microbiologists have accepted Bernard’s theory believing that microbes cause disease only when a disturbance arises which upsets the equilibrium of the body.

Today, more and more physicians and researchers like myself believe that microbes are always present. In fact some of these microbes are absolutely necessary to allow our body to function properly. As mentioned in previous chapters, some of the microbes in our body, the so-called **Commensals**, are a part of our natural immunity. Microbes are only able to cause disease if the body is in a weakened state. It is significant to note that Pasteur actually condemned his own theory on his death bed saying: “Bernard is right. The microbe is nothing. The environment is all important” (8).

I have presented the “Triangle of Infection” concept to more than 6,000 medical doctors while they were in medical school. How many of these doctors remember and practice this concept? Unfortunately, no more than 5%. As soon as the young

physicians graduated from the medical schools, they are trained by pharmaceutical representatives. The pharmaceutical companies promote antibiotics as these provide them with lucrative incentives. The company representatives teach the doctors to prescribe antibiotics and other drugs. Most doctors only remember drugs to kill microbes and have forgotten about the other two angles. No wonder, we are afraid of flu!

Each year more than 190,000 Americans die of lung disease and of this number more than 60,000 die of pneumonia as the complication of flu (9). Unfortunately, most Americans are unaware of this magnitude of disaster. The public need to know that 190,000 lives can be saved each year if the method described in this book is used instead of high-tech and drug approach currently in use.

Are colds and flu contagious? Of course they are. All respiratory viruses are contagious. Common cold viruses (rhinoviruses, coxsackie viruses, and influenza viruses) are all highly contagious. People with strong immune functions may not develop any symptoms even though they are exposed to these viruses. Those of us with lowered resistance (due to having too many sweets for example) may suffer symptoms of respiratory

infections. Some of us may have mild symptoms; others may have more severe symptoms. Several times each week, patients call my office telling us that they have terrible and miserable colds. Should they take antibiotics? Should they go to the emergency room or should they go to the hospital? My staff will instruct them to take Cold Remedy and do hydrotherapy. As a “rule”—my patients recover from their respiratory infections in a matter of just a few days! I have not lost one single soul from pneumonia in my more than three decades of medical practice.

If you or one of your loved ones is suffering severe colds and flu, I strongly suggest you discuss with your doctor to include hydrotherapy so that you will not have to become a statistics among the 60,000 deaths each year from complications of viral infection. If your doctor will not listen, I suggest you learn the techniques yourself. If you cannot do so, please consult some one who can to help you.

With diligent, and consistent effort in applying hydrotherapy, careful selection of eating wholesome foods and drinking an abundant amount of pure water, plus the judicious use of herbs; one can not only build a strong immune system, but may

also be able to conquer colds and flu as well as many other respiratory infections.

References

Chapter 1 — Introduction

1. Pleis, J.R., Lethbridge-Cejku, M.: Summary of health statistics for U.S. adults. Vital and Health Statistics, Series 10, Number 232, 2006.
2. Minino, A.M., Heron, M.P., Murphy, S.L., Kochanek, K.D.: Deaths: Final data for 2004. National Vital Statistics Reports, Volume 55, Number 19, 2007.
3. National Center for Health Statistics: www.cdc.gov/nchs/fastats/deaths.htm, 2004, 2008.

Chapter 2 — Immunity: God's Gift to Humankind

1. Szabo, G.: Consequences of Alcohol Consumption on Host Defence. *Alcohol* 34:830-841, 1999.
2. Watson, R.R.: Ethanol, Immunomodulation and Cancer. *Progress in Food and Nutrition Science* 12: 189-209, 1988.
3. Mutchbik, M.G., Lee, H.H.: Impaired Lymphocyte Response to Mitogen in Alcoholic Patients, *Alcoholism, Clinical and Experimental Research* 12: 155-158, 1988.
4. Glassman, A.B., Bennett, C.E., Randall, C.L.: Effects of Ethyl Alcohol on Human Peripheral Lymphocytes. *Archives of Pathology and Laboratory Medicine* 109: 540-542, 1985.
5. Johnson, S., Knight, R., Marmer, D.J., Steele, R.W.: Immune Deficiency in Fetal Alcohol Syndrome. *Pediatric Research* 15:908-911, 1981.

6. Brooks, G.F., Butel, J.S., Morse, S.A.: Jawetz, Melnick, & Adelberg's Medical Microbiology, 21th edition, page 212. Appleton & Lange, 1998.
7. Gottesfeld, Z., Abel, E.L.: Maternal and Paternal Alcohol Use: Effects on the Immune System of the Offspring. *Life Sciences* 48:1-8, 1981.
8. Tat, H.C.: Alcohol and Pregnancy: what Is the Level of Risk? *Journal de Toxicologie Clinique Experimentale* (Paris) 10:105-114, 1990.
9. Planta, M.A.: Alcohol, Sex and AIDS. *Alcohol* 25:293-301, 1990.
10. Zenebe, W., Pechanova, O.: Effects of Red Wine Polyphenolic Compounds on the Cardiovascular System. *Bratisl Lek Listy* 103:159-165, 2002.
11. Huxley, R.R., Neil, H.A.: The Relation between Dietary Flavonol Intake and Coronary Heart Disease Mortality: A Meta-analysis of Prospective Cohort Studies. *European Journal of Clinical Nutrition* 57:904-908, 2003.

12. Mukamal, K.J., Conigrave, K.M., Mittleman, M.A., Camargo, C.A. Jr., Stampfer, M.J., Willett, W.C., Rimm, E.B.: Roles of Drinking Pattern and Type of Alcohol Consumed in Coronary Heart Disease in Men. *New England Journal of Medicine* 348:109-118, 2003.
13. Fernandez-Jarne, E., Martinez-Losa, E., Serrano-Martinez, M., Prado-Santamaria, M., Brugarolas-Brufau, C., Martinez-Gonzalez, M.A.: Type of Alcoholic Beverage and First Acute Myocardial Infarction: A Case-controlled Study in a Mediterranean Country. *Clinical Cardiology* 26:313-318, 2003.
14. Suh, I., Shaten, B.J., Cutler, J.A., Kuller, L.H.: Alcohol Use and Mortality from Coronary Heart Disease: the Role of High-density lipoprotein cholesterol. The Multiple Risk Factor Intervention Trial Research Group. *Annals of Internal Medicine* 116:881-887, 1992.
15. Vogel, R.A.: Alcohol, Heart Disease, and Mortality: A Review. *Review of Cardiovascular Medicine* 3:7-13, 2002.

16. Johnson, J.D., Houchens, D.P., Kluwe, W.M., Craig, D.K., Fisher, G.L.: Effects of Mainstream and Environmental Tobacco Smoke on the Immune System in Animals and Humans: A Review. *Critical Reviews in Toxicology* 20:369-395, 1990.
17. Mili, F., Flanders, W.D., Boring, J.R., Annest, J.L., Destefano, F. The Asosciations of Race, Cigarette Smoking, and Smoking Cessation to Measures of the Immune system in Middle-aged Men. *Clinical Immunology and Immunopathology* 59:187-200, 1991.
18. Moszczynski, P., Slowinski, S., Lisiewicz, J.: Effect of Tobacco Smoking on Selected Immunologic Indices. *Folia Haematologica* (Leipz):305-310, 1989.
19. Magnusson, C.G.: Maternal Smoking Influences Cord Serum IgE and IgD Levels and Increases the Risk for Subsequent Infant Allergy. *Journal of Allergy and Clinical Immunology* 78:898-904, 1986.

20. Yahya, M.D., Watson, R.R.: Immunomodulation by Morphine and Marijuana. *Life Sciences* 41:2503-2510, 1987.
21. Tashkin, D.P.: Pulmonary Complications of Smoke Substance Abuse. *Western Journal of Medicine* 152:525-530, 1990.
22. Chao, C.C., Molitor, T.W., Gekker, G., Murtaugh, M.P., Peterson, P.K.: Cocaine-Mediated Suppression of Superoxide Production by Human Peripheral Blood Mononuclear Cells. *Journal of Pharmacology and Experimental Therapeutics* 256:255-258, 1991.
23. Piccotti, J.R., Brissette-Storkus, C.S., Chambers, W.H., Bricker, J.D.: Suppression of Splenic T Lymphocytes Proliferation by Acute Cocaine Administration. *Life Sciences* 61:967-976, 1997.
24. Shanti, C.M., Lucas, C.E.: Cocaine and the Critical Care Challenge. *Critical Care Medicine* 31:1851-1859, 2003.

25. Avila, A.M., Morgan, C.A., Bayer, B.M.: Stress-induced Suppression of the Immune System after Withdrawal from Chronic Cocaine. *Journal of Pharmacology and Experimental Therapy* 305:290-297, 2003.
26. Friedman, H., Newton, C., Klein, T.W.: Microbial Infections, Immunomodulation and Drugs of Abuse. *Clinical Microbiology Review* 16:209-219, 2003.
27. Tobin, K.E., Latkin, C.A.: The Relationship between Depressive Symptoms and Nonfatal Overdose among a Sample of Drug Users in Baltimore, Maryland. *Journal of Urban Health* 80:220-229, 2003.
28. Bauman, J.L., DiDomenico, R.J.: Cocaine-induced Channelopathies: Emerging Evidence on the Multiple Mechanisms of Sudden Death. *Journal of Cardiovascular Pharmacology and Therapeutics* 7:195-202, 2002.
29. Melamid, I., Kark, J.D., Spirer, Z. Coffee and the Immune System. *International Journal of Immunopharmacology* 12:129-134, 1990.

30. Nixon, D.W.: Nutrition and Cancer: American Cancer Society Guidelines, Programs, and Initiatives. *CA-A Cancer Journal for Clinicians* 40:71-76, 1990.
31. Butrum, R.R., Clifford, C.K., Lanza, E.: NCI Dietary Guidelines: Rationale. *American Journal of Clinical Nutrition* 48:888-895, 1988.
32. Sanchez, A., Reeser, J.L., Lau, B.H.S., Yahiku, P.Y., Willard, R.E., McMillan, P.J., Cho, S.Y., Maggie, A.R., Register, U.D.: Role of Sugars in Human Neutrophilic Phagocytosis. *American Journal of Clinical Nutrition* 26:1180-1184, 1973.
33. Ader, R., Felton, D.L., Cohen, N.: *Psychoneuroimmunology*, 2nd edition, New York: Academic Press, 1991.
34. Kiecolt-Glaser, J.K., Glaser, R., Strain, Stout, J.C., Tarr, K.L., Holliday, J.E., Speicher, C.E.: Modulation of Cellular Immunity in Medical Students. *Journal of Behavioral Medicine* 9:5-21, 1986.

35. Cohen, S., Tyrrell, D.A.J., Smith, A.P.: Psychological Stress and Susceptibility to the Common Cold. *New England Journal of Medicine* 325: 606-612, 1990.
36. Palmlad, J., Petrini, B., Wasserman, J., Akerstedt, T.: Lymphocyte and Granulocyte Reactions During Sleep Deprivation. *Psychosomatic Medicine* pp. 273-278, 1979.
37. Schleifer, S.J., Keller, S.E., Camerino, M., Thornton, J.C., Stein, M.: Suppression of Lymphocyte Stimulation Following Bereavement. *Journal of American Medical Association* 250:, No. 3:374-382, 1983.
38. Malter, M., Schriver, G., Eilber, U.: Natural Killer Cells, Vitamins, and Other Blood Components of Vegetarian and Omnivorous Men. *Nutrition and Cancer* 12:271-278, 1989.
39. Moffat, A.S.: China: A Living Lab for Epidemiology. *Science* 248:553-555, 1990.
40. Hirayama, T.: Mortality in Japanese With Life-Styles Similar to Seventh-day Adventists: Strategy for Risk

Reduction by Life-Style Modification. *National Cancer Institute Monograph* 69:143-153, 1985.

41. LaPerriere, A.R., Antoni, M.H., Schneiderman, Ironson, G., Klimas, N., Caralis, P., Fletcher, M.A.: Exercise Intervention Attenuates Emotional Distress and Natural Killer Cell Decrements Following Notification of Positive Serologic Status for HIV-1. *Biofeedback and Self-Regulation* 15:229-242, 1990.
42. Espersen, G.T., Elbaek, A., Ernst, E., Toft, E., Kaalund, S., Jersild, C., Grunnet, E.: Effect of Physical Exercise on Cytokines and Lymphocyte Subpopulations in Human Peripheral Blood. *Acta Pathologica, Microbiologica, et Immunologica Scandinavica* 90:395-400, 1990.
43. Tvede, N., Heilman, C., HalkjaerpKristensen, J., Pedersen, B.K.: Mechanisms of B-lymphocyte Suppression Induced by Acute Physical Exercise. *Journal of Clinical and Laboratory Immunology* 30: 169-173, 1989.
44. White, E.G.: *Ministry of Healing*. Pacific Press, Mountain View, CA, 1905.

45. Kiecolt-Glaser, J.K., Glaser, R., Strain, Williger, D., Stout, J., Messick G., Sheppard, S., Ricker, D., Romisher, S.C., Briner, W., Bonnell, G., Donnerberg. R.: Psychosocial Enhancement of Immunocompetence in a Geriatric Population. *Health Immunology* 30, 169-173, 1989.
46. Kiecolt-Glaser, J.K., Glaser, R., Strain, Stout, J.C., Tarr, K.L., Holliday, J.E., Speicher, C.E.: Modulation of Cellular Immunity in Medical Students. *Journal of Behavioral Medicine* 9:5-21, 1986.

Chapter 3 — A Mini-review of Basic Immunology

1. Male, D.: Introduction to the Immune System. In *Immunology*, 6th edition, Mosby, Times Mirror International Publishers Ltd. Pp. 1-12, 2001.
2. Rook, G.A.W.: Immunity to Bacteria and Fungi. In *Immunology*, 6th edition, Mosby, Times Mirror International Publishers Ltd. Pp. 245-258, 2001.

3. Nash, T.: Immunity to Viruses. In *Immunology*, 6th edition, Mosby, Times Mirror International Publishers Ltd. Pp. 235-243, 2001.
4. Lau, B.: Fat Cat Fights the Immune System. In *Energized —1998 Devotional*. Review & Herald Publishing Association, Hagerstown, MD. P. 103, 1998.
5. Lau, B.: Sweet and Weak. In *Energized —1998 Devotional*. Review & Herald Publishing Association, Hagerstown, MD. P. 166, 1998.
6. Swine Flu: Tamiflu, the Danger Drug. April 29, 2009
<http://pakistanalert.wordpress.com>

Chapter 4 — An Effective Treatment for Respiratory Infections

1. Lau, B.: The Triangle of Disease. In *Garlic and You*. Apple Publishing Co., Canada. Pp. 99-100, 1997.
2. Lau, B.H.S.: *Medical Microbiology Syllabus to Medical Students*. Loma Linda University Medical School, Loma Linda, CA 2002.

3. White, E.G.: *Ministry of Healing*. Pacific Press, Mountain View, CA, 1905.

Chapter 5 — Treatment for Four Clinical Entities

1. White, E.G.: *Selected Messages, Book Two*. Review and Herald Publishing Association, Washington DC. Pp.300-301,1958.
2. Thrash, A., Thrash, C.: *Home Remedies*. Thrash Publications, Rt. 1, Box 283, Seale, AL 36875. 1981.

Chapter 6 — The How of Hydrotherapy

1. Bachman, D.D.: *The Complete Book of Water Healing*. Instant Improvement, Inc. New York. 1994.
2. Dail, C.W., Thomas, C.S.: *Simple Remedies for the Home*. Teach Services, 182 Donivan Road, Brushton, NY, 12916. 1991.
3. Thrash, A., Thrash, C.: *Home Remedies*. Thrash Publications, Rt. 1, Box 283, Seale, AL 36875. 1981.

4. Thomas, C.: *Simple Water Treatment for the Home*. University Press, Loma Linda, CA 92354. 1977.

Chapter 7 — Nutrition to Prevent Respiratory Infections

1. Sanchez, A., Reeser, J.L., Lau, B.H.S., Yahiku, P.Y., Willard, R.E., McMillan, P.J., Cho, S.Y., Maggie, A.R., Register, U.D.: Role of Sugars in Human Neutrophilic Phagocytosis. *American Journal of Clinical Nutrition* 26:1180-1184, 1973.
2. Griffin, V.B., Griffin, D.J.: *Moooove Over Milk*. Let's Eat, P.O. Box 38, Hot Springs, NC 28743. 1997.
3. Osaki, F.A.: *Don't Drink Your Milk*. Teach Services, Donivan Road, Route 1, Box 182, Brushton, NY 12916 1992.
4. Malkmus, G.H.: *God's Way to Ultimate Health*. Hallelujah Acres, Edison, TN, 1995.

5. Lau, B.H.S., Adetumbi, M.A., Sanchez, A.: *Allium sativum* (garlic) and Atherosclerosis: A Review. *Nutrition Research* 3:119-128, 1983.
6. Adetumbi, M.A., Lau, B.H.S.: *Allium sativum* (garlic) - a Natural Antibiotic. *Medical Hypothesis* 12:227-237, 1983.
7. Adetumbi, M.A., Lau, B.H.S.: Inhibition of in vitro germination and spherulation of *Coccidioides immitis* by *Allium sativum*. *Current Microbiology* 13:73-76, 1986.
8. Lau, B.H.S., Woolley, J.L., Marsh, C.L., Barker, G.R., Koobs, D.H., and Torrey, R.R.: 1986. Superiority of Intralesional Immunotherapy with *Corynebacterium parvum* and *Allium sativum* in Control of Murine Transitional Cell Carcinoma. *Journal of Urology* 136:701-705.
9. Adetumbi, M.A., Javor, G.T., Lau, B.H.S.: *Allium sativum* (garlic) Inhibits Lipid Synthesis by *Candida albicans*. *Antimicrobial Agents and Chemotherapy* 30:499-501, 1986.

10. Lau, B.H.S., Lam, F., Wang-Cheng, R.: 1987. Effect of An Odor Modified Garlic Preparation on Blood Lipids. *Nutrition Research* 7:139-149.
11. Lau, B.H.S.: Anticoagulant and Lipid Regulating Effects of Garlic (*Allium sativum*). In *New Protective Roles of Selected Nutrients in Human Nutrition*, Gene A. Spiller and James Scala, editors, Alan R. Liss, Publishers, P.295-325, 1989.
12. Lau, B.H.S.: Garlic for Disease Prevention. *Journal of Health and Healing* 13:3-6, 1990.
13. Lau, B.H.S., Tadi, P.P., Tosk, J.M.: *Allium sativum* (garlic) and Cancer Prevention. *Nutrition Research* 10:937-948, 1990.
14. Lau, B.H.S., Yamasaki, T., Gridley, D.S.: Garlic Compounds Modulate Macrophage and T-lymphocyte Functions. *Molecular Biotherapy* 3:103-107, 1991.
15. Lau, B.H.S.: Suppression of LDL Oxidation by Garlic. *Journal of Nutrition*. 131:985S-988S, 2001.

16. Brinkeborn, R.M., Shah, D.V., Degenring, F.H.: Echinaforce and Other Echinacea Fresh Plant Preparations in the Treatment of the Common Cold. A Randomized, Placebo-controlled, Double-blind Clinical Trial. *Phytomedicine* 6:1-6, 1999.
17. Lindenmuth, G.F., Lindenmuth, E.B.: The Efficacy of Echinacea Compound Herbal Tea Preparation on the Severity and Duration of Upper Respiratory and Flu Symptoms: A Randomized, Double-blind Placebo-controlled Study. *Journal of Complementary Medicine* 6:327-334, 2000.
18. Schulten, B., Bulitta, M., Ballering-Bruhl, B., Koster, U., Schafer, M.: Efficacy of *Echinacea purpurea* in Patients with A Common Cold. A Placebo-controlled, Randomized, Double-blind Clinical Trial. *Arzneimittelforschung* 51:563-568, 2001.
19. Kim, L.S., Waters, R.F., Burkholder, P.M.: Immunological Activity of Larch arabinogalactan and Echinacea: A Preliminary, Randomized, Double-blind, Placebo-

controlled Trial. *Alternative Medicine Review* 7:138-149, 2002.

20. Melchart, D., Clemm, C., et al.: Polysaccharides Isolated from *Echinacea herba* Cell Cultures to Counteract Undesired Effects of Chemotherapy—A Pilot Study. *Phytotherapy Research* 16:138-142, 2002.
21. Lau, B.H.S., Ong, P., Tosk, J.: Macrophage Chemiluminescence Modulated by Chinese Medicinal Herbs *Astragalus membranaceus* and *Ligustrum lucidum*. *Phytotherapy Research* 3:148-153, 1989.
22. Lau, B.H.S., Ong, P.K., Wang, S.J., Wong, D.Y., Tosk, J.M.: Chinese Medicinal Herbs for Immunodeficiency. *International Clinical Nutrition Review* 10:430-434, 1990.

Chapter 8 — Conclusions

1. Lemonick, M.D., Park, A.: The Truth About SARS. *Time* Pp. 48-53, May 5, 2003.
2. Park, A.: Just the Facts. *Time* P.53, May 5, 2003.

3. Dubos, R.J.: *Louis Pasteur—Free Lance of Science*. Little Brown & Company, Boston. Pp. 233-266, 1950.
4. Vallery-Radot, P.: *Louis Pasteur—A Great life In Brief*. Alfred A. Knopf Publisher. 1958.
5. Hallock, G.T., Turner, C.E.: *Louis Pasteur*. Metropolitan Life Insurance Company, New York. 1948.
6. Vallery-Radot, R.: *The Life of Pasteur*. Doubleday, Page, and Company, New York. 1924.
7. Olmstead, J.M.D., Turner, C.E.: *Claude Bernard & the Experimental Method in Medicine*. Henry Schuman, New York. 1952.
8. Anonymous Author: A Paradox in Disease Theory and the Confession of Louis Pasteur. *Journal of Health and Longevity*
1:1-2, 2003.

9. National Center for Health Statistics:
www.cdc.gov/nchs/fastats/deaths.htm 2003, 2008.

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