Portrait of the Author

COLDS, COUGHS *and* CATARRH

BY

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PREFACE

ALL too many of us are prone to take health lightly. When we have good health we accept it as a matter of course, giving no thought to its perpetuation, but doing anything and everything which pleases us regardless of the ultimate effect on bodily harmony. Many a misguided person has assumed and even boasted that his stomach was made of armor plate and would digest nails, only to discover when he least expected that his stomach would digest nothing. So prevalent is this habit of carelessness in health that it has been claimed that a person with some slight weakness or functional disorder will live longer than a strong person because the afflicted one finds it necessary to live carefully at all times in order to live in comfort. However, I should not advise anyone to cultivate a weakness. I advise, instead, the cultivation of some common sense which will protect from foolish indulgence.

There is another class of people who, while admitting the necessity for careful living even

in health, will refuse to observe such care, saying that they would rather live a few years less and enjoy (?) themselves during that period. They fail to realize that it is not merely a matter of shortening the life span by a few years, but of living life in comfort, and in real, not imaginary, enjoyment. Such persons are likely to live longer than they wish to live through years of suffering.

Both classes, as soon as they begin to feel uncomfortable as a result of abuse of their bodies, immediately lose all confidence, are filled with a multitude of fears, and rush madly from this doctor to that one, seeking vainly the help that can be found only within themselves.

Many efforts have been made by individuals, societies, and even business organizations to awaken people to the need for right living at all times if they would be healthy, successful, and happy. It is only within recent years, however, that the lesson has begun to "go home." By means of statistics, examples, and experiments, broadcasted through books, magazines, lectures, advertisements, the radio, "health days," etc., the people have been

shown that they lose greatly in money and happiness by not taking proper care of themselves. Show a man where he loses money by a certain course of action and frequently he will change; but show anyone where he loses in happiness and, though he may change, the change will be slow and perhaps even ultimately be inadequate.

It is difficult to estimate the economic loss and the unhappiness that has resulted from the common disorders, known as colds, coughs, and catarrh. They are so common that most people are inclined to accept them as a matter of course, without realizing the far-reaching effects that may develop. For instance, suppose the first born of a newly married couple is not properly fed and cared for (this is a very common state of affairs, as unfortunately our young people are not trained to become parents) and develops frequent colds. The mother worries and the father worries. The child becomes irritable, requires much more attention during the day and continually disturbs its parents at night. They lose sleep, and, with worry to aggravate them, they too become irritable. Quarreling results, and an

otherwise happy marriage may end in divorce. This may appear to be a "far-fetched" illustration but it serves to show the possibilities.

Consider the various vocations that are radically affected by colds, coughs, and catarrh. A famous singer may lose several thousand dollars and considerable prestige from disappointing an audience. An unknown singer may lose his one big chance for recognition as a result of a cold. In a closely contested election a candidate may miss his opportunity of election because a cold prevented him from making public appearances at a critical time. A minister may fail to "save" a hundred souls because a cold broke up his revival meetings. A salesman may fail to make the sale on which he has set his heart because a cold prevented him from expressing himself adequately. A poor school teacher may lose a part of her much needed salary because she had been incapacitated by a cold and cough. Many an athlete has failed to break the record or win a championship because he allowed a cold to develop. One cannot breathe adequately, normally function physically, express himself clearly, or even think rationally when even

only his nose is "all stopped up" with a cold.

Not only money and opportunities are jeopardized by colds, coughs, and catarrh, but social pleasures, and even one's religious devotions may be interfered with. Who can enjoy himself at a dance when unable to breathe properly and under the constant necessity of using a handkerchief? Who likes to go to a theatre or a church when under the frequent necessity of coughing, sneezing, or blowing the nose? Who can discover the hidden beauty in the fairest face when concealed by a red and swollen nose, chapped lips, and congested eyes? Or what man can impress the lady of his choice when he is continually hawking and clearing his throat or nose and either swallowing or expectorating mucus? These are but a few examples of the many unpleasant situations that may arise as a result of colds, coughs, and catarrh.

To return to the economic phase of the subject for a moment, consider the results of the health survey made in 1921 by the Metropolitan Life Insurance Company. In that year there were 16.2 absences on account of sickness for every hundred clerks in their own

organization. The average number of days of absence per clerk per year was 4.1 for men and 8.1 for women. Most of these sickness absences were due to colds and their sequelæ —grippe, influenza, tonsilitis, bronchitis, etc. In 1923 the same company found that colds occurred at the rate of 240.7 per 1000. The average number of days lost per case was 2.2.

In 1919 a survey was made in New York state of 76,559 factory employees, and it was found that 45 per cent, or nearly half, of the sickness disability was due to colds. And 32 per cent of loss of working time was due to this cause.

From a consideration of the factors that I have mentioned it readily will be seen that colds, coughs, and catarrh are not to be taken lightly. They indicate that a toxic condition is present in the body and if the accumulation of poisons is not removed almost anything in the way of illness may result. The complications that may follow an "ordinary cold" are so many and so extensive that I have devoted a separate chapter in this book to their consideration. Prompt treatment of all diseases

is very necessary, even of the so called minor ones.

Let us not forget, however, that important though treatment may be, it is completely overshadowed in importance by prevention. Prevention saves all—time, money, energy, suffering, and many times life itself. Just think for a moment of all the things you could lose through sickness, and you will realize the importance of prevention of sickness.

And what constitutes prevention? Right living at all times, even when feeling in the very best health possible; study of the body and its care, and practice of the knowledge gained; appreciation of the fact that eternal vigilance is necessary in overcoming the adversities of environment, particularly in a civilized community.

The six cardinal points in right living are proper diet, exercise, breathing, bathing, sleeping, and thinking. It is difficult to say which is the most important, as each depends upon, and helps the others. One thing is certain, however: that without a proper balance among them the best of health and immunity from disease are impossible.

Most people have at least two colds every year, one in the spring and one in the fall, and not a few far exceed this number; some, in fact, having a cold almost perpetually. To these it may seem like a fond dream that immunity is possible, but I can assure you that it is so if you are willing to make the effort.

I shall consider in these pages the correlation between colds, coughs, and catarrh and the similarity of the causes that produce all three. By avoiding the causes, the diseases themselves may be avoided. By making constructive use of the right habits of living discussed in the chapters on treatment, any present attack of colds, coughs, or catarrh may be eliminated, and vitality so increased that a genuine immunity is attained and maintained as long as one continues to adhere to the laws of right living.

Bernarr Macfadden

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CHAPTER I

Correlation Between Colds, Coughs and Catarrh

TO those who understand the unity of disease this chapter is scarcely necessary. But unfortunately there are still many folks who are totally ignorant of the real nature of disease and who yet wander in the mazes of medical and other superstitions, or are so blinded by the authority complex that they believe that whatever is generally accepted must be right. Such persons have the idea that all so-called diseases are different from all others, simply because of the difference in symptoms; and they consider it the height of folly to use the same treatment for different "diseases." They think that disease "attacks"

one, that it is an accident, like being held up on the street, or a Divine visitation of retribution. Disease to them is an ogre which must be fought with medicine, the knife, and that mysterious force, the M.D. degree, which to their minds transforms an ordinary individual into a nearly omniscient, omnipotent arbiter of life and death. This chapter will bring to these, I hope, enlightenment; and to all others a better understanding of the fundamental oneness of disease, and particularly the close relation between colds, coughs, and catarrh. By even the most superficial observation this relation should be visible; but the full extent of it becomes apparent only after deeper study, when it will be seen that these ailments are related as to causes, symptoms, pathology, and treatment, such variations as there are being mostly a matter of degree.

Toxemia, or the excessive accumulation of digestion and metabolism by-products and foreign matter in the body resulting from wrong habits of living, is the basis of all disease or imperfect functioning except those conditions due to accident. It is the same with any machine. Keep it clean, well oiled, and

properly fueled (not under-fueled or over-fueled), and it will run smoothly and well; but put sand in the bearings, forget to oil it, and give it a low grade fuel or excessive fuel and it soon will cease to operate. Take a fish from salt water and put it in fresh water and it will soon languish and die. Or take a wild animal from its natural habitat, confine it, feed it "civilized" foods, and it will quickly become diseased.

The difference between a machine and a fish, beast or human is that if taken in time an animal can restore itself to normal while a machine requires outside assistance. If the salt water fish is restored to the ocean it will soon recuperate, and if the wild animal is set free it will not take long to regain its former health. Similarly, if a human being, who has allowed himself to indulge in improper habits of living until his body is filled with poison, will change those habits, his body soon will purify itself and again become healthy. Thus it will be seen that if toxemia is the basis of disease—and I am convinced that this cannot be successfully contradicted—the basis of health is a clean blood stream and clean tissues; and

these conditions are produced in the body according as we live wrongly or rightly, not merely as a matter of fate. Our natural physical state is health, and it is only when we continually interfere with the body that it becomes unhealthy and diseased.

Since colds, coughs and catarrh all are on a basis of toxemia they must be merely different manifestations of this same cause or condition. This is indeed so. (Of course, coughs are sometimes due simply to the entrance of foreign matter into the throat, but such coughs would be classed as truly accidental.) When the toxemia has developed, the body realizes the necessity for an extraordinary cleansing and its first effort at vicarious elimination takes the form of an acute crisis called a "cold," which may or may not be associated with a cough. If neglected, a cough usually develops; and if medicine is taken or the cold is otherwise improperly treated it gradually assumes a chronic state, which we call catarrh.

A cold is a sudden more or less violent inflammation of the mucous membranes, together with a large increase in discharge of mucus in order to flush out the impurities from

the body. Because of its comparative severity it usually is of short duration, the cleansing being accomplished rapidly. The medical terms for a cold include coryza and rhinitis. Coryza is applied to a cold in the head; rhinitis may be either a cold or catarrh according as it is acute or chronic; but no matter what the name, the condition is essentially the same. Catarrh is simply a chronic cold, the symptoms being the same except that they are less acute, and being less acute a longer time is required to purify the body, so catarrh generally is of long duration—chronic. A cough may be a symptom of either, or of both colds and catarrh, but it is also a purifying measure. Hence it will be seen that they all are closely related.

The pathology (changes in function or structure, usually considered chiefly regarding tructural change) associated with colds and catarrh always is located in the same tissue of the body, the mucous membrane, which is further evidence of the relation existing between these "diseases." The variations in the changes in the mucous membranes in colds and catarrh are merely a matter of degree, as explained

heretofore. As mucous membrane lines the respiratory, the digestive, and the genito-urinary systems, as well as special parts, such as the eye-lids, sinuses, etc., any of these regions may be affected.

By far the most cases of these disorders, however, are found to involve the nose and throat, because these parts have the freest access to the surface of the body and foreign matter can be more quickly eliminated through them, and also because these parts are most exposed to the stimulations and irritations in the environment. As a rule, other parts are not affected until after considerable involvement of the nose and throat, or in case elimination through these mucous membranes has been persistently suppressed by drugs and local applications of chemicals. For these reasons it usually is catarrh, the chronic condition, which affects the bronchi, stomach, intestines, bladder, urethra, vagina, etc. No matter where the location, however, the pathology is practically the same.

The symptoms of a cough are, of course, always located in the throat, the cough being produced as a result of irritation of the nerves

in the mucous membranes; but the source of the irritation may be either local, as in colds and catarrh, or referred from some other part, such as the stomach, liver, uterus, etc. Abnormalities of these organs which may give rise to coughing are also fundamentally due to toxemia; so even in a referred cough the real cause is the same as in a direct cough.

Colds, coughs, and catarrh are related also as to treatment, which is only reasonable to expect since they are related as to causes, and the aim of any rational therapy is to remove causes as well as their effects. The keynotes of treatment are elimination, the removal of the accumulation of poisons, and the increase of vitality to develop resistance and better functioning. Modifications of treatment are necessary only to allow for the difference between acute and chronic conditions or for various special conditions which may be present in individual cases.

It is because of the close relation between these ailments that they are being considered together in this book. Also because many people have all three conditions; or, if they only have one now, they are very likely to de-

velop the others unless prompt and proper treatment is instituted.

For a fuller understanding of the phenomena of colds, coughs, and catarrh, however, it is necessary to know something of the structure and function of the parts affected, particularly the mucous membranes; also the method by which reflex actions are produced, and certain other general facts about the body's functions. These will be considered in the next chapter.

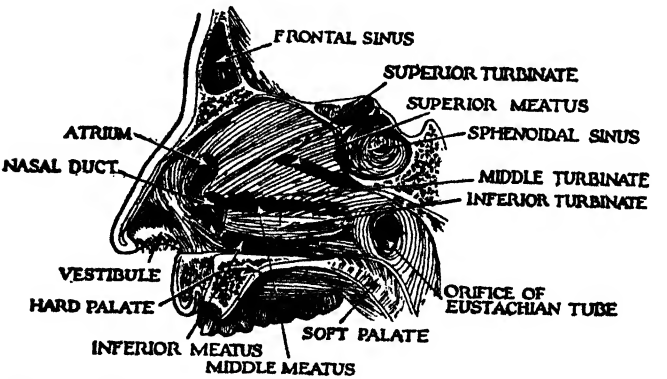
CHAPTER II

Parts Affected by Colds, Coughs and Catarrh

IT was stated in the last chapter that colds and catarrh occur most frequently in the nose, throat, and bronchi; this being the case we will confine our anatomical descriptions chiefly to these parts, giving only a general idea of the other parts which may be affected. When other regions of the body are affected the condition usually is given another name, such as pneumonia, sinusitis, gastritis, enteritis, urethritis, vaginitis, etc. But in all cases it is the mucous membranes which are affected, and a fairly thorough description of them will be given. In the case of the cough the irritation immediately giving rise to it will be found always to occur in the throat, regardless of the original source of irritation.

The nose is composed of two portions, external and internal. The external portion is

familiar to all, but as the internal portion may not be, a more detailed description of it will be required. The external portion is divided into two parts, the nostrils, and these by a thin plate called the septum, which is part cartilage and part bone. The bony part forms the bridge of the nose and is continued into the internal nose, which it bisects into two chambers called the fossæ. On the outer walls of the fossæ are three somewhat scroll-shaped bones—the turbinates—which divide these chambers from above downward into three parts, the upper, middle, and inferior meatuses, or openings.



Section of the nose, upper pharynx and mouth. Catarrh and colds frequently involve these regions.

THE NOSE

On the roof of the nose and the walls of the meatuses are found various openings leading to the spongy bones behind the nose and the hollow parts (sinuses) of the bones of the forehead and upper jaw (cheek bones). These are known respectively as the orifices of the ethmoidal, sphenoidal, and frontal sinuses and of the antrum (sinus of the upper jaw). It is through these openings that catarrh of the nose may extend to the sinuses, producing sinusitis. There is another opening on the wall of the inferior meatus that leads through a duct to the eye. This is called the lacrimal duct, as it is a drainage canal for excess tears; but it may also be the means of permitting an extension of a cold or catarrh to the eye.

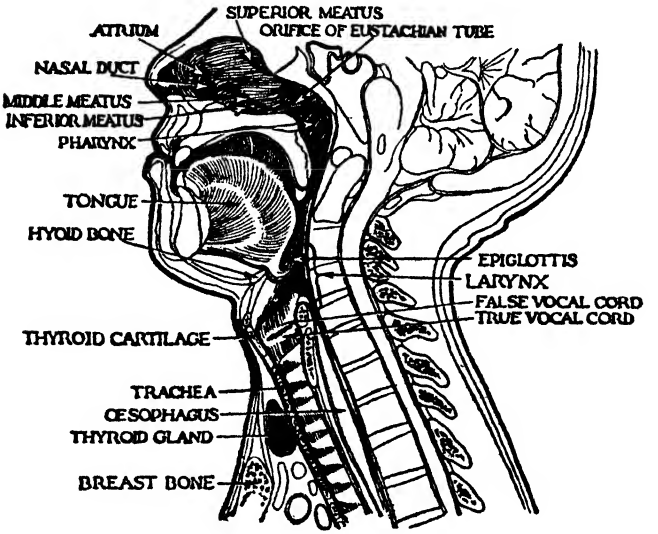
All these parts—nostrils, fossæ, sinuses, antrum, and lacrimal duct—are lined with mucous membrane that is continuous from one to the other. This is thicker in the upper than in the lower part of the nose, and in this thicker portion are found the end-organs of the nerves

of smell, the olfactory nerves. The mucous membrane of the nose is ciliated (covered with fine hair-like processes) and the entrances of the nostrils are guarded by real hairs. The back of the nose opens into the naso-pharynx (see description of pharynx), the openings being known as the posterior nares in contradistinction to the nostrils, which are technically known as the anterior nares.

The function of the nose is to prepare air for the lungs by heating, moistening, and filtering it, and to protect us from danger of various kinds through the sense of smell. The irregularities of the inner surface of the nose, produced by the turbinate bones, create a larger area of mucous membrane over which the air passes, thus enabling it to be more thoroughly warmed and moistened by the blood flowing through the vessels in the membrane. The air is filtered by the hairs, and the cilia and much dust is also caught by the mucus on the membranes. The cilia have a brushing movement toward the entrance of the nose which aids the flow of mucus in that direction so that foreign matter can be more quickly washed out.

THE PHARYNX

Behind and partly below the inner part of the nose is the pharynx, which is commonly referred to as the throat. The upper part, which is above the roof of the mouth, is called the naso-pharynx; the part immediately be-



Section of the upper air passages to the lower part of the trachea, showing the relation of the parts of the respiratory tract, including the mouth. Any portion shown may be affected by colds or catarrh.

hind the mouth is called the oral portion; and that below this, the laryngeal portion. On the lateral walls of the naso-pharynx are found two openings, one on each side, which lead through the Eustachian tubes to the internal part of the ears. Catarrh or colds affecting the throat may extend through these tubes to the middle ear or even to the mastoid bone (behind the ear) producing the much dreaded mastoiditis.

The anterior part of the naso-pharynx opens into the nasal fossæ through the posterior nares. On the back wall of the naso-pharynx, between the two Eustachian tubes, is a mass of lymphoid tissue called the pharyngeal tonsil. It is here that the well known adenoids frequently develop in cases of chronic catarrh. The oral part of the pharynx is continuous forward into the mouth and the laryngeal part continues downward into the larynx and esophagus. Between the pharynx and the mouth, one on each side in depressions called the fauces, are found the more generally known or palatine tonsils. All these parts, including the mouth, also are lined with mu-

cous membrane and may be affected by colds or catarrh.

The chief function of the pharynx is to serve as a passageway for air between the nose and larynx, or of food between the mouth and esophagus. The lymphoid tissue and the tonsils, however, aid in elimination by filtering the lymph which passes through them and thus removing foreign matter, and by producing cells called phagocytes which destroy micro-organisms.

THE LARYNX

The larynx is the essential organ of voice, as it contains the vocal cords; but it also serves as a passageway for air and has considerable to do with the production of a cough. It is a box-like structure of cartilage and muscle, situated below the pharynx and in front of the esophagus. Food must pass over the larynx in going from the mouth to and through the esophagus to the stomach. The larynx is covered with a cartilaginous lid called the epiglottis. This lid is open when we breathe but is closed when we swallow, thus helping to

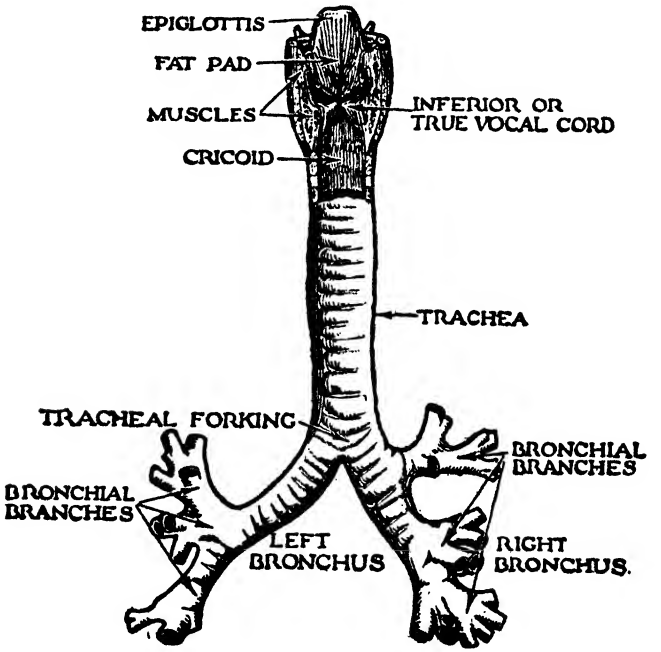
keep food from entering the larynx while it is passing on its way to the stomach, which accident would be productive of choking, and, incidentally, in mild degree is a frequent cause of some coughs. The muscles of the larynx move both it and the vocal cords within it. By moving and varying the length of the vocal cords various sounds may be produced and the amount of air entering or leaving the bronchi may be regulated. This air regulation is important in the production of a cough, as will be explained more fully in a later chapter.

The larynx is lined with mucous membrane the same as are the pharynx, nose, and mouth. When colds or catarrh develop in the larynx there is hoarseness, or the voice may be entirely lost for a time, because the inflammation and swelling interfere with the action of the vocal cords.

THE BRONCHI

Just below the larynx will be found the trachea or windpipe, which divides into two parts at about the level of the fifth thoracic vertebra, these parts being known as the bronchi. The trachea and bronchi are tubes for

the passage of air, the walls of which contain C-shaped cartilages. The open ends of the cartilages are toward the rear and are con-



Showing the respiratory passage from the pharynx to the branching of the bronchi into bronchias. The bronchias continue branching like the branchings of a root, becoming progressively smaller until they end in the air vesicles. Colds or catarrh may affect any portion of the tract, though colds are more pronounced in the upper region, and cough usually is due to irritation of the upper passage.

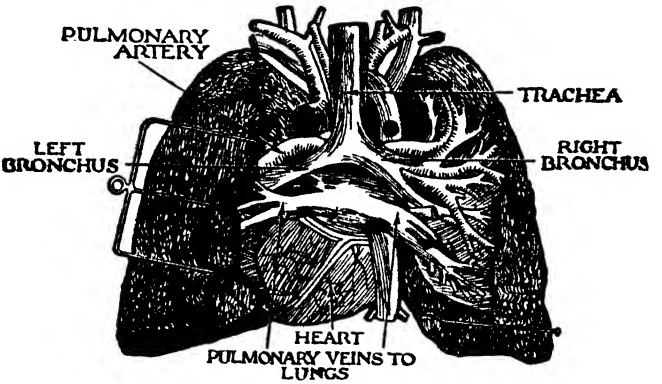
nected by small muscles. When the muscles contract the ends of the cartilages are drawn together, thus reducing the size of the tubes. This contraction helps to force foreign matter or mucus out of the tubes into the throat where it can be eliminated. This phenomenon is observed in coughing. The trachea and bronchi are lined with ciliated mucous membrane, which is a further protection, the cilia acting in the same way as they do in the nose.

The bronchi on entering the lungs further divide and subdivide, much like the branches and twigs of a tree, but inverted, until they end in very thin-walled pouches called air cells. It is through the walls of the air cells that the exchange of oxygen and carbon dioxide occurs in breathing. Thus the bronchial tubes and air cells form the working tissue of the lungs. All these parts are lined with mucous membrane, which is continuous from the nose and mouth to the air cells.

THE LUNGS

The lungs as a whole are composed of the bronchial tubes, air cells, blood-vessels, and nerves, with a supporting structure of connec-

tive tissue. One lung is developed about the right bronchus and the other about the left bronchus. The right lung is the larger, having three lobes or sections; the left lung contains only two, as more room on that side of



Showing the lower end of the air passage, the trachea, with its bronchial branchings as these enter the lung, and the relation of the bronchi to the heart and blood-vessels of the chest.

the chest is needed to accommodate the heart. Each lobe is made up of a number of lobules, which are clusters of air cells with their attached bronchioles (small bronchial tubes).

The lungs are covered on the outside with a double serous membrane, called the pleura, one layer being closely attached to the lungs and the other to the chest walls. A thin film

of serous fluid between the two parts of the pleura takes up the friction produced by the motions of the lungs in breathing. Reduction of this fluid, allowing the two portions of the pleura to come into direct contact, is the cause of the pain in pleurisy.

The function of the lungs is to absorb oxygen from the air, to be used in all the bodily processes, and to eliminate carbon dioxide, which is a by-product of tissue metabolism. Small amounts of organic matter also are eliminated. Thus it will be seen that the lungs both feed and purify the body, and are very vital organs. To keep them in good condition and free from colds, coughs, catarrh, etc., is essential to health and life.

Having now a general picture of the respiratory tract (nose, pharynx, larynx, trachea, bronchi, and lungs) in mind, we will consider in more detail the structure and function of the lining membrane.

THE MUCOUS MEMBRANES

The mucous membranes are a soft velvety tissue composed of a basement (foundation or supporting) membrane, beneath which is a

layer (called the corium) of blood-vessels, lymphatics, nerves, and muscle fibers held together with connective tissue, and above which is a layer of epithelial cells. These cells, in addition to their thin and delicate walls, are composed largely of mucin (a special form of protein) in combination with other proteins and water. There are also many glands in the mucous membranes. These are small tubes formed by an involution or folding inward of the membrane, and which open onto its surface. They are mostly mucous glands, but there are also some serous glands, and in the digestive tract there is a number of different kinds of specialized glands which have to do with digestion.

The membrane is nourished by the blood and lymph flowing through the corium, and these fluids also furnish the materials for secretion and excretion by the epithelial cells and the glands. The nerves in the corium receive sensations from the environment and activate the minute muscle fibers and the glands of the membrane. Some of these nerves are instrumental in producing the cough and sneeze, which will be explained later. Others control

the character and amount of the secretions and excretions.

The functions of the epithelial cells are to secrete, excrete, and absorb; and the functions of the membranes as a whole are to cover and protect. The skin is the covering and protection of the outer surface of the body, while the mucous membrane is the covering and protection of the exposed surfaces of the internal parts of the body. It might be called the internal skin, as it is in reality a special form of skin.

The function of the glands found in the mucous membrane is, of course, to secrete the fluid for which they were designed. The mucous glands secrete mucus; the serous glands, serum; and the glands in the digestive tract, digestive juices of various kinds. The mucous glands are common to all mucous membranes, while the others are found only in certain parts. We are chiefly interested in the mucous and serous glands, as they are the ones that are most active during colds and catarrh.

Mucus is a pale, semi-transparent, alkaline fluid, containing white blood-cells and epithelial cells. Chemically, it is composed of water,

mineral salts, and mucin. It is the mucin which makes the secretion viscid. The mucus varies somewhat in consistency and composition in different locations, as it always is especially adapted to the needs of the part where it is secreted. The chief varieties are nasal, bronchial, vaginal, urinary, and gastro-intestinal.

The function of the mucus is to protect the membranes; to keep them moist, soft, and flexible; and to aid in catching and then washing out any dirt or other foreign matter which may reach them. The serous glands of the mucous membranes are mostly in the nose. They secrete a thin, watery fluid which is practically analogous to lymph, the fluid part of the blood. The function is similar to that of mucus, but it is employed more in abnormal than normal conditions in this location. Most of the serous glands are located in the serous, rather than the mucous, membranes. (Serous membranes for the most part line cavities and cover organs truly within the body—that are not directly nor indirectly in contact with the outside air.)

Under normal circumstances the mucous

membranes do not excrete, at least to any appreciable amount, except in the lungs where they play a limited part in the elimination of carbon dioxide. Under abnormal conditions, however, when it is necessary to increase the elimination from the body they may excrete profusely. This is done by the epithelial cells, which pass the poisons which have been brought by the blood and lymph to the corium into the mucus and then onto the surface of the membranes where it can reach the outside of the body. The flow of mucus often is greatly increased, and the amount of fluid is further augmented by extra serum from the serous glands in order to dispose of more toxins. The mucus may become greatly thickened by the addition of many white blood-cells which have been destroyed in fighting bacteria, by the toxins themselves, and other debris. Sometimes the mucus becomes so thickened and foul with poisons that it is very disagreeable to every sense.

The absorbing power of the mucous membranes is rather limited except in the digestive tract where it is especially designed for that purpose. The mucous membranes of the nose

and throat, however, are capable of absorbing various chemicals, and of the lungs, various gases and chemicals. Thus nicotine may be absorbed by taking snuff or breathing tobacco smoke. The temporary (and harmful) relief from the use of catarrhal medicines which contain opiates results from their absorption. Drug addicts often take cocaine by snuffing it up the nose. Poisonous gases of all kinds, on entering the lungs, will be absorbed by the mucous membranes the same as oxygen is normally absorbed from the air. Under normal circumstances the membranes will not absorb a substance not in gaseous form or in solution; but if the membranes become weakened and they are not properly protected by the mucus they may allow substances only partly in solution to pass through. It is in this way that the pollen protein gains entrance to the body and ultimately produces hay-fever in those who are otherwise susceptible.

It might appear from these facts that the mucous membranes do not live up to their function of protection; but they are not designed to protect against all dangers, and it is only when other protective agencies have

been broken down that such poisons ever reach the parts where they can be absorbed, at least in sufficient quantities to do any noticeable harm.

Colds and catarrh occur most often in the nose, throat, or bronchial tubes, and these parts are protected in many ways besides those provided by the mucous membranes themselves. There are the stiff hairs around the margins of the nostrils which help to filter dirt out of the air. There is the sense of smell which warns us of many dangerous substances, including poisonous gases and foul breath. Other nerves in the membranes are irritated by dust, gases, chemicals, etc., and cause us to sneeze. The sneeze is nothing but a violent expiration for the purpose of blowing out such foreign matter. For this reason one should always sneeze through the nose. If such foreign matter gets into the throat or bronchial tubes a cough is produced to eliminate it.

The cough is a spasmodic contraction of the walls of these parts, together with a violent explosive expiration. Much of the mucous membrane lining the respiratory passages is ciliated. These fine, hair-like projections

have a continual brushing movement toward the outer entrance of the air passages, and in conjunction with the flow of mucus, which is also assisted by the cilia, act somewhat like scrubbing with a brush and water and make the respiratory tract practically self-cleansing. The tonsils, as has been mentioned, secrete phagocytes (bactericidal blood-cells) which overcome most bacteria which may try to enter.

From the foregoing it will be seen that these parts are well protected in many ways. Yet colds and catarrh will occur frequently. Why is this? Because they come from the inside rather than the outside, and because outside factors can become operative only when the normal protective agencies have been put out of action by the poisons from the inside.

Where do the inside poisons come from? They develop as a result of impaired metabolism which is due to wrong habits of living—improper diet, lack of exercise, impure air, etc. These will be discussed more fully in the chapter on causes. The ordinary organs of elimination—the kidneys, lungs, skin, and bowels—can take care of all ordinary and many extraordinary toxins which may be de-

veloped in the body; but they have their limits, and when much extra elimination is required other organs must be called upon to assist. Generally the first ones to come to the rescue are the mucous membranes. By producing an extra flow of mucus and serum they flush out at least much of the extra impurities. When this is done suddenly and violently we have a cold, when slowly and moderately we have catarrh. Coughing and sneezing help to cleanse the excess mucus from the parts.

If the accumulated impurities have affected the stomach or some other organ, or have produced a catarrh in other parts, a cough may be produced reflexly. A reflex action is brought about as follows: A stimulation of some sort is received by a nerve-ending and that nerve carries it to a center in the brain or spinal cord where it is recognized, interpreted, and referred to a motor center, which sends a command for action over a motor nerve to the point of irritation or a related point. If the irritation is in the throat, the sensation travels to the spinal cord where it is transferred to the motor center, which sends a message to the muscles of the throat and chest

so that they produce a cough, which in turn removes the irritation. However, all the nerves in the body are more or less connected, so that irritation of a stomach nerve may travel to the motor center which produces the cough. The majority of coughs, however, are produced by irritation in the throat or bronchial tubes. Coughing cannot be originated from the alveolar (air cells) walls.

The other parts of the body which are lined with mucous membrane, such as the genito-urinary canal, the digestive tract, the eye-lids, etc., also are subject to the same symptoms as occur in colds and catarrh of the respiratory tract. While these conditions are not called colds, they are produced by the same causes, manifest the same increased and abnormal flow of mucus, and respond to the same treatment. These parts may be affected after the nose, throat, or bronchi if the causes are not removed, as the body uses a greater and greater expanse of mucous membrane to aid in elimination. They may also be affected *before* the nose, throat, or bronchi is affected, if there is some particular abuse or local irritation of the organ in question. The various complications which

may follow colds, coughs, and catarrh if they are neglected or improperly treated will be discussed in detail in a later chapter.

CHAPTER III

Causes of Colds, Coughs and Catarrh

IF the orthodox healing profession would give more attention to the ultimate causes of disease and less to symptoms, diagnosis and treatment they would be doing a much greater work than they are at present. Symptoms should not be confounded with causes. For instance, germs are more of a symptom than a cause of disease; similarly enlarged turbinates are a symptom and not a cause of catarrh. There is nothing of more importance to know about a disease than its ultimate causes. When these are known the disease may be avoided, or if it already has developed it may be checked and in many cases cured merely by removing the causes. On the other hand, if the causes are not known, and hence are not removed, we may treat until doomsday and the condition still will persist. Even if the disease could be remedied by treatment

alone, if the causes were not known and removed the same or some other manifestation of abnormal conditions would return. Like causes produce like effects. This chapter is, then, in many ways the most important chapter in this book.

Of the three conditions—colds, coughs, and catarrh—the cold is usually the first one to develop, so we will first consider causes in relation to it.

CAUSES OF COLDS

If you were to ask the question, "What causes a cold?" the answer from the majority of people would be "We catch cold from exposure." This statement is worth some study, as it is a splendid example of our tendency to judge from appearances, and shows how little of the true nature of disease generally is known.

In the first place we do not "catch" cold—except possibly at the table! Which reminds me of that very apt advice that the best exercise for preventing a cold is to place both hands on the table and push back. A cold is not an accident, an "act of God" or the "devil," but is

developed *by the body because the cold is needed.* It is an eliminative measure produced to relieve the body of an excess of toxins. It actually is beneficial if properly cared for. This may seem strange to many who are in the practice, as soon as they exhibit signs of a cold, of immediately taking steps to "stop" it. If the steps they take are to remove causes —well and good; but if they merely try to suppress symptoms—wrong, all wrong!

The symptoms should not be suppressed, as they are the means the body takes to bring about that elimination which is so necessary to remove the accumulation of poisons from the body. This has been explained in the chapter on "Correlation." If the symptoms help to remove the real disease and are, therefore, beneficial, one might reasonably ask why we should treat the disease at all. Why not just let it run its course? As a matter of fact, treatment of an acute condition like a cold not always is necessary *provided the causes are removed.* This is the important point. However, it always is well to use treatment, since it helps the body more quickly to restore normal conditions. Moreover, natural treat-

ment consists to a large extent in removing causes, that is, in correcting the habits of living; but there are also many measures, fasting, for instance, which actually help the body in its work of purification.

We have seen that a cold is not "caught," but there still is the exposure to be considered. Does not exposure play some part? There is no denying that colds often do follow exposure. In fact, this probably is the origin of the name "cold." Back in past ages someone noticed that certain symptoms often followed exposure to cold with its accompanying unpleasant chilly feelings, so they dubbed the symptoms a "cold." But in spite of the name and its origin a careful study of the conditions will show that the exposure is not the primary cause of the trouble. Exposure not *always* is followed by a cold.

The truth of the matter is that practically all diseases have both predisposing and exciting causes. Predisposing causes are those which produce conditions in the body favorable to the development of a disease; exciting causes are those which precipitate the trouble and which have something to do with deter-

mining the character of the symptoms that occur. Predisposing causes always are necessary to disease, but exciting causes are not; disease often develops without any particular exciting cause. While colds often follow exposure, at other times they develop without any immediately apparent reason and the patient cannot understand why he should have one. Exposure, then, is only an exciting cause and as such is not of primary importance.

The various bugaboos such as wet feet, drafts, changes in the weather, changes of underwear, etc., all should be relegated to their proper places as mere exciting causes. If one is in a condition to develop a cold, wet feet may interfere sufficiently with the circulation to start it; but even then if the wet feet are warm their wetness probably would have no untoward effect. The same applies to drafts. When we are outdoors we are subjected to drafts from all directions, particularly when the wind is blowing, but we think nothing of them. Why, then, should we fear drafts indoors or consider them a cause of disease? Even if the draft is a cold one and produces a congestion of blood in some local part it will

not give rise to a cold unless the body is in a toxic condition, and if the body is thoroughly warm it will have no effect anyhow. The maintenance of warmth is much more important than is the avoidance of drafts.

Even so, changes of weather or underwear should have no effect, as the body has a special heat-regulating mechanism which has a wonderful power of adapting the body to changes in temperature so that it takes considerable and prolonged exposure to injure the healthy body. Observe that I say the healthy body. This is the main point. In a body which already is unhealthy and where the resistance is low, even slight exposure may be sufficient to precipitate a cold.

From the popular superstition in regard to exposure one might assume that the body was designed to go about in cotton batting; but as a matter of fact the more one accustoms himself to changes in temperature and to exposure the less likely will he be to develop a cold. Many a thoughtless person has been led to contribute to charity because of seeing the children of the poor going about inadequately clad in severe weather. Yet these very chil-

dren frequently are less subject to colds than the children of the rich. In the first place, they are not overfed; secondly, they are more muscularly active; and third, they have not been enervated by coddling but have developed resistance through hardship and exposure. Colds are the result of too much heat, but heat within the body—in the blood. Exposure has a tendency to reduce this to normal.

Do not think, however, that I am advising indiscriminate and prolonged exposure. Such would have a bad effect even on a healthy person. Prolonged cold inhibits all the functions of the body so that nothing works just right, elimination being particularly affected, with the result that toxemia is bound to develop or increase. Then the unequal circulation which results from prolonged exposure will cause a congestion of blood in certain parts and inflammation may develop in those parts as an eliminative measure, because where there is congestion tissue wastes are not properly removed. Very localized exposure, as of the neck to a slender draft, may cause such marked local contraction of tissues, especially spinal tissues, as to interfere with the internal

nerve and blood supply and function as to incite a cold. This is possible only when there is susceptibility from toxemia, inactivity, sluggish circulation, etc. Furthermore, the prolonged cold will force the body to expend large amounts of energy in an effort to maintain normal temperature and thus will lower resistance, especially if the exposure is coupled with deficient nutrition. So, prolonged exposure may be a predisposing as well as an exciting cause; but it should not be given undue importance, because in these days of civilization it is seldom that one will be subjected to such an experience. Far more colds are developed these days from overheating and overclothing in combination with improper diet than from exposure.

Another supposed cause of colds which has become very popular of late is germs. There is even less reason for this belief than there is for the hoodoo of exposure. There is no doubt that germs are found in the excretions produced during a cold, but so are they found in any refuse. Their mission is to reduce the waste matter to elementary substances that can be used again in some way in the various

processes of Nature, either inside or outside the body. Fallen leaves decay and become fertilizer for the living trees. Buried bodies decay from bacterial action and ultimately are returned to the elements from which they were built. So germs are a result of the causes of the cold and not a cause in themselves.

Certain types of germs may find food and space for development in the abnormal mucus accumulated in the respiratory passages during a cold, with the result that with the addition of the toxins of the life processes of the germs, the cold symptoms become influenza, pneumonia, whooping cough, or diphtheria symptoms; and while the germs here may be the cause of the change in symptoms they are not the original cause of the trouble. As far as colds, coughs, and catarrh are concerned germs may be completely discounted when the abnormalities are properly and promptly treated—or better yet, prevented by right living.

It always is well to avoid exciting causes, such as have just been discussed, as it is useless to run unnecessary chances; but they should not be allowed to monopolize the atten-

tion so that the importance of the predisposing causes is obscured, nor should they be allowed to become objects of fear so that their avoidance develops into an obsession.

The predisposing or actual causes of colds consist of anything which interferes with normal bodily function. Among these are improper diet; lack of fresh air, exercise, bathing, and sleep; overclothing; overheating of houses; destructive emotions or thoughts; bad habits of any kind; vaccination and inoculation.

Of all the possible errors in diet, the one most likely to bring about a cold is overeating. Overeating wastes energy by calling for extra efforts toward digestion and elimination, and thus reduces vitality, which brings about a slowing down of all the functions of the body. Overeating clogs the alimentary tract with decaying masses of unassimilated food which give off a great variety of toxins and poison the entire body. Overeating thickens the blood stream with these same toxins so that it cannot properly circulate, and this brings about congestion and inflammation, particularly in those parts of the body which are not especially active muscularly. Overeating

tends to produce obesity and fatty degeneration, with resulting diminution of organic tissue and function throughout the body. One cannot overeat for any length of time without developing that enervation and toxemia which underlie every cold.

The dietetic error next most likely to produce a cold is the excessive use of starch and sugar, particularly the refined varieties. One may not be taking too much total food; but if too much of this total is starch and sugar, acid fermentation will result, producing a lowered alkalinity of the fluids and tissues of the body, which is very conducive to a cold. Then when large amounts of these foods are used one is inclined to use too little of the so-called "protective" foods, such as fruits and green vegetables. Refined starch, as is found in white bread, pastries, and degerminated cereals, and refined sugar, as is found in a great many different foods but particularly in desserts, beverages, and candy, are lacking in organic salts and vitamines; and when these substances are not supplied in the food the blood leaches them from the tissues in order to maintain the bodily processes. This soon

undermines the entire constitution. Another bad effect of the overuse of these foods is that so much oxygen is used in metabolizing them that there is not enough for taking care of other food elements and tissue wastes.

Other dietetic errors which predispose to colds are the use of spices and condiments, smoked and pickled foods, all of which irritate the stomach and incline one to overeat; too much meat and gravy, producing hyperacidity; the use of tea and coffee—both poisons; lack of mastication; eating without an appetite; eating when mentally disturbed or physically fatigued; and improper combinations of foods. In fact, any form of improper diet will tend to produce disease, and especially that common safety valve, the cold.

Another very prolific cause of colds is lack of fresh air. Fresh air is air liberally supplied with oxygen and contaminated with the least possible amount of deleterious substances. Oxygen enters into all the tissues of the body and is necessary to all its functions. Any lack will be reflected in lack of tissue or function, or both. Under-oxygenation means that lowered alkalinity soon will result and something

will have to be done to bring about the elimination of the excessive acid. This something is very likely to be a cold. Fresh air is absolutely necessary in keeping the respiratory passages in good condition. The air should not be fresh only, but clean. Dusty air clogs the respiratory passages and irritates the mucous membranes.

The majority of people get far too little fresh air, except possibly in the summer time, and this is the period when there are fewer colds. People who live in cities are particularly prone to be satisfied with a minimum of fresh and pure air. They keep their windows closed to exclude the dust, the noise, or the cold, and in so doing also exclude the air. They may open their windows a little at night; but when the rest of their day is spent in confined rooms, dusty streets and subways, and a generally tobacco-polluted atmosphere, this is scarcely sufficient to be of any marked benefit. Many even keep their windows closed at night in cold weather. Persons who live in cities should keep their windows wide open at night, for the air is purer then, and open as much as possible during the day. They also

should spend as much time as they can in the parks and on the water, if such conveniences are to be had. Those who live in small towns or in the country are more fortunate, as pure fresh air is readily available; but these are very often the ones who are the most careless about securing it. They think if they live in the country they are bound to be healthy whether they take advantage of its benefits or not.

If one is sure to have plenty of fresh air at all times it will make up for many dietetic and other deficiencies, though, of course, this is no excuse for willfully indulging in bad habits. People who work outdoors and keep their windows open at night very seldom have colds, unless they are gormandizers, and constipated.

The same applies to those who take plenty of exercise. But if exercise is lacking there is bound to be frequent necessity for vicarious elimination. No part of the body can function at its best unless general exercise is used. It is needed to promote deep breathing, to equalize and accelerate the circulation, to improve digestion; and to increase elimination. Energy is needed to exercise, and something must be burned in the body to produce that energy.

In so far as is possible this will be waste matter and the more one exercises, within his strength, the less waste will there be in the body. To be sure, exercise itself breaks down considerable tissue, and this will have to be eliminated; but this is readily accomplished through the increased lung and skin activity induced by the exercise. If one never uses his muscles unless absolutely necessary, his whole organism will become stagnant. Impurities will accumulate, and unless a cold or some other form of extra elimination comes to the rescue the body gradually will disintegrate until some chronic disease removes the individual from the land of the living.

There are those who claim that through his evolution man now has accustomed himself to a life in which exercise has but a small part. Some even go as far as to prophesy that the time will come when man will be chiefly if not entirely mind. While there may be some reason for anticipating this, the fact remains that man at present is endowed with a body made up largely of muscles and muscular organs; and such being the case it is only natural to assume that they are intended for use and

that unless they are used they will deteriorate, to the detriment of the individual. This is borne out by a comparison between those who take regular exercise and those who do not. The former are strong, forceful, healthy, and successful; the latter are weak, retiring, sickly, and failures. When one has a cold his nose "runs"; but if the patient himself would do more actual running and other exercises there would be less reason for his nose to indulge in such athletics.

The fact that a cold is a cleansing effort on the part of the body would seem to indicate that lack of cleansing would be a cause of the abnormality. Such, indeed, is the case. Lack of internal cleansing is the chief cause; but lack of external cleansing also has an effect, because the skin is an important eliminating organ and unless it is kept clean and in good working order other eliminating organs will have part of its work to do. Most people would resent the imputation that they do not keep themselves clean; but it is an undeniable fact that the majority still limit themselves to the Saturday night bath, and this is not enough under our present methods of living,

feeding, and clothing the body. Moreover, the soap and warm water cleansing bath is not the only thing required to keep the skin in good working order. It must have air and sunlight, and dry friction also is of much value. Cold water is the natural bathing medium and should be used regularly and liberally. When these things are not done the skin becomes either dry and harsh or greasy and pimply, according to the nature and dietetic habits of the individual; and these are sure signs that the body is filled with impurities and that elimination is deficient, for the body needs, even though it seems to be much in excess of that noticeable in others.

The close relation between the skin and mucous membranes was explained in our discussion of the structure and function of the parts affected by colds; and when the skin is in such shape as described above the mucous membranes are bound to be abnormal, for what affects one will affect the other. With a toxic condition of the entire body and defective elimination from an inactive skin and mucous membranes it is only natural for a cold to develop sooner or later.

But even the most perfect active life will not compensate for loss of rest and sleep. We may eat right, exercise regularly and properly, breathe deeply of fresh air, and observe care in all our habits of living during the day; but if we do not relax and sleep enough to allow the body time enough to recuperate from the day's exertions we will be burning the candle at both ends and will some day awake to the painful realization that we have about reached the middle going both ways.

Sleep is a natural restorative. The body is self-cleansing and self-healing and even when greatly abused it will normalize itself if given the opportunity. It is during sleep that it has the best chance to do this. Then all voluntary effort is suspended, all fear thoughts and destructive emotions are at least quiescent, and the life force within the organism has free and undisturbed sway and can right all the wrongs in the body. If it were possible for a person to sleep several days uninterruptedly he would find that most of his ills would disappear in that time. Of course, such sleeping would include fasting, as no food would be taken. It

also presupposes warmth, fresh air, and relaxation.

The last three things are as important in our regular sleeping as they would be in any "therapeutic" sleeping. It is not only the loss of sleep that predisposes to colds and other diseases but the loss of the fresh air and relaxation that should go with it. Of course, some people are foolish enough to shut out the fresh air even when asleep, and many do not appreciate the necessity for relaxation. Tension in the body interferes with circulation and hence with every function, for the whole organism depends on a good supply of pure blood. Interferences with circulation are especially prone to produce colds, because where there is congestion there very soon will be inflammation unless the blood and tissues are unusually pure. Lack of sleep and relaxation, then, can be placed well to the fore as predisposing causes of colds.

The tendency of overheating of houses and overclothing of the body to cause colds depends on a number of factors. An overheated room usually is one which is filled with stale air. It probably would be possible, if plenty

of fuel were used, to have a room too hot and at the same time well ventilated; but this never occurs in actual experience. A room which is tightly closed to retain the heat is not fit to stay in for any length of time, and if, also, the temperature is too high it is doubly injurious. The excessive heat has a drying effect on the mucous membranes of the respiratory passages which renders them incapable of performing their functions properly. A cold may be produced in this case as a reaction, in order to supply extra mucus and serum to keep the membranes moist.

Another bad effect of the excessive heat is that it enervates the entire body. It acts as a sedative so that one feels sluggish and lazy and his organs work in the same manner. Digestion, assimilation, circulation, and elimination all slow down; and it does not take long under these circumstances to develop a toxic state of the body, especially since an improper diet usually is a factor, also. The temperature of a room should not be over 68 degrees Fahrenheit, and even less would be better.

The same enervating effect is produced by overclothing the body. The constant warmth

stimulates perspiration; but the excessive clothing prevents its being removed from the skin, so that one actually "stews" in stale perspiration. This soon ruins skin action. The constant protection of the skin weakens resistance so that the least breath of cooler air will produce congestion and in most cases a cold, since the body already is in a position to develop one.

The importance of air to the skin has been mentioned. It is manifest that when the body is kept swathed in heavy clothing the air cannot reach it, and one suffers the same as though the lungs had been deprived of air, though to a lesser extent. Excessive clothing also interferes with circulation, both because of pressure from the weight and because of constant dilation of the surface capillaries from the overheating. Either too little blood will reach the vital organs because too much is in the skin, or through a reaction too much may be sent to the internal organs and too little reaches the skin. In either case congestion of the mucous membranes soon occurs, and this is but one step short of a cold.

Physical factors are not the only ones, how-

ever, which predispose to colds. Mental factors often play a considerable part. Fear of any kind, including worry, self-consciousness, jealousy, etc., inhibit functions of the entire body, much the same as do prolonged cold or excessive heat. It is a well known fact that when one is suddenly startled both heart and lung action are temporarily suspended. Fear of a less acute kind but frequent or constant produces the same effects in a chronic manner. One who is constantly depressed (that is, constantly afraid that something unpleasant is going to happen) has no appetite. If he eats, his food does not digest properly; he gets a headache; he feels disinclined to exercise; he loses sleep and becomes nervous; in short, he loses vitality and resistance, develops toxemia, and is in a fine condition to have a cold or something worse. These same effects are produced by constantly thinking destructive thoughts, by wishing or planning harm to others, and by the mental attitude of always expecting the worst to happen.

A little different effect, but one which produces the same conditions in the end, is brought about by anger. Anger stimulates the body;

but it does this by the production of poisons and at the expense of a great amount of nervous energy, so that afterward one is weak, exhausted, nervous, and trembling. Frequent yielding to temper soon reduces the vitality and poisons the body so that a cold is easily developed. In fact, one may consider himself fortunate if nothing worse is produced.

The effects of these thoughts and mental attitudes are not given the attention they deserve. We are inclined to think and feel as we please without regard to the effects on *us*, though we sometimes give some attention to the effect on others. But we are the ones who are most injured by wrong thinking, and the sooner we realize it the better. Opportunities for developing a cold are many, and there is no use in adding this one to all the others.

Any habits which waste energy or poison the body will help to produce a cold. The tea and coffee habits have been mentioned, but there remains the candy, alcohol, and tobacco habits, the medicine habit, the gossiping habit, the bargain sales habit, etc. The tobacco habit is a particularly bad one in relation to colds,

coughs, and catarrh. Besides poisoning the body with nicotine and reducing the vitality, it irritates and dries up the mucous membranes of the respiratory tract so that they are made very susceptible to disease. The use of tobacco is so widespread that it is an important factor in the causation of colds and other diseases and deserves vigorous condemnation from all who value their health. To one who does not use tobacco there is no more disgusting, unpleasant, and filthy habit than that of tobacco, and while the user may not realize it, it costs him many friends and good times. There is nothing that can be said in favor of the tobacco habit, and the sooner it is stamped out the better for humanity.

The candy habit is bad because of the excess of refined sugar, the effects of which have been discussed. While the action is different, the use of candy is as pernicious as that of tobacco. It is hardly necessary to cite the bad effects of alcohol, as they are well known. Drugs have bad effects, the particular effect depending upon the nature of the drugs. Gossiping and attending bargain sales waste much energy and have bad mental effects.

There is another destructive habit that also needs special mention. This is sexual abuse in one form or another. Many people would be horrified if told that they were abusing themselves in this manner, yet they perhaps are allowing their minds to dwell on sexual matters more or less continually. Mental sexual abuse in some ways is even worse than physical abuse. Again, many people through ignorance overindulge within the bonds of marriage, feeling that the ceremony takes away all need for moderation. Any mental or physical act which causes the reproductive organs to be in a chronic state of excitement and congestion, even though slight, may be considered sexual abuse.

Such abuse may predispose to a cold and other worse conditions in a great many ways. There is no part of the body that will not be adversely affected by it. The nervous system, however, is perhaps the chief sufferer, so that the vitality soon becomes reduced, causing every function of the body to operate in an erratic manner. Nervous energy is the power that runs the body, and when this is wasted the "engine" is bound to slow down. A perfect

meal will be imperfectly digested; a good system of exercise will produce fatigue instead of stimulation; and a normal amount of sleep will be insufficient.

Too much cannot be said against this bad habit in any form. It often develops insidiously so that one is in its grip before he realizes it. Hence, anyone who values his health and who wishes to avoid colds, as well as other diseases, would do well to be constantly on guard against it. This is especially important during adolescence.

The causes of colds so far discussed are easily avoided if one is willing to exercise a little restraint and avoid them. There is another possible cause that is not always so easily avoided. This is vaccination, and its companion in iniquity, inoculation. Under certain circumstances, especially when there is an epidemic, we may be forced by law to submit to this form of poisoning, particularly in certain states and the larger cities. This is a serious state of affairs and the sooner the public awakes to the need for stopping it the better; but until then these barbarisms will have to be recognized as possible causes of colds, if in-

deed one is so fortunate as to escape a worse condition, even death. Such pollution of the blood stream strikes at the very root of life, and once it is done it takes long hard work to undo the mischief. Sometimes it is never completely undone.

My purpose in mentioning the subject here is to warn you against voluntarily submitting to such poisoning, to urge you to fight all laws which would enforce such practices, and to advise you to take prompt steps to purify the body if at any time you should be so unfortunate as to have the outrage thrust upon you. The usual measures employed for quickly removing the poison from the body consist of thorough washing and sterilization of the wound, fasting, enemas, the free drinking of water, and either cold wet sheet packs or electric cabinet or other sweat baths. I would urge you to protect your children also against this menace by every means in your power. All too often the frequent colds, adenoids, diseased tonsils, and so-called children's diseases which so frequently afflict school children are to be traced to the compulsory vaccination which took place at the time they started in

school work. Avoid vaccination and all forms of inoculation and so-called "immunization," for yourself and your loved ones, as you would death itself.

As the reader probably has discovered by this time, colds are not due to any one thing such as a draft or being out in the rain. They are a gradual development from various wrong habits of living, and unless one is careful of his habits in every way he never can be sure that he will be immune from them. At the same time, the things necessary to do in order to avoid colds are only the things necessary to do in order to be generally healthy, happy, and prosperous, so that one need not feel that he is going to a lot of extra trouble in keeping himself immune from colds. Besides, practice of right living gives immunity not only from colds, coughs, and catarrh, but from all other diseases as well.

CAUSES OF CATARRH

We now come to a consideration of the causes of catarrh. When it is remembered that catarrh is, mostly, a chronic cold it will be readily understood that it has its origin in the

same basic causes as have just been enumerated. In some cases it develops gradually from these causes, with few or no colds. Such cases usually have been making slight errors in living here and there over a considerable period of time so that there has not been at any one time such a large amount of impurities on hand as would necessitate an acute eliminative crisis, such as a cold. Occasionally catarrh may develop because the patient has been living so radically wrong that he has not had enough energy to bring about a cold. An acute condition always requires a greater expenditure of energy than does a chronic condition, because during the former the eliminative functions all are very active. Because of their greater all-round activity children are more prone to acute conditions, such as colds, while older persons incline to chronic conditions, such as catarrh.

In the great majority of cases, however, catarrh develops after a series of colds that have not received proper attention. Sometimes they are neglected entirely and at other times they are suppressed by wrong treatment —perhaps intentionally. Drugs suppress the

symptoms of a cold but do not remove the cause, so that the body must seek other means of elimination, with the result that catarrh develops. In this way the poisons are gradually eliminated unless one also suppresses the catarrh with drugs, in which case something worse develops. See chapter on "Complications."

Catarrh may be produced even in a fairly healthy individual by continual irritation of the mucous membranes from breathing air filled with dust, lint, poisonous fumes, and other foreign matter. These not only irritate the membranes but clog the respiratory passages and interfere with elimination, thus predisposing to inflammation of the mucous membranes in two ways. These things may be only exciting causes in some cases, but if the air is particularly polluted and is breathed over long periods of time such an environment may be a predisposing and actual cause of catarrh. A low vitality always makes local irritation more detrimental, but even a high vitality will in time feel the effects.

While such really foreign matter in the air may produce catarrh, the same does not apply

to an excess of moisture. Moisture is a normal ingredient of air and while it may be apparently excessive in some localities it still will not be a real cause of disease. There is a fairly widely distributed belief that a damp climate causes catarrh, but such is not the case. This idea is in a class with the exposure hypothesis of colds. It may be an exciting cause if one is otherwise in a condition to develop catarrh, but unless one has been interfering with the body in some way it will take more than a damp climate to produce catarrh. Catarrhal cases often find that removal to a moderately high dry climate eliminates all or nearly all of their symptoms; but this is mostly because such a climate is stimulating to the body as a whole, so that the elimination is improved and catarrh rendered unnecessary. Also, the individuals in such cases usually see to it that they secure more liberal quantities of the salutary air than they have been accustomed to secure at home. If they had secured as much fresh air at home they probably would never have felt the need to go to another climate. When a person finds a climate that seems to improve his troubles greatly he is inclined to

become more careless in his habits of living, feeling that the climate will protect him, with the result that his old troubles begin to return. So climate is neither a cause nor a remedy for catarrh.

Other factors which often are blamed for catarrh are nasal deformities and abnormal growths. If you have catarrh and consult a medical doctor and he finds that you have a deflected septum, nasal spurs, adenoids, polypi, or enlarged turbinate bones he will say that these are the cause of your catarrh and that you need an operation. As a matter of fact these conditions are *results* of catarrh, with the exception of the deflected septum and the nasal spurs. If a deflected or otherwise deformed septum interferes greatly with breathing it may be a contributing cause that should be corrected by operation, as this is a developmental defect, and not a disease. But even if the operation is performed, it will require other factors to bring about a real cure that is permanent. But removal of adenoids, polypi, or enlarged turbinates will have no effect on catarrh except possibly to give some temporary relief because of easier breathing. Later

the condition usually becomes worse because the real causes have not been removed and because some of the functioning tissue has been cut out and consequently replaced with scar tissue.

Start where you will, if you reason back to first causes you will find that wrong habits of living are at the bottom of colds, catarrh, and their sequelæ, the difference in symptoms being due largely to the character of the wrong habits indulged in and the variations in individual vitality and heredity; also to the treatment given for colds when they develop.

CAUSES OF COUGHS

Coughing may be associated with either colds or catarrh, as well as with various other abnormal conditions. It is only a symptom, but still it has causes the same as everything else. It may be produced voluntarily or involuntarily but the fundamental cause in all cases is nerve irritation. Generally, if we produce a cough voluntarily it is because we wish to remove some tickling or other unpleasant sensation in the throat. This irritation may arise in one of four ways—from the presence

in the throat of foreign matter, such as dust, odors, fish bones, etc.; from excessive mucus; from pressure on nerves; and from reflex irritation.

Coughing may be produced by nothing more than changes in temperature of the air passing through the respiratory passages, if the mucous membranes of these passages are sufficiently inflamed as a result of a cold or other disease manifestation. This is due to the increased sensitiveness of the mucous membranes when they are so affected. On the other hand, certain conditions, such as chronic catarrh, paralysis of the glottis, destruction of the vocal cords by ulceration, or general weakness, may lessen the ability to cough, because of decreased sensitiveness of the mucous membranes and other interferences with nerve action, or perhaps weakness or paralysis of some of the muscles concerned in coughing.

There are all kinds of foreign matter which may get into the throat and produce a cough. Almost everyone has had such an experience at one time or another. The phenomenon is so common that an extended discussion of it here is not necessary.

Coughs caused by excessive mucus usually are associated with colds, catarrh, bronchitis, asthma, tuberculosis, and related conditions. The excessive mucus produces sufficient nerve irritation to call for a cough, which in turn attempts to remove the offending mucus.

Coughs due to pressure on nerves may be associated with spinal subluxations, tumors, goitres, and aneurysm. Spinal subluxations usually are present to some extent in most all disease, either as a cause or an effect. A cold may produce enough congestion and contraction of the neck muscles to bring about a subluxation, which in turn may produce a cough if the cold already has not done so. At other times a subluxation may occur as a result of an accident and give rise to a cough without a cold, catarrh, or other inflammation; or it may result from contraction resulting from localized exposure to a draft. A tumor, particularly if it is near the throat, may press on a nerve sufficiently to cause a cough. Goitre and aneurysm, because of the swelling, may do the same thing. Goitre also affects the nerves of the body in general and may give rise to a cough in this way.

The immediate cause of the cough in most cases is either direct or indirect stimulation of the superior laryngeal nerve, which has its endings in the mucous membrane of the larynx. However, it may arise from stimulation of any of the endings of the vagus nerve which are situated in the respiratory tract. As this nerve also sends branches to the heart, liver, spleen, and stomach, abnormal conditions in these organs may produce a cough reflexly. Through other nerve connections, abnormal conditions of the uterus or occasionally cold feet may be enough to produce a cough. The mechanism of the reflex action already has been explained in the chapter on description of "Parts Affected."

In any case, however, it will be found that the basic causes of all the abnormal conditions which may produce a cough, except subluxations or the presence of foreign matter in the throat due to accident, are those same wrong habits of living which already have been enumerated as causes of colds and catarrh. Thus it will be seen that where there is a cough it is not so important to discover the exact disease which is producing it as it is to find out

where the living habits are wrong, and to correct them. Of course, it is well to know the exact condition, as some special treatment also may be required to aid in removing the effects of those improper habits; but right living is still the factor which needs the most attention.

In those cases where a cough is due to getting something accidentally in the throat, the cause is so obvious that one does not need to seek for it, and its removal is comparatively simple. There may be some cases, however, where a small object, such as a tooth brush bristle, may get into the throat without a person realizing it and a special examination may be necessary to locate the trouble.

The causes of complications of colds, coughs, and catarrh will be considered in the chapter on "Complications." These consist mainly of neglect and improper treatment. If due attention is given to the causes of the original condition, no necessity will arise for seeking causes of complications, for these will be prevented from developing, or they will disappear with the removal of the cause of the whole symptom complex.

CHAPTER IV

Symptoms of Colds, Coughs and Catarrh

THE symptoms of colds are so well known that it would seem unnecessary to mention them, but as most people are not fully informed as to the "what, how, and why" of these symptoms a discussion of them here should be worth while.

We have seen that a cold is an acute eliminative crisis developed by the body as a means of removing an accumulation of impurities. When the bowels, kidneys, lungs, and skin have proved unequal to the task of purification, that accessory organ of elimination, the mucous membrane, is called upon to assist. The blood, carrying the toxins to be eliminated, is rushed to the membranes in large quantities, an increased amount of mucus and serum is supplied by the glands of the membranes, the poisons are passed from the blood into the

mucus, and the latter is thrown onto the surface of the membranes where it can be eliminated by sneezing, coughing, and blowing the nose. The nose is chosen as the site of the inflammation because it is very near to the outside surface of the body and discharges can be readily removed from it.

The signs of a cold may vary all the way from a mere "sniffling" in the nose to generalized symptoms very closely resembling those of influenza. As a rule the trouble begins with a burning in the nose accompanied by sneezing. The burning is due to the increased supply of blood in the parts, which produces a sort of local fever and dries the membranes. This dryness and burning irritate the nerves and produce the sneeze. In order to counteract the dryness and to supply a medium for the solution of the toxins an increased flow of mucus and serum is provided. Hence, the next symptom is a flow of thin, watery matter from the nose. Further sneezing helps to remove this. If the cold is not now promptly and properly treated the symptoms proceed as follows:

The thin mucus thickens and becomes yel-

low and pus-like as it is further filled with toxins. In some cases it may become greenish. A blackish color usually is due to dust and dirt which have been inhaled. This thick mucus interferes with breathing through the nose, and this difficulty is further increased by a swelling of the mucous membranes resulting from the congestion of blood and increased activity of the tissues. Even the outside of the nose may become red from the same cause. The upper lip frequently becomes chapped and covered with "cold sores" from the acrid dripping from the nose and the general fever or gastric irritation. If breathing through the mouth becomes necessary the mucous membranes in the mouth and in the throat become dry, and the cold is inclined to spread to them—there will be coughing and elimination of phlegm from the throat, perhaps also a sore throat. Or the cold may spread upward and affect the eyes so that they become red, sore and swollen, and discharge either an increased amount of tears or an actual inflammatory exudate.

The extreme congestion in the nasal passages often produces a headache at the root of

the nose and a general full feeling through the head, sometimes with ringing in the ears. There may be even a slight fever and feeling of general prostration. (A general chilliness or an actual chill may begin these more severe attacks of colds.) As a rule there is no appetite at this stage, which is a clear indication of the need of fasting. Sometimes, at the beginning of the cold, the appetite may be increased, but this is not genuine hunger; and if the fast is started at this stage the cold will not develop further. Due to the difficulty in the breathing, the headache, and the nasal discharges, sleep is interfered with and the nerves become considerably irritated. A person with a severe cold is seldom if ever in a good humor. As a rule he has a full-fledged grouch. This only further increases the trouble, however, and should be avoided. (See paragraphs on mental causes of colds.)

As the cold begins to abate the discharge lessens, the nose opens up so that breathing becomes more free, the head feels clearer, and little by little all the symptoms subside. They should disappear entirely under proper treatment, but otherwise they reduce only to a

chronic state and stay there. In some cases the cold may improve and then develop again immediately or shortly afterward, but only if the causes have not been removed. A cold usually lasts about a week if it has had a chance to become well developed before treatment is adopted, but it may extend to three weeks or even a month or more if neglected, or it may come and go for months. In the latter case catarrh practically always develops. Properly treated, colds usually subside within three or four days. They cannot be made to stop abruptly, except by drug suppression, because they do not develop until a good house-cleaning is needed.

SYMPTOMS OF CATARRH

The symptoms of catarrh are quite similar to those of a cold except that they are not so severe, and the general symptoms, such as headache and malaise, are not present. If the catarrh continues long enough, however, there usually are loss of weight and strength, and a considerable digestive disturbance, in addition to the local symptoms.

The local symptoms are divided into two

varieties—hypertrophic and atrophic. In the former the mucous membrane becomes chronically swollen and there may be even an overgrowth of tissue. In extreme cases the turbinate bones themselves may become enlarged. Adenoids are common. All this partially occludes the nose so that breathing becomes difficult. Though the discharge is slight, it is thick, and with the thickening of the membrane breathing becomes still more difficult, there is constant snuffling and sniffing, and mouth breathing frequently is resorted to. Then there is a coated tongue and foul breath. The thick mucus often has an offensive odor and it dries into crusts over night, which have to be picked out in the morning. Picking the nose through the day also is common. This is very largely a habit, however, and should be avoided. When the naso-pharynx is affected the mucus drops down into the throat and is swallowed, hawked up, or coughed up. If swallowed it usually disturbs the stomach functions sooner or later.

The atrophic variety is associated with an atrophy or shrinking of the membrane instead of an overgrowth and swelling. This form

often is called "dry catarrh." The discharge is very slight and even may be absent. Due to the slow oozing of the mucus, crusts form readily and are common at all times. Picking them off frequently injures the mucous membrane and ulcers form, or these may develop anyhow. The nose feels dry and there is considerable burning and irritation. When the throat is affected coughing is very common and rather distressing, since the cough is unproductive and gives little relief. This usually is a more chronic and more difficult condition to remedy than the hypertrophic variety.

In mild cases of catarrh there may be neither atrophy nor hypertrophy but merely a sort of slight continuous cold. But no matter what the particular symptoms it is well to remember that the basic causes are the same.

COUGH SYMPTOMS

A cough, being a symptom in itself, hardly can be said to have symptoms, but there are different varieties, even though the method of coughing is always the same. The actual mechanism of the cough is as follows: A more or less deep inspiration is taken and the glottis

(the chink between the vocal cords and that part of the larynx concerned in speaking) is closed so that no air can escape and considerable pressure is developed within the lungs. This pressure usually is further increased by contraction of the walls of the bronchial tubes. Then the glottis is opened and a sudden forcible expiration made, which, if successful, forces the objectionable substance, whatever it may be, into the mouth. It is prevented from going up the nose by the uvula and soft palate. From the mouth it is easily ejected. This process is repeated a number of times if necessary, depending on the position, character, and amount of the material to be eliminated.

These same factors determine the character of the cough. When the secretions are rather fluid and located in the trachea or bronchial tubes we have a moist cough. When this occurs in paroxysms it usually indicates asthma. This also may produce a wheezing cough, and so may chronic bronchitis. A dry cough is one where the secretions are very slight and tenacious or else absent. Chronic atrophic catarrh or simply breathing dusty air produce such a cough. A dry cough, becoming violent,

is quite characteristic of whooping cough.

A hollow barking cough often indicates larnygitis; a hoarse cough, the beginning of a generalized cold; a ringing cough, becoming muffled, is common in croup; a raw cough indicates ulceration, partial destruction, or displacement of the vocal cords; a hollow, empty cough may occur in tuberculosis; and a slight cough generally is produced by catarrh of the upper air passages. However, the character of the cough cannot always be depended upon to indicate exactly the condition which is present, and other symptoms should be considered in arriving at a diagnosis.

Symptoms as a whole serve the double purpose of warning the patient that he has not been treating his body rightly and of helping to remove the effects of his folly. They also help to indicate the chief causes of the trouble and thus make it easier to avoid them. Symptoms are to a very considerable extent friends, and we should neither fight nor fear them. Simply accept the warning and admonition that they give, do all in your power to remove their causes, and you will never have need to give the symptoms any further thought.

CHAPTER V

Treatment of Colds

I HAVE stated that natural methods of treatment consist to a large extent in the removal of causes. This means that the measures employed are not so much treatment as they are changes in the habits of living. Treatment implies temporary measures which are used only in an emergency, being discarded as soon as the signs of trouble have disappeared; whereas, right living is something which must be adhered to permanently if one desires to maintain his regained health, or, in fact, to recover it. It is manifestly foolish to live in such a manner that disease is removed, and then return to the old disease-producing habits as soon as health is restored.

Yet this is just what many people do. They may be told that they need to take certain exercises, practice deep breathing, employ cold baths, and avoid certain imitation foods,

in order to overcome their disease. This they may do, and then when they feel all right again, they cannot understand why the doctor insists that they continue to do these things. They are so accustomed to taking medicine for their ills until the symptoms are suppressed and then discontinuing it until the body produces other symptoms, that they look upon exercise, breathing, bathing, etc., as so much "medicine" to be used in the same way. But I want my readers to clearly understand that they are sick because of the manner in which they have been living and the only way they can get well and stay well is to right about face and follow closely the straight and narrow path of right living. And though the road be straight, narrow, and many times difficult, the goal at the end is more wonderful in every way than that reached by the broad and easy path of "do as you please."

Since the causes of all diseases are very similar, and natural methods of treatment consist largely in the removal of causes, it follows that the treatment of all diseases by these methods must be quite similar. This already has been explained in the case of colds, coughs,

and catarrh in the chapter on "Correlation." There is a difference, however, in the treatment of acute and chronic diseases.

In the acute disease all the functions of the body are working very actively in an effort to throw off the accumulated impurities, so that it is not so necessary to stimulate the body to increased activity as it is to avoid giving it any unnecessary work to do, and to conserve energy. In a chronic disease, on the other hand, all the functions of the body are working sluggishly, and there is need to stimulate them, *naturally*, to greater activity and to build vitality. Of course, there are various stages in both acute and chronic diseases and some conditions are on the border line between the two, so that it is not always possible to lay down hard and fast rules; but in the majority of cases it will be found that the important points in treatment are as described in the two sentences beginning this paragraph.

Because of this difference in acute and chronic diseases I am considering the treatment of colds and catarrh in separate chapters; but because of the close relationship between the two conditions it would be well for every

patient to give attention to both chapters even though he have only one of the abnormalities. I am also devoting a separate chapter to the cough, so that it can be added to the treatment of either the cold or catarrh or used separately in those cases where it is not connected with either of these diseases.

All acute diseases are more easily and quickly remedied than chronic ones. This is not only because the body is making more strenuous efforts to throw off the accumulated poisons in an acute disease, but also because the acute crisis is the first to appear; this means that the body has not been so long abused nor so filled with impurities as is the case when a chronic disease has had the time and opportunity to develop. Hence, all acute disease should receive prompt and proper attention, because when the causes have been removed there is that much less reason for a chronic disease to develop. Continual suppression of acute diseases is one of the chief reasons for the increase in chronic ones. But such suppression only puts off the day of reckoning when the debt to Nature must be paid "to the uttermost farthing." The longer the period

of abuse the greater the debt, and the longer and more difficult will be the journey back to health. In some cases it may be so difficult that the patient wearies and succumbs.

Elimination is the keynote in the treatment of acute diseases and, therefore, in the treatment of colds. All the symptoms show that the body is making every effort to purify itself; and the more you can help, without requiring too great an expenditure of energy of the body, the better. After the disease has been eliminated the important thing is to build vitality in order to restore the lost energy and to develop resistance against the adversities of environment.

When these facts are kept in mind it readily will be seen how foolish are the orthodox methods of treating a cold. One of the oldest treatment maxims is "Feed a cold and starve a fever." The latter part is all right, but if you try to feed a cold you will soon have a fever to starve. If you stuff the cold, you may make it worse, possibly bring on a fever. By starving a cold in the first place it must soon disappear and there will be no likelihood of a fever developing at all. How can you

expect to assist the body in elimination when you are keeping it busy all the time digesting and assimilating food, or rather in passing out the undigested foods with the least damage possible? For food will not be properly digested, if it is digested at all, during an acute disease. At such a time the digestive juices do not flow in proper quantity or quality, and the motor mechanism is practically at a standstill. Eating when the body is not in condition to handle food is overeating, and overeating has been cited as one of the chief causes of colds. To continue deliberately a cause as a means of eliminating the effect is the height of stupidity. But most people do not think when they are ill; they simply take other people's advice, which may or may not be good —usually not. No matter what the source of the advice, it always should be subjected to the test of your own reason. When so tested natural methods of healing never will be found wanting—providing, of course, that you have a good foundation for reasoning along rational lines in regard to disease.

Taking drugs for a cold is even worse than the feeding idea. This not only adds further

poisons to the body at a time when purification is the prime necessity, but at the same time, by inhibiting the nervous system, renders the organism less able to eliminate these poisons. Discouraged and half dead, the body quits its purifying efforts for a time, the symptoms disappear, and the patient thinks he is "cured." In reality he is worse off than at first, but it is hard to convince him of it until later when he finds himself developing catarrh or something worse. Fortunately, most people do not consider a cold serious enough to require a "regular" doctor; they simply visit the corner druggist who gives them a laxative, which, with the eliminative efforts already being made by the body, usually is sufficient to give temporary relief. Bad as laxatives are, they are not so bad as some other things that might be taken. If the druggist gives aspirin or quinine, or both, the cold sufferer might just as well have gone to the most liberal drug-dispensing doctor in town.

Probably the next treatment, as soon as someone can find a specific germ on which to blame the cold, will be serums and "immuniza-

tion." This will endure for a while (as long as the credulity of the people will tolerate it), be succeeded by another treatment, and so on, *ad infinitum*. Meanwhile, colds will continue as numerous as ever and perhaps more and more serious, as the causes will not have been removed.

CHLORINE GAS TREATMENT

One treatment devised by the medical profession—the chlorine gas treatment—seems to have some virtue in lessening symptoms. This treatment consists of the inhalation of small quantities of chlorine gas mixed with air. A specially constructed chamber, in which the patient sits, is used, the gas being admitted very slowly. The length of a treatment usually is half an hour, but varies in individual cases. Chlorine is a poison and hence helps to kill germs; and while germs are not a cause of colds they sometimes help to perpetuate or intensify the symptoms, particularly in those of low vitality. The quantity of chlorine is small enough to produce no noticeable bad effects on the patient but sufficient to have some germicidal action. Of course, germs grow

rapidly, and even though it were possible to kill all of them in one or several chlorine treatments, which is unlikely, they would soon grow again as long as there were poisons present for them to feed upon. The treatment is not, therefore, a substitute for natural methods of treatment, but if used at all should be considered only as an accessory.

A few persons who have a naturally high vitality may be able to throw off a cold with no assistance but from the chlorine treatment, but the majority will do well not to depend on it alone. In fact, if proper treatment of a rational character is adopted promptly a cold will be aborted and no necessity for further assistance will be felt. Even in stubborn and advanced cases natural methods of treatment are fully adequate, the chlorine being merely a method of securing some additional relief from symptoms. In all cases it is well to remember that unless the fundamental causes enumerated in this book are removed a genuine *cure* has not been attained—and a genuine cure consists of nothing more than a return to normal by removal of impeding factors; there is nothing magic or mysterious about

it, as most people seem to consider "cures."

TERPEZONE TREATMENT

Another very effective treatment that recently has been brought to my attention is Terpezone. As the name implies, this is a combination of turpentine and ozone. A special apparatus, involving years of study and experimenting, now is perfected for making a vapor from refined turpentine (sap of the pine tree) and combining it with ozone, which it produces also during the electrochemical process. The vapor is moistureless and heatless, and non-irritating to the most delicate membranes, even when these are inflamed.

Ozone is a healthful, natural ingredient of the air; but deforestation, land cultivation, and the erection of homes, towns, and factories, with their smoke-belching and gas-exuding chimneys, have lessened the presence of ozone until even a trace cannot be found in the air above thickly populated districts. In the mountain and forest regions the air is laden with both ozone and the emanations from the pines, and these are about the only localities

where ozone is found today. It doubtless is largely due to the presence of these that the climate of pine forest regions is so favorable for catarrh, tuberculosis, anemia, and many other disorders, particularly those involving the respiratory passages and the quality of the blood from the standpoint of cells and hemoglobin.

When terpezone is inhaled there is brought into direct contact with the respiratory mucous membranes a rich supply of a very soothing vapor that contains an oxidizing agent, in ozone, that destroys all bacteria within a few minutes. It is the one substance, except sunlight, that kills germs and yet not only does not destroy the cells but increases their functioning ability. The ozone is absorbed by the lungs, in small amounts necessarily but in potent amounts, and as it comes in contact with toxic material it gives off a molecule of oxygen that destroys the toxins. This is a treatment that, frequently, greatly relieves or cures a cold in one treatment of an hour or two—not by suppressing it, but by destroying the toxins responsible for the cold. It is a treatment by elements we naturally would

have but are denied by our own progress in civilization. Unfortunately, this apparatus is not as yet made in large numbers, but I understand that before long there will be available an apparatus for every doctor or community.

The natural and rational treatment of colds is the same now as it always has been and always will be. It varies only with the stage of the trouble and not with the styles in treatment, for it is based on sound premises, not on hypotheses or public demand.

Colds might be divided into three stages—coming on, developed, and becoming complicated. In the coming-on stage a few simple measures for assisting the elimination are all that will be required to produce results, though, of course, there must be a reform in the habits of living in order to prevent recurrence. In this first stage the measures that may be employed with benefit are about as follows:

COLD COMING ON

A long walk should be taken, together with deep breathing. The length of this walk may be anywhere from five to fifteen miles, depending upon one's general condition and the

amount of time available. If not accustomed to doing much walking five miles probably would be all that could be taken, and the most comfortable shoes possessed should be worn in order to spare the feet. The route of the walk should be through the district with the purest air available, and for the ordinary person three miles an hour would be a good rate of progression. One should make a special effort to breathe more deeply than usual, but not so deeply as to produce strain or dizziness or fatigue of the respiratory apparatus. Rhythmic breathing is very satisfactory. This calls for inhalation for a certain number of steps and then exhalation for a certain number, after which there is a brief pause. The number of steps can be regulated according to the individual requirements, but most people can use the rate of six, four, and two—inhaling for six steps, exhaling for four, pausing for two. Some may find it easier to inhale and exhale for the same number of steps. After sufficient practice this method of breathing will become almost automatic, requiring little or no conscious attention to counting.

Another very excellent breathing and walk-

ing exercise is to take one quick half-breath with the first step, two quick quarter-breaths with the second step (thus completing a full intake of air); then exhale during the next two steps, this method to be continued throughout the walk or for as long as desired and then later repeated. This walk may be taken at any time during the day, but preferably in the afternoon.

Eat nothing but acid fruit (oranges or grapefruit being best) for the evening meal, then before retiring take an enema and a hot bath. The hot bath may last for five or six minutes at a temperature of 105 to 108 degrees, after which the body should be sponged off with cold water and thoroughly dried. It is well to have a cold wet towel about the head while in the bath. Retire early and be sure to have plenty of fresh air in the bedroom, or better yet, sleep out of doors.

By next morning the cold will be gone in most cases, but it will be well to eat lightly that day, to take an air-bath, and if possible a sun-bath, and to continue to secure plenty of fresh air. Thereafter give more attention to right living, especially in regard to diet,

and if you wish to be on the safe side it would be well to take a short fast. Even though it may not be absolutely necessary, it is always of advantage to fast for a few days occasionally this is a practice that even the healthy person can adhere to with benefit.

COLD WELL DEVELOPED

If the cold has reached the stage where it is well developed before treatment is adopted, the fast or an acid-fruit diet will be very necessary. Many cases will find that an acid-fruit diet will be just as good as the fast, since it has a specially alkalinizing effect on the body, and most persons who have a cold are in a condition of lessened alkalinity.

The best treatment for a cold in this stage is somewhat as follows: A diet of nothing but raw acid fruit, adopted as soon as the treatment is decided upon, and continued until the symptoms all have subsided. Oranges are the best to use, but grapefruit, grapes, unsweetened grape juice, or peaches may be taken. The quantity usually should be limited to six oranges a day or a similar amount of other fruit. The fruit may be taken in three meals

or may be consumed one piece at a time at equal intervals throughout the day. Severe cases would do well to take the juice of the fruit only, rejecting the pulp. There should be taken from three to four quarts of water a day, at any time and in whatever manner is most convenient. Either hot or cold water or some of each may be used, according to the desire. In cold weather it is as well to use at least one quart of hot water daily. The water may be flavored with a little lemon juice if desired.

An enema of one to two quarts of warm water also should be taken daily, preferably in the evening. The water must be injected slowly from an ordinary fountain syringe, but it is not retained more than three minutes and need not necessarily be retained at all after the required quantity has been injected. Any one of three positions may be used—the knee-chest, on the right side, or on the back with hips elevated on a pillow. For those who do not know what the knee-chest position is, I will explain that the body is supported by the knees and elbows with the chest almost touching the floor and the hips elevated, the thighs

vertical, the trunk sloping downward from the hips to the head. This posture permits the water to flow in gently by gravity and also aids the patient in relaxing the abdominal muscles. This is the preferred position in most cases, but if any special difficulty is experienced in holding the water one can try lying on the side or on the back as desired. It is not necessary to use anything in the water, but in cases where constipation is severe and there is difficulty in expelling the water a little salt (a level tablespoonful to each quart of water), or some soapsuds may be added if desired.

In the evening of the first day of treatment the hot bath and enema should be taken the same as in the case of a cold which is just beginning. At least ten hours of sleep should be secured that night, and the bedroom should be ventilated to the fullest extent possible. If able to sleep outdoors so much the better. Every day during the fruit diet and for at least a week thereafter arrangements should be made to secure as many hours of sleep as circumstances will permit. If unable to sleep all the time when in bed, be sure to relax per-

fectly, mind and body, as this will be the next best thing to sleep.

The difficulty in breathing when lying down, which is a frequent symptom of a heavy cold, may be relieved by the use of a heating compress to the neck, and this can be worn nightly to advantage in any case, as it reduces inflammation and helps to induce sleep. This pack is made of two or three thicknesses of muslin or linen cloth about two inches wide, which is saturated in cold water, thoroughly wrung out, and applied closely round the neck. It is covered with a slightly wider piece of heavy woolen flannel or woolen cloth, such as a piece of old blanket. This is applied as snugly as possible in order to keep the air from the wet cloth, but it should not be so tight as to be uncomfortable or to interfere with circulation. When properly covered, the pack soon becomes warm and usually dries during the night.

When the orange diet is used it is seldom necessary to take more than the one hot bath. A daily air, dry-friction, and sun-bath, followed by a cold bath, should be used. In taking an air-bath it is important to maintain warmth,

but there should be no difficulty about this when dry friction is applied. If the sunlight also can be procured this will add to the warmth, and in the summer may make it so hot that an occasional sponge or shower of cold water will be necessary. In taking a sun-bath one should start with three to five minutes' exposure of the nude body and increase three to five minutes a day up to several hours. The gradual application is necessary to avoid burning. A good way to start is "piecemeal"—the legs the first day, legs and thighs the second day, including the hips next, then the abdomen, finally the trunk above the waist. The sun should not pass through glass, and if taken indoors the window should be partly open. The best way indoors is to lower fully the top sash of the window. A cold bath always should follow the sun-bath. Even half an hour's sun-bath is a great help. If the natural sunlight cannot be procured, artificial sunlight from the mercury-quartz lamp may be employed. If neither is available, the air-bath alone will be of much value, but in this case it should be continued an hour or more. In the winter it

will have to be taken in a heated room as, of course, no clothes are worn during an air-bath. The dry-friction bath need not occupy more than ten minutes, usually less. The friction may be applied with the bare hand, a coarse towel, a bath mitt, or a soft brush. Start gradually and make the friction more vigorous as the skin becomes toughened.

Exercise is best confined to walking during the fruit diet, although if one is quite vigorous and accustomed to exercise a workout sufficent to produce perspiration on the first and second days of treatment would be of advantage and would render it unnecessary to take a hot bath. When walking, rhythmic breathing should be practiced as already described. If unable to do much walking for any reason deep breathing is all the more important. It should be practiced for two or three minutes whenever convenient during the day, always doing it in the fresh air. Any breathing exercises will be of value, but I give a few here as examples.

1. Exhale fully; then inhale as you raise arms forward upward, high overhead, hold the breath for two seconds, then

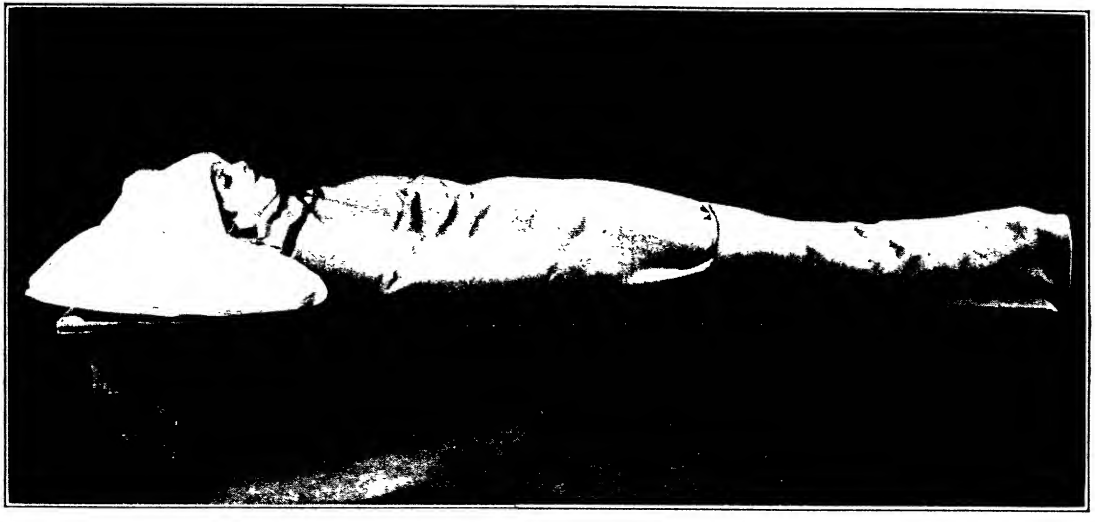
lower the arms sidewise as you exhale. Repeat.

2. Drop the head forward and clasp hands behind it. Inhale as you bring the head and elbows well backward, exhale as you relax forward again. Repeat.
3. Place the tips of the fingers on the root of the nose between the eyebrows; then spread the nostrils and inhale rapidly and forcibly. Exhale slowly and evenly, letting the arms drop to the sides. Repeat.
4. Inhale a full breath; then exhale slowly as you hum the sound "m." Repeat several times.
5. Inhale in a series of sniffs; then exhale the same way. Repeat a few times.
6. Extend arms forward shoulder high as you exhale, then draw the elbows as far back as possible as you inhale, and repeat.
7. Draw the shoulders forward as you exhale, then roll them upward, backward, and downward as you inhale, and repeat.

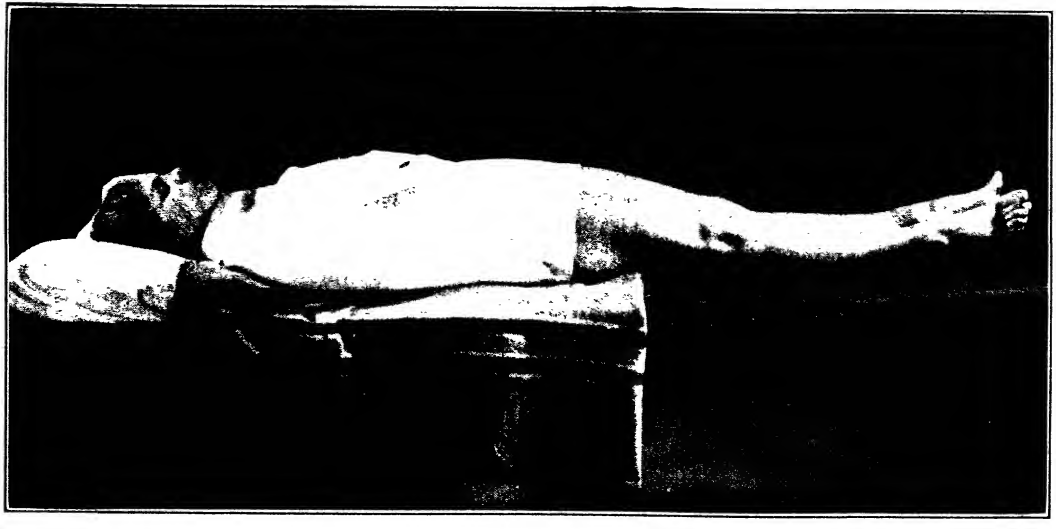
8. Close one nostril with the finger and inhale and exhale through the other. Same with the other nostril. Repeat a few times.
9. Inhale a full breath, hold it one second as you bend the body to the left, then exhale as you return to upright position. Same, bending the body to the right. Repeat.
10. Inhale a full breath slowly, then open the mouth wide and exhale suddenly and completely. Repeat three or four times.

After the symptoms of the cold have subsided and it is time to break the orange diet or fast, the milk diet will be found the best to use in most cases. This will enable one rapidly to regain the weight lost and to build up the vitality. It also is the easiest method of breaking a fast or fruit diet. Fresh raw milk should be used, though pasteurized may be taken if the fresh milk cannot be procured. If a complete fast has been observed the orange diet should be taken for one or two days before starting the milk. In any case, on the first day the quantity of milk is to be limited to six

For one with good vitality a simple modified Wet-Sheet Pack is beneficial. The sheet should be placed on a dry blanket after being wrung from cold water. The arms are held overhead while one side of the sheet is wrapped about the trunk and one leg. The arms are lowered close to the body, the legs drawn close together, and the other loose side of the sheet wrapped closely about the entire body. The blanket then is drawn snugly about one side, then the other. Tuck sheet and blanket in snugly at the shoulders.



Illustrating either completed Wet-Sheet or Blanket Pack. If the blanket pack is used, wring a blanket from hot water and place it over three or four dry blankets. Quickly wrap the patient in this sheet, as described for the wet-sheet pack, then wrap the dry blankets one by one, fitting at the neck. A cold wet towel turban should be on the head. Hot water bottles may be used with this or with sheet pack if needed.



Illustrating the Trunk Pack. This is applied in the same manner as the genuine wet-sheet pack is applied except that the sheet used extends no lower than the prominence of the hips: and even if it stops at the waist but is tucked in snugly at the neck it will constitute an effective pack for colds, especially chest colds. Notice that the dry blanket completely covers the wet sheet when applied.

The Throat Pack. Suitable material, such as old sheeting, is wrung from cold water and wrapped closely about throat, then covered with wider dry flannel. Many times it is more effective to have the cold turban also, which usually should extend to the nape of the neck. Both may be worn while one is up and about the house.

glasses, taking it a glass at a time every two hours. The next day twelve glasses can be taken at one-hour intervals. After that the quantity is to be increased two glasses a day up to five or six quarts. The milk should be sipped slowly, and it may be warmed slightly if desired. In no case is it taken ice cold. Two or three oranges may be used each day and if the milk is pasteurized at least one orange to each quart should be taken.

Enemas, which should have been used while on the fruit diet, are to be continued daily until the bowels move naturally, but the quantity and temperature of the water is to be gradually reduced until only a cup of cool water is being injected. If normal movements are delayed longer than a week the enema may be skipped for one day and then used only on alternate days. This gives the bowels a further incentive to move of themselves.

The milk diet may be continued for from two to four weeks, or even longer if desired. If unable to arrange to secure the milk at proper intervals for any length of time, however, a combination diet of milk and fruit for two meals and one meal of natural solid foods

may be started after four or five days on milk. In this case the milk and fruit meals should be composed of two or three glasses of milk with fruit as desired, using acid fruit at one meal and sweet fruit at the other. Care is to be observed not to eat too much sweet fruit; also not to overeat at the meal of solid foods. This meal of solid food should consist of raw and cooked vegetables, whole wheat bread and butter, and a light dessert. Vegetable soup may be added when desired, and eggs, cottage cheese, or a little fish might be added three or four times a week.

After the milk diet or an equal period on the combination diet, a normal one of fruits, vegetables, whole grain cereals, and dairy products is resumed.

A few days after breaking the fast or fruit diet general exercise should be started gradually, using any of those given in the chapter on "Treatment of Catarrh" or any others that may appeal to one. Since the purpose of these exercises is to stimulate the circulation and elimination and build strength and vitality, it is not so important just which movements are taken as it is that the muscles be used suffi-

ciently to bring about the desired physiological benefits. In all cases, however, the rule should be observed to begin lightly, increase gradually and regularly, and keep at it persistently. While on a milk diet the exercises are best taken in the early morning before starting milk for the day.

All general health-building measures should be observed, along with proper diet and exercise, in order to preclude any probability of a recurrence of the cold.

There is one special form of exercise that has been found very helpful for colds. This was described by Dr. Thomas Clarke Hinkle in an article in *Physical Culture Magazine.* The idea of the exercise is to increase forcibly the circulation through the nasal passages and thereby cure the cold with one's own blood. Of course, the blood has to do this anyhow, as it is the medium which carries away the waste matter and brings up the new material for replacing worn-out cells; but this special exercise hastens the process.

The exercise is performed as follows: From a sitting position in a chair, lean well forward so that the head is down between the knees;

then press downward with the abdominal muscles as though straining at stool; relax, and repeat several times. Then raise the body to normal sitting position, rest a moment, and repeat the exercise. This can be done whenever convenient during the day. While leaning forward, and particularly while pressing with the abdominal muscles, one will have a very full feeling in the head, but after returning to upright position the nose and head will feel considerably clearer. The full feeling is due to the increased flow of blood to the head, the clear feeling to the relief of the congestion. After a number of repetitions, the increased circulation will have brought about considerable healing. It is not advisable, however, to depend on this method alone for a cure, as it does not go deeply enough. It is a true "treatment," as it does not greatly affect the fundamental causes of the abnormality. Nevertheless, it will be found to be a valuable assistant and may be taken while fasting, fruit dieting, or eating.

COLD BECOMING COMPLICATED

If for any reason the cold has been allowed

to progress to the point where it shows signs of becoming complicated, more strict treatment will have to be instituted. The absolute fast should be adopted, except that a little orange, lemon, or grapefruit juice in water may be used if especially craved. More rest should be secured, and if the fever is noticeable it would be best to go to bed. In a low fever a hot-blanket pack may be used effectively, and in a high fever a cold-sheet pack.

The hot-blanket pack consists merely in wrapping the body in hot blankets, dry ones being the easiest handled. If no facilities are available for heating the blankets except by hot water, the hot wet blanket is to be covered with several layers of dry blankets, with hot water bottles placed about the patient in order to maintain the heat. A cold wet cloth should be placed on or around the head. When free perspiration has occurred the patient should be uncovered, sponged with cool water, thoroughly dried, and again covered with sufficient bedclothing to avoid chilling. Care must be observed to avoid chilling when removing the hot blankets. The room should be warm, and it may be necessary to uncover

only part of the body at a time, sponging and drying that part before uncovering any more of the body. This usually is safest.

If necessary to apply a cold wet-sheet pack, proceed as follows: Place several blankets on the bed and the wet sheet on top of these. The patient is then placed on the sheet, with the top at about the base of his skull, and is rapidly covered. First bring the wet sheet over one arm, over the body, between the body and the other arm, and over one leg, tucking it in close to the skin. Then bring the other side of the sheet completely over the body and legs and tuck in well. The legs should be close together and the arms close to the body at the finish of the sheet wrapping, though at the start the legs are slightly separated and the arms away from the body. The sheet is fitted snugly about the neck by folding, and the lower end is folded up over the feet. The blankets are wrapped closely round the body over the sheet, mummy-like; and if the patient does not feel warm in a minute or so hot water bottles should be placed at the feet and sides. A cold wet towel is placed on the forehead or about the head. This pack is to be left on until

perspiration has been produced; when it is removed the patient is covered with the dry blanket, and sponged, a part at a time, with cool water.

Both the hot-blanket and the cold-sheet packs are powerful eliminators, and together with the fast, water drinking, and enemas should promptly check the progress of the disease.

Aside from the measures mentioned, the treatment is the same as described in the previous section for a cold that has become well developed.

One never should allow a cold to develop beyond the initial stage, however, as long as he possesses the knowledge of how to remove it. This does not mean that the cold should be suppressed, but that the causes should be promptly removed and the body assisted in its work of elimination. When taken in the first stage the treatment is very simple and effective and need not inconvenience one to any great extent. It is only when one has failed to pay his debt to Nature promptly that she exacts usury in the form of additional suffering and additional self-denial in treatment.

So if you have a cold start now to treat it; if you have none as yet go back and read the first part of this chapter again and resolve to use the measures there described and avoid getting a cold, and the unnecessary trouble, expense, and disappointment associated with it.

CHAPTER VI

Treatment of Coughs

WHEN passing a drug store the other day I saw a large sign in the window reading "Stop that cough!—25 cents." Sounds easy, doesn't it? And many people believe that it is just that easy to stop a cough as the advertising sign indicated. They think that for the price of twenty-five cents and the time it takes to swallow a few spoonfuls of some concoction or other or dissolve a few pellets on the tongue they can purchase freedom from the cough that is irritating and annoying them. Perhaps they can for a time, but it soon returns, or something worse develops. The advertised methods of treatment are so easy that they do not require the patient to do any thinking, so he never thinks whether any of the treatments will do more harm than the cough, whether the results will be permanent, why he has the cough, or any such troublesome

questions as these. If anyone were to tell him that he was laying the foundation for pneumonia, asthma, or tuberculosis, he would refuse to believe it.

I cannot impress upon you too strongly the importance of avoiding drug suppression of a cough. The cough is there for a purpose, a necessary purpose, and to prevent the cough without removing the cause is to court disaster. Suppose you accidentally caught a fish bone in your throat and started to cough. Would you take medicine for it? Would you try to suppress the cough? No, you would cough all the harder and try other measures as well for removing the cause. There is no more reason or warrant for suppressing a cough due to excess mucus, inflammation, nerve irritation, etc., wtihout removing the cause, than there is for suppressing one due to an obstruction in the throat without removing the obstruction. The immediate bad effects may not be so apparent, but they are there just the same.

If, however, one is employing all possible measures for removing the cause of the trouble but even more prompt removal of the cough

seems necessary because of complications, there are a few occasions when suppression even by drugs may to some extent be warranted. I have hesitated to mention this, because where allowed an inch many will take a mile; but as most people who are sufficiently interested in natural methods to read a book on the subject are at least beginning to think, I believe that I can cover this phase of the subject without being misunderstood. Remember, however, that one must be taking steps to remove the causes before *any* suppression is allowed, and *none* should be used in any case except as a last resort.

One may at times develop a truly nervous cough; that is, one which is caused, aggravated, or perpetuated, by a general nervous condition. There may be some slight inflammation in the throat but the cough is wholly unproductive and really serves no useful purpose. Its continuance may even be due to habit. In this case, partial suppression may be justified for a time. Will power should be sufficient when other proper measures are being employed to allay the nervousness. Resolve that you will not cough without reason,

and if you feel yourself starting make an effort to control it. Deep breathing and autosuggestion will be helpful here. The latter may be employed to advantage in any case. Various soothing substances, such as will be described hereafter, may be swallowed and should help to some extent. The real suppression, however, depends mostly on will power, and relaxation for relieving the nervous tension. In extreme cases, where complications make it imperative to avoid the strain of coughing, temporary use of certain drugs may be a last resort, but opiates should be avoided.

A fairly frequent reason for partly suppressing a cough is pleurisy. In this condition the pleura is so inflamed that any extra motion irritates it, adds to the pain, and interferes with healing. Hence, the less friction between the two layers of the pleura the better, and this is least in quiet, normal breathing. When coughing, breathing is deep and the movement of the pleura extensive, hence the reason for trying to lessen it. The patient will, himself, make every effort to suppress his coughing because of the pain which it causes him. Further protection will be secured by strapping

the chest with adhesive plaster so that the ribs on the affected side cannot lift very high, particularly the lower ribs. Inhibition of the spinal centers may be of assistance in further reducing the cough. This should be done by a therapist who understands such treatment. In acute pleurisy no further measures for suppression should be employed, as it is necessary to eliminate the excess mucus. In any case, proper treatment will soon so lessen the symptoms that the cough will cause no trouble. In chronic pleurisy where there is little extra mucus mild drug suppression may be employed for a time if all other measures fail.

A somewhat similar condition to pleurisy is peritonitis, which is inflammation of the serous lining membrane of the abdomen. As there is considerable movement of this membrane when coughing, it may be necessary to use some suppression for the same reasons as in pleurisy.

About the only other condition where partial suppression may be required is in tuberculosis, either pulmonary or laryngeal. Proper treatment will, in the great majority

of cases, keep the cough within bounds; but in very severe cases where the lung involvement is extensive, the patient weak, and the cough severe, some damage may be done to the lung tissue, and scars which have formed may be torn by the severe wrenching. Even then, the use of fresh air and rest usually is sufficient, but some actual suppression occasionally may seem necessary for a time. The patient should endeavor to suppress the more severe coughing, and inhibition may be tried. Strapping the chest, as in pleurisy, also will be of assistance.

Tuberculosis of the larynx is a frequent justification for cough suppression. Coughing is a severe strain on the larynx, and the worse the larynx is and the less able it is to stand such strain the more likely will a severe cough be present. This aggravates edema of the larynx, which is a dangerous condition. Every effort should be made to avoid suppression; but if it seems necessary, and voluntary suppression fails, try local anesthetics, such as orthoform or anesthesin. By lessening the sensibility of the laryngeal mucous membranes much coughing may be prevented. Occasion-

ally some drug suppression may seem necessary. The use of sunlight in the larynx usually will soon remove the necessity for any such inhibition.

Outside these conditions, avoid suppression. And please note that even in these extreme cases complete suppression is not justified; there should be merely enough to tide the patient over until the general treatment can get in its work. "Stop that cough—25 cents" is never safe! Probably even the conditions named would never require drug suppression if it were not for the fact that people are so accustomed to taking drugs that in desperate cases nothing else will produce the necessary mental effect.

No matter what particular measures may be used to ease and prevent the cough itself, the most important thing is to treat the disease to which the cough is due. When this is removed the cough will disappear of itself. As we already have seen, the most common cough diseases are colds and catarrh, treatment for these being fully given in this book. If these conditions are properly treated and followed by right living, there will be no need to know

the treatment for their complications, such as pneumonia, influenza, asthma, tuberculosis, and other conditions where excess mucus produces the cough symptom, because these will not occur. However, in order to be of some assistance to those cases which already have developed these troubles, brief directions for treatment have been given in the chapter on "Complications."

In the group of coughs produced by direct nerve pressure the primary need is to remove that pressure. If due to spinal subluxations adjustments and spinal exercises will be needed. An osteopath, naprapath, or chiropractor, or perhaps a masseur or masseuse, should be consulted. In ordinary cases, any of the spinal exercises given in the chapter on "Treatment of Catarrh" may be used. Sometimes these will be enough to produce results without adjustments. In cases of spinal curvature, however, special exercises will have to be devised in accordance with the direction of the curve. My book, "Strengthening the Spine," would be of assistance.

When the pressure is due to tumor, aneurysm, or goitre the quickest and most ef-

fective method for relief is the fast. In the case of a tumor the fast should continue until the growth is absorbed if possible, otherwise a series of shorter fasts with a careful diet between fasts, using raw foods wholly or chiefly. In the case of an aneurysm the series of shorter fasts should be used, each fast ranging from five to ten days, a limited diet of natural foods being taken between fasts. When there is a goitre the same plan will prove valuable, although some cases of simple goitre can take the long fast when the general condition is good. General health-building measures, of course, are to be employed in all these conditions; but exercise must be very limited or avoided in aneurysm, and fairly light in goitre. It generally can be taken freely in tumor cases, except that movements which cause pain or aggravate the affected area should be avoided.

In coughs due to nerve irritation reflexed from some other part of the body, fasting is very helpful in giving prompt relief. Particularly in those cases where the cough is due to a stomach reflex is fasting of value. Here it may be the only measure required. When

the trouble arises from the reproductive organs, a short fast, continence, and alternate hot and cold sitz baths are the main point of treatment.

No actual treatment is needed where the cough is due simply to foreign matter in the atmosphere. Just use such measures as are necessary to purify the air or to secure better air. If some foreign substance lodges in the throat, the induced cough generally will subside it. Leaning forward and slapping the back between the shoulders will be of further assistance. In the case of a young child it may be held upside down by the feet. Sharp substances which stick in the throat may sometimes require surgical assistance.

There are a number of measures which may be used in the case of a cough which, while they do not materially affect the cause of the trouble, still are of considerable value since they relieve irritation and lessen the violence of the cough. One of the best known of these measures is the taking of small quantities of honey and lemon. The usual mixture is equal parts of honey and lemon juice, but this may be varied slightly according to individual pref-

erences and effects. Some find that honey alone is very soothing. Whichever is used, it should be taken very slowly, about a half-teaspoonful at a time, thoroughly mixing it with saliva, and allowed to trickle slowly down the throat. Take only what is necessary to relieve the throat irritation.

Another soothing potion is flaxseed tea. This should be made fairly thick, and taken warm with a spoon rather than by drinking. It may be flavored with lemon or lemon and honey. This not only soothes the throat but assists the bowels. As much as desired may be taken.

In a case of diphtheria, pineapple juice will be found very helpful. This is not soothing, but since it helps to loosen the membrane and mucus it aids, in the end, in relieving the cough. This may be used in any condition where the mucus in the throat is very tenacious and hard to remove. Another measure of value in these cases is the swallowing alternately of hot water and ice. A few small swallows of hot water are followed immediately by the sucking of a small piece of ice or the swallowing of very small ice pellets. The

rapid change from hot to cold alternately relaxes and contracts the mucous membrane and thus helps to loosen abnormal secretions.

Throat packs and compresses will be found of much assistance, not only for relieving the cough but also the pain due to the cough or the cause of the cough. Hot compresses generally are preferred for pain or nerve tension. These may be made of any cloth, but flannel is the best. After folding or cutting to the proper size to fit the part affected, allowing for at least a few inches on all sides of the part immediately affected, the compress is wrung from hot water and applied over one layer of dry cloth. It should be renewed as soon as it begins to cool. The application of heat may be continued for ten to fifteen minutes. If there is much inflammation in the throat it would be better to use alternate hot and cold compresses, applying the hot for five minutes and the cold for half a minute or a minute. Where pressure is causing trouble cold compresses may be used over the part where the pressure occurs, except in the case of spinal subluxations. The cold compress is applied in the same manner as the hot compress except

for the difference in temperature, and is renewed as often as necessary for half an hour.

The cold pack, as described in the chapter on "Treatment of Colds" will be found to have the widest usage. It will be of value in almost any form of cough and in all forms of throat irritation. Used persistently every night it will materially relieve even reflex coughs. Especially in tuberculosis of the larynx is it of value. Modified to suit the part, it may be applied to the region giving rise to the reflex cough, except in case of heart trouble, or aneurysm. Here it may be used both night and day, with a couple of hours rest each morning and evening. If the pack dries before time for the rest period it may be re-wet and applied again. This intensive application is advisable in any acute throat condition, especially if there is fever.

In the cough of whooping cough the hot compresses over both throat and chest are valuable to relieve paroxysms, the cold neck pack applied at night being serviceable to reduce inflammation. Alternate hot and cold compresses completely around the neck are helpful in diphtheria.

Cough drops may be used moderately if it is inconvenient to secure the honey and lemon or the flaxseed tea. Too many cough drops will disturb the stomach, however, so they should be used only as an emergency measure.

In any form of cough it is advisable to keep the throat and nose clean. Outside contamination can be avoided by insisting on pure fresh air at all times. This, admittedly, is difficult to procure in cities, however, so that spraying of the nose and throat may be necessary. Spraying and gargling both are of value in removing excessive mucous secretions and thus preventing coughs. Ordinary salt water and boric acid solution, lukewarm, are as good as anything to use, but any of the proprietary alkaline sprays may be employed. It is better to avoid the more powerful disinfectants. The purpose of spraying and gargling is simple cleanliness rather than disinfection. To attempt to keep the respiratory passages aseptic is a hopeless task, so antiseptics are not particularly necessary or valuable. Spraying is done with a throat atomizer, which may be bought in any drug store. If the mucous membranes are very dry, an oil spray,

such as the various combinations of eucalyptus, menthol, pine oil, etc., may be used. Nasal douches, with the douch cup, are excellent for temporarily clearing the nasal passages. One should not make the mistake of depending on sprays, douches, and gargles for a cure, however. They are merely to give relief while the causes are being removed according to the methods already described.

The same applies to all other "treatments" for coughs. Never lose sight of the fact that the primary necessity is to treat the disease which is causing the cough, which means changing the habits of living. Symptomatic treatment, while often of considerable assistance, never should be allowed to replace or overshadow constitutional treatment.

CHAPTER VII

Treatment of Catarrh

CATARRH, after it has become well developed, is a condition that is not easy to eliminate. There are several reasons for this. The first is that a chronic condition like catarrh develops only after a prolonged period of bodily abuse, and no one can undergo such abuse without losing considerable vitality. Hence, all the functions of the body are sluggish and the reaction to treatment poor. Another reason is the prevalence of impure air and indoor occupations associated with civilized life. This makes it harder to cure catarrh in the city than in the country, and almost impossible if one has to follow an occupation where he is subjected all day to an atmosphere laden with dust, smoke, or poisonous fumes. Even under the most adverse conditions, however, it is possible to secure great relief, and there are few cases which cannot achieve a

cure if the patient is willing to do what is necessary.

He must not be in a hurry, as a chronic disease always takes time to remedy. This may be considered particularly true of catarrh, which is such a convenient method of securing extra elimination that the body often seems loathe to give it up. It gets the habit of eliminating in this way and must be trained to make greater use of the ordinary organs of depuration as their functional ability is increased by right living and a vitality-building regimen. It is simply a question of persistent, hopeful, confident use of the right measures.

The medical treatment of catarrh consists almost entirely of local measures, and many people are surprised to find that these are placed in the background in the treatment by natural methods. The question is asked often, "Is not local treatment necessary?" The answer is, "No, it isn't necessary. Various local measures, which will be described later on in this chapter, may be employed for temporary relief and for extra assistance to the body, but it is possible to get well without them. Since the disease is not due to local causes, as has

been explained, local treatment will not cure it. In many cases the local medical treatment makes the condition worse instead of better, particularly when this consists of frequent unnecessary operations. Attempting to stop catarrh by purely local treatment is a good deal like trying to dry up a fountain by bailing water out of its basin. Natural methods of healing, on the other hand, go to the very source of the trouble and remove that.

The most important phase of the treatment by natural methods is the increase of vitality, because without this the organs cannot be brought even to ordinary functioning. Elimination is the next important point, running a close second, because if the body cannot be relieved of some of its load of poisons it will be in no condition to build more vitality. Each depends on the other and each assists the other; but perhaps the increase in vitality is the more important, as this is required before the body can take advantage of the various stimulating measures that may be employed to increase elimination. Vitality is built by intensive use of right habits of living; elimination is increased by fasting or fruit dieting

and by various uses of water which stimulate the eliminative organs.

Diet.—Fasting or fruit dieting is used first because, while it does not build vitality and nerve energy, it saves these, and "a penny saved is a penny earned." At the same time it gives the body an opportunity to eliminate the worst of the accumulated impurities. Being then in a better condition to profit by all forms of treatment, one can proceed to build vitality in every way possible and use as much eliminative treatment as the general condition will warrant at the time. This should be a gradually increasing amount as the health improves. The usual regimen in the treatment of catarrh includes the following measures of treatment.

A fast or fruit diet, for from seven to thirty days, takes off the bulk of the rubbish that underlies the catarrhal condition. The fast is used in cases which are overweight, in cases where the previous diet has been fairly well supplied with salts and vitamines, and when the patient does not have to work while taking treatment. Not that it is impossible to work while fasting—far from it; but it is not so

pleasant to do so, requiring more energy and determination. The length of the fast will depend on the weight, strength, and confidence of the patient and on the symptoms which appear while fasting. If anything occurs which makes the patient feel that it would be dangerous to fast longer the fast should be terminated. *Fasting* never kills, but starvation or fright may. If the fast cannot be continued until all symptoms disappear, which is the real goal of the fast, a series of shorter periods of abstinence may be employed, repeating as often as the weight will permit until the desired results are secured. During the fast from two to four quarts of water a day should be drunk, and an enema taken daily. All fasts are to be broken gradually, taking one or two days on acid fruit juices, the entire fruit, or vegetable broth, before starting whatever diet is to be followed afterward. The fruit or fruit juice generally is used.

While fasting always is of benefit in catarrh, it has been found that many cases secure just as good results from an acid fruit diet; therefore, this generally is recommended,

since it is easier to take. Most patients want the easiest and quickest methods of relief, and if there is any choice between the ease and the quickness they will take the ease. One of the strongest attractions of medical treatment is that it is so easy. It doesn't require one to deny himself, but merely to "take this." However, the acid fruit diet has a special alkalinizing effect upon the body, requires almost no digestion, and does not interfere with elimination, so there is considerable reason besides ease for its use. It is particularly applicable in cases which are underweight and greatly lacking in vitality, in cases which have to do considerable work while taking treatment, where the patient is afraid of the absolute fast, and in the case of children. Where it is desired to approximate closely the fast the fruit juice alone is used, and even this may be diluted with water.

The method of taking the fruit diet has been described in the chapter on "Treatment of Colds." The length of the diet depends on the same factors as the length of a fast, but in most cases it can be continued longer. It is not advisable to go over thirty days, how-

ever, and most cases will not need this long. A series of short fruit diets, instead of one long one, may be used where necessary. Most cases will find that a ten-day fruit diet will be sufficient at the start and two or three days additional then can be taken every month until the desired results are secured. Food must be resumed gradually after a fruit diet, much the same as after a fast.

The milk and fruit diet is excellent for use immediately after the fast or fruit diet. There are some physicians who object to the use of milk in cases of catarrh on the ground that it is a mucus-forming food. This conveys the idea to the patient that the milk makes more mucus regardless of the bodily condition; it gives the impression that milk is a cause of excess mucus. This is far from the facts. Mucus is composed largely of water and albumin, yet the excessive use of starchy foods and sweets will cause it to increase very quickly. This is because the formation of mucus depends not on the ingestion of certain food elements but on the need for elimination. If there is inflammation of the mucous membranes there will be more mucus regardless of

the diet. Of course, if one fasts, takes a fruit diet, or adopts the so-called "mucusless" diet of fruits and green vegetables the mucus will decrease, because the accumulation of impurities which is its cause will be reduced by not being added to and by the extra elimination which such dieting permits. Yet the time must come when other foods will be needed in order to build up the body, for the "mucusless" diet does not supply sufficient building and energy-producing elements for permanent use. No food equals milk in its building powers.

If the body has not been thoroughly cleansed by fasting or a very limited diet before the milk is adopted, the amount of mucus will increase; not because of the milk *per se,* but because the large amount of water in the milk helps to flush out the body and the large amount of nourishment stimulates all the bodily functions. As soon as all the toxins have been flushed out, the mucus will decrease even if the milk diet is continued, thus showing that the milk is not the cause of the mucus. Another point in favor of milk as a diet is that it is an alkalinizing as well as a building diet,

and these are the things needed in overcoming the acidity and lack of vitality associated with catarrh. As most people will not fast or take a fruit diet long enough to cleanse the body thoroughly, the milk is needed to finish this cleansing and at the same time build up the body. About the only time when the milk diet is not indicated is when the patient still is overweight after his fruit diet or fast.

I generally recommend the milk and acid fruit diet rather than milk alone, because the former is especially alkalinizing and favors bowel elimination. Then, too, many people cannot secure raw milk and have to use some fruit anyhow. The combination diet has the further advantage that it is easier to arrange and is not so monotonous. It is taken the same as the ordinary milk diet except that one quart of milk less per day is used and acid fruit is taken as desired. Oranges are best, but a mixture may be used if it agrees all right. When the larger quantity of fruit is taken it usually is best to use it between the milk feedings rather than directly with the milk, though there is no marked objection to the latter plan and it may be followed if neces-

sary or if more convenient. The milk and fruit diet may be continued for from four to six weeks, depending on the need for extra weight and vitality and the rapidity with which these are gained.

If the patient is overweight, a diet largely of fruit and vegetables is preferable to one of milk. This is the same as will be described below as the diet following the milk and fruit, except that the total quantity is limited to an amount that will permit gradual reduction, and an even larger proportion of raw fruits and vegetables is employed. After the weight reaches normal the variety and quantity of foods can be amplified to approximate that given below.

The fruit and vegetable diet that is used after the milk and fruit diet is composed chiefly of raw fruits and green vegetables, with moderate amounts of other fruits and vegetables, whole grain cereals, and dairy products. When changing from the milk to this diet the best plan is to take the milk and fruit for half a day and a meal of solid foods in the evening. Or two meals of milk and fruit may be taken and one of solid foods. After from three to

seven days, regular meals may be resumed. Care always must be observed to avoid overeating, and it may be necessary to give special attention to mastication, since it is not required to any great extent while on milk and fruit and one is inclined to get out of the habit of masticating as fully as is necessary.

When taking milk for half a day no milk should be used with the evening meal. This meal should be composed of a good-sized raw vegetable salad; one cooked vegetable, either of the green or light starch variety; and a little sweet fruit for dessert. Some vegetable soup, cottage cheese, a few nuts, or buttermilk or some form of sour milk may be added after a few days. When ready to adopt regular meals again, breakfast may be composed of some fresh fruit and milk, with or without a bran or whole grain cereal with sweet fruit. Lunch should be of fruit only, fruit and a vegetable salad, fruit and buttermilk, or buttermilk and a vegetable salad. Dinner is the same as lunch except that a little whole wheat bread or Rye-krisp and butter may be added. This cereal product may be taken for lunch if omitted from dinner. In this case lunch may be of

whole grain bread and butter with a vegetable salad, or bread and butter with vegetable soup. If there is a particular desire for it, buttermilk may be used with dinner. As the condition still further improves other cereals such as whole corn bread, cold whole grain muffins, etc., may be added to the diet, and eggs used occasionally. Quantities employed at any meal depend upon the normal appetite. Never eat to repletion, and never eat without appetite. The menus suggested may appear very limited to many people, but it is these very persons who have been the most indulgent and prolific in their eating and who, therefore, need the strictest dietetic treatment if they want to eliminate their catarrh. As normal bowel activity is absolutely necessary for the correction of this trouble, the diet should be sufficiently laxative that there will be two or three evacuations daily.

No matter what diet is employed after the fast or fruit diet, the diet of oranges only for two or three days a month should be observed just the same. This should be continued until the health is restored to normal and may be continued indefinitely with benefit, as

it serves as an excellent safety valve against overeating and other errors in diet, and helps to prevent disease, and to prolong life.

If only a few days on fruit are taken at the start of treatment, an attempt should be made to extend this diet for a longer period after being on milk and fruit for two or three weeks. If even a ten-day period does not seem to give all the results desired, a similar period may be repeated three or four weeks after the first one. It should not be expected that one can eliminate a chronic catarrh by going on fruit for a day or two. One must make up his mind to devote as many days to this diet as necessary.

Diet is an extremely important part of the treatment of catarrh and one would do well to give it careful attention; but there are other measures that also are very necessary, both for building vitality and improving elimination. Probably the most important of these is fresh air and its necessary adjunct, deep breathing. Fresh air is of little value if one does not get plenty of it into his lungs. One should live as nearly as possible out of doors. An outside occupation is of much assistance,

particularly if it also calls for physical exertion, though if it is associated with much dust or smoke it would not be so favorable. If compelled to work inside, some plan for sleeping outdoors, or nearly so, should be adopted. This may be done in addition to working outdoors, as one cannot get too much fresh air. If a regular or improvised sleeping porch is not available there are a number of window tents on the market that permit one to sleep with the head at least in the open air. If the bedroom has windows on two or more sides and all of them are opened fully from top and bottom and the bed is placed in the line of air currents between these, a condition very closely approximating out of doors may be obtained, especially when there is a fair breeze blowing. In cold weather one will have to make the same provisions for warm covering as he would if he were sleeping outside. A sleeping bag is very good for use indoors as well as outdoors.

Deep breathing may be practiced at any time of the day that is convenient, and as often as desired, though never so long at one time as to produce respiratory fatigue. The

amount that can be taken without bringing on this condition will be found to increase with practice. If dizziness develops from the deep breathing it should cause no concern. It indicates that one is getting much of the necessary oxygen and a pronounced effect upon the circulation. The best time to do deep breathing is when exercising, because more of the available oxygen will be absorbed; but some special breathing should be done in addition to this when one is suffering from catarrh. Special deep breathing always should be done through the nose. Even when exercising vigorously the breathing should be nasal as long as possible. Mouth breathing dries the mucous membranes and robs them of the protection of the normal mucus. It also allows air to enter the lungs that has not been properly cleansed, warmed, and moistened. Temporary mouth breathing during a short period of extreme exertion will do no particular harm, but it is easy to fall into this habit when the nose is somewhat clogged with catarrhal excretions, so one should watch himself and check any tendency to neglect nasal breathing.

For breathing exercises it is not particularly

necessary to use certain ones. The important thing is to fill the lungs fully and then empty them completely. Straining and "packing" the air into the lungs should be avoided; also holding the breath for more than a few seconds at a time. Some special exercises have been given in the chapter on "Treatment of Colds," and others may be adapted from these or made up entirely to suit the patient. The rhythmic breathing already mentioned, which is used while walking, is of as much value for catarrh as for a cold.

The importance of fresh air and deep breathing lies in the fact that oxygen is necessary to all the functions and all the tissues of the body. The more oxygen that can be secured and utilized the better will every part of the body work and the more perfectly will it be built and rebuilt. Oxygen is necessary also in the process of burning up the impurities which accumulate in the body as a result of wrong habits of living and the by-products that result from tissue use and destruction. The lungs are powerful eliminators, and when working as they should they will be able to overcome considerable of the

effects of bodily abuse. Fresh air and deep breathing are particularly necessary in respiratory diseases.

After making sure that the lungs are being adequately supplied with fresh, pure air, the next thing to which attention is given is the skin. The skin is capable of eliminating more impurities from within the body proper than any other depurating organ of the body and should never be overlooked in the treatment of any disease, but particularly catarrh, because of the close relation between the skin and mucous membranes. This already has been explained.

Baths of various kinds are valuable in catarrh. Air, dry-friction, sun, steam, light, hot-water, and cold-water baths all are serviceable and may be used, though usually they all are not necessary in a single case. The air, dry-friction, and cold-water baths should be taken daily as already described in the chapter on "Treatment of Colds." Sun-baths should be taken daily whenever possible. When neither these nor the mercury-quartz lamp treatments can be obtained a hot bath of some kind may be used twice a week until the condi-

tion becomes normal. This bath may be immersion in hot water or a cabinet bath by hot air, steam, or electric light. The hot immersion has been described. It is important to remember that all these baths—sun, artificial sun, and heat—are to be of no longer duration than necessary to secure a liberal perspiration or at least a good relaxation of the skin pores, and always are to be followed by an application of cold water in some form, usually a sponge or a spray. Persons unaccustomed to the use of cold water probably will shrink from it at first, but a little practice soon will permit them to enjoy it.

The sun-baths are to be preferred to the hot baths because they not only improve the elimination through increase of perspiration but they also add energy to the body and improve internal nutrition and are, therefore, of great help in building vitality. Hot baths take away energy to some extent, but sun-baths bestow it. Because of the value of sun and air on the skin the clothing should be as light and porous as is consistent with warmth. The bad effects of overclothing and overheating of houses have been discussed elsewhere.

Another very important factor in the treatment of catarrh is exercise. As has been pointed out earlier, it is of great importance to increase the vitality in every way possible, and unless regular exercise is taken this cannot be done. Rest should be observed one day a week, but on the other six days exercise should be taken faithfully, though the amount taken daily and the degree of energy exerted may fluctuate somewhat with the desire.

In this connection I wish to call your attention to the very great value of walking. It is almost a specific for catarrh. It takes one out in the open air, promotes deep breathing, gives one exercise, and gently but extensively stimulates all the eliminative functions of the body. Even a short walk is of value, but for catarrh I advise walks of five to fifteen miles. A walk of five miles can be taken daily, and one of fifteen miles at the week-end. These distances should be taken all in one stretch if the greatest benefit is to be secured. For catarrh, a walk of one mile, repeated five times, is not of as much value as one walk of five miles. Of course, walking takes a little time, but it is time well spent and one soon will grow to

enjoy his walk so much that he will not want to give it up. When walks of this length are used regularly, less other exercise may be taken without jeopardizing the health.

If unaccustomed to walking it will be necessary to start with shorter distances in order to harden the feet and also the leg muscles, and perhaps to increase the general strength and vitality, especially when one is particularly low in these. It is surprising how much walking can be done, however, without tiring particularly. Even if one does feel quite weary after a walk he soon recuperates. This is proof of the special value of walking in increasing functional activity without great use of energy, and shows why it is so helpful in building vitality. If one's occupation calls for considerable walking he need not take such long special walks, but can give more attention to calisthenics and other exercises. All others who suffer from catarrh should take these long walks, even if considerable sacrifice is required to spare the time.

In addition to the walks general calisthenics are taken three days a week. This frequency should be increased to six times a week if the

long walks are not used or are taken only irregularly. Special attention should be given to movements in a reclining position, because the walking and most of one's other activities are taken in the upright position. The reclining position also favors a better circulation through the respiratory passages. Many exercises for the spine can be taken in this position, and such movements are of great assistance in building vitality. The spinal nerves are distributed to all parts of the body and influence all its functions, so that the stimulating effect of exercise of the spine is felt throughout the entire organism. However, any exercises will be of value and any movements may be taken. All sports and active games may be employed, but care is to be observed not to overdo. The exact amount of exercise that can be taken will depend upon the individual's condition; but if one does not take so much exercise that the muscles tremble afterward or so that one does not feel rested after a normal night's sleep, there is little danger that one will overdo. "Begin moderately and increase gradually" is an important maxim to be observed in exercising.

Probably many patients will be disappointed to learn that there are no special movements that have a magic or specific effect in removing catarrh. It would be nice if one could take a few special exercises and get rid of all his troubles, but I am compelled to admit that I know of no exercises that will do this in a case of catarrh. The ones I am giving below, however, will serve as examples of the most beneficial type of exercises and will be found as effective as any.

STANDING POSITION

1. Clasp hands behind the head and drop the head forward; then draw the head backward against the resistance of the hands.

2. Clasp hands on the forehead and drop the head backward; then draw the head forward against the resistance of the hands.

3. Place the left hand on the right side of the head, the head over the left shoulder; then bend the head to the right against the resistance of the hand. Same to the other side, using the left hand.

4. Circle the head left and right.

5. Extend arms overhead; then circle the

arms, describing small circles with the hands. Same with arms held sideward at shoulder height. Same, describing larger circles with the hands. Also, start with small circles and gradually enlarge them.

6. Spread feet about a foot apart and extend arms sideward at shoulder height; then rotate the body to the left, and alternate to the right.

7. Place hands on hips; then circle the body from the hips, first to the left, then to the right.

8. Kick forward and upward as far as possible with the left leg, then with the right. Same to the side, and to the rear.

9. Place the left foot forward (lunge position) and flex arms at the side; then bend forward, touching the hands to the floor, and return to upright position, again flexing the arms, then bring feet together and lower arms. When raising the body, lift strongly as though pulling something. Same with the right foot forward.

10. In standing position with feet together, bend the knees until sitting on the heels. Return to position.

RECLINING FACE-UP POSITION

11. Keeping the arms at the sides, draw up the left knee, pressing the thigh tightly against the abdomen. Return to position and repeat with the other leg, alternating the two.

12. Place the hands under the hips, then raise both legs to the vertical and describe small circles with the feet.

13. Extend arms overhead; then raise both legs and touch the toes to the floor overhead.

14. Extend arms overhead; then rise to a sitting position, touching the hands to the toes. At first throw the arms forward in the line of direction of the movement; later make the abdominal muscles do most of the exercise.

15. Raise the knees, bringing the feet close to the hips but resting on the floor, and clasp hands behind the head; then raise and lower the hips.

RECLINING FACE-DOWN POSITION

16. Extend arms overhead; then raise the left arm and the right leg, lower, and repeat with the right arm and left leg.

17. Extend arms sideward at right angles to the body; then raise the left arm as high as possible, twisting the body from the hips. Alternate with the right arm.

18. Place the hands under the shoulders; then push the body up to arms' length, keeping the hips rigid; then raise the hips, allowing the body to move backward and bending the head downward until the chin nearly touches the chest. Return to first position and repeat.

SIDE-RECLINING POSITION

19. Support the body on the under arm, placing the other hand on the hip; then raise and lower the hips. Same on the other side.

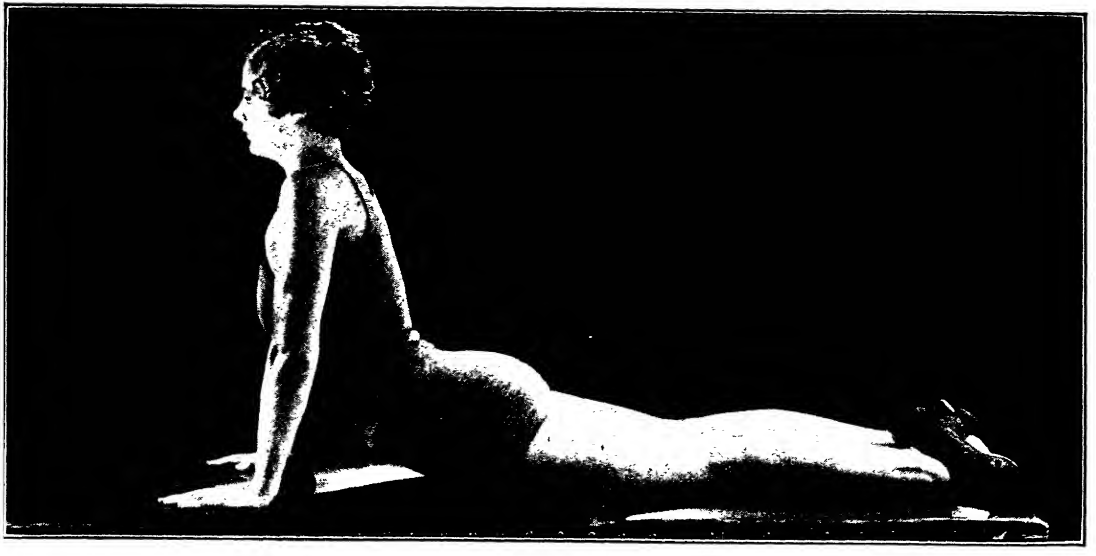
20. Extend the upper arm forward and the upper leg backward; then swing the arm backward and the leg forward, repeating continuously. Same on the other side.

SPECIAL POSITIONS

21. From a sitting position with knees drawn up and arms clasped round them, roll backward and forward.

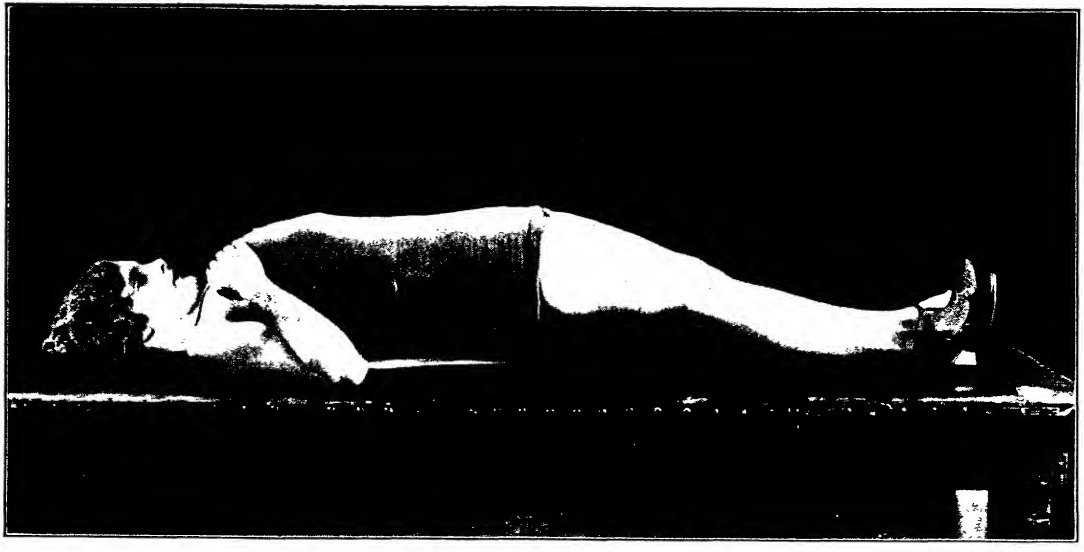
22. From kneeling position with hands

Begin with arms down. Raise arms shoulder height in front, taking a moderate breath. Then clench fists and quickly snap elbows back to sides, as shown, while completing a full deep breath. Strike vigorously forward with both hands and exhale, completing the exhalation when lowering arms to sides. The movement may be varied by starting and completing each movement with arms horizontal, also with them overhead.

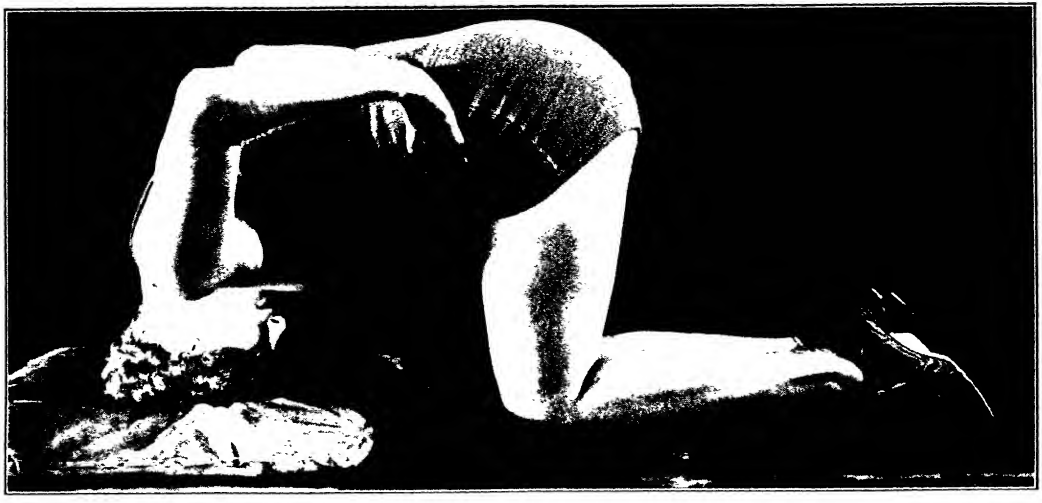


Starting lying prone, elbows bent and palms flat on floor below shoulders, push up with arms until arms are straight, as shown, inhaling deeply. Lower body and exhale, and repeat several times. Keep the thighs flat on the floor.

From lying relaxed, raise one knee and clasp it as shown, then press firmly into the abdomen. Relax, extend the leg, and repeat or alternate. Try the pressure both with full breath and with exhaled breath. Raise both knees in the same movement, also. With a deep breath, hold momentarily while pressing with knee and force down abdomen as in forced bowel evacuation.



From lying relaxed on the back with the elbows at the sides, tense the back muscles and with these and the arms force the hips as high as possible. Relax and repeat. Inhale when raising hips, exhale when lowering, but take another deep breath and exhale before repeating the movement. If strong enough, put considerable weight on the neck.



Taking the position shown, rock back and forth with the head as the pivot. If not strong, assist with the hands at sides of head at first. Later raise off the knees, resting on the toes and head. With hands at sides of head this may be varied by swaying from side to side. Inhale always as the chin leaves the chest, exhale as it approaches chest. Be sure to get a good forward and backward movement.

Take a deep breath and bend over as shown, then force down upon the entire abdominal contents as when forcing tardy bowels to evacuate. Perform the same movement also with breath exhaled. Rise to sitting position between each two movements and breathe normally a time or two. This movement may be done several times daily, at home or in the office or elsewhere. The same intra-abdominal pressure may be applied standing.

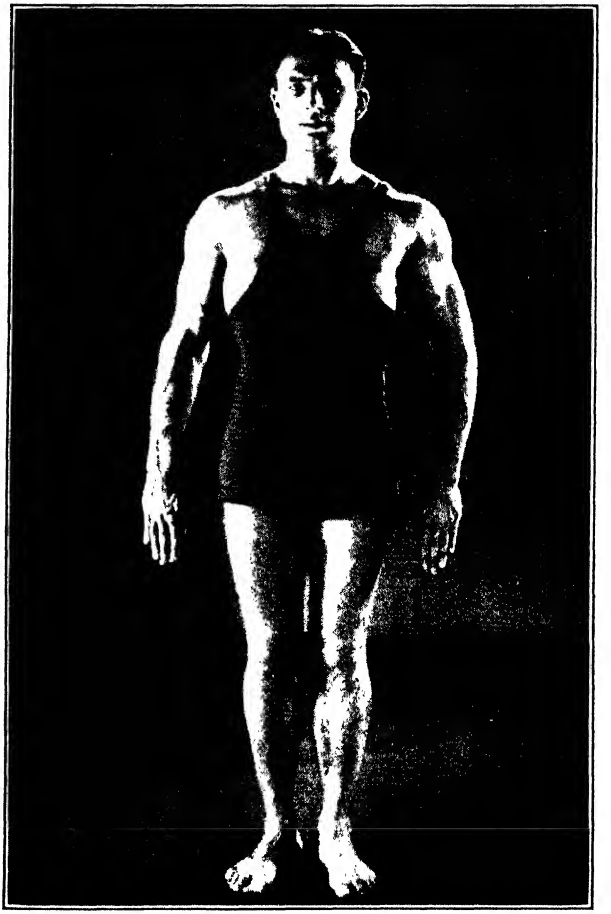
This illustrates merely a form of exhaling. After having taken a deep breath and holding it only for the count of one or two, open the mouth and let all the air out of the lungs in one quick explosion. A good form of inhaling to use with this is "packing." After taking a fair inhalation pause a second and take in a little more; pause again and then take in some more; and continue until a full breath has been taken.

Doubtless this will be a difficult exercise for many readers, though some will be able to perform it free from any wall. It is merely standing on the head, and as a movement may be done several times daily if convenient. Use the wall for a rest for the feet if necessary; it does not detract from the benefit of the inverted position. Do not hold the position long at a time, but repeat it several times when doing the exercise.

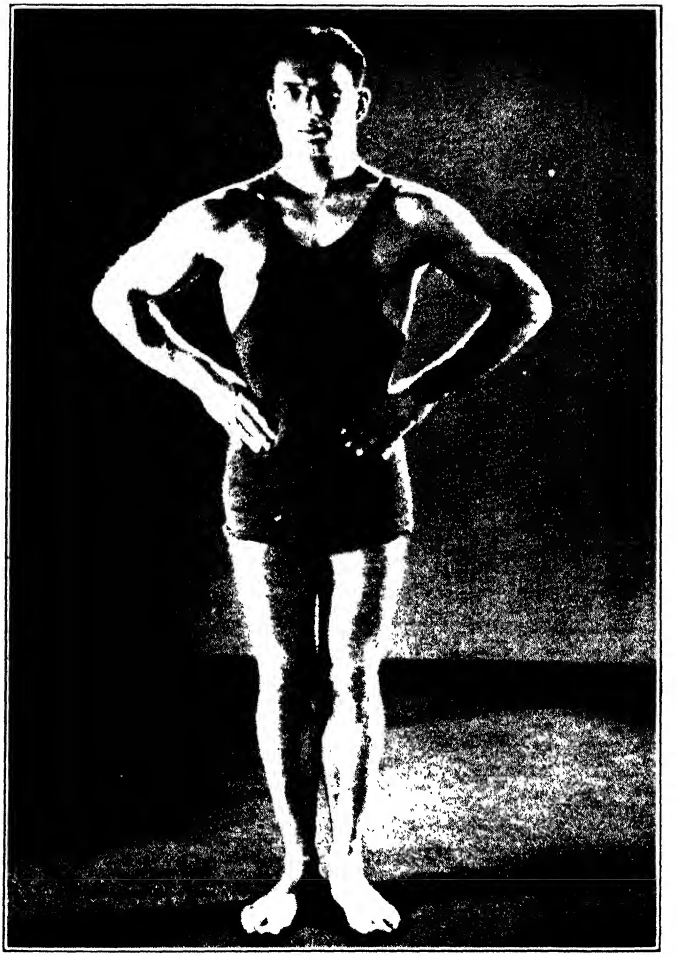
The Stimulating Breath: After taking a deep breath, hold it for a few seconds while slapping the chest, front and sides, with the open palms. Then use the edges of the hands, also the closed fists but not with severe pounding. Using the open palms, slap the chest while bending from side to side, and in all movements continue slapping or beating while exhaling. Use the hands from upper chest to lower chest, as well as on the sides.

While continuing to inhale bring the head far back, resisting the movement with the hands. Relax the arms and neck and rop the head forward, exhaling ready for the next movement.

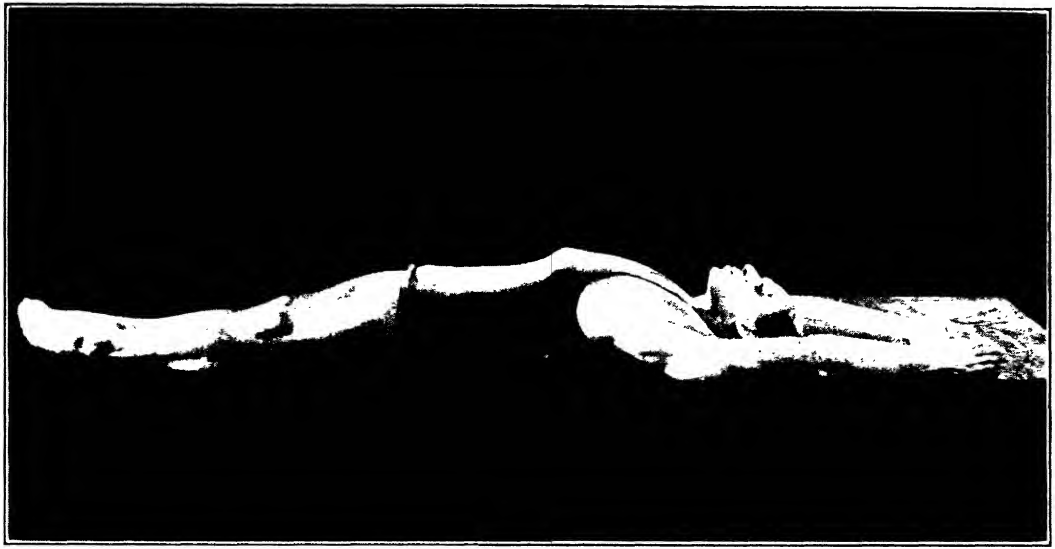
Neck-Resisting Exercise: This is similar to my vitalizing exercise, except that the hands offer resistance, and the chin is brought down close to the chest at the start of each movement. Begin in the position as shown above.



Vibratory Exercises: From position shown, tense the arm, shoulder and chest muscles and vibrate the arms forward and backward. The hands should travel only a couple of inches or so. Vary the movement by holding the arms rigidly forward, palms down and vibrating up and down, and then with palms inward, vibrating in and out, and the same movement arms out to sides

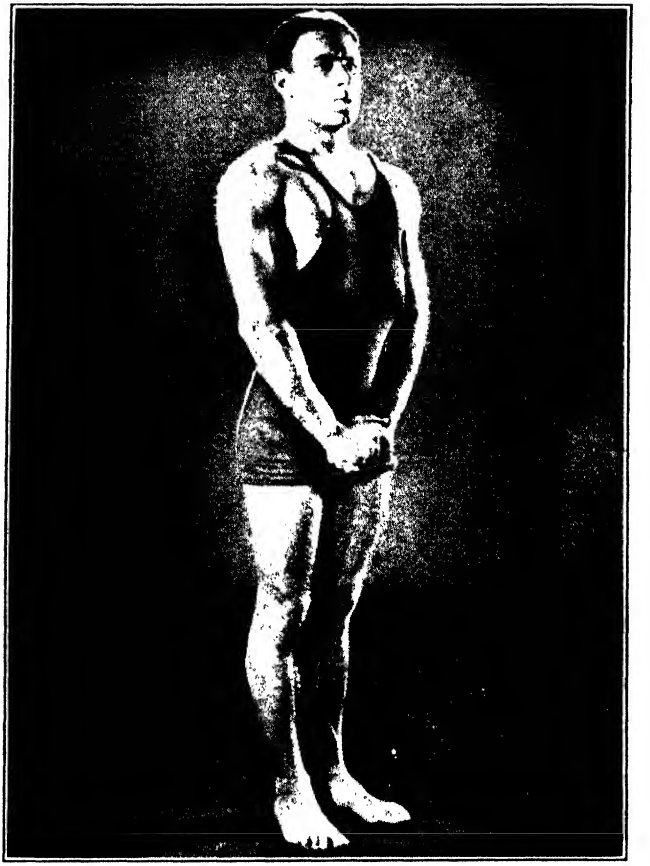


Vibratory Exercises: Taking the position shown, stiffen the entire body and vibrate the trunk forward and backward over a very short distance. This will be difficult, but the attempt will be helpful. After three or four seconds relax, then repeat.



Lying relaxed with arms down at sides, raise arms overhead slowly while taking a deep breath through puckered lips. Lower the arms slowly while exhaling through the closed lips. Breathe deeply each time, and stretch the body from fingers to toes with each deep breath. Relax after several movements, then repeat; then relax and breathe normally a few times.

The Resistive Breath: Cover one nostril with the finger and breathe deeply in and out through the other nostril. Alternate between a series of rapid respirations and several slow ones. Then occlude the other nostril. Breathe deeply.



Resistive Breath: With the lips puckered, breathe in and out, deeply, through the mouth, of course. Try slow breathing for a while, then gradually more rapid. A pipe stem or hollow reed or glass rod may be used if desired, but it must be small. Also take a deep breath, close lips and nostrils, and for two or three seconds blow without blowing out. This latter and all movements causing a rush of blood to the head are to be avoided if there is marked high blood pressure.

clasped behind the head, bend the body forward and touch the head to the floor.

23. From position on "all fours," lower the head until it rests on a cushion placed on the floor; then while supporting part of the weight of the body on the head move it backward and forward and from side to side.

24. From position on "all fours," bring one leg forward, then the other, alternating the two with a running movement.

25. Do a hand-stand a number of times, resting the feet against a wall if necessary.

Repeat each of these exercises several times. Head movements may be repeated from ten to twenty times, heavier exercises from five to ten times, more or less according to strength, energy, and time.

These are but some of the many exercises that may be used, and the patient should soon be able to figure out variations and additions of his own so as to avoid monotony. A constant effort to do the exercises better and to improve one's form will make the exercises more beneficial and also aid in maintaining interest. All the exercises given need not be taken at one time, but some from each group

should be used. As the strength improves it should be possible to take all of them and to increase gradually the number of times each one is performed.

After having exercised one must secure an adequate amount of rest and sleep in order to recuperate the energy and tissue loss resulting from activity. When allowed proper repose the body not only will replace the amount lost but will add a little more, so that by gradually increasing the activity one can gradually increase his surplus and thus gain more vitality. The actual number of hours of sleep required will vary with different individuals. This is because some relax better than others, and some have more vitality to start with than others. Some people can secure more benefit from mere relaxation than others can from sleep, because the latter fail to relax.

The two most important factors in proper sleeping are relaxation and fresh air. After retiring at night go over the entire body several times to be sure that every muscle is relaxed. Then relax the mind by refusing to give the attention to any thought which enters. Make the mind as nearly as possible a blank.

This quickly will induce sleep of the soundest, most restful character. One cannot take his troubles to bed with him and secure the best results from sleep. Troubles will be found to be most unpleasant bedfellows, so dispose of them before retiring.

If for any reason you are unable to sleep, perfect relaxation of mind and body largely will take its place. It is very seldom, however, that one who knows how to relax perfectly will lie awake if he wishes to sleep. Such a person can sleep anywhere, any time—sitting, lying, or even standing—and under the most adverse circumstances. Of course, in order to relax perfectly one must assume a comfortable position. Some will find one position better than another, but any position which cramps the chest should be avoided. As a rule the best position is nearly prone (face down), the left arm being drawn up sufficiently to lift the chest, the left leg drawn up to prevent rolling on the face, and the face being turned to the left. This position has a number of advantages, one being that one is not likely to roll over on the back. Sleeping on the back particularly is to be avoided in catarrh because in

this position one is almost certain to breathe through the mouth. If inclined to breathe through the mouth anyhow, the jaw can be tied shut with a cloth extending over the head.

Fresh air while asleep is necessary not only because it aids relaxation and gives greater results for a given number of hours, but for all the other reasons mentioned in the paragraphs on the use of deep breathing. It is well for most people to sleep eight hours unless they have definite proof that they do not require so much. When suffering from catarrh or any other disease more than eight hours can be spent in sleep to advantage, at least for the first few weeks of treatment.

There is one more factor in the general treatment of catarrh that should be given attention. This is right thinking. In the chapter on "Causes" I have shown how wrong thinking can interfere with every function of the body. Here I will make some suggestions on how to think rightly. First, assume a confident, calm, and hopeful mental attitude. There is no doubt that you can get well if you do what is necessary, so there is no need for

worry, doubt, or discouragement. Then make up a number of encouraging thoughts, memorize them, and repeat them whenever you think of them. If you find yourself at any time thinking wrong thoughts, immediately repeat a number of these good thoughts or repeat a favorite one over and over, and you will turn the attention from the bad ones. This requires only a little effort of will and a little practice and will be of great value on many occasions. In fact, this ability is in many ways the key to self-mastery. A few examples of thoughts which may be substituted in this way follow.

"I am calm and in perfect control of all my faculties."

"I am strong and unafraid."

"I am working with the life force in my body, which is constantly striving to make me healthy."

"Right thinking cannot fail to result in health."

"God's in his heaven, all's right with the world."

Many others can be formulated according to the patient's need, and can be couched in

scientific or religious terms according to his inclinations.

Another form of autosuggestion which is very helpful may be practiced just before going to sleep. This consists in instructing the body what you wish it to do during the night. First relax perfectly, then repeat what you want done, then trust the body to do it. Even if the results do not appear very promising at first this cannot fail to be of assistance. The bodily functions are under the control of the so-called "unconscious mind." It is this part of the mind which operates the body while we sleep, and it is very suggestible. When we consciously instruct the unconscious we are giving it suggestion. It usually takes considerable practice to get very positive results, but the fact that many people are able to awake at a certain time by previously determining to do so is proof that it is possible to instruct the unconscious through the conscious mind. If the unconscious mind can keep time —and frequently it does so by arousing the individual at the desired time, perhaps regularly—it certainly can do other things as well.

Still another use of the mind in healing is to

visualize. See yourself as perfectly healthy and doing the things you want to do. For best results be sure these things are worthy things, while letting the mind do its share, and do not fail to work to bring them about.

Anyone who doubts the value of such mental treatment in such an apparently wholly physical abnormality as catarrh has only to try it conscientiously to be convinced.

In addition to the more active general measures just discussed, due attention should be given to the more passive but just as necessary measures, such as avoidance of tobacco, alcohol, drugs, sexual abuse, and other bad habits. Even the most perfectly planned system of fasting, diet, exercise, etc., will fail if it is constantly being nullified by such abuses. As these are among the possible causes of catarrh they must be removed, because as long as even one cause remains one cannot expect perfect results.

We now come to a consideration of the local treatment of catarrh. As in the case of coughs, cleanliness is here the chief factor. The nose or nose and throat may be sprayed with salt water several times a day, in order

to assist in the elimination of the excess mucus and to clean out any accumulated dirt which would be irritating to the already inflamed membranes. In the case of atrophic catarrh an oil spray may be used, since there is little or no mucus, the membranes being abnormally dry. A little petroleum jelly placed in the nose may be of some assistance. In ordinary catarrh, stimulating applications, such as menthol and its various combinations, may be used occasionally to give relief from the obstructed breathing; but such applications should be used as little as possible, and under no circumstances should one expect them to cure the trouble or take the place of the constitutional treatment just described. Local treatment is strictly symptomatic and designed only to give temporary relief. Positively no ointments containing opiates should be used.

Operations for one thing or another frequently are recommended by medical doctors for catarrh. If one has a septum which is deflected so badly as to interfere considerably with breathing it may be advisable to have it operated upon. Large polypi and adenoids also can be removed in order to secure quick

relief, though osteopathic "finger surgery" often will make it possible to avoid the knife. Operations for enlarged turbinates very seldom are necessary, as often the enlargement is merely a thickening of the membranes, which can be reduced by proper treatment. The deflected septum may be a partial cause, and its removal to this extent curative; but operations for the other conditions named are not curative but merely give some relief, as does other local treatment. Abnormal growths in the nasal passages are not causes of catarrh; they are results of this disease or of the causes of the disease, and may be avoided by living rightly.

The value of climate in catarrh was discussed in the chapter on "Causes." If you wish to secure every possible advantage of environment in your treatment it is all right to go to a moderately high dry climate, but this should not be considered absolutely necessary. Such a climate is pleasant, stimulating, and palliative to symptoms, so that it has a good effect on the mental attitude. If one intends to come back to his former climate it often is just as well not to leave in the first place, as

one may find that his symptoms reappear upon his return and he may be inclined to get discouraged. But this is because he was not really fully cured. By continuing treatment the symptoms will disappear.

The main dependence in the treatment of catarrh always should be placed on the constitutional treatment, placing local treatment second, and climate last. And as I have said before, time is an important factor. Vitality must be increased and accumulated toxins must be eliminated, and the patient must make up his mind to pay the price in time and effort. And after all, is not health worth any price?

CHAPTER VIII

Complications of Colds, Coughs and Catarrh, and their Treatment

FOR the purpose of this discussion a complication shall be considered an increase, elaboration, spread, or change of symptoms which develop because the causes of the original condition have not been removed or because the accumulation of toxins was so great that the first eliminative effort was insufficient to remove them even with proper treatment. Another possible cause is improper treatment, which makes a bad condition worse. A complication may be an increase or change in symptoms at the same point as the original abnormality, or it may be a spread of the same symptoms to or development of different symptoms in some other locality, usually adjacent but sometimes remote. Inflammatory conditions, such as colds and catarrh, are particularly likely to spread to parts anatomically

related to those first affected. In any case, a complication is a further abnormality which renders the whole condition more grave and the prognosis less favorable.

There are few if any diseases which can develop more complications, if neglected or improperly treated, than colds, coughs, and catarrh. This is because they generally are the first indication that more impurities are collecting in the body than can be taken care of by the ordinary eliminative efforts. If this warning is not heeded and the poisons continue to collect, it is only to be expected that the condition will go from bad to worse. No bodily abnormality ever stands still; it either grows better or worse.

The multiplicity of possible complications is a strong reason for giving more attention to colds, coughs, and catarrh than they usually receive. These conditions are so common that we often are inclined to minimize their importance and to feel that they soon will correct themselves. Colds sometimes do, as they are acute in nature (at least the symptoms may disappear without particular treatment); but catarrh never does. It may change into some-

thing else—that is, a different name may be applied to the change in symptoms; but the real condition always will remain unless something definite is done to correct it. Even in the case of a cold it is seldom that more than one, and a light one at that, will completely disappear without treatment. In most cases untreated colds degenerate into catarrh.

COMPLICATIONS OF COLDS

As all parts of the body are connected either directly or indirectly, it is easy to see how an abnormal condition in one part may spread to another; and it is necessary only to follow along the line of anatomical relationship to determine to a considerable extent what these conditions will be. As I have just mentioned, a cold is an acute condition; and if it is neglected and the accumulation of toxins is fairly large, so that larger areas of mucous membrane are required for elimination, the symptoms may spread to the throat, when it is called pharyngitis; or to the tonsils, when it is named tonsillitis; or to the larynx, when we have laryngitis; or to the bronchi, when we have bronchitis; all these conditions being in

the acute form to match the cold. If it goes still further we may have pneumonia, pleurisy, or influenza, as the lungs, pleura, or general system become affected.

If, instead of spreading downward, the cold travels upward, we may have an acute inflammation of the lining membrane of the eye—conjunctivitis; or of the sinuses—sinusitis; or if it goes through the Eustachian tubes we may have inflammation of the middle ear—otitis media; or ear abscess or mastoiditis may develop. In almost all the conditions thus far named there is very apt to be a swelling of the lymph glands and tissues, particularly the pharyngeal and palatine tonsils and the glands in the neck.

In young children a cold may lead to croup; and in children of any age, or even in adults, whooping cough or diphtheria may develop if there are enough of these germs around to start a flourishing colony in the phlegm that is being formed or in the weakened tissues.

We might follow the progress of the cold through many other parts of the body; but enough of the most likely complications have been named in order to impress upon you that

a cold is not always such a simple matter, and that once started it may lead to anything if not properly treated, which is another proof of the unity of disease.

A detailed description of the symptoms of the possible complications of colds is hardly necessary here. Nevertheless, it will be of assistance to discuss them to some extent in order that one may be able to recognize the warning signs and take the necessary steps to prevent further trouble.

In general, it may be said that if all the symptoms appear to be growing worse one may assume that complications or sequelæ are on the way. In the case of the cold, if a well-defined fever develops, if there is an aching throughout the body, or if sharp pains are felt in the head, neck, or chest one had best adopt more strict treatment at once—for the cold; that is, for the entire body as these signs may indicate the approach of influenza, pneumonia, pleurisy, laryngitis, quinsy, sinusitis, otitis media, etc.

COMPLICATIONS OF CATARRH

Catarrh very often follows a partly or im-

properly treated cold, but it is more of a sequel than a complication. In fact, catarrh is simply a chronic cold. The complications of catarrh are, therefore, mostly chronic in nature. The same parts may be affected as when complications of a cold appear, and we may have chronic pharyngitis, laryngitis, bronchitis, sinusitis, or conjunctivitis. When the tonsils are affected chronically they become enlarged and sometimes infected. In long-standing cases they may finally decrease in size and become imbedded. Chronic catarrh of the ear usually leads to head noises and deafness, usually slow in development. Chronic catarrh of the nose often produces adenoids, polypi (small tumors), and enlarged turbinate bones. When the small as well as the large bronchial tubes are affected, asthma is very likely to develop. Tuberculosis much more often follows a chronic catarrh than a cold. The interference with breathing produced by the "stopped up" nose and possibly, also, the enlarged turbinates and adenoids, the breeding places for germs provided by the abnormal mucus and often by the enlarged tonsils, the lowering of the vitality be-

cause of the delayed purification of the body and the extra nervous energy used, all pave the way for the development of "the Great White Plague." The very fact that the catarrh continues shows that the wrong habits of living are being continued, and it is only to be expected that something worse eventually may develop.

A chronic condition, such as catarrh, also is more inclined to spread to remote parts of the body than is an acute condition, such as a cold. Very often a catarrh of the stomach, called gastritis, or of the intestines, called enteritis, will develop. In the case of women the reproductive organs may be affected, and metritis (inflammation of the uterus) and leucorrhea (vaginal catarrh) produced. These are not always a direct complication of the nasal and throat catarrh, but they arise to a considerable extent from the same fundamental causes and are, therefore, much more likely to develop when catarrh in the nose already is present. It is largely a matter of the site chosen by the body for the work of elimination, and this depends on local and individual conditions.

The symptoms of catarrh complications may be any of the following: If a full feeling in the ear develops and there is difficulty in hearing, involvement of the Eustachian tube or middle ear may be anticipated. If a cough develops and becomes increasingly noticeable and there is a scratchy sensation behind the breast bone, there is considerable chance of bronchitis. This also may lead to asthma. If the cough is accompanied by loss of weight and strength, shortness of breath, and slight fever, tuberculosis may be suspected. If breathing through the nose becomes increasingly difficult without any increase in the amount of mucus, enlarged turbinates, adenoids, or polypi may be developing. When remote parts of the body are affected the symptoms are the same as those of catarrh in the nose except as regards location and some slight differences due to anatomical or physiological variations in the parts.

COMPLICATIONS OF COUGHS

Since a cough is only a symptom one would not expect it to have many or any complications, but it does. When long continued or

very violent it may produce some very uncomfortable and even serious complications. A cough is a special form of violent expiration and requires considerable nerve energy, muscle tension, and air pressure.

Because of the frequently repeated violent expirations which produce considerable movement of and pressure against the abdominal and pelvic organs, the muscles, tendons, and ligaments supporting these organs may become weakened and stretched so that the organs drop below their normal position, when we have the condition called prolapsus or visceroptosis. This, in turn, greatly interferes with normal function of the parts and may produce a long train of ills. If the lower abdomen becomes more prominent, gas develops easily, and digestive disturbances are noticeable, prolapsus probably has occurred. Anyone who has coughed much for any length of time is certain to have some ptosis unless special measures have been employed to prevent it.

If the abdominal muscles are especially weak or the abdominal rings are not perfectly closed the above-named conditions may give

rise to a hernia or rupture. In fact, a single violent fit of coughing may do this even when the coughing itself is not due to disease but to choking on some foreign object. Many cases of hernia have been produced, aggravated, or reproduced, probably after surgical correction, in this way. The likelihood of the development or approach of rupture is manifested by a sharp pain in the lower abdomen during a paroxysm of coughing. If the pain is accompanied by localized swelling in the groin, rupture already has occurred.

Due to the same reasons that produce the prolapsus and because of the pressure from the prolapsus itself, the circulation through the blood-vessels of the rectum may be interfered with to such an extent that hemorrhoids are produced. Hemorrhoids are simply varicose (or dilated) veins or capillaries in the rectum. This condition is rendered still more likely because of constipation, which always is present to some extent when there is a condition producing a chronic cough. Hemorrhoids may give rise to pain, itching, or bleeding, though they are sometimes present even when no noticeable symptoms are felt.

A condition of aggravated hemorrhoids, or one that may be distinct from hemorrhoids, is prolapse of the rectum, which may protrude for some distance through the anal orifice.

During coughing there is a considerable rise in blood pressure, because of the muscular effort and the changes in air pressure. If one already has hardening of the arteries or high blood pressure from some other cause, one of the smaller blood-vessels in the brain may rupture, producing a "stroke" of apoplexy. This is not likely to occur except in cases which already are complicated by some circulatory disturbance, but for this very reason such cases should observe particular care to prevent or immediately treat all coughs.

Another possible complication of chronic coughing is emphysema. This is a dilation of the air cells in the lungs, and is produced by the increased pressure of the air during the cough, together with a weakened condition of the air-cell walls arising fundamentally from the same causes which produced the cough. These factors cause the air-cell walls to stretch and become very thin. Sometimes they break and several air cells coalesce. This is espe-

cially prone to develop when the cough is due to asthma. Almost all cases of chronic asthma have some degree of emphysema, and this may be so extensive as to be quite serious. In all cases it produces much discomfort and difficulty in breathing, particularly on slight exertion. As disturbance in the rhythm of breathing is a fundamental cause of asthma, coughing may lead to the development of this disease.

Everyone is familiar with the red face and congested eyes of one who has just coughed violently. This extra blood pressure in the eyes may produce a chronic inflammation or may even distort the eye sufficiently to produce an error of refraction. In any case, there is almost certain to be some soreness and weakness produced, and considerable lacrimation (flow of tears). If the arteries are weak, coughing may rupture a blood-vessel in the eye, causing temporary or permanent blindness.

In addition to producing specific conditions, such as have just been named, coughing may affect the general health through the loss of nerve energy. Anyone who has had a chronic

cough, particularly if it has been fairly violent, will testify that it is very exhausting. After a paroxysm one is left panting and partly prostrated. Even a rather mild cough will use up a lot of valuable energy that is needed for other purposes, and since anyone in a condition to develop a cough already is lacking in nerve energy to some extent the loss becomes doubly serious. One should not assume from this, however, that suppressive measures are to be used for the cough. The proper thing to do is to remove the cause, using partial suppression only in case of dire necessity.

While I have felt it advisable to point out some of the possible complications of colds, coughs, and catarrh, in order that my readers may have a proper appreciation of the importance of prompt and proper treatment, I would not have anyone become worried or thrown into a panic by supposing that all these troubles may descend on anyone who has a cold. The majority of colds are readily remedied by a short period of strict treatment, and when really eliminated by natural methods and not suppressed by drugs there is no reason

to fear the development of any further trouble. In fact, the general health is benefited by the extra elimination of the cold and the proper treatment for it. By careful attention to right living further colds may be prevented and all possibility of complications removed.

It then depends entirely upon the patient whether he has complications or good health, and none but the foolish will have any trouble in making the choice. Unfortunately there are many who are still foolish, and to all such I say, "Take warning!"

TREATMENT OF COMPLICATIONS

A consideration of the treatment of complications must necessarily be brief in a book of this kind, since it is chiefly intended for colds, coughs, and catarrh. But, after all, the treatment of complications does not differ very widely from that of the original condition, for in most cases the complication is only an intensification or elaboration of the first disease. In the case of coughs, however, complications of a rather widely different charac-

ter may develop and these will be considered more fully.

TREATMENT OF COLD COMPLICATIONS

The complications of a cold are mostly acute inflammations of the structures adjacent to the nose. The treatment is very similar to that for a cold except that the absolute fast is used or the orange diet is continued longer, and more rest should be secured. The cold neck pack may be changed to a cold chest pack if the bronchi or lungs become affected. In a case of pleurisy a hot-water bag should be applied and the chest strapped with adhesive plaster. If the tonsils become inflamed the pack may be placed about the front of the neck and up under the ears instead of all the way round the neck. If the eyes are affected, alternate hot and cold bathing usually is better than packs. Eye rest is to be observed. If the larynx is affected it is better not to use the voice. In most cases the prompt adoption of the fast, together with water drinking, enemas, and fresh air, soon will reduce the condition to a point where it can be treated as an ordinary cold.

TREATMENT OF CATARRH COMPLICATIONS

The treatment of complications of catarrh is also very similar to that of the original condition. In fact, some of the complications are no more than catarrh of another part. If the eyes become affected they should receive as much rest as possible. If there is a purulent discharge boric acid water may be employed to bathe them. If the ears become so involved as to produce deafness, the use of jaw exercises and spinal treatments is particularly indicated. In exercising the jaw, simply move and stretch it in all directions. Widely opening the mouth against resistance of a hand under the jaw is a very good exercise.

Sunlight in the throat is helpful when the tonsils are affected. If adenoids and polypi develop, interfering seriously with breathing, their removal by surgery may be advisable in order to secure quick relief. This is only necessary in extreme cases, however. "Finger surgery" by a capable osteopath frequently is as quickly effective. Operations on the turbinate bones seldom are advisable or neces-

sary. When the stomach and intestines are affected the absolute fast should be used instead of the orange diet. If leucorrhea appears all local irritation should be avoided and strict cleanliness observed. Alternate hot and cold sitz baths also are of great value, their duration to be approximately three minutes in the hot and one in the cold, making two changes. The cold always is to be used as the final bath.

If the catarrh should develop into asthma, the practice of relaxation should be given particular attention. If one can develop the power of relaxing at will, he will have control of acute attacks. During such attacks the hot foot bath and hot hand bath, hot chest and spinal compresses, and spinal treatments also are helpful; but particular attention should be given to relaxing. The ten-day orange diet is repeated as often as necessary, always using the milk and acid fruit diet between such diets unless the patient is much overweight, in which case the diet should be mainly of fruits and green vegetables. Walking and fresh air should receive particular attention.

If unfortunately one has neglected his

catarrh to such an extent that tuberculosis has developed, the treatment must be considerably different. The main points of the treatment I recommend are short orange diets of from one to three days each, repeated every five, six or eight weeks, with the milk diet between these periods, fresh air day and night, sun-baths, air and dry friction baths, cool baths with reduction of temperature every few days until one can take fully cold baths, and rest. After definite signs of improvement have appeared walking is adopted, the lengths of the walks to be gradually increased, and, in time the speed increased from a leisurely stroll to a stimulating stride.

In the case of asthma and tuberculosis the condition has progressed so far beyond mere catarrh that it is advisable to secure detailed directions for treatment, such being out of place in this book.

TREATMENT OF COUGH COMPLICATIONS

The most common complication of a persistent cough is prolapsus of the abdominal or pelvic organs. In order to prevent this, every person who has a persistent cough should give

special attention to abdominal exercises in a reclining position and should assume the knee-chest position for five minutes several times a day. In conditions where exercise is contra-indicated, the knee-chest position alone will have to be depended upon, or walking about the room on the hands and feet. Even one who is accustomed to exercise and who has fairly well-developed abdominal muscles would do well to observe these precautions. Any exercise that brings the abdominal muscles into use may be employed. A number will be found in the chapter on "Treatment of Catarrh." The knee-chest position has been described elsewhere.

If prolapsus has developed before treatment is adopted the same measures are employed, except that the exercises are taken on a slanting board and are followed by a cold sitz bath for one minute. A slanting board may be improvised by placing an ironing board with one end on a chair seat or side of a bed or trunk, and the other on the floor. The patient lies head down, the feet being secured with a strap for the body-raising movements. A particularly beneficial movement, whether

lying, standing, or walking, is drawing in the abdomen as far as possible. This may be done without regard to breathing, or it may be done while holding for a very few seconds a fully inhaled breath and a fully exhaled breath.

The more serious condition of hernia, which also may result from a cough, is treated by the exercises on the slanting board, the cold sitz baths or local cold cloths, and by the use of a truss or suitable support. Exercises are taken in the face-up and side-lying positions and should be fairly strenuous. Of course, if one is not accustomed to exercise it is well to begin gradually. The hernia is held constantly in position with the truss except during exercises, as it must never be allowed to protrude. During the exercises the fingers hold the hernia in position. After the abdominal muscles have been well developed, the opening has had a chance to close, and the cough has become cured, the truss may be discarded gradually. One precaution in exercising for hernia is never to raise the straight legs directly upward when lying on the back. Always bend the knees at least slightly, and it is

better to bring the leg slightly to one side when bringing them over the body for various movements in that position.

The chief modifications of treatment when hemorrhoids develop from a cough are that a solid food diet, containing plenty of raw foods, is preferred to the milk diet, and cold sitz baths should be used daily. The slanting board (gravity) exercises also can be used to advantage. Warm rectal irrigations often are of value. These are taken the same as an enema except that the water is allowed to run out as fast as it runs in. A special irrigation tube may be secured if desired. Frequently hot rectal irrigations give more prompt relief. Either the warm or hot irrigations should be followed by a very short cold application.

If high blood pressure is present it is especially important to limit the quantity of food used, in order to prevent the possibility of apoplexy occurring during a coughing paroxysm. The amount of food that can be taken will vary in different cases, but always should be as small as will maintain ordinary weight and strength. Considerable rest should also

be secured, as this often lessens the severity of a cough.

Cold eye baths will help to prevent and ameliorate congestion of the eyes resulting from hard coughing.

With these suggestions and the detailed treatment already given for colds, coughs, and catarrh, one should be able successfully to handle most of the complications which may result from these diseases, always remembering that "A stitch in time saves nine" and that prompt treatment of the first symptoms of abnormality will prevent their developing into anything more serious.

CHAPTER IX

Main Points in Treatment Summarized

IN order that the reader may have notes which he can use for ready reference during the progress of his treatment, I am giving in this chapter a brief summary of the main points which I have brought out in regard to colds, coughs, and catarrh, and also an outline of the treatment in each case.

Diseases, particularly colds, coughs, and catarrh, are not "caught," but are developed as a result of wrong habits of living. These, then, are the real causes and should be given the most attention, regardless of the exciting cause in the particular case. Treatment by natural methods consists largely in a correction of the habits of living; but various special measures also may be required, according to the peculiarities of the individual case.

A cold is an acute disease; that is, the body working strongly to bring about extra elimi-

nation, and the symptoms are correspondingly violent. It is important to avoid giving the body any unnecessary work to do, and to conserve energy.

Catarrh is a chronic disease; that is, the body still is trying to eliminate, but being weakened from a long period of abuse it cannot work so strenuously and the symptoms are, therefore, less violent. The important points in treatment are the building of vitality and increase of elimination.

A cough is only a symptom, being found most often associated with colds and catarrh; but it may also arise from disturbances in other parts of the body, from nerve irritations, nerve pressure, and from the presence of foreign matter.

Symptoms are simply the signs of the body's efforts to remove the real disease, which is a clogging of the organism with toxins of one kind or another.

The habits of living include eating, drinking, breathing, exercising, bathing, sleeping, working, playing, and thinking. If these are not right, disease develops; but if they are right, one enjoys a genuine immunity. Pr

vention, therefore, consists entirely in right living.

TREATMENT OF COLDS

Just Coming On:

A long walk with deep breathing of the fresh air.
Evening meal to consist of nothing but acid fruit.
Enema and hot immersion bath before retiring.
Retire early in a well-ventilated bedroom.
Eat lightly the next day or take a short fast.
Give particular attention to the habits of living.

Developed:

Acid fruit diet until symptoms are gone.
Enemas daily.
Hot immersion bath the first night.
Plenty of sleep and fresh air.
Cold neck pack.
Air, dry-friction, and cold water bath daily.
Sun-bath daily if possible.
Walking and deep breathing.
General exercise for vigorous persons only.
Special exercise for nasal circulation.
Milk diet after symptoms are gone.
Combination diet if necessary.
Normal diet after milk diet.
Special attention to right living.

Becoming Complicated:
Absolute fast.
More rest.
Hot-blanket pack or cold wet-sheet pack.
Otherwise, same as for developed cold.

TREATMENT OF COUGHS

Treat the disease or condition to which the cough is due.

When due to nerve pressure:
Spinal treatments.
Treatment for tumor, aneurysm, goitre, etc.
When due to nerve irritation through reflex:
Treat the part of the body affected.
Fasting always of value.
When due to foreign matter:
Fresh air.
Lean forward; slap on the back.
Surgery when necessary.
Palliative measures:
Honey or honey and lemon.
Flaxseed tea.
Throat packs and compresses.
Cold packs have widest usage.
Spray nose and throat for cleanliness.
Salt water spray.
Suppression:
Partial suppression justified only in special and extreme cases.

Will power and suggestion.
Spinal inhibition.
Local anesthetics.
Drugs (as a last resort).

TREATMENT OF CATARRH

Fast or fruit diet for from seven to thirty days.
Ten-day orange diet usually employed.
Repeated if necessary.
Daily enemas.
Free drinking of water.
Fresh air.
Milk and fruit diet after the fast.
Fruit and vegetable diet after the milk diet, or if overweight after the fast, or if unable to take milk.
Fast or fruit diet for a few days every month.
Deep breathing.
Bathing—Air, dry-friction, cold water baths.
Sun, steam, or electric cabinet baths.
Exercise—General exercises.
Walking.
Sleep and rest—relaxation.
Proper mental attitude—autosuggestion.
Avoid bad habits of any kind.
Keep nose and throat clean.
Salt water spray or douche.
Oil spray.

Operation occasionally needed for deflected septum, adenoids, polypi.
Climate—moderately high dry.

TREATMENT OF COMPLICATIONS

Absolute fast, or longer fruit diet.
More rest.
Local treatment according to part affected.

If distinctly different condition develops, treat according to its nature.

CHAPTER X

Prevention of Future Colds, Coughs and Catarrh

I STATED in another part of this book that prevention was more important than treatment, and so it is. This should be obvious to anyone. But most of you who read this book will do so because you have a cold, cough, or catarrh of which you desire to be relieved, and until you have regained your health you will not be in a position to keep health. So, the first and greater portion of this book has been devoted to causes and treatment. Having cured your colds, coughs, or catarrhs (as I hope) by means of the directions so far given, the problem now arises as to how to prevent future ones.

The main points—practice of right living, study of your case, and eternal vigilance—have been mentioned elsewhere, and repeatedly I have called your attention to the fact that

avoidance of causes avoids the disease. To repeat here would seem unnecessary; but it is so easy to become careless, and there are so many pitfalls for the unwary that I feel that further emphasis on some points and elaboration of others are both justified and advantageous.

The first thing to remember is not to return to your old habits of living. You may have been carrying in your mind the thought of the nice juicy steak you were going to enjoy after you had finished your special diet; or you may have been luxuriating in the anticipation of lying in bed as long as you wished in the morning instead of getting up and taking your exercise; or some other pet bad habit may have been monopolizing your attention; but if you desire health, if you have any yearning toward the joys associated with abounding vitality, you will make up your mind once and for all to turn your back on your former habits and adhere strictly to those which are conducive to health.

If you will do so you soon will discover that you have formed the habit of right living and that the old temptations now have no power

over you. You will enjoy living rightly. You will no longer look upon it as a continual self-denial. Your former bad habits will seem as strange and foreign to you as your present good habits did before you adopted them and became acquainted with them to a sufficient extent to learn their real nature. You will find that right living has so many compensations besides the mere immunity from disease (which is no small thing in itself) that you never will return to your old ways of living. No matter how many times you may fall by the wayside you will find yourself continually striving to do better until you finally have won the complete victory.

Many people, however, are inclined to think that they are living rightly when they are not, and when they fail to secure results they condemn natural methods of living. But this is only because they have failed to give the matter proper study and attention. Some of the pitfalls that are constantly garnering their harvest of victims are the following:

"Just this once." Many a person has felt that he could indulge in some wrong habit of living "just this once" without its indulgence

hurting him. And probably he could. The trouble is that "just this once" whets the appetite for more, and each time one yields it makes it easier to yield the next time. Almost before one realizes it a regular habit again has been formed. The only safe way is to resist all temptation, and in a short while one will find that what once was a temptation has ceased to be beguiling.

Occasional Indulgence. This applies particularly to certain articles of food. Some such articles are on the borderline between good and bad foods and their occasional use works no particular harm. But here again there is the ever-present danger of unconsciously developing a habit. It is better to avoid all such foods until one has become so entrenched in the habit of eating rightly that he will be able to adhere to occasional indulgence with little or no danger of going further.

Overeating of health foods. Whole wheat bread frequently is used to excess by persons recently converted to its use. It has a good flavor and because it is a health food they are inclined to think they can use any amount of it. Even if they use only the same amount of

whole wheat that they did of white it may be too much, because of its greater solidity. Or they may have used too much white bread before. Most people eat too much bread anyhow. The same may be said of whole grain products of all kinds. Because of their tempting flavor sweet fruits and nuts also are frequently overeaten. These are concentrated foods and should be used in moderation in any case, but particularly when one is just getting back to health. The same applies to honey. Honey with whole wheat bread is delicious, and one must be constantly on guard not to use too much of it. I have already called your attention to the fact that overeating of starch and sugar is a frequent cause of colds, coughs, and catarrh.

Exercise "systems." If one maps out a series of exercises which use all the larger groups of muscles in the body and then practices them a certain number of times each day, he will be doing himself much good. But if he never changes his "system" the time will come when it will not be sufficient for his needs, unless it is more comprehensive and flexible than the average person devises. He will be-

come so accustomed to them that they will require little effort; they will become monotonous and he will be inclined to neglect them; and because of these facts they will not be effective in protecting him from disease. I do not wish to minimize the value of such "systems," but wish merely to show how you unconsciously may be failing to get the exercise you need. The better plan is to have several such systems and to alternate or mix them; to have some simple apparatus which may be used occasionally, and to take part in sports if it is at all possible to do so. Games and sports furnish a great variety of movements and plenty of interest, and, frequently, get one out into fresh air and sunlight. In any case, use sufficient exercise to call for enough exertion to guarantee the physiological benefits you need.

Neglect of cold baths in winter. It is an axiom of cold bathing that the body should be warm before applying the cold water, and if one finds that the cold weather gives him a chilly feeling he is inclined to neglect such bathing. The remedy is to exercise sufficiently to warm up, wearing extra clothing if neces-

sary. Dry-friction immediately before the cold bath also is of great value. As a last resort take a hot bath first; this to be not over three minutes in duration.

Neglect of fresh air. It is so easy to neglect this prime requisite for the prevention of colds, coughs, and catarrh that I feel it can stand further mention than has been given it thus far. See that your homes, particularly the bedrooms, are properly ventilated, even if your place of business is not. Window ventilators can be secured at moderate prices that give quite good results. Spend as much time as possible out of doors, and in order to be sure that you are out a certain amount it is well to time yourself. You will be surprised to find how the time gradually lessens unless you watch it closely. At least one hour should be spent out of doors each day.

Neglect of sleep and relaxation. We all are so busy these days, particularly when we begin to feel good again after a period of indisposition, that before we realize it the hours of sleep and relaxation are being crowded and curtailed. Learn to plan your day so that you can do all the really necessary things and still

secure adequate sleep. When you have made your plan, adhere to it until it has become a habit, else it may prove of little value.

Careless thinking. This is a very easy pitfall into which to stumble. Most of us have been so little trained in observing and regulating our thoughts that it takes considerable time and practice to get the habit of proper thinking. It is well to set aside a certain period each day to be used for suggestion, development of consciousness, and concentration on the habits of thinking. It will be time well spent and bountifully repaid. There are so many things which may disturb our thought-equilibrium to our detriment that more or less regular preventive thinking must be used.

However careful you are to observe the general principles of right living you cannot secure the best results unless you *study your own case* and adapt these principles to your own individual needs. Everybody is not alike in all points.

Some may find that regularity of meals agrees best with them, while others may find that they get along better by eating only when they have a well-defined hunger, no matter

how irregularly this condition may appear. Some may find that a day of fasting at stated intervals is an excellent preventive of ills, while others may find that they do best to fast only when they feel that all is not as it should be. Some can handle a much larger amount of starches and sweets than others. This, of course, is especially true of those regularly expending considerable energy in work or play.

The total quantity of food required also varies greatly in individual cases. The same is true of exercise. Some may need very little to keep in condition because they are so careful of their other habits, while those who are not so careful or who vary in other ways may need considerably more. Sleep is a notoriously variable quantity in the regimens of healthy people.

When it comes to right thinking some turn to religion while others prefer to use scientific terms and apply themselves to psychology. The results are the same in the end, yet failure might result if the scientifically minded person attempted to use religion, or *vice versa.*

It should not be very difficult, however, for a person to discover just what variations of

the fundamental principles best suits him. A little time, thought, and practice will yield rich rewards here.

Finally, in your efforts to prevent colds, coughs, and catarrh (also other diseases) never forget that *eternal vigilance* is the price of health, and hence of immunity to disease. Do not let health matters become an obsession to you, but do not become careless, either. Find the regimen that agrees with you and then adhere to it, but keep "an eye out" continually for the adversities of environment. Let your goal be perfection, and do not be satisfied until you attain it.

[THE END]