ject, but is intended to be suggestive to other investigators. I do not now attempt to collate recent evidence on the changes in the blood. In order, however, to account for the destruction of the red corpuscles, the formation of the pigment, and for the phenomena of intermittent fever, I see no need for the micro-organism which is alleged to be parasitic in the blood, in intermittent fever. It seems to me that all of the phenomena can be accounted for about as well without the parasites as with; but it seems to be a general fact in nature, that, whenever a highly organized being commences to break down, there are generally organisms that await the occurrence; and, when the breaking-down process is of elements microscopic in size, I believe that micro-organisms are generally there. I accept the evidence of the eminent men who have reported that they are present in the blood in intermittent fever.

But if we grant that malarial fever is caused by micro-organisms parasitic in the blood, it has remained to be explained how it is that the micro organisms only cause intermittent fever under certain conditions of the atmosphere. That intermittent fever does occur under some conditions, and does not occur under other conditions, has long been positively known. I claim that the statistics which I have collected prove what those conditions are, and that the relation of those conditions to intermittent fever is quantitative and causal. I refer more especially to the evidence relative to the half million and more cases of intermittent fever which occurred in the United States armies during the war in 1862–64, and to the evidence of the recorded experience of physicians in Michigan during eight years.[1]

HEALTH MATTERS.

Ether-Drinking.

MR. ERNEST HART, editor of the *British Medical Journal*, has lately published some statistics and important information relative to the above subject. The matter is of very great value, directly and indirectly, says Henry Conkling, M.D., in *The Brooklyn Medical Journal* for April. It calls attention to the internal use of a remedy which, as a powerful cardiac stimulant, has been used but little of late. The published statistics have been collected, in part personally, and also by communication with medical men, clergymen, and others in the various parts of Ireland where the custom prevails.

The earliest history of the habit goes back to 1842. The greatest amount of ether used for drinking-purposes was in 1876. A few years after this date there was a diminution in the consumption; but it has since increased, until at the present time the amount nearly equals that of 1876. The majority of the ether (methylated ether) comes from large English houses, being sent sometimes to wholesale Irish firms, who retail it, or directly to the smaller dealers. It is put up in stoppered bottles or metal vessels. It is sold to the consumers in groceries, taverns, and public-houses, selling for two cents (United States money) for two drams. Its very small cost enables the dose to be frequently repeated. From two drams to half an ounce is the amount usually drunk; and this is repeated from two to six times during the day, depending on the personal habits. One or two cases of confirmed drinkers are mentioned where one pint of ether was generally used, when on a debauch, in divided doses.

The amount that produces intoxication depends on the individual. The ether is drunk in a single swallow, sometimes diluted, and again taken pure. The intoxicating effects are quickly produced, and quickly pass away. It is possible, therefore, as the author observes, for an *habitué* to become intoxicated many times in a short period.

A small dose causes a feeling of exhilaration, the drinker laughing, dancing, and being quite wild in his movements. If the small dose be not exceeded, there is no period of marked depression following the stimulation; but in larger quantities a state of stupor is frequently present, and, as the effect passes away, a feeling of weakness is left.

[1] Diagrams and statistics were given by Dr. Baker in support of his position.

It will be seen, in reading the individual accounts given in the paper, that mania is a marked feature very commonly presented, the drinkers often becoming very violent.

In moderate amounts, no lesions anatomical in their nature are produced. Of the two intoxicants alcohol and ether, the former probably causes more bodily derangement.

In ether-drinkers who have continuously consumed large quantities, a train of nervous and circulatory disturbances is generally present. Emaciation has been observed in certain cases, and occasionally the skin is of a cyanotic hue. The more moderate drinkers generally suffer from various forms of stomach troubles. In all cases there has been observed a marked change, in the way of deterioration, in the moral character.

The relation of ether to insanity was also investigated. No satisfactory evidence of the drug being directly causative could be gathered, but physicians to certain of the insane-asylums regarded it as detrimental in all cases where there was latent insanity. Death is probably not hastened in any great degree, although, by interfering with nutrition, the general health may become impaired.

Attention is called to the fact that there is danger to the user from having the drug near the fire or lights of any kind. The author believes that the practice probably prevails in certain parts of large cities.

It is interesting to observe how common the use of ether as an intoxicant must be, in the districts investigated, when the public conveyances are frequently impregnated with its odor.

This curious and novel paper teaches one valuable therapeutic lesson: the effect of the drug has been shown to be rapid and transient. In its use, therefore, as a cardiac stimulant, this point should be recollected, and no long intervals should go between the time of giving the various doses. Its rapid action makes ether a safe and valuable remedy for hypodermic use in conditions of syncope.

Poisonous Mussels.

A case of fatal poisoning of a mother and four children from poisonous mussels is reported by Sir Charles A. Cameron, M.D., in the *British Medical Journal* for July 19, 1890, and republished in *The Brooklyn Medical Journal* for April.

The first symptoms came on in twenty minutes after eating the stewed mussels. These were a prickly ("pins and needles") pain in the hands. Five persons ate of the dish, one lightly; and in one hour afterward one of the children died, and an hour later the mother and three other children. One child and the servant recovered.

The chief symptoms were vomiting, dyspnœa, swelling of the face, loss of co ordination of movements, and convulsions. The patients died asphyxiated. The mussels were fresh, and were obtained from a pond which was a mixed salt and fresh water pond, and received some sewage. The mussels, on examination, were found to have large livers and brittle shells. A leucomaine was extracted from the liver of the mussels which resembles Brieger's mytilotoxine ($C_6H_5NO_2$). The liver seemed to be the seat of the poison, which had been before noticed by M. Dutertre of France. The cause of this peculiar disease, the author thinks, is due to the foul water in which the mussels lived.

The livers of these mussels were examined microscopically by Dr. McWeeney, and in a preliminary note published in the *British Medical Journal* of Sept. 13 he describes at least five different organisms appearing in his cultures, one of which, he thinks, is the specific organism of the poison.

The important lesson is, that mussels from stagnant or sewage-laden waters should not be eaten.

Influenza in the German Army.

The medical department of the Prussian War Office has furnished statistics of the epidemic of influenza from the medical records of the German Army, an extract from which is given in *The Boston Medical and Surgical Journal* for March 26. The name "grippe" is supposed to be derived from the Polish word "chrypka," which means catarrh. The epidemic appeared in the army suddenly at the end of November, 1889, and in March was

considered as entirely passed. The first cases occurred in the barracks situated in the Baltic provinces, from which place it spread rapidly, the larger garrisons being generally attacked first. There was, roughly speaking, a belt stretching across the country from north-east to south west, in which belt the epidemic seemed to travel, and outside of which the cases were less frequent and severe. A number of garrisons at a distance from this path, that is, in the south-east and north-west, escaped altogether. The time occupied in spreading through the whole army was five weeks, whereas the epidemic of the year 1833 took more than three months. The total number of cases reported was 55,263, of which three-tenths of one per cent were seriously ill, and one-tenth of one per cent died. The Bavarian troops suffered the most. The larger number of cases occurred among the younger men, and the smallest number among the artisans. Many other interesting data are recorded.

Hæmolymph Glands.

It might be thought, that, after the careful search that has been made in all the tissues of the animal body, it would be almost impossible to find a structure that has up to the present remained undescribed; yet Mr. W. F. Robertson, working under Dr. William Russell, in giving a careful histological description of his so-called hæmolymph glands, has opened up a new field for histological and pathological research. From the description given, says the *Lancet*, the hæmolymph glands appear to be a kind of cross between the spleen and the lymphatic glands, as almost all the structures that Mr. Robertson describes may be found in one or other of these organs, although they have never yet been figured as he finds them arranged. Most observers who have noted the existence of the small prevertebral blood-red points have assumed that they were simply lymphatic glands, the cortical spaces of which were distended with blood ; and, although every butcher can point them out, it appears that no one has hitherto had sufficient curiosity to determine him to examine these structures microscopically. The large cells, with their colorless subdivided nuclei found in the sinuses, appear to be somewhat similar in character to the large red-blood corpuscle-forming cells that have been described in the spleen, and even free in the blood circulation, and it will be interesting to note whether it is possible to make out any relation between the cells in the blood and those in the hæmolymph glands. Although at first sight it might appear that Mr. Robertson's observations may lead to further complications in the study of the blood-forming and blood-destroying functions, it is hoped that a careful study of the structures that he has so well described may allow of further light being thrown on these subjects. We are gradually drifting further and further away from the idea that special functions are necessarily bound up in special organs. That there is a special development in certain kinds of tissue in special organs, and consequently that certain functions are here carried on more actively, all will admit; but we are gradually coming to see that such functions as the glycogenic, hæmogenic, and the zymogenic are carried on in every part of the body, and that the various differences as regards these functions in the various tissues are those of degree rather than those of kind.

Dietetic Employment of Fat.

W. Zuntz has a paper on the dietetic employment of fat in the *Therapeutische Monatshefte*, October, 1890, an abstract of which appears in the *Medical and Surgical Reporter*. He was induced to put to the experimental test of some conditions of digestion of fat a preparation of chocolate suggested by Von Mering. The chocolate is so made that it possesses a sufficient quantity of free fatty acids to form a permanent emulsion without in any way injuring the taste of the chocolate. In order to find out whether the digestibility of fat is enhanced by the power to form an emulsion Zuntz sought to find out what quantity of cacao-butter, with and without the addition of fatty acids, was appropriated when administered to dogs. The result was, that there was an increase in digestibility, which was only slight,— two per thousand of the fat,— if moderate quantities of cacao-butter were cooked with the rest of the food, but it was considerable if (as is usually the case with cod-liver oil, in order to avoid stomach digestion) the cacao-butter was given some time before the rest of the food, and in somewhat greater quantities. In the latter case there appeared in the stool 9.9 per cent of pure cacao-butter, and only 6.1 per cent of the emulsionized.

Corresponding to the result of the emulsionizable cacao-butter in dogs, the fat of Mering's chocolate proved to be very digestible in men. For three days a moderate diet poor in fat, consisting of bread and lean meat, was given, and in addition a daily quantity of 416 grams of chocolate containing 87 grams of fat. In the fæces appeared only 4.88 per cent of fat; whereas Weigmann, in a series of experiments with ordinary cacao-butter, administering 53 grams, recovered 5.5 per cent. In comparison with the most used fats, and those fats prized on account of their being easily digestible, such as butter, lard, marrow, the fat of the chocolate preparation is seen to be considerably superior.

Eating before Sleeping.

A recent writer, says the *Journal of the American Medical Association*, states that the view that brain workers should go supperless to bed is not good advice. Most medical authorities of the day think it wrong It is a fruitful source of insomnia and neurasthenia (sleeplessness and nervous prostration). The brain becomes exhausted by its evening work, and demands rest and refreshment of its wasted tissues, not by indigestible salads and "fried abominations," but by some nutritious, easily digested and assimilated articles. A bowl of stale bread and milk, of rice, or some other farinaceous food, with milk or hot soup, would be more to the purpose. Any of these would insure a sound night's sleep, from which the man would awaken refreshed.

New Medicinal Soaps.

The *Edinburgh Medical Journal*, February, 1891, says that Eichhoff of Elberfield, who has already added to the list of medicinal soaps some of real value, and embodying some valuable improvements, has continued his researches into the subject. He reviews the conditions of the skin in which soap treatment is to be recommended. This is specially indicated in cases where the skin is unctuous. The soap removes the excess of fat, while the incorporated drug, if suitably chosen, acts at the same time on the disease itself, and, as Eichhoff thinks, can chase the offending organisms from the ducts of the cutaneous glands. He quotes in support of this the treatment by medicinal soaps of psoriasis, which he regards as parasitic, and of acne, the pustules in which are now believed to be due to the pyogenic micrococci. He praises also the cleanliness, the innocuousness, and the cheapness of this method with the vigor of a true partisan.

Soaps may be, for convenience, divided into (1) alkaline, containing an excess of free alkali; (2) neutral, in which all the alkali is combined with the fatty acids; (3) so-called acid soaps, which are prepared either by the addition of weak acids or by being superfatted, and eventually re-act faintly acid. The alkaline may be used to remove masses of scales; while in acute inflammations of the skin, or when it is irritable, the neutral or superfatted soaps are to be employed. The superfatting of the new soaps consists of 2 per cent lanoline, and 3 per cent olive oil, and they are made by Ferdinand Mühlens at Cologne. Among these new soaps may be specially mentioned a menthol soap, containing 5 per cent of menthol. The local anæsthetic influence of menthol on the skin is well known, and the principal use of this soap will probably be found in lessening pruritus. Eichhoff cites some cases where cure resulted in pruritus senilis and pruritus genitalium. He recommends, that, should the soap be employed for the head or lace, the eyes should be kept firmly shut, else an unpleasant, though, he says, not dangerous, coldness of the conjunctiva is perceived. A 5-per-cent salol soap is one which may prove useful in psoriasis. The salol, when so used with water, breaks up into carbolic and salicylic acids, and these in their nascent condition may be expected to act with energy. A 5-per-cent resorcin soap promises to be of advantage in cases where this valuable drug is indicated.