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THE RELATION OF DIET TO CERTAIN CHRONIC DISEASES.

by

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378
K16
190
v.3

Outline.

Introduction.

Importance of the Knowledge of Dietaries.

Diabetes.

Nature.

Cause.

Symptoms.

Dietetic Treatment.

Tuberculosis.

Cause.

Predisposing Causes.

Heredity.

Environment.

Climatic Conditions.

Race.

Sex.

Age.

Occupation.

Greatest Source.

Preventions.

Symptoms.

Hygienic Treatment.

Dietetic Treatment.

Dyspepsia.

Nature.

Causes.

Symptoms.

Dietetic Treatment.

Fevers.

Nature.

Causes.

Symptoms.

Foods in Fevers.

Typhoid Fever.

Cause.

Modes of Infection.

Nature and Symptoms.

Dietetic Treatment.

Operations.

Antiseptic Methods.

Anaesthetics.

Mild Operations.

Severe Operations.

Appendicitis.

Definition.

Position of Appendix, and Structure.

Cause.

Predisposing Causes.

- 1. Age.
- 2. Occupation.
- 3. Overeating.

Symptoms.

Dietetic Treatment.

378
K16
190
v.3

Disease means want of ease and wherever found it is a sure sign that something is wrong. Discomfort is one of the earliest signs of its approach, pain is a later one. They both are warnings that sooner or later sickness will overtake us if proper steps are not taken to prevent it. As disease is the result of the violation of the laws of health, the first advance toward recovery is to re-establish those laws. Life depends upon diet and the restoration of health depends upon the same principles as its preservation; as the material for repair and support must come from diet we should have a practical knowledge of dietaries and a proper appreciation of their curative value.

Some of the more common diseases and their dietetic treatment will now be considered; diabetes, tuberculosis, dyspepsia, fevers, and operations.

Diabetes.

Diabetes was considered not so long ago to be an incurable and inevitably fatal disease, but by the labors of scientists its cause has been discovered to be an inability on the part of the tissues to assimilate starch and sugar, and in severe cases in the production of sugar from the tissues themselves.

It may occur alone or in association with a variety of diseases, particularly those of the liver, pancreas, lungs, and nervous system. The obese are more liable to diabetes than thin persons who are more active. In case of the fleshy person, up to a certain age the body is able to store up fat then it loses this power and carbohydrate is excreted in the form of sugar, instead of being stored up as fat.

Diabetes may occur in any climate and in any age with either sex. It is somewhat more common among the wealthy than the poor,

378
K16
190
v.3

1773 790
2 9

because of sedentary habits combined with overindulgence in eating. The disease runs a chronic course and in the majority of cases terminates fatally in from two to four years.

It is a disease of adult life but when young persons are attacked, it is more apt to prove fatal. In adults diabetes can be more easily held at bay, so that one has a chance of a good useful life with it. One rarely dies of diabetes itself but of other diseases to which one is made more susceptible. One may have it and never know it.

The true cause is still obscure and aside from dietetic treatment but little advance can be claimed in regard to the controlling influence of medicine. The method of production and elimination of sugar and the influence of the disease upon general nutrition is understood, but its real exciting cause and the fundamental reason for the interesting departure from the normal metabolism of starchy foods which is its basis is still unknown.

Among the various determining causes of the disease have been reported the eating of too much sugar and starchy foods, blows and shocks affecting particularly the nervous system, injuries to the back of the head and blows over the liver, as well as general concussion, such as that produced in railway accidents; exposure to cold, wet, and fatigue; emotional strain, worry, mental fatigue and anxiety. Tumors and hemorrhages at the base of the brain and certain circumscribed lesions of the floor of the fourth ventricle, have been known to cause the disease. It is a curious fact that the irritation or puncture of this area is followed by the appearance of sugar in the urine. This spot is called the diabetic center and it is in close relation with the sympathetic and vaso-motor nerves that control the capacity of the hepatic blood vessels.

The influence of heredity can be traced as a factor in about one-third of all cases, and cases are on record of its occurrence in many members of the same family. Some scientists think that there is a possibility of diabetes being contagious.

The most important symptoms which are to be combated by diet are sugar waste, the large quantity of urine voided and rapid emaciation and loss of strength.

The dietetic treatment of cases of diabetes may be subdivided into three classes. (a) Those patients who pass a considerable amount of urine containing a large percentage of sugar, but in whom the general health is still good. (b) Cases in which in addition to the passage of considerable sugar there is more or less dyspepsia, emaciation and debility. (c) Cases in which the constitutional symptoms become rapidly severe after the first appearance of sugar in the urine.

(a). In the first class of cases, the dietetic treatment is productive of great benefits and not rarely the patient begins to gain flesh and strength; they sleep better; the daily quantity of urine falls and it approaches the normal composition; the excessive appetite and thirst diminish; the digestion improves and in one to three weeks the sugar may entirely disappear. Such patients are not to be regarded as cured, however, as soon as the sugar disappears - not until they can eat starches in ordinary quantity without exciting the appearance of glycosuria.

(b). The second class of cases is also amenable to diatetic treatment, but the benefit is not so immediate and usually not so great as in the first group, and it may be impossible to cause the total disappearance of sugar, although it may be reduced. If the amount of urine is lessened by the changes of menu, the specific gravity may remain high and sugar is abundant, the case is very

378
K16
190
v.3

grave and drugs may have to be resorted to.

(c). In the third and most severe class of cases, dietetic treatment is sometimes of avail, and it should be always undertaken, for it may prevent the patient from becoming worse, although it is unable to accomplish a cure. Sugar seems to be in this class of cases produced from the tissues themselves.

Many diabetic persons prefer to live less long and be allowed to eat what they want rather than to hold to such restrictions as dieting requires. This is probably due to the long continued habit or heredity rather than to actual inability to support life, for the Eskimos thrive upon a diet absolutely free from starches and sugars of every kind. In prolonged cases it will usually be found that patients do better with an occasional variety in their diet, even if it involves giving a little starchy food for a few days.

The general condition of bodily nutrition must be carefully considered in giving any diet. Fleshy persons will be benefited by a very strictly limited diet. They make their fat largely out of carbohydrate and hence a nitrogenous diet is well suited to their condition, whereas emaciated, weak patients gain no flesh upon an exclusively nitrogenous diet and it may barely support life for them. Improvement follows in many cases upon a diet which excludes starches and sugars almost completely, but this is a difficult diet to enforce, for the cravings for carbohydrate, especially bread, becomes so strong that patients will resort to any form of deception to obtain this food. For this reason it is generally desirable to allow patients from two to four or even six ounces of bread a day, in divided portions otherwise the craving for it does positive harm, and a loathing for all food results, or they break all restraints and injure themselves more by overeating.

378
K16
190
v.3

1776 790
115 9

With regard to the suddenness with which the diet should be adopted by the patient, it is found to be the rule that it is easier for most patients to begin with the fully restricted diet at once than to gradually eliminate one article after another from the menu. Examination of the urine should be made before the restricted diet is commenced and every day afterwards until the patient is doing well; then after this once or twice a week is sufficient.

The effect of no dietetic system is immediate and at least two days may be required for the patient to come fully under the influence of treatment, because the materials already present in the body when the new diet is commenced, may serve as a source of sugar for some little time afterwards.

All sugars and starchy foods should as a rule be avoided. Soups and broths made of meat of any kind without vegetables, eggs in any form, fresh fish of all kinds, fresh meat - fowl and game of all kinds (except the livers of such), ham, beef, bacon, smoked beef, tongue, sweet-breads are allowed. Of the fats, olive oil and all animal fats and oils such as butter, cream, cod-liver oil. Of the vegetables, spinach, horseradish, radishes, celery, lettuce, cucumbers, cranberries, string beans, asparagus, cabbage, may be used. Cheese, gelatin jellies, but unsweetened except with saccharine, fruits if not too sweet, nuts as almonds, walnuts, pecans, hazelnuts, and coconuts, are allowable.

Tuberculosis.

Tuberculosis is a specific disease caused by the bacillus tuberculosis. It may be general or affect one or more organs of the body. It may affect the lymphatics, bones, intestines, or the mesenterii glands, but the lungs constitute by far the most frequent site for the development of germs. The bacillus produces from the

tissue "or soil" in which it grows, a toxin or poisonous substance which enters the circulation by absorption and which modifies nutrition causing fever and an increased production of tissue waste, with more or less rapid emaciation.

The disease may be inherited directly from the mother. This is rare, but may be. What is more frequent is an inherited susceptibility to the disease. Where the family is susceptible and one case occurs others are apt to follow from infection.

Tuberculosis is one of the most widespread of maladies. About one-seventh of all deaths are due to it. Environment is an all important predisposing factor. Dwellers in cities are much more prone to the disease than residents of the country. Not only is liability to infection very much greater in the city but the conditions of life are such that the powers of resistance are apt to be weakened. Sunlight is one of the most powerful agents in destroying the bacillus, so that in imperfectly ventilated dwellings and workshops, and in residences in close dark alleys and in tenement houses, the liability to infection is very much increased. The influence of environment was never better demonstrated than in the experiment of Trudeau, who found that rabbits inoculated with tuberculosis, if confined in a dark, damp place, without sunlight and fresh air, rapidly succumbed, while others treated in the same way, but allowed to run wild, either recovered or showed very slight injury. The occupants of prisons, asylums, poorhouses, etc., are under conditions most favorable to foster the development of bacilli which may have lodged in their tissues. The respiration of impure air appears to render the lungs less capable of resisting infection. No single condition is of greater importance than that which relates to the proper arrangement and ventilation of buildings.

Geographical position has very little influence. The

378
K16
190
v.3

disease is perhaps more prevalent in the temperate regions than in the tropics, but altitude is a more potent factor than latitude. The disease prevails more widely in the wet, ill-drained districts - an increase which is associated with greater liability to catarrhal affections of all kinds.

The influence of race, which has been much studied, is probably less owing to inherent differences than to conditions under which the individuals live. The Indians are very prone to the disease, as are also the Irish and negroes; on the other hand the Hebrews possess a relative immunity.

The influence of sex is very slight. Women are perhaps somewhat more frequently attacked than men, possibly from the fact that in a more sedentary indoor life, they are more liable to infection.

There are four stages in life at which tuberculosis is most apt to occur. First stage - from birth to five years of age; second stage - from seventeen to twenty-two; third stage - in the vicinity of forty years; fourth stage - in old age, beginning at about sixty years.

Occupation is an important predisposing factor. The inhalation of impure air in occupation associated with a very dusty atmosphere render the lungs less capable of resisting infection. The per cent of pulmonary tuberculosis among the workers is very high and certain occupations, such as those of glass workers, stone cutters and in coal mines and the whole group of trades, favor the development of tuberculosis. Any condition that leaves the vitality lowered will increase susceptibility to the disease.

The greatest source of tuberculosis is the sputum of consumptives. These bacilli in the dust are inspired in the air breathed

378
K16
190
v.3

They are taken into the mouths of children from dust gotten on the hands in playing. Water is also frequently a source. Infected milk, while a possibility is not often a source.

One of the most important preventatives of the disease is the destruction of all sputa. If it is not burned, it should be disinfected. All cloths used should be burned. Even the dishes should be kept separate. The hands and finger-nails of the patient should frequently be washed and cleaned in antiseptic water.

The earliest symptoms of pulmonary tuberculosis are usually a loss of weight, anemic condition, general lassitude and weakness, fever developing as the disease increases, sinking away and decay of the tissues infected and formation of pus. The tonsils usually become infected first with tubercle bacilli then from there the germs are carried by the lymphatics to the lungs. It is usually present before recognized and in sudden attacks diagnosed as pneumonia. Then, it is said pneumonia develops into tuberculosis. It so closely resembles typhoid in some cases that it is often diagnosed as typhoid-pneumonia. The period of incubation may extend three weeks or even months. The onset of the disease may be very slow, insidious or sudden. The sudden attacks are not often readily cured. The cure is hygienic and dietetic.

For the former the patient should sleep and work both winter and summer, out of doors. Flannels should be worn all the time, thin ones in the summer time, and invigorating, tonic baths should be taken.

From the first, the patient must be impressed with the fact that diet is of primary importance in the treatment of the disease, and whenever he displays a tendency to become careless in this regard, the injunction concerning diet must be repeated. Directions should not be given in a general way but should be specific,

covering both the articles to be eaten and those to be avoided. The time for taking food and the amount to be taken should be carefully outlined. These points vary with different patients but each case must be studied individually if success is to be attained. It is generally better to give written instructions concerning diet, as the patient is apt to be forgetful, especially if he has certain strong dislikes.

Many patients loathe foods of all kinds. A change of air may promptly restore the appetite. It is remarkable how rapidly the appetite and digestion improve on the fresh-air treatment, even in cases which have to remain in the city.

The nutrition of the patient is a reliable guide as to the progress of the disease. If he is taking sufficient nutritious food, is digesting it, and is gaining in weight, the sign is good. If the reverse is the case it is bad. A persistent inability to digest food is always an unfavorable symptom. Care should be taken to avoid disturbing the stomach by the use of nauseating drugs. Irritability of the stomach should receive early and the most careful consideration. It is usually due to fever, anemia, the swallowing of sputum, improper food or drugs. If due to fever, care in selecting diet should be exercised. When there is a marked anemia, fresh air, sunshine, good food, massage, and iron in an easily assimilable form are helpful.

The intestines should be watched and constipation promptly relieved. Sugar and starches are rarely well borne. This may be due to the presence of a catarrhal condition of the bowel, but may also be true when catarrh is not present.

While sufficient food should be given, an excess is injurious, and each patient should be watched carefully. Not more should be given at one time than the patient can digest with ease.

1781
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1790
9

The kinds of food that should be eaten are an abundance of fat foods and red meats, and just as large a diet as can possibly be digested should be eaten. If enough cannot be taken in three meals, five or six should be given a day. Concentrated foods should be used because there is more nourishment obtained from them. Emulsified fats are more readily digested than fats that are not emulsified. Cream and olive oil salad dressing are good examples of emulsified fats. Fruits will be necessary in the diet to aid in the digestion of the large amount of meat consumed. Carbohydrates are less necessary because they occur rather in bulky articles and yield less to the body than the amount consumed. A large amount of water should be taken. Rest is important and the patient should be instructed to rest before and after meals.

Dyspepsia.

Dyspepsia includes a large class of cases in which digestion is performed painfully or with difficulty, but in which no organic change in the organs of digestion can be discovered. In some of these cases, the chemistry of the stomach is at fault, but in many the basis of the condition would seem to consist rather in an undue sensitiveness to normal irritants. In many cases the patient's general nutrition requires to be considered rather than his mere gastric sensations. If the nervous system and blood can be raised to a proper level of health, the dyspeptic symptoms often disappear spontaneously. For this reason, harm may be done by too strict dieting.

Personal peculiarities are a very potent factor in dyspepsia. Not only do individuals vary from one another in this regard, but the same person varies at different periods, in different stages of health, or at different ages.

In nervous dyspepsia, pain exists as a prominent symptom

and is often independent of the quality of the food - even a mouthful of water may cause it, but as a rule fatty and acid foods excite it, and must therefore be avoided. The appetite, too, varies greatly - it may completely fail at one time, and return in an exaggerated form at another.

The normal gases of the stomach are those of the atmosphere but when food is improperly fermenting other gases are evolved. Some of them are carbon dioxide, hydrogen, marsh gas, and olefiant gas, and are what cause the eructations. Some degree of lactic acid fermentation is a normal accompaniment of gastric digestion, but it is easily carried too far, butyric acid develops and eructations of gas occur.

Distension of the stomach and intestine with gas interferes with the free play of the diaphragm in the respiratory movements and since the heart lies upon its side, separated from the stomach only by the diaphragm, an inflated stomach compresses and displaces the heart, interfering with its rythm and force and causing palpitations. The latter, in connection with impeded extent of the movement of the diaphragm, produces dycpnoea, especially on exertion.

Pain is a very frequent accompaniment of dyspepsia. It is usually of a dull aching variety, but is sometimes sharp and acute. It is often erroneously referred to the heart but is due rather to over-sensitiveness of the stomach wall, excited by products of imperfect digestion. In all diseases of the stomach the retention of any particles of undigested food gives rise to irritation and mal-fermentation, which still further complicates the diseased condition of the organ itself and interferes with its proper action upon fresh quantities of food. This may occasionally be relieved by vomiting or a cup of hot water may aid in washing the stomach contents onward

into the intestine and relieving the gas.

The causes of dyspepsia are: eating too much food, eating too much food of one kind, food improperly cooked, irregularity of eating with poor mastication, worry or improper mental attitude during eating, mental and physical exhaustion, severe mental or manual labor immediately before or after eating, constipation, constitutional diseases, indulgence in stimulating beverages, condiments and spices.

The symptoms are eructations, palpitations, headache, vertigo, loss of appetite or morbid craving for some indigestible articles of food, flatulency and sometimes nausea, heartburn, lassitude, irritability, drowsiness or restlessness and despondency. Many of these symptoms are believed to be due to the absorption of certain products which resemble ptomaines. Insufficient secretion is the essential cause of most dyspeptic symptoms as they appear in various disorders of the stomach.

The diet for a dyspeptic must be controlled according to two conditions of the stomach, one or the other of which may exist - hyper-acidity and hypo-acidity. Where hyper-acidity is the symptom, it will be found that foods rich in proteid are best borne. The reason for this is that proteids are able to fix a large amount of hydrochloric acid, and so delay the appearance of free acidity. On the other hand, foods rich in carbohydrates must be partaken of sparingly, as free acid appears in the stomach very early after their use, and the conversion of their starch by the saliva is interfered with. If flatulence is much complained of green vegetables and pulses should be avoided. Abundant fat should be used. Soda should not be used to neutralize the over-acidity of the stomach.

In hypo-acidity use organic acids of fruits, limit the amount of proteid consumed. There will be no difficulty in

1784
3

1790
9

carbohydrate digestion, therefore it should enter more liberally into the diet. In all cases, give an abundance of water.

Fevers.

It used to be the belief that a fever should be starved and a cold fed, but the reverse has been found by practice to be true. A fever should be fed for tissue is being torn down and an abundance of food is necessary to rebuild it. Rise of temperature above 99-1/2 ° F. constitutes fever. It is occasioned either by imperfect loss of heat or by overproduction. The pulse is generally accelerated in proportion to the elevation of temperature, though the proportion varies in different diseases.

Fever is caused by the entrance of microbic organisms or metallic poisons into the body and its struggle to destroy them or by mental stimulus.

The most important symptoms are rise of temperature and accelerated pulse, quickened breathing and great thirst. The first things to do in a case of fever are - to see that the bowels are free, that the pores of the skin are open, and that plenty of nourishing food is given. No fever patient is ever in nitrogenous equilibrium. Because of nitrogenous waste, it is necessary to give nitrogenous food, yet as the kidneys are overworked from normal nitrogenous waste, urea and uric acid, it will be necessary to give them such nitrogenous food as will yield the least urea and uric acid as a result. Milk is indicated in all fever cases. If milk proves difficult of digestion and curds, the form of the milk should be altered by dilution, predigestion, fermentation or modification with thoroughly cooked farinaceous materials. Frozen milk is good for a high fever. Raw eggs are one of the first foods allowed; if the

37
KL
190
v.3

1785
4

1790
9

temperature rises to 104° F. milk will not digest because the digestive secretions are dried up, in this case raw egg compounds will digest better. Coffee is permitted to those accustomed to its use. Meats, vegetables, and cereals as usually prepared, breads, both hot and cold are to be avoided until convalescence is thoroughly established. Broths and meat teas are useless unless given in connection with raw egg. A person could starve to death on beef teas and broths.

Nitrogenous material must be given. Gelatin is a nitrogen-sparer but it is given in such dilute form that it seldom does much good. Thin farinaceous gruels spare the nitrogen of the tissues and supply the blood with some burning materials.

Fats will not be digested at a high temperature, so butter or cream or fat in any form cannot be used.

Abundance of water should be given to compensate increased metabolism, to lower the temperature and to wash away increased amount of waste materials. Acidulated drinks are allowable and in giving large quantities, it is better to dilute them as strong acids injure the stomach. Fever patients should be fed when fever is the lowest and therefore when digestion will be the best.

In moderate cases semi-solid food may be given, as milk-toast, cream-toast, soft-cooked eggs, beef jelly, plain rice pudding, and cold meat jellies.

Typhoid Fever.

Typhoid fever is an acute infectious disease due to the entrance into the body of the bacillus typhosus. The bacillus causes ulcers in the lower end of the small intestine and they may extend even into the large intestine. They are deep, clean-cut, often including the whole thickness of the muscular layers and sometimes perforating through the serous layer. An overloaded intestine or a

37
KL
19
v.3

distended bowel may precipitate perforation at any moment. When hemorrhage occurs it indicates that perforation has taken place, that is, the ulcers have punctured into the intestinal wall, pus may have been discharged and peritonitis may result.

The modes of infection are by water, by food, by contagion, or by contamination of the soil.

Typhoid occurs most commonly in the autumn months and in temperate climates. It is a disease of youth and early adult life, the greatest susceptibility being between the ages of fifteen and twenty-five. The period of incubation lasts from eight to fourteen days, sometimes twenty-three, during which there are feelings of lassitude and inaptitude for work. The onset is rarely abrupt. There are chilly feelings, headache, nausea, loss of appetite, pains in the back and legs, and nose bleeding. The symptoms increase in severity and the patient finally takes to his bed. The fever usually lasts about four weeks, then there may be two weeks of convalescence.

The requirements of food in typhoid fever are - that it must leave no residue and that it must be palatable. When the patient is fond of milk and can digest and absorb it thoroughly, there is no better diet for typhoid fever and it answers every requirement of a fever food. In giving a milk diet the danger of irritation of the intestinal wall must not be overlooked. Undiluted milk on entering the stomach, becomes almost solid, and large firm milk curds are as likely to prove irritating to ulcerating surface as starchy foods. To render milk more digestible it should be diluted. The different ways in which milk may be given are - raw, boiled, diluted with plain water, barley water, lime water, or pancreatinized according to taste and need. From one and three-fourths to two quarts may be given in twenty-four hours. One-fourth of the milk may

378
K16
190
v.3

be substituted for broth if desired, and diarrhoea is not present. Buttermilk is still easier than milk to digest because the finely divided curds prevent the formation of larger curds. The acidity of buttermilk also is gratifying.

Substitutes for a milk diet are farinaceous articles, such as prepared starchy foods, like Mellin's, farinaceous gruels, custards, egg-nog, weak tea or bouillon, junket and cream, egg albumin beaten and added to milk or fruit juices. There is no residue left from raw white of egg, for it is all absorbed. Yolk of egg is harder to digest but is very good if it can be digested. Sugar must not be given or anything that will ferment. The whole principle in the dietetic treatment of this disease is to prevent fermentation. If this symptom does occur it is best to withhold all food until it is allayed.

As convalescence approaches give beef juice about one tablespoon every two hours. Panopeptone may be used in the same way. The greatest care should be exercised when all fever has passed away. Meat should be withheld until the patient is able to move around.

Operations.

Great advancement has been made along the line of surgical operations since the value of antiseptics and anaesthetics have been discovered. The antiseptic methods of treatment enable the surgeon to bring to successful results today operations which but a few years ago would have been regarded as utterly impossible. Everything used in the operation must be absolutely free from any infectious particles, and must be kept so from beginning to the end of the operation. The most reliable disinfectants are bichloride of mercury, carbolic acid, and peroxide of hydrogen.

It is always best to give anaesthetics before taking the

37
KL
190
v.3

patient to the operating room. If he is not given an anaesthetic, all instruments and as far as possible everything that is disagreeably suggestive, should be covered. The anaesthetics used are ether or chloroform. When it is given the stomach should be empty, otherwise vomiting is apt to occur at a critical time when the patient is weak, also fatal choking may be produced by food being drawn into the trachea. For this reason, a light and easily digested meal only is given, such as a cup of coffee and a roll, then three or four hours later, the anaesthetic is administered. An ounce of brandy should be given half an hour before the operation - long enough for it to be absorbed. An anaesthetic should not be given for six hours after a full meal is eaten, as it impedes anaesthetisation besides causing danger of vomiting and choking. When an accident occurs immediately after a heavy meal, an emetic should be given to empty the stomach, while the patient is conscious, to avoid the conditions which may result.

Ether is more likely to produce vomiting than chloroform. In very susceptible persons, the condition may last a day or two, for this reason caution should be observed for some hours afterward in giving food, and a light fluid diet of milk, cocoa, tea, coffee or beef tea only should be allowed.

A wound will heal the sooner the better the condition of the blood, and to keep blood in good condition and to hasten the healing processes plenty of nourishing food should be taken.

In mild operations when the patient cannot take much exercise, the channels for removal of waste must not be allowed to become choked and inert. There should also be proper assimilation of food. If there has been no loss of blood or severe shock, a full diet may be allowed if patient is practically as well as ever.

1789
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1790
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Severe pain before an operation, prolonged operation, severe shock, calls for a diet which must be supervised with much care. After depressing pain and severe shock, give rest and stimulation rather than food. Positive harm results from overfeeding. Black coffee is a good stimulant. The patient should be kept upon a diet of milk for three or four days. When the stomach regains its tone, broth and meat extracts with egg may be added. Give no food when stomach is distended and there is no appetite, but give as an enemta, coffee, pancreatinized milk, egg albumin or alcohol. If great loss of blood has occurred the volume of fluid should be replaced in the body as soon as possible. Salt water injections, or in severe cases hypodermic injections of saline solutions, help restore lost fluid to the body.

Appendicitis.

Appendicitis is the inflammation of the vermiform appendix which is attached to the caecum, a portion of the large intestine which extends a little below the place where the small intestine joins the large one. It is from one to three inches in length and is about one-fourth inch in diameter. The most common position direction it assumes is upward and inward, the position next in frequency is behind the caecum. It may be met with, however, in almost every region of the abdomen and adherent to almost every organ in it. The structure of the appendix is almost identical with that of the caecum; it is particularly rich in lymphoid tissue and the blood supply is derived from a small artery which passes along the free edge of its mesentery.

Inflammation of the appendix is caused either by certain micro-organisms, by faecal concretions, by foreign bodies being forced into the appendix or by a sort of catarrh of the appendix.

Perforation may finally result from inflammation.

Appendicitis is a disease of young persons. According to statistics, more than fifty per cent of the cases occur before the twentieth year and sixty per cent between the sixteenth and thirtieth years. It has been met with in the seventh week but rarely occurs before the third year.

Persons whose work necessitates the lifting of heavy weights seem more prone to the disease. In a number of cases the symptoms have followed very closely a fall or a blow. Indiscretions in diet are very likely to bring on an attack.

In a large proportion of all cases of appendicitis the following symptoms are present - sudden pain in the abdomen, on the right side; fever, often of moderate grade; gastro-intestinal disturbances - nausea, vomiting, and frequently constipation; tenderness or pain on pressure in the appendix region. There are three possibilities in any case of appendicitis presenting the preceding symptoms:- Gradual recovery; the formation of a local abscess; the development of peritonitis.

The dietetic treatment of appendicitis which has not yet passed into the surgeon's hands should consist in giving only such food as will be thoroughly absorbed. Beaten eggs, broths, a moderate quantity of pancreatized milk, whey, or buttermilk may be allowed. Cocoa may be given and strained gruels of rice or barley.

The first few days after the operation no food is given. As long as symptoms are present, give liquids of egg albumin, weak tea, broth or diluted milk. When symptoms begin to disappear the previous diet is increased. When pain and fever have disappeared give gruels of rice and barley and soft-cooked eggs. Then later mashed potatoes and vegetables finely divided, finally the regular diet.