WHAT, HOW AND WHEN TO EAT

Food Problems Discussed in a Scientific Manner.

From a Paper Recently Read by Mrs. John M. Oakley Before the Twentieth Century Club of Pittsburg.

"Man," says an eminent anatomist, "is a stomach, with various organs appended." This epigram presents in a concise form the supreme importance of a perfect digestion. The stomach is the center of the nutritive processes of the body, and any derangement of its functions must result in disorder of the entire organism.

We Americans have long been known as a nation of disordered stomachs. With the widest and best dietary in the world to choose from, we are still the victims of a widespread national dyspepsia. Why? The foes of our digestion are three, and they lurk in every household—the frying pan, ice water at meals and the habit of rapid eating. A cursory examination into the nature of foods and the simplest processes of digestion will show why these three national habits are eminently fitted to destroy the most perfect natural digestion.

All the substances we eat are divided into the two great classes of nitrogenous and non-nitrogenous, to which may be added a small amount of inorganic matter in the shape of salts. The non-nitrogenous foods are again divided into fats and carbo-hydrates. All these elements are essential to perfect health, but it is the nitrogenous element, commonly called protein, which alone will support life. Protein is found in its most perfect form in the white of egg; it is the principal constituent of the gelatine of meat, the casein of milk and the glutin of cereals and vegetables. The fats exist in the form of animal fats and vegetable oils. The carbo-hydrates are sugar and starch. Their chemical symbol is the same as that of fat, C. H. O., carbon, hydrogen and oxygen, and after being subjected to the subtle chemistry of digestion, they play the same part in the human economy as that performed by fat, that is, they are the heat and force producing elements. Although contributing to the preservation of bodily vigor, the fats and carbo-hydrates do not of themselves support life. A man fed upon pure starch, pure sugar, or pure fat, would die almost as soon as with no food at all.

WHAT HEALTH REQUIRES.

Perfect health requires a perfect adjustment between the nitrogenous and the non-nitrogenous elements. Too much protein will result in uric acid, gout or rheumatism. An excess of fats and carbo-hydrates causes various stomach derangements, flabby muscles, anaemia, and fatty degeneration of the vital organs. Taking wheat as the example of a perfect food, and it is the only one adapted to all climates and conditions, the proper portion of these elements should be: One part protein to seven parts fats and carbo-hydrates, or more accurately, one part protein, one part fat, and five parts starch and sugar. In order to extract the most nutriment out of these three elements the human system has been provided with four leading digestive fluids, or ferments, the saliva, the gastric fluid, the bile and the pancreatic fluid, and these must be maintained in an unvarying ratio of quality and quantity to insure perfect health. Starch is digested by the saliva, protein by the gastric fluid, fats and sugar by the bile, while the pancreatic and minor intestinal fluids must give a final touch to all before they are fitted for absorption. The saliva, bile and pancreatic fluid must be alkaline, and the gastric fluid intensely acid.

It was formerly supposed that the sole use of the saliva was to moisten food in preparation for swallowing, but recent investigations show that it plays a most important part in the digestive process, there being absolutely no digestion of starch without contact with saliva. Here then we see the first bad result of rapid eating. The starchy foods are in the first place but imperfectly broken up with the hasty mastication, which is the national habit; they are not allowed to remain in the mouth long enough for each particle of starch to come into chemical contact with the saliva, and they are hurried into the stomach without the amount of saliva which should accompany them to continue the work of changing insoluable starch into soluable dextrine. The starch thus hurried prematurely into the stomach simply ferments like yeast, and generates gas, which causes discomfort and flatulence. This is starch indigestion in its simplest form.

By the muscular action of the stomach this undigested and fermenting starch is passed into the intestines, where, as the most of it is in no condition to be absorbed, it continues to ferment, and the irritation of the delicate mucous membrane lining of the intestines caused by this fermentation results eventually in intestinal catarrh, one of our national maladies.

TEETH SHOULD BE USED.

Thorough mastication is almost as important for proteids as for starch. Meat, for example, should be thoroughly broken up by the action of the teeth before it is passed on to the gastric fluid. Dogs and cats can bolt their food without detriment, for their gastric fluid is strong enough to take care of any piece of meat that can pass down their throats; but the human gastric fluid needs the assistance of the teeth. Moreover, there are few of us in whom the gastric fluid exists in proper strength and quality. Imperfect ventilation, lack of exercise, tight clothing—all interfere with its proper secretion. The imperfectly masticated meat is submitted to a weak gastric fluid. A part may be digested, the remainder decays, and we know how quickly animal food will decay at a temperature of 100.

The first result is an offensive breath and a coated tongue, and as this decaying food is passed on into the intestines, the poisonous products of decomposition are absorbed into the system, and give rise to biliousness and sick headache. These two symptoms are a frequent result of too much animal diet. The gastric fluid is one of the great disinfectants of the body, and when kept at its proper strength and quality, will destroy any germ that may lurk in our food. The typhoid germ and the cholera germ fall easy victims to the healthy gastric fluid. Even Allegheny river water may be drunk with impunity by a perfectly healthy stomach. The fact that the entire population of Pittsburg and Allegheny have not succumbed to our present drinking water shows that there is, after all, a large percentage of healthy stomachs among us. The person with a feeble digestion must take especial care to boil his drinking water and avoid suspected foods.

To return to the second cause of our national dyspepsia, ice water at meals. When imperfectly masticated food is washed down by copious draughts of ice water, the first bad result is that the saliva and gastric fluid are much diluted, and are correspondingly less efficient. Secondly, the temperature of the stomach is lowered below the point where perfect digestion can take place. Digestion requires 100 degrees Fahrenheit, hence it must stop until the injected ice water shall be heated to that temperature. But decay, as we know, will begin at a much lower degree, hence, though there may be no digestion there will be decay. Third, the salivary glands, finding sufficient moisture in the mouth without their action, make little or no secretion. We hear a great deal nowadays from political economists about the evil effects of pauperizing the poor by giving them what they have not earned. The physical nature is as easily pauperized as the moral. If the mouth be supplied with moisture, little or no saliva is secreted; if pepsin be given to the stomach, no pepsin will be secreted. The best digestive results are obtained from dry food, the necessary water to be taken between meals. The same objection applies to hot drinks, such as tea or coffee, which should be drunk at the close of meals, and to wine, which should be drunk, when at all, before they begin. Alcohol in any shape precipitates the constituents of the gastric fluid, and renders it wholly inert.

OUR FOE THE FRYING PAN.

The third great national foe to digestion is the frying pan. The essence of frying is hot fat; and fat, as we remember, is not affected by the saliva nor the gastric fluid, but receives its first digestion from the bile. A bit of fried potato, for example, is surrounded by an oily coating of melted fat. This fat is impervious to saliva, which is thus prevented from coming into chemical contact with the starch of the potato. Bits of fried fish or meat, or egg enveloped in the oil coating of the melted fat, are similarly rendered impervious to the action of the gastric fluid, and pass on to the intestines, where the fat at last may be digested, but where the substances it encased remain to ferment, and cause sick headache and biliousness. It is the excess of melted fat which renders pastry so indigestible. The butter or lard is so thoroughly worked into the flour that each particle of the latter is encased in fat with the result that the saliva is unable to act upon the starch of the flour. For the same reason griddle cakes and hot biscuits lavishly spread with melted butter are so apt to cause indigestion. The extra work which the use of the frying pan entails upon the bile and pancreatic fluid tends to diminish the quality of these secretions, and the natural result is a fat indigestion. A weak starch digestion is almost always accompanied by a weak fat digestion. This is easily understood when we recall that both fat and starch are carbo-hydrates, with the same constituents of carbon, hydrogen and oxygen, that they fill much the same place in the animal economy, and that starch receives its final digestion in the liver. While free fat is emulsified by the bile and made ready for absorption into the tissues, starch, transformed by the saliva into a perfectly soluable substance is stored in the liver cells to be delivered up as the system calls for force and heat.

Another substance which prevents the proper action of saliva is vinegar. The saliva, as we have learned, is strongly alkaline, and anything which weakens its alkalinity weakens its digestive power. The practice of placing the salad near the end of a dinner after the starchy vegetables have been eaten is founded upon sound hygienic principles. The system must have acids, but it can get all it requires from the natural fruit acids without calling upon a fermenting substance like vinegar. Dr. Kellogg experimented at the Battle Creek laboratory with a number of healthy boys, feeding them different foods in different combinations, and then analyzing the contents of their stomachs. He found that vinegar in the proportion of one part vinegar to twenty parts saliva will utterly destroy the salivary digestion. Vinegar also interferes with gastric digestion by its preservative qualities. We preserve melons, fruits and meats in vinegar, and it has the same preservative action when introduced into the stomach. It is directly antagonistic to the gastric fluid. Salads are quite as acceptable when dressed with lemon juice.

FOODS SHOULD BE STUDIED.

A knowledge of the relative value of foods is of the highest importance to the housekeeper, especially when she has to provide for the needs of workingmen and growing children. Meats are valuable according to the amount of protein they contain, and according to the digestibility of their fibre; a loose, open fibred meat being more easily acted upon by the digestive fluids than one which is firm and compact. Beef contains a high percentage of protein, with a fair proportion of fat and inorganic salts. Taken in connection with a small amount of bread and butter, it is capable of supporting life indefinitely. The best methods of cooking are broiling and roasting. Raw beef, finely minced, will digest in two hours; broiled or roasted, it will require three hours. Tough beef can be stewed with advantage, but both gravy and meat must be eaten to get the whole nutriment. Beef tea used to be regarded as a highly concentrated food and a perfect diet for convalescents, but it is now known to be only a stimulant. The protein or life-giving element of beef is not solute in water, and makes a very small per cent. of beef tea. For the same reason, beef broth contains very little of the true food element, and must be thickened with the nitrogenous vegetables, as beans or peas, to make it nutritious. The various beef extracts have even less nutriment than the 'home-made beef tea; they are merely flavors. Liebeg himself claimed nothing for his beef extract except its stimulating qualities. Its protein amounts to only .05, too little to sustain life. Mutton has slightly less protein, with more fat than beef, and requires three hours to digest. Mutton broth requires the addition of nitrogenous vegetables to give it a true food value. Lamb has still less protein, and will scarcely support life of itself, but if combined with beans or peas will give sufficient nutriment. It digests in 2½ hours. Veal, we all know, digests slowly, but so much from the firmness of its fibre as from a peculiar stringiness which makes it elude mastication. It takes five hours to digest, and feeble stomachs would do well to avoid it altogether. Veal, however, makes a very valuable broth, its protein disolving freely in water, and making a rich gelatinous soup. The protein of chicken is a true food, most desirable for convalescents. The flesh of chicken is rich in nitrogen, and when properly cooked is even more digestible than beef.

Turkey and duck are also nutritious, though, owing to a closer fibre, are not so digestible as chicken.

AS TO HOG PRODUCTS.

Pork is not intrinsically an unwholesome food. Its fibre is very close and firm, and if it were masticated twice as long and thoroughly as beef, would probably digest in the same time, but with the usual hurried mastication, roast pork requires 5½hours for digestion. Bacon, however, which is nearly pure fat, with little fibre, takes only four hours. Bacon gives us one necessary fat in one of its most digestible forms. Broiled to crispness, it is a luxury for the well-to-do, and baked with beans, a positive necessity to the poor. The great danger in pork is the possibility of its being infected with trichinae. This parasite exists only in the lean, muscular fibre, and is destroyed by cooking. Beef is really more dangerous than pork, inasmuch as tuberculosis is constantly spreading among cattle, and the poison of tuberculosis is not destroyed by cooking.

Milk is one of our most valuable foods, in fact, a daily necessity to sick and well, yet there are many people who cannot take milk because, as they say, it makes them bilious. The chemistry of the mattis is thus: Milk, when taken into the stomach, it as once acted upon by the natural ferment rennin, which is one of the constituents of the gastric fluid, and its protein, called casein, is precipitated in the shape of curds, more or less large and hard. If there be not hydrochloric acid in sufficient quantity and strength promptly to break up these curds, they will decay and give rise to all the troubles which attend the decay of food within the body. When animal substances decay, an alkaline poison called ptomaine is generated.

Germs are the cause of decay, and the ptomaines the result of decay. A person who dies from diphtheria or typhoid fever, dies from ptomaine poisoning, the result of germ life, and not from the mere presence of the germs themselves. Germs can be destroyed by cooking, but the ptomaines remain. The healthy gastric fluid destroys germ life, and the liver, with its antiseptic bile, is intended to disinfect any ptomaine which may by chance enter the body. But, with an enfeebled gastric fluid, and an excess of animal diet, the liver is overtaxed and the ptomaine products of imperfect digestion escape into the system, causing billousness, so-called, rheumatism, gout, and eventually, Bright's disease. A man whose liver is thus daily weakened by ptomaines, will succumb to an overdose of a narcotic, or under the administration of an anaesthetic, where a man with a vigorous liver would speedily rally. An offensive breath is an indication of the presence of ptomaines.

It must be remembered that milk is a food and not a beverage; and should, therefore, be eaten slowly. When sipped slowly, a spoonful at a time, it is far less likely to form large and indigestible curds. Buttermilk, in which the fat is removed, and the casein broken up by the souring and the churning process, can often be tolerated where fresh milk is too great a tax on the digestion. The Irish laborer is entitled to four pints a day, and in that quantity it will add the necessary protein to a diet of potatoes. Its use is universal in India, where they say, "a man may live without bread, but without buttermilk he dies."

HOW TO TREAT EGGS.

Eggs cause billousness in some people for the very same reason that milk does. They form a highly concentrated animal food hence, when not thoroughly digested, ptomaines are evolved. Eggs are often indigestible from being improperly cooked. They should never be fried nor boiled hard, the solidified white of egg being insoluble in the gastric fluid. They should be made into an omelet, or poached, or soft boiled. To boil an egg properly, place it in a vessel of boiling water, take the vessel off the stove and let stand for ten or twelve minutes. The white is then simply thickened like a custard, and retains its perfect digestibility.

The lose and even fibre of fish renders it an easily digested food, but it must be eaten fresh, as ptomaines develop quickly. Recent investigations do not substantiate the theory that fish is especially rich in phosphorous, and hence, must be a good diet for the brain worker. It has no more phosphorus than good beef, and is, as a rule, deficient in protein. Red salmon, herring and codfish, however, have sufficient protein to allow their substitution for meat, and the cheapness and digestibility of codfish should give it a prominent place in the dietary of the poor.

Important as these animal foods are for the generation of strength and endurance, it is yet possible to dispense with them altogether. The cereals contain not only protein enough to support life, but enough starch and sugar to supply all the necessary force and heat. Wheat stands at the head of the cereals, and is pre-eminently the food for man. It is eaten at every meal with satiety, simply because it contains every element of food required by the body. Unfortunately, the prevailing desire for a fair-appearing white bread has led to refining flour until little is left except starch. The scientific inquiries recently conducted in New York into the relative amount of nutrition in the foods usually eaten by the poor show that ordinary baker's bread gives the highest percentage of waste; that is it gives the least nutriment for a given amount of money. Whole wheat and Graham flours should be used in bread making, the latter, however, which contains bean, must be avoided where there is gastric or intestinal catarrh. Bread may be raised with either baking powder or yeast, the loaves should be small and thoroughly baked, in order to kill the yeast germ. As the yeast plant grows it feeds upon the flour and diminishes its nutritive quality by just so much. All cooking experts condemn the home-made and the brewers' yeast, and give preference to the compressed yeasts.

TO TEST BAKING POWDER.

Baking powder is a modern substitute for yeast, and when made of pure soda and cream of tartar will probably injure none but the most delicate stomachs. Unfortunately, it is much adulterated, and chiefly with the two poisonous substances, alum and ammonia. A simple way of testing for the presence of either or both is to put a teaspoonfut of baking powder into a teacup, add about two tablespoonfuls of hot water, and then set the cup on the stove. If the powder effervesces alum is present. The greater the effervescence the larger the proportion of alum. If there is any ammonia present its fumes may be detected during effervescence. Alum has the property of increasing its bulk many times, over under the influence of moisture, hence it is largely used by bakers as an adulterant of flour. A very small per cent. of alum added to a sack of flour will give the baker five more loaves to the sack. The only perfectly hygienic method of raising bread is by aeration. In this method a blast of carbonic acid gas is forced by mechanical means into the dough. The bread thus made is light and porous, with none of the fermenting tendencies which are due to year and baking powder. It would be a great boon to the poor, as indeed to all bread consumers, if an aerated bread bakery could be started in Pittsburg.

In the absence of aerated bread people with feeble digestions are forced to confine themselves to various unleavened grain preparations. Oatmeal and Graham crackers are digestible, and so are many of the steam-cooked cereals so freely advertised. Unfortunately, some of these cereals are not so thoroughly cooked as they claim to be, and the slight additional cooking which we give them in our home is not sufficient to make their starchy elements digestible. The first step toward the digestion of starch is thorough cooking. Raw starch is incapable of digestion or assimilation. It is the raw starch which they contain which makes unripe fruits so very undigestible. As they ripen, the heat of the sun slowly cooks this starch and converts it into grape sugar. There are some preparations of wheat now on the market in which, by slow and long-continued dry heat, the starch is sufficiently pre-digested to be assimilated by those with the most obstinate starch indigestion.

Oats stand next in value to wheat. In the shape of porridge or crackers, oatmeal is quite as nutritious as wheat, but it is a strong food, and those who eat much of it should live a vigorous outdoor life. Oatmeal will not make so light and appetizing a bread as wheat flour, and for that reason is not so much used. Oatmeal porridge is not a wholesome food for weak digestions, as it is generally swallowed in spoonfuls, without chewing. Dry food, with thorough mastication to stimulate the salivary glands, is the first step towards recovering a lost digestion.

FACTS CONCERNING CORN.

Corn is a wholesome cereal, for it contains fat and protein, as well as starch, and furnishes abundant heat and energy. Our ordinary canned corn is notoriously indigestible, however, on account of the hard outer skins which it contains. Cornmeal is eminently wholesome, mush being an especially nutritious and valuable food. Rye is inferior to wheat in nutritive qualities and digestibility, but when used in connection with buttermilk, as is the custom in Germany, will amply support life.

The protein, or albumen, of barley dissolves readily in water, on which account barley is especially valuable for thickening beef broth, and barley water is one of the best and most nourishing foods for fever convalescents.

Although rice has a high percentage of starch, it will, when properly cooked, digest in one hour. It contains 1 part protein to 39 parts carbo-hydrates, and to our American standard, is not capable of supporting life; nevertheless, the masses of China and India live and do hard labor with rice as their only food.

Among vegetables, beans, peas and lentils are easily the most nutritious. They contain a high percentage of protein, and with the addition of a little fat, will supply every element the body requires. The potato has fallen into disrepute lately, chiefly on account of improper methods of cooking. It is true that fully one-third of the potato is waste, and it should by no means have the place it now occupies in the dietary of the poor.

On account of its high percentage of starch a potato must be properly and thoroughly cooked to be digestible. The only proper way to cook potatoes is to bake them with the skins on, though they may be steamed and mashed without positive detriment. But even when baked they should not be eaten unless dry and mealy. A watery, soggy potato is is absolutely indigestible. We already understand why fried potatoes should be avoided, and as to potato salad, it is a dietitic absurdity. Vinegar, as we have learned, prevents the digestion of starch, and in the face of that fact, we take a starchy vegetable and deligerately dress it with vinegar? What else can be expected but dyspepsia?

DANGEROUS VEGETABLES.

The remaining vegetables, tomatoes, turnips, carrots, cabbage and onions, are chiefly valuable for their salts and acids. They have comparatively little nutriment, tax the gastric fluid heavily with their tough fibres, and should not form so large a proportion of the poor man's dietary as they do.

Fruits are valued, not for their nutritive quality, which is small, but for their power to maintain the alkalinity of the blood. They also stimulate the appetite and digestive fluids, supply water to the system, and have a generally laxative effect. The most nutritious fruits are the banana, date fig, prune and grape. As a rule fruits are more digestible when cooked, and should be eaten at the beginning of a meal, rather than at the end. The banana is so generally eaten that it deserves a word to itself. It should never be eaten uncooked. This sounds absurd in the face of the thousands that are consumed daily in their raw state, yet the banana contains enough starch to make cooking a necessity. It is more a vegetable than a fruit, and if persistenly eaten raw, will produce a starch indigestion. Baked in their skins they are much more palatable, and are at the same time a nutritious and satisfactory food.

Cane sugar is a carbo-hydrate, and as such is not a true food. It must be changed by the action of the liver into grape sugar before it can be assimilated. It ferments easily in weak stomachs, and is a fruitful cause of flatulent dyspepsia. It fulfills the same purpose in the human economy as starch, and since there is such an abundance of starch in all cereal and vegetable foods, it follows that the need for sugar is very small. The amount of sugar that is generaly eaten greatly overtaxes the liver, which, we remember, is the custodian of the carbo-hydrates, storing them up within its cells, and letting them out as the system demands. When more sugar is eaten than the liver can take care of, as is usually the case, it escapes into the system undemanded, and causes flatulence, obesity, some forms of rheumatism and gout, and finally diabetes. On account of its appetizing flavor, however, it will doubtless continue to hold a prominent place in our dietary, despite the remonstrances of hygienists. A good rule to follow is to eat just as little sugar as possible. The habit of candy eating between meals cannot be too severely condemned.

Mrs. Richards, of Boston, and Miss Marian Talbot Dean, of the University of Chicago, have conducted very exhaustive inquiries into the amount and kind of food needed by people pursuing different occupations. The amount naturally varies with the decree of physical exertion. They estimate that the best admixture of foods is one part meat to four parts grain and vegetables.

Those who believe in a larger proportion of meat can adduce many strong arguments. Meats are more easily assimilated than vegetables. They form a more concentrated diet, tax the digestive organs far less, and require far less skill in cooking. On the other hand, they do not provide enough waste to keep the excretory organs in good condition, and the superabundant protein finding no way of escape, remains to decay and poison the system with ptomaines. Vegetables and grain do require skill in cooking, and do impose a duty upon every digestive organ, but they stimulate the excretory system, maintain the alkalinity of the blood, and any reasonable excess in their consumption is readily taken care of by the simple process of adding a few layers of fat to the body.

POINTERS FOR HOUSEKEEPERS.

The conscientious housekeeper should carefully study each day's bill of fare, so that the correct proportion of protein and carbo-hydrates may be maintained. Beef, mutton and chicken, which contain a large per cent of protein, should be served with the starchy vegetables, rice and potatoes. Lamb, which has less protein, should be supplemented by the nitrogenous peas and fat pork should be accompanied with the highly nitrogenous beans or lentils. An excellent supplement to fish is maccaroni, which is not a starchy food, as we would at first infer, since much of the starch is eliminated in the process of manufacture. Codfish, however, should be served with potatoes or rice. Succulent vegetables may be served with all these combinations, since they have neither starch nor protein in sufficient quantities to disturb the proper ratio. The cereals, wheat, oats and corn, are benefited by a slight admixture of fat in the shape of butter and cream, but it is unwise to add sugar to either wheaten or oatmeal porridge. The starch in these grains gives the liver enough to do without overtaxing it with cane sugar.

To keep the correct ratio between animal and vegetable food, it is best to serve meat at only one meal a day. The number of meats which the system demands is a question of never-ending discussion. The Ralston idea is a hearty breakfast, a hearty dinner at 1 or 2 o'clock, and no supper. Dr. Dewey advocates no breakfast, dinner at 11 or 12, and a light supper. Dr. Kellogg advises breakfast at 8 and dinner at 3, with no supper. But none of these hours, hygienic though they may be, are suited to the working hours of a man, or the school hours of a child. I therefore suggest a compromise in the shape of a very light breakfast and lunch, and a dinner of all that a healthy system may require.

HEALTH-GIVING DIET.

As a sample health-giving diet for one day I would suggest: First, one or two glasses of water while dressing. Then a breakfast of fruit, whole wheat bread or wheaten or oatmeal porridge, cooked dry enough to promote mastication, and a cup of coffee or cocoa. This food will be thoroughly digested in four hours or less, and will give the stomache needed rest before lunch time. An hour before lunch another glass or two of water is required. For lunch I would suggest either an omelet, a poched or boiled egg, a bit of broiled fish, macaroni in some shape, or a nutritious soup, to be supplemented with fruit and whole wheat bread. Weak tea as a final course would be injurious to few. Four hours will be ample time to dispose of this nutritious meal, then another glass of water in anticipation of dinner.

In preparing dinner we must remember that a multiplicity of dishes, all requiring different lengths of time for digestion, is one of the most fruitful causes of dyspepsia, hence we must avoid too many different foods, while preserving an appetizing variety. Bouillon, or consomme, which stimulates the gastric fluid, is a hygenic prelude to the dinner. The meat, roasted or broiled, should be served with its supplementary vegetable. A salad, dressed with lemon juice, and not vinegar, may be added with advantage.

The true hygienist yields the dessert with reluctance; but the custom is too firmly roted to be opposed, so we will admit all varieties of custards and blanc-manges, but must turn our backs firmly upon the seductive pastry. Ice cream may be admitted if each spoonful be held in the mouth long enough to melt before being passed on to the stomach. In this plain dietary there is yet enough to gratify every taste, and enough is not only as good as a feast, it is infintely better.

It may be asked, is all this thought and care worth while. The obvious answer is another question. Is it worth while to be well?

A NEW AND CURIOUS LEG.

An Artificial Contrivance with a Heel and Ankle Movement.

From the New York Journal.

A European experimener has produced an artificial leg. It as nearly resembles a human member as any that can be devised.

This artificial leg is a curious contrivance of hinges, screws and elastic bands. Extending downward from about what in the human leg is the ankle, to a point midway between the heel and the instep, are two steel rods, one placed in front of the other.

One rests on a sort of roller hinge, and allows the foot to give or bend with each step. The other serves the purpose of bringing the foot back into place after the step is taken.

Any lateral movement of these rods is prevented by the sides of the slot through which they move. A screw and a nut at the top of the rod also prevent the rod from turning and thus giving trouble in walking. An artificial tendon is placed within the foot, behind the ankle joint, and extends loosely through a hole in the leg, where it connects with a nut at about midway up the limb.