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Mélanges

CATECHISM OF HYGIENE

FOR THE USE OF

CONVENTS AND FEMALE SCHOOLS

BY A TEACHER

1888

QUEBEC.
FORGUES & WISEMAN, Booksellers and Stationers,
134, St. Joseph Street, St. Roch's.

1891

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TESTIMONIAL.

It gives me pleasure to acknowledge the receipt of this small pamphlet. The work is really a credit to its author whose name is so modestly concealed under the designation of "Teacher."

The very first page shows how the writer understands the importance of the study of Hygiene, as part of a child's education. "It was asked of Agesilaus how children should be instructed. Teach them what they must do, when they are men," answered the King.

Following this advice we must teach you, dear pupils, what you ought to do when each of you may be "mistress of a household."

"Mayhap you have been told that home was the cradle of hygienical science; that the family was the source whence the stream of health should flow" This great truth embodies man's whole existence; his health and life result from his formation in childhood.

This treatise comprises the following hygienic topics: "Hygiene of a lodging; — Hygiene of breathing; — Hygiene of alimentation;—of drinks;—of condiments;—Hygiene of the organs of motion and exercise;—Hygiene of sleep;—Hygiene of the skin;—Hygiene of the senses;—Conclusion.

The work is scientifically correct. We wish it every possible success.

Dr. J. I. DESROCHES,

Head Editor of the *Journal d'Hygiène Populaire.*

CATECHISM OF HYGIENE

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BY A TEACHER

It was asked of Agesilaus how children should be instructed. "Teach them what they must do when they are men," answered the king.

Following this advice, we must teach you, dear pupils, what you ought to do when each of you may be "mistress of a household."

Mayhap you have been told that home was the cradle of hygienical science; that the family was the source whence the stream of health should flow; consequently you have followed with interested attention these preliminary notions of that department of medical science which treats of the preservation of health, in the "Synopsis of an elementary cours of hygieni" which has lately been given you.

In this more extended course, which we now offer to your consideration, you may develop the theory of knowledge already acquired; the practical development thereof will some day be required: thus you will complete your instruction, and endear yourselves to your families, and render yourselves useful to your fellow-beings.

YOUR DEVOTED TEACHER.

LET US BEGIN BY FINDING A LODGING

ARTICLE I

HYGIENE OF A LODGING.

Q. What ought one seek for in the choice of a habitation ?

A. In our climate a slightly elevated position ought to be preferred. Habitations exposed to South and East influences being better lighted and less cold, are preferable to those situated so as to be at the mercy of North and West influences in which greater cold and dampness and gloominess prevail. Country life is more salutary than city life.

Q. On what quality of soil ought a habitation to be built ?

A. When optional, it should be erected on dry, sandy, stony, or calcareous ground. If

choice of a location is not possible, and if the habitation must be constructed on clayey, low and damp ground, the site should be drained and rendered salubrious by deep side-canals, so dug as to convey waters to some distance. An intelligent mistress of a household ought to have a plan of her house, indicating the position of the water-conveyances, and pay serious attention to their management.

Q. What should be removed from a habitation ?

A. All accumulation of detritus, animal or vegetable, pools, and stagnant water. These produce deleterious emanations, which taint and vitiate the atmosphere, thereby generating a host of ills.

A. Care should be taken to avoid the vicinage of abattoirs and unhealthy factories; and when this is impossible, the immediate surroundings of the house should be devoted to the cultivation of some flowers, and to the planting of as many trees as possible. During the day vegetables absorb carbonic acid and emit pure oxygen which vivificates the air.

Q. What should be observed concerning the windows of a house ?

A. They should be high and wide, so to let in the sun's fullest rays, thus exemplifying the adage of the ancients; "Where the sun entereth

the physician cometh not." To open one's house to the sun is to open it to health and gaiety. Pure air and light are benefits which Providence dispenses to all creatures, from which, as from many other gifts, they shut themselves out through ignorance.

Q. What then would you say to such of your friends as hermetically closed their windows, fear of dimming the brightness of their furniture or the lustre of their carpets ?

A. I should say that a wise manager of a household ought to be more concerned about her own health and the health of those dear to her, than about the beauty of her parlor and the brightness of her furniture. Furniture may be renewed while a wrecked constitution can only with difficulty be ameliorated. Then, from an economical point of view, sickness involves more expenditure than a new set of furniture.

Q. In what part of the house ought the bedrooms to be placed ?

A. One should never sleep on the ground-floor, because of the dampness and lesser purity of air ; nor in those apartments situated between the ground-floor and upper-story, on account of their slight elevation ; an upper room should be chosen, high-ceiled, with windows opening to the rising or mid-day sun, through which air and light may freely pene-

trate, because the air which has not undergone the action of light is unwholesome. Like plants, man deprived of light will etiolate and wither.

Q. What should furthermore be observed ?

A. As much as possible, bed-rooms should not be occupied until bed-time, and, then, nothing should be kept therein which might emit any odor, however agreeable. Flowers, medicine, articles of food should be excluded. All strange emanations vitiate the air. In the rooms of the sick, especially, these practices should be carefully observed.

Q. What attention should be given to a newly constructed house ?

A. In order that a newly built habitation may be occupied without any danger to health, it should be left to dry for a year at least, so that it may, during that interval, be subject to the influence of winter winds and summer heat. Imprudent persons who avoid this precaution, pay for their temerity, as a rule, with rheumatism, erysipelas, chest complaints, &c.

Q. How can one be assured of the salubrity of an apartmeut ?

A. By inclosing and exposing therein, during 24 hours, 500 grammes (two pounds) of quick lime. If the weight of the lime be increased

by only one or two grammes, the apartment is habitable.

Q. What precaution should be taken in the keeping and cleaning of the different rooms of a house, and especially of bed-rooms ?

A. Nothing is more unwholesome than dust, the atoms whereof sometimes contain dangerous germs, especially when epidemic diseases rage. Dusting right and left does not take away dust, but displaces it, and raises clouds of unwholesome substances which are inhaled, and which penetrate even to the lungs. Cleaning, then, should be done with a large sponge, or rag, slightly wetted. Thus dust is removed without spreading it in all directions.

Q. What should be done before occupying a room which has not been occupied for some time ?

A. A fire should be lighted, and the windows should be opened, weather permitting. If the weather be unfavorable, create a draught through the door.

Q. Is there not something to be remarked concerning feather-beds ?

A. From a hygienical point of view, it is a bad habit to be on a feather-bed ; it is soft and warm and absorbs the perspiration which it excites. If it must be used, it should be placed under a woollen or hair mattress.

Children should not lie on feather-beds. It is more conducive to their health and growth that they should lie on rather hard beds. They should not occupy the same bed with an aged or sickly person. An old person thereby gains strength; but the health of young children is gravely compromised.

ARTICLE II

HYGIENE OF BREATHING.

Q. What is the first act of life?

A. It is that of respiration. Respiration is the inhaling and exhaling of air by motion of lungs.

Q. What are the organs of breathing?

A. The nostrils, the mouth, and the skin which covers the body.

Q. Of what is the air which we breathe composed?

A. It is composed of 21 per cent of oxygen and 79 per cent of azote, with which are mixed a thousandth part of carbonic acid and vapor in variable quantities. Oxygen and azote constitute the air indispensable to life. The other elements

are more or less noxious to its purity, and consequently render it more or less dangerous.

Q. What quality should the air which we breathe possess ?

A. It should be pure. If it is laden with miasmata, or unwholesome exhalations, it becomes a slow but sure poison.

Q. Why must the air which fills occupied rooms be often renewed ?

A. Because that air is no longer pure after having been inhaled; it has thereby lost its vital, and acquired noxious properties. It has been infected by its passage through the lungs. The reason is this: when we breathe, we consume the oxygen of the air. It mixes with the blood, and pervades the different parts of the body, seeking the carbon which we have absorbed in our food (see combustible food). The oxygen consumes this carbon, thence is produced *carbonic acid* gas, which is poisonous and destroys those who inhale it. Consequently, for the preservation of her own and of her family's health, the mistress of a household should constantly renew the air which has already been used.

Q. As we inhale only the Oxygen of the air, what becomes of the Azote ?

A. We absorb it in nutrition, as will be hereafter shown, (see reparative aliments).

Q. How is the air renewed in apartments which have been occupied?

A. By means of ventilation. To air or to ventilate an apartment is to exclude the vitiated air which it contains, and to induct pure and fresh air, by means of openings, greater or smaller in dimension, which may afford a passage to the outer air which seeks to enter and to the inner air which seeks an outlet.

Q. What determines this exchange between the vitiated air inside, and the pure air outside?

A. Difference of temperature. The inner air being heated, is dilated, and tends to escape by every outlet. But in thus escaping, it leaves a vacuity which is filled by the colder air from outside. Thus, the former issuing forth, the latter rushing to replace it, a continual exchange is effected, which renews the interior air and maintains it in its purity. If a room which is occupied could be hermetically closed, death would ensue from asphyxia.

Q. Can a sick person's room be ventilated without danger?

A. Not only can this be done, but it should be done, after having taken every precaution suggested by prudence to avoid chilling the patient. A wise nurse should proceed in the following manner: placing a thermometer in the room, she puts a little extra covering over

the sick person, and notes the temperature indicated by the thermometer, as ordered by the physician. Then, she opens the window, in summer time, or the ventilator, in winter time, and lets the temperature fall by a few degrees. Afterwards, she closes the window or ventilator; waits till the thermometer rises to the desired point, and then takes off the extra covering. The sick person inhales the restored air with delight. It is also that he may enjoy the benefit of pure air, that many visitors should not be allowd to stay long in the sick-room. They take their part of the oxygen which he needs, leaving carbonic acid which he can well do without. Few visits and a great deal of pure air; these are necessary to persons laid up by sickness.

ARTICLE III

HYGIENE OF ALIMENTATION.

Q. After having procured for the family the advantages of a healthy habitation and the benefits of pure air, what is the most imperious duty of a household mistress?

A. The duty of making a good choice of arti-

cles of food. Most sicknesses come from the stomach, and are due to ill-feeding.

Q. What are called aliments ?

A. Everything which serves to maintain the life of the body, and which can be assimilated to the organs. An apple is an aliment, paper is not.

Q. Why do we eat ?

A. We eat: 1° To put into our bodies substances which preserve animal heat ; a warm body is a living one ; a cold one is dead : 2° To give them others which restore the organs, as they wear away, for everything possessing motion is subject to wear out.

Q. How are designated those substances which preserve the heat of the body ?

A. They are called combustible or respiratory aliments ; such are dripping, oil, butter, pork, sugar, honey, yelk of eggs, farinaceous and feculent substances, alcohol, and all liquids containing it, such as wine, brandy, strong liquors, &c. These substances unite with the oxygen which comes from the lungs, undergo combustion, and produce the heat necessary to life, as well as the strength necessary for action.

Q. How are designated those substances which serve to repair our organs ?

A. They are called azotic or reparatory aliments. Those which better effect this reparation are meats, especially those derived from full-grown animals, as oxen, sheep, &c.; then fish, white of eggs, cheese, certain vegetables, as beans, turnips, cabbage, carrots, &c. All these aliments calculated to renovate the tissues worn by the action of every day life.

Q. How do we know the respective properties of those aliments ?

A. Through the labors of learned men given to the study of chemistry, we know very well, to-day, what are the properties of the different substances which man needs for his nourishment.

Q. Are there not aliments which are called complete ?

A. The best known are *milk* and *eggs*, which contain carbon and azote in such proportions as to be sufficient of themselves for complete nourishment. The yelk of eggs wholly contains carbon, while the white thereof is pure azote. Milk contains sugar and butter, that is to say, carbon ; it also contains azote in such of its parts as make cheese.

Q. What quantity of nourishment should be taken daily ?

A. It varies according to differences of age, occupation, season and climate. A child should

eat less than an adult. A person of idle or sedentary habits should not eat as much as one whose occupation involves a great use of muscular power. Scientists say that the daily wants of an adult require, on an average, three hundred grammes of carbon and twenty of azote, which proportions are contained in a pound and a half of bread, and one pound of meat, of which part is replaced by other nutritive substances. At all times, one should know how to restrain one's appetite ; that is, to cease eating while yet hungry.

Q. What should be observed in alimentation on account of climate and change of seasons ?

A. In cold climates combustible aliments should be taken, in increased quantities ; thus Esquimaux and Laplanders gorge themselves with fat and oil ; on the contrary, in warm countries, the quantity of such substances should be diminished, and nourishment derived chiefly from vegetables and fruit. Hindoos and Arabs live on rice, dates and other fruits. For the same reason, food should be stronger and more abundant in winter than in summer.

Q. Explain this difference.

A. In order to maintain the body in a warm and even temperature, nature requires that the amount of combustible nutrition absorbed

should be proportionate to the degree of cold which obtains. The natural temperature of the body being about 37° centigrade, it follows that as we advance northwards, the body should be kept in warmth by increasing the quantity of combustible aliments ; while, on the other hand, this quantity should be diminished as we advance in a southward direction.

Q. What happens when the nourishment given a person is too poor, or too slightly recuperative ?

A. An ill-nourished person becomes emaciated ; the body wastes away and is not restored ; weakness ensues, and the internal combustion, whence strengh was derived, no longer acting sufficiently, health declines, and premature death is the consequence.

Q. And if the nourishment is too rich, too abundant, what follows ?

A. The result is as baleful as the preceding case ; because the carbon absorbed in too great quantities, not being consumed, is transformed into fat which presses against and stifles the organs, paralyses action, and predisposes to a host of diseases. Moreover excess of azote produces an abundance of blood and humors which generate painful maladies, such as gout, inflammations, calculus, and others called diseases of rich persons.

Q. What then is the secret of alimentary hygiene ?

A. Sobriety and temperance. We should take food not for pleasure, but through necessity, that is, to regain exactly what we have lost. Our nourishment should be at the same time sufficient and moderate ; made up of reparatory and combustible aliments in suitable proportion ; because the exclusive use of either necessarily brings trouble into the organism, and promptly undermines health.

DRINKS.

Q. What is meant by drinks ?

A. All liquids received into the stomach to repair the losses occasioned by fluid secretions and to help the digestion of solid nourishment.

Q. What is preeminently natural drink ?

A. Water. As it constitutes the greater part of our bodily composition, we should drink it daily. It is water which renders the flesh soft and elastic. Without water it would be dry and hard, and could not fulfill its functions. Chemists inform us that water makes up three-fourths of our weight; thus, in a child weighing 80 pounds, there are, it seems, 60 pounds of water.

Q. How much water should be taken daily ?

A. An adult in good health loses about one litre per day (1,760 pint), more or less according to work, exercise and heat. On an average, then, one should drink a litre of water daily ; but as water is contained in most of the aliments which we take, such as soup, sauces, tea, &c., so much ought to be taken from the daily ration of pure water.

Q. What qualities should water possess in order to be potable ?

A. It should be well-aired, clear, without odor, color or taste. Water may be ascertained to be potable, when it dissolves soap without leaving a residue, and when it easily cooks dry vegetables. These signs are as certain as those afforded by chemical analysis.

Q. What kind of water is best adapted to use ?

A. The best water is that taken from springs, rivers and streams. Rain water is also good, but it should be gathered directly, because that which falls from house-roofs carries with it certain impure substances which must be removed by filtering. Water drawn from certain wells and cisterns should be filtered before use. The same is to be remarked regarding water taken from ponds and swamps : in fine all stagnant water should be filtered.

Q. What should be observed when one is oppressed by heat, thirst, or when the body is perspiring ?

A. Cold water or any iced drinks should not be taken. Thirst is better relieved by mingling a few drops of brandy or a little coffee with the water, taking it then in small draughts. Want of precaution on this point is the source of almost all lung diseases.

Q. What have you to say concerning other liquids taken as drink ?

A. With the exception of milk, which is food as well as drink, it is more conducive to health to completely dispense with them. If wine must be taken, by the physician's orders, it should be sufficiently weakened with water, or mixed with broth, milk, cod-liver oil, iron, &c. The immoderate use of fermented drinks destroys the health, weakens the intellect and leads to a shameful and premature death.

CONDIMENTS.

Q. What are condiments ?

A. Under this term are comprised certain substances which are used to season certain culinary preparations ; such as salt, pepper, mustard, vinegar. To these may be added cer-

tain vegetables which stimulate taste and digestion; as garlic, onions, parsley, caper, pickles, &c.

Q. How should condiments be used?

A. With moderation. Abuse of condiments gives rise to inflammation of the stomach which is very often fatal. Many young girls have destroyed their health by an immoderate use of salt, mustard, and vinegar! Excess in all things indicates a sketch of madness, cure of which depends on our own will.

ARTICLE IV

HYGIENE OF THE ORGANS OF MOTION AND EXERCISE.

Q. What are the organs of motion in man?

A. The organs of motion are: 1° the bones; 2° the muscles; 3° the nerves.

Q. What is the function of bones in the body?

A. They serve to support all the other parts of the body; they constitute the frame of the human structure, called skeleton. There are short and long bones. Some are movable, others

are fixed. The whole has been combined and constructed by the ablest and wisest of architects. The human body contains as many as 200 bones.

Q. What are the muscles ?

A. The bones being of themselves powerless to execute any movement, need the aid of particular organs. These are the muscles. The muscles properly so called constitute what is commonly named the *flesh*, that soft, thick, ruddy part of the body, formed by fibres attached to each other, and inserted on the bones by means of bonds known as *Tendons* and *Ligaments*. Under the influence of the will, these muscular parts are shortened by contraction and lengthened by relaxation, and draw the movable party to which they are attached. There are more than 500 muscles in the body.

Q. What is the agent of the will in the movement ot the muscles ?

A. The nervous system. The nerves are thin white cords, formed of a substance called nervous matter. They penetrate every part of the body issuing from the brain and spinal marrow. The former are called *brain-nerves* and cause all facial movements; the latter are called *spinal nerves* and direct the movements of the trunk and limbs. Thus in order to move, two things are required: 1° An act of the will imparted

by the nerves; 2° cooperation affected by the muscles and bones.

Q. Are there not movements in the body independent of the power of the will ?

A. Yes ; those of the heart, lungs and stomach are not subject to the will ; but, without muscular action, these organs so irregularly exercise their functions that they insensibly induce rachitis, atrophy, paralysis and death.

Q. Is motion necessary then to health ?

A. It is the most powerful auxiliary of health. By contraction of the muscles, the blood is aided in its course through the smallest channels to the extremities of the body, and thus prevents all noxious accumulation in the interior organs. Exercise favors the different functions of respiration, digestion, and blood circulation ; furthermore it contributes to development of the intellect and to the clearness of ideas. The Creator gave motion to every living being ; the bird leaps from branch to branch ; wild beasts roam over plain and through forest in quest of food ; the duty of labor imposed on all shows the necessity of motion.

Q. What voluntary movements are most favorable to health ?

A. Those which bring the greatest number of muscles into action, especially in children. Instinctively they feel the need of developing their

strength and of expanding in leaping about and gesticulating the exuberance of animal spirits with which they are endowed.

Ordinary gymnastics, such as leaping and running, skittles, ball playing, lawn-tennis, battledore and shuttle-cock, trundling a hoop, croquet, are especially adapted to youth; for aged persons nothing is more beneficial than a daily walk.

Q. Can all children take part in the same exercises?

A. There are children of such a weak constitution from their birth that they should be forbidden all violent exercises. Easy games and agreeable distractions should be provided them, such as the cultivation of flowers, short but frequent walks. Delicate young girls develop their strength by discharging the duties of the household, and by helping their mothers in the care of their younger brothers and sisters.

Q. What do you think of dancing?

A. Night dances in closed rooms, where the air is vitiated by the light and respiration, are far from being a hygienical exercise. They are even oftentimes dangerous on account of the fatigue they occasion, and of the sudden changes of temperature which bring on chills and chest diseases. Consequently it is wiser to abstain from dancing.

Q. Does not want of work and exercise also affect the nervous system ?

A. The nerves deprived of motion undergo considerable changes and bring painful disorders into the organism. Hence habitually originate hypochondria, and those nervous attacks which do not imperil life, but which are a source of annoyance and uneasiness in the bosom of families. There is no better preventive and curative medicine for these disorders than exercise and application to useful labors.

Q. What should persons do who are unable to take exercise ?

A. They should instead have dry rubbings with a piece of flannel or rough cloth. These rubbings enliven circulation, irritate the skin, and are especially beneficial to aged persons who suffer from rheumatism.

Q. Can every species of exercise be indulged in without reserve ?

A. Moderation must be observed in everything. Excess is as prejudicial as insufficiency; thus an upward, long and tiresome walk; rapid running, any violent exercise continued for a time without interruption, &c., trouble digestion, obstruct respiration, give rise to excessive perspiration, and occasion lumbago, chills, inflammation, &c. After a certain time of inaction and repose, as during the period of con-

valescence, exercise should be taken gradually, and too violent and too prolonged exercises should be avoided.

Q. What should furthermore be observed?

A. The season should be taken into consideration for walks and games. During summer it is better to walk in the morning or evening; in winter time towards mid-day is preferable. When a forced walk must be taken after a meal, that meal should be light. Want of exercise in winter renders one more sensible to cold, and necessitates too great a heating of rooms; the heat thus obtained weakens the body and makes it liable to suffer from the slightest variations of temperature. Hence colds, sore throats, inflammation on the chest, which in our country create so many victims. Loud reading, and singing without excess, greatly strengthen the chest.

Household occupations are conducive to health, by exercising body, mind and even heart The cultivation of a garden is greatly recommended as a means of health.

ARTICLE V

On rest.

Hygiene of sleep.

Q. Could the body be always in motion or occupied in working ?

A. No ; work and fatigue, either of the body or of the mind, necessitate repose. In establishing the succession of days and nights, the Author of all things seems to have subjected entire creation to alternate periods of activity and rest. Were we to continue moving, the time would soon come when every action would become painful and even intolerable.

Q. What precaution should be taken before rest, after too brisk a toil or violent exercise ?

A. Howsoever great be the want of rest which may be experienced, care must be taken, if the body be perspiring, to slowly diminish speed, while walking, to gradually lessen the rapidity of motion, when too rapid, and to cease all activity only when the great heat of the day will have been diminished. Otherwise sudden chills may follow which induce grievous perturbation in the entire system. The seductive attraction of cool and damp places, of shady

bushes should then be avoided. Neither should one sit on stone benches or in any other place in which the temperature is much lower than that of the body.

Q. What rest is most natural and salutary ?

A. Sleep, which all the better exercises its reparatory and beneficial action, when begun and finished at the same hours, night and morning.

Q. What time is most favorable to sleep ?

A. Night : man is so made that he must work by day and rest at night ; our eyes see nothing in darkness.

Animals for the most part and plants obey the same law. The serenity, calmness and silence of night have been ordained by Providence to this end.

Q. What must be thought of those who invert this order, and change day into night and night into day ?

A. It must be said that they either ignore the dire consequences of such disorder, the sad results of which they will sooner or later experience ; or that they care nothing for the loss of their health.

Q. At what hour should one retire for the night ?

A. For children the hygienical hour is from

seven to eight o'clock; grown persons may prolong their sitting until ten o'clock, at the latest.

Q. What should be the duration of sleep?

A. This depends on the age, constitution and state of health. Children need more sleep than adults; persons of weak constitution more than robust people; during sickness and convalescence, prolonged sleep is necessary. Thus ten hours for children; 6 or 7 for healthy persons; 8 or 9 for delicate persons; this approximates the hygienic rule. Some there are who sleep only three or four hours, without feeling any inconvenience.

Q. What are the effects of too prolonged slumbers?

A. Idleness, indolence, weakening of the body, of memory, of intellect. Late rising, when one is not sick, impairs the health, and is opposed to spiritual as well as to material interests. "He who riseth late," says Franklin, "can never overtake his work."

Q. What precaution must be taken to induce peaceful sleep?

A. Given a day employed in useful work, during which moderate exercise has been taken; the body should be stripped of all uncomfortable clothing and sufficiently covered; because natural heat is reproduced with less activity during sleep; the head should be slightly raised;

all sorrowful remembrances and painful impressions should be shut out from our thoughts; we should pray God fervently and consign ourselves to the care of His Providence. There should be an interval of a few hours between the last meal and bed-time, in order to avoid all ugly dreams, nightmares, and other accidents, which might result from laborious digestion.

Q. What are the effects of insomnia?

A. Insomnia or want of sleep gives rise to varied maladies, chief among which are those of the brain.

When there is total absence of sleep, it is a torture to which the organism soon succumbs. In such a case a physician should be consulted. But if insomnia is occasioned by overwork or overeating, the cause thereof should be removed before it becomes chronic.

Q. Does not outward temperature exercise some influence on sleep?

A. Excessive heat or cold bring on sleep. In the first case sleepiness is overcome by indulging in a siesta; in the second case, it must be courageously resisted, sleep then bringing on death by paralysing the limbs. Most of those unfortunates, found dead in the snow, on mountains or in fields, during severe winters, were victims of a sleepiness which they could not resist.

ARTICLE VI

HYGIENE OF THE SKIN.

Cleanliness.—Toilet.—Clothing.

"La propreté est au corps, ce que l'amabilité est au caractère."

(LAROCHEFOUCAULT.)

Cleanliness is next to godliness
Cleanliness is pleasure.

(PROVERB.)

Q. Of what importance is cleanliness morally and physically considered ?

A. "Not only does the health of the body depend a good deal on cleanliness," says Schmalz, "but it is one of the principles of the morality of man. It is chiefly in unclean dwellings that are to be found idleness, deceit, theft and every other vice. Want of cleanliness is not only prejudicial to purity of body, it is prejudicial to purity of soul." Thus vice is often clad in rags, while virtue, even in the midst of extreme poverty, bears the stamp of cleanliness; but whatever may be the reason, want of cleanliness always excites unfavorable ideas.

St. Francis de Sales, St. Liguori recommended it ; and the historian of the life of St. Teresa shows us that amiable saint caressing on her bed of death, the nurse who attended her, adding that the love which the saint had for cleanliness was like a reflection of the purity of her soul.

Q. How and on what should cleanliness be practised ?

A. It should chiefly be practised on the skin, then in connection with clothing and dwellings.

Q. Why should cleanliness be observed chiefly in regard to the skin ?

A. Because the functions of the skin have direct influence on the health of all our organs.

Q. How is the skin composed?

A. That exterior coating of the body is composed of two coverings: the epidermis and derma.

Q. What is the epidermis ?

A. That exterior pellicle bereft of sensibility which receives neither nerves nor blood vessels. It is easily renewed and serves to protect the derma.

Q. What is to be found in the derma ?

A. In the derma or skin properly so called we find : 1° a marvellous tissue of fine hair-like nerves which receive sensations by their extre-

mities called *papillas*, and bear the impressions to the brain; 2° a multitude of small blood vessels, called *capillary vessels* which serve for absorption respiration, &c.; a prick of a pin shows their presence; 3° millions of small microscopic glands which secrete perspiration and eliminate from the body superfluous matter by means of small tubes, the orifices of which are called pores. By these various functions of the skin, it is easily understood what influence it exercises on the interior organs, and how necessary it is to keep it in a continual state of perfect cleanliness (See articles: perspiration and cleanliness in synopsis.)

Q. What is the best means of preserving the skin in this necessary cleanliness?

A. To frequently and carefully wash it so as to cleanse it from the dirty coating which is constantly forming either by secretions which come to the surface or by the many stains incurred by contact with exterior objects.

Q. Is the daily washing of hands and face sufficient?

A. Bathing should also be indulged in. The Mosaic law prescribed bathing as a religious observance; the waters of the Ganges are sacred in the eyes of the Hindoo; bathing in that river is a religious act. Christians should also consider water as one of the most precious gifts

of Providence ; use it in abundance and with gratitude.

Q. What precautions should be taken in bathing ?

A. Medicinal baths should not be taken except by order and according to the prescriptions of a physician, because they are not adapted to every constitution. As regards baths solely taken for cleanliness, which are suitable to every person, one should observe : 1° not to go into water while in a state of perspiration ; 2° not to bathe immediately after meals ; but only after an interval of a few hours, so as not to stop digestion, which would be very dangerous ; 3° to choose clean water ; 4° to rub oneself with care on coming out of the water, and, after promptly dressing, to take exercise so as to bring about a reaction.

Q. When these baths cannot be taken, how can the deficiency be supplied ?

A. It may be supplied by means of a large sponge or a wet towel.

These ablutions should be performed rapidly, and on one limb at a time, which should be rubbed vigourously and immediately covered, because cleanliness should not antagonize modesty, both being sister-virtues.

When in health, this ablution may be taken in cold water, and should last only a few mi-

nutes; during winter, or when indisposed, *luke* warm water is used.

Q. Can sick persons receive these attentions?

A. If the physician has not expressly forbidden it, they receive them; it is especially during the illness that circulation of the blood to the extremities should be excited, because the limbs being deprived of motion are almost always icy cold. However, hot water must be used, and rubbing should be done with a warm and rough cloth.

These ablutions give ease to the sick and cannot but produce salutary effects. When it is impossible to use even these means, the skin of the patient should be rubbed with a flannel or rough cloth, so as to take away the spots of dirt which fill the pores.

Q. Does cleanness of the skin suffice to insure health of the organs?

A. To this must be added cleanliness in clothing and in dwellings; because it would be useless to clean the skin, and afterwards to put in contact with vestments impregnated with sweat, or dusty and stained. No matter how poor the clothing, it should always be kept clean, if not through deference towards others, at least through self interest.

Q. Besides cleanliness in clothing is there

nothing else which should merit the attention of a house-keeper ?

A. One of the most formal precepts of hygiene for the preservation of health, being that which prescribes that the body be kept in the same temperature ; the mistress of a household should know under what conditions clothing can accomplish this object.

Q. What are the conditions ?

A. They are : the stuff of which clothes are made, their form and color.

Q. Of what are clothes made ?

A. Of different substances possessing different properties and which should not be indiscriminately used.

These are : flax, hemp, cotton, silk, wool and furs.

Q. Make known their respective properties ?

A. Flax and hemp favor the cooling of the body, by easily transmitting the heat of the body they cover to the outside. For this reason it is good to use textures of either during the summer season, and when travelling in warm countries. Cotton is better adapted to retain the heat of the body ; it has furthermore the advantage of being easily impregnated with perspiration. Its use is therefore useful during intermediate seasons. It may be used with comfort at every season as inside clothing ; as

it is easily soiled, it must be often changed, indeed, as often as possible.

Wool admirably preserves the heat of the body; consequently it should be used in the making of winter garments. The use of flannel jackets worn next the skin is almost indispensable in such a variable climate as that of Canada. Besides keeping the body in the same state of warmth, it produces, by its roughness, a slight friction favorable to the action of the veins and nerves.

Silk has the same properties as wool, but it should not be worn next the skin, because it keeps the body in a sort of vapor-bath, which impedes perspiration. The same is to be remarked with regard to impermeable clothing which should be doffed as soon as shelter from rain is reached.

Finally furs, preventing all loss of bodily heat, are an efficacious barrier against cold.

Q. What must be observed with regard to the shape of clothing?

A. Whatever part of the body the dress may cover, it should not compress it, so that the circulation of the blood may be free, and that perspiration may evaporate. The shape should leave liberty of action to all the movements. Nothing then is more opposed to hygiene than to squeeze the waist in a narrow corset, which

presses against the ribs, renders breathing difficult and occasions grave disorders in the interior organs. Even garters drawn too tight impede the circulation of the blood. And what must be said of boots? When too narrow, they may produce congestion of the brain; when with narrow high heels, they facilitate sprains, and, what is worse, occasion contractions of the muscles and viscera, results of which are terrible. 'T is the fashion, it is said, and because of this, health and life are sacrificed to satisfy the exigencies of vanity. What folly!

Q. What influence on health has the color of tissues?

A. Experience has shown that black and dark colors absorb heat and more readily give it passage than light colors, especially white. To be assured of this, the following experiment may be made: On a bright sunny day in winter, two blankets, one white, the other black, are spread out over the snow. After a certain time, it is discovered that the snow is melted under the black blanket, whereas it has remained intact under the white one.

A white garment is therefore a screen against heat in summer and keeps the body warm during winter. Consequently, given the same thickness, white tissues are cooler in summer, and warmer in winter than black stuffs. For this reason the Arabs and Kabyles always wear

winter and summer, their white woolen burnos.

Q. Is there a period determined by the calendar during which we may lighten our clothing, and change them without imprudence ?

A. On this point the state of the atmosphere and our own impressions are the best dates in the calendar. As a general rule nothing is risked in keeping warm clothing at the approach of summer, whereas great danger is run by too speedily changing winter for summer clothing.

Q. What further observations may be made as regards clothing ?

A. 1° The linen or clothing worn by persons who have died of contagious diseases, such as small pox, typhus, scarlatine, consumption, &c. should not be worn. Poor families who cannot afford to destroy these articles should carefully disinfect them, or, better still, inter them for two or three months after having previously steeped them in lye.

2° Wet garments should not be kept on ; but moderate exercise should be taken, in order to preserve the heat of the body, till such a time as they can be changed.

3° Our feet being habitually in contact with the earth, must be preserved against cold and dampness. Cotton stockings are preferable to thread stockings during summer. In winter

time woolen stockings are used. Such as cannot endure the contact of wool with the skin, should put on fine cotton stockings, and woolen ones over them. This is an excellent means of keeping the feet dry and warm.

Q. Is care of toilet confined to cleanliness of the skin and clothing?

A. To these must be added the attention to be paid to the hair, teeth and nails.

Q. What care must be taken of the hair?

A. It should be combed each day, then brushed so as to remove the white pellicles (dandruff) from the scalp. This should be done in the morning so as to dry the hair after the perspiration produced during the night, and to air it. The hair should not be twisted or tied too tight, in order to avoid a rush of blood to the head; and they should be loosened for the night.

Dry hair needs a little pomatum, the simpler the better. Naturally oily hair does not, it would even be injurious.

The custom of impregnating the hair with water leads to head-ache and baldness. The hair of sick or convalescent persons should not be cut.

Q. What hygienical care should be given to the mouth and teeth?

A. To prevent deterioration of the teeth which gives rise not only to very acute pains, but also

to foul breath, and imperfect mastication, which causes laborious digestion ; the mouth should be rinsed every morning and after each meal ; the teeth should be cleaned every day with a wet cloth or a soft brush, not only to remove all detritus of food, but also to prevent the formation of tartar. A soft tooth-pick should be used, such as a goose-quill. Metal tooth-pick should be avoided. Hard substances such as nuts &c. should not be broken with the teeth. Hot and cold drinks should not be taken in immediate succession. A decayed tooth should be extracted or cauterized so as not to injure the others.

Q. What should be observed in cutting the nails ?

A. The finger-nails are cut short and in the shape of a semi-circle ; the toe-nails are cut square, so that the corners may not pierce the flesh. This causes acute pain, sometimes even ulcers, which cannot be cured unless by the extraction of the nail. This is what is called *ingrowing toe nail.*

ARTICLE VII

HYGIENE OF THE SENSES.

Sight.

Q. What is the organ of sight ?

A. The eye, that marvellousbut very delicate instrument, which receives light and transmits to the brain the image of surrounding objects, by means of the optical nerve.

Q. What precautions must be taken to preserve sight ?

A. Like all the other organs of the human body, the eye requires exercise and rest. Too long and too fixed a gaze at an object diminishes or weakens the sight ; so equally would insufficient exercise of the eye. The precautions to be taken are :

1° To exercise the eye so as to see far as well as near. Many persons are myopes or presbyopes, not by nature, but for want of attention to these principles of hygiene.

2° Light being, so to speak, the food of our eyes, it must be adapted so as to be neither too strong nor too weak. Protracted work by too strong a light fatigues and diminishes the

power of sight, and may occasion paralysis of the retina; working with a dim light also produces evil effects; the eyes become congested through the efforts made to see.

3° When obliged to look fixedly for a long time, at fine writing or delicate work, there should be occasional intermissions during which the eye should be turned to distant objects. If a weakness or burning be felt, the eyes should rest and be refreshed by bathing with cold water.

4° One should avoid passing suddenly from profound darkness to vivid light, and *vice versa* because the dilatation or contraction of the pupil is then too instantaneous. The transition from darkness to light aud *vice versa* should be gradual.

5° Brilliant objects. such as lightning, fire, the sun should not be fixedly gazed at; the same may be said with regard to those objects which reflect the sun's rays, as water, snow, white facades, &c.

Q. What must be done when obliged to work, read or write by an artificial light?

A. Care should be taken that it is abundant, and its brilliancy should be softened by means of a shade or by roughed glass globes which stand between the eye and the naked light. One should not work facing the light, but in such

a way as to have it come sideways, and while sewing, it should come from the left side. This care of the eyes should be observed at all times, and at every age, but especially during infancy because of the extreme delicacy of the organs of sight.

Q. What is the natural range of vision ?

A. When the eye is in its normal condition the range of vision in reading, writing, sewing, extends to about 30 centimeters. If one is obliged to increase or lessen this distance, the eye is not in its normal state. Long-sighted persons are called *presbyopes ;* short-sighted persons, *myopes.*

Q. How can these defects be amended ?

A. By means of spectacles ; but long sighted persons only use them while reading, writing, or working on small objects , wearing them to see distant objects only tends to weaken the sight ; short sighted people, on the contrary, may wear them continually ; many experience ease thereby.

Q. If the range of both eyes is not the same, what must be done ?

A. A suitable glass must be taken for each eye. To this effect, recourse must be had to a good optician, without any regard to double expense, when it is a question of preserving such a precious organ as the eye.

Q. Must practice of cleanliness be observed also with regard to the eye ?

A. Undoubtedly ; because the secretions of the lachrymal glands which collect in the eye, contain saline matter which is injurious, and which should be removed every morning, by bathing with pure water.

Smell.

Q. What are the organs of smell ?

A. The nasal chambers not only play a part in the act of breathing, they are also the organs of smell. As we breathe more by the nose than by the mouth, and as the odorous particles spread through the atmosphere, are borne to us with the air which we inhale, it was wisely ordained that the nasal chambers receive them.

Q. How is this done ?

A. By means of a hurried membrane called the pituitary membrane, which lines the interior of the nose, and which is in contact with the nerves which bear impression to the brain.

Q. What is the function of smell ?

A. This sense—advanced sentinel of the digestive organs—serves us to discern the aliments which are suitable for our nourishment, because it is almost certain that if the odor of

any substance is disagreeable to us, it would trouble the stomach, and be digested only with difficulty.

Q. What hygienic care must be taken of the sense of smell ?

A. As this sense is weakened and deteriorated by everything which may thicken or wither the mucous membrane or destroy the sensibility of the olfactory nerves, one should avoid the habitual use of exciting odors, such as those of tobacco and camphor, as also too violent perfumes.

Taste.

Q. Where is the seat of the sense of taste ?

A. The seat of this sense is in the mouth every part of which, particularly the tongue, is endowed with great sensibility.

Q. What is the function of this sense ?

A. To make known to us the properties of substances which are used as food, and to warn us if they are useful or injurious.

Q. What hygienical care must be taken of this sense ?

A. It should not be impaired or weakened by the abuse of stimulants, such as strong liquors, spices, chewing tobacco, &c. Taste like

smell has an instinctive repugnance for certain aliments, which it is not necessary to endeavor to conquer.

Hearing.

Q. What is the organ of hearing ?

A. The ear, most complicated in its form. The diseases which affect it require the care of a specialist.

Q. What care must be taken of the ears ?

A. Like the other organs, the ear must have exercise and rest alternately. Too loud and too prolonged a noise, as well as long uninterrupted silence, is injurious to hearing. Cleanliness daily practised is necessary, in order to rid the ears of the cerumen (wax) which is formed in them. This thick, sticky secretion hardens in course of time, fills the cavity of the ear and produces deafness. To extract this secretion, a bone or ivory ear-pick should be used. Pins or any other metal object should never enter the ear.

Q. What must be done when an insect penetrates into the ear ?

A. Olive-oil should be injected to kill the insect, then it should be taken out softly with an ear-pick, or little pincers.

Touch.

Q. Where is the seat of the sense of touch ?

A. The sense of touch is extended over the whole surface of the skin; the hand is the organ of touch. It owes this property to the great quantity of nerves which furrow it.

Q. What care must be taken of the hands ?

A. The hands should be often washed, especially when they have touched unclean objects, served the sick, or handled dangerous substances.

Gloves, which are used to protect them from the variations of the atmosphere should not be constantly worn ; they would then be more injurious than useful.

(Every thing relating to hygienical care of the skin has been already mentioned, Art. VI).

Conclusion.

What we have just learned is not only profitable to ourselves and to our families ; the society in which we live can reap advantage thence from

In the course of domestic economy, we have treated of " the care of the sick," which is incumbent on every mistress of a household. It

remains for us to add to what has been said, certain rules of hygiene, concerning the precautions to be taken when epidemic or contagious maladies are raging. In such circumstances, the mistress of a household should neither be alarmed nor fly, but show her devotedness. The imperious duty of all those, who are called upon to attend to these maladies, is to immediately procure disinfectants which destroy the *microbes* or *germs* of these diseases. The linen should be steeped for some minutes in disinfecting liquid, before being put into lye. Disinfectants should also be thrown on the dejections of the sick (bowel dejections or vomit), and should never pollute a stream or common lavatory.

Imprudent persons who fail to observe these hygienical rules, are guilty of a real crime, since they put into motion a murderous evil which, given an impetus, produces frightful ravages.

A STARTLING FACT.

Doctor Pécaut, in his course of public hygiene relates that in the month of October 1882, a farmer's daughter fell sick of typhoïd fever. The persons who attended her instead of burying deep the dangerous dejections of the sick girl, threw them out in the barn-yard, the sandy soil of which was permeable in a high degree.

The putrid matter penetrated the soil and infected an underground spring situated a few meters from the surface. The waters of this spring, carried away by pipes, supplied the wants of one half the neighboring town.

What was the result ? the germs of a terrible sickness were carried by the water into the town and with it into the dwellings : An epidemic, typhoid fever, broke out, a thousand persons were stricken with the disease, and about one hundred died.

Such may be the frightful results of what seems to be very pardonable negligence.

PROVERBS AND GEMS OF THOUGHT.

God gives us a long life : 'tis we who shorten it.

The true secret of prolonging life, is not to shorten it ourselves.

Sauces, sweetmeats and dainty dishes are profitable to the physician alone.

Scarcity of water engenders an abundance of ills.

There is nothing which men love better to preserve and nothing they spare less then their own lives.