

THE GENERAL DEATH RATE

A VERY STRIKING REDUCTION IS SHOWN BY FIGURES.

All Due to Better Hygiene—Efficacy of Warm Water in Medicine, Its Bountiful Action and Benefits—Black and Red Eggs.

Observance of the rules of hygiene has for its result the decrease of mortality, writes a correspondent. In every country statisticians have taken pleasure in showing the results obtained by figures. Sir Joseph Ewart has proved beyond dispute that in England particularly the death rate was lowered; that the mortality caused by certain special diseases has diminished, and that there is a disappearance or, at the least, a very great reduction, in the death rate of some maladies.

Thus, from 1858 to 1860, and during the following five year periods, ending with that of 1891-1895, the death rate per thousand from all diseases amounted to 22.22, 25.58, 22.42, 21.96, 20.79, 19.40, 18.90 and 19.04. And it must be noticed that of late years influenza has swelled the death rate.

It is particularly the death rate of cities that has diminished. Thus, from 1861 to 1870, for every 100 deaths in the country there were 126 in the towns; from 1891 to 1893 the proportion was only 100 to 113. The progress of urban hygiene—street paving, sewerage, drainage, better drinking water—accounts for these favorable results.

From 1858 to 1860 the death rate from smallpox was 219 per million inhabitants. It has fallen to 23 during the period 1891 to 1893. Between the same periods there is a reduction from 792 to 191 deaths per million from the group of fevers, inclusive of typhoid fever, typhus and some other ill defined continuous fever.

From 1871 to 1875 the typhoid mortality was 378.8 per million; from 1891 to 1894 it fell to 135.2. The municipal measures taken to provide pure drinking water in the towns, and the watch kept upon milk are in great part the cause of this improvement. For some time past attention has been drawn to the propagation of typhoid fever by shellfish—by oysters taken from beds affected by sewerage. Sir Joseph Ewart, by personal investigation, became convinced in 1894 that out of 56 cases of typhoid fever 22, that is 42 per cent., were due to the contamination of shellfish by very impure water. In 1895 out of 56 cases 7 were attributable to oysters and 12 to other shellfish. These facts justify the measures taken by the Local Government Board with a view to purifying the beds in which the oysters lie.

From 1871 to 1875 typhus caused 81.4 deaths per million, and only 2 from 1891 to 1894. This disease, due particularly to crowding, ALMOST DISAPPEARED, save in a small number of large cities.

Phtisis shows, from 1850 to 1860, a mortality of 2,565 per million, and from 1891 to 1893, a reduction to 41 per 1,000, or 1,512. General hygiene—improvement of food, increased comfort, better habitations—has its share in this progress, but special indications have also contributed to these excellent results—disinfection of spittoons, care in the cooking of meat, prohibition of meats and milk from tuberculous animals.

Hygienic or sanitary measures do not appear to have reduced the death rate of diphtheria, and the same is the case with measles, scarlatina, influenza, and English cholera.

Cultivation of the soil and drainage have almost entirely got rid of malaria. Scoury is no longer a terror on the ships or in the colonies of England. Leprosy, after having been endemic for over thirteen centuries, with its maximum in the twelfth century, and its latest cases in the eighteenth, has almost disappeared. While the plague has not made its reappearance in England, it has made and is even now making ravages in Great Britain's Indian possessions. It was owing to the fact that the rules of hygiene were misunderstood, that Bombay has been invaded by the plague from China.

As for cholera, although it has recently been imported, in its most serious forms, into three districts, nowhere has it spread, because nowadays every proper precaution is taken by the local authorities to preserve the drinking water from contamination by the cholera bacillus. It is thus evident, from a study either of the general death rate or of the mortality from certain specific diseases, that there is a noteworthy decrease. Much still remains to be done, but the results so far obtained are an encouragement to persevere in the path of progress upon which science has set a resolute foot.

WARM WATER IN MEDICINE.

Warm water exercises a double physiological action, local and general. Locally, it irritates the nerves of the skin, excites the cutaneous circulation, owing to the contraction produced in the vessels, which, however, afterward dilate. Its general action is characterized by an augmentation of the movements of inhalation and exhalation. The respiratory movements later become less frequent and deeper, which increases the action of the heart and the circulation. The dilatation of the vessels of the skin induces a stronger current of blood toward the periphery and "decongests" the internal organs. The chemical properties of the blood undergo changes.

Upon the increased heat produced at the periphery in the dilated vessels, there often follows a diminution of the general temperature.

For these reasons warm baths have been ordered in fever diseases as derivatives against exudations, to favor resorption. They have given good results in cerebral meningitis, in oedema combined with nephritis, bronchitis and pneumonia, rheumatism and sciatica. Locally, under the form of compresses, warm water is advantageous in cerebral apoplexy, in certain forms of conjunctivitis and in sick headache.

In affections of the heart, procedure in the use of warm baths is necessary.

In surgery warm water is used especially in parenchymatous (hemorrhages, but it is effective only when applied to contractile organs. It produces excellent results in the treatment of sprained or crushed limbs. It acts marvelously on atonic sores, which it excites to cicatrization, on boils and anthrax. It limits the inflammation and circumscribes purulent abscesses when it does not completely stop suppuration.

For all these reasons the use of warm water in therapeutics cannot be too highly recommended.

BLACK AND RED EGGS.

There is not, so far as I know, any aliment more appreciated than eggs. Their value is known to all. Like milk, they offer to digestive action, under a simple form, albuminoid matter, fatty matter, sugar and salts, similar to those which enter into the composition of the blood. Albumen is found in them in almost the same and fatty matter in a larger proportion than in the muscular meat of the ox. Consequently, there are united, in one aliment, substances which play an important and very general role in the economy of life. Eggs present all the characteristics of a complete aliment, capable of furnishing formative material to all the tissues of the human economy, even the osseous tissue.

The eggs most used for food are those of the hen, and, more rarely, those of the guinea fowl, the duck, the turkey and the plover. The quality of the eggs varies somewhat according to the food eaten by the bird, and to which must be ascribed the black coloring that may be observed in ducks' eggs, and the red tint that may be seen in hens' eggs.

As every one knows, eggs are composed of a yolk swimming in a white or albumen and enclosed in a shell. How is it possible for the yolk to assume a black tint? The reason is that ducks particularly eat oak glands. Now, these glands are very rich in tannin and the yolk is rich in iron—the chemical combination of these two results in tannate of iron, which produces ink, the good black ink of olden days.

No explanation has yet been given, to my knowledge, at any rate, of the fact that hens fed on crayfish shells, which they like immensely, lay eggs the yellow of which has a bright red coloring. But that is a fact placed beyond doubt by experience.

Are these black or red eggs offensive? I do not think the eating of them should cause any injury to the health; but I do believe that they are of inferior quality, and that for this reason they should be avoided. As a matter of fact, it is a rare thing to come across these eggs.

IN A MINE ABOUT TO EXPLODE.

The Foreman, Imprisoned and in Darkness, Extinguished the Fuses When Almost Burned to the Powder.

John Kendall, who was recently the foreman of a mine at Rossland, B.C., lately underwent an experience that has left him a physical wreck. His nerves were shattered and it will be months before he regains his former strength.

It was about three weeks ago that Kendall and four other men lighted the short fuses under eight charges of giant powder in the True Blue mine and then jumped into the basket to be hauled to the surface and out of harm's way. The basket raised a few feet and then stopped. Soon it began settling, and it looked as though the five men would be blown to atoms when the tremendous charges of powder were exploded. When the basket was within four feet of the bottom of the shaft the fuses could be heard spluttering, and the men knew that only a few seconds would elapse before the blasts were discharged.

Kendall jumped from the basket, and began pulling the fuses from the primers, which were to explode the powder. Kendall had extinguished five of the fuses nearest the bottom of the shaft when he heard the preliminary spluttering that betokened the immediate explosion several feet away. He stumbled towards them and fell, extinguishing his light. Then there was nothing but the spitting fire to guide him.

"Fortunately," he says, in describing his actions, "the shots had been put down close together. I was able to seize a fuse in either hand. Providence was with me again, for neither blast exploded as I drew the fuse from the primers. What happened after that I do not know of my own knowledge. A great darkness came over me. They say they found me doubled up at the bottom of the shaft, with the fuses of the last two holes clinched tightly in my hands."

It was afterwards discovered that the stopping of the ascending basket was due to the engineer's carelessness. He had forgotten to open the water-cocks in the cylinders, and as a consequence the slide valves choked and would not act.

NO DISCOUNT ON THEM.

She—How can I ever repay you for your kindness? He—With kisses. She—How much do you value them at? He—I'll take them at their face value.

THE FARM.

PROFIT IN FERTILIZERS.

Without question, fertilizers increase crops, but it is easily possible to so use the fertilizers that the increased production will not pay the cost of the fertilizers used.

With a proper use of fertilizers thirty bushels of wheat per acre may be regularly gotten, where, with the usual hit-or-miss, way of using farmyard manure only about fifteen bushels can be depended upon. Ten dollars' worth of chemical fertilizer, properly proportioned and properly used, will undoubtedly produce a crop worth far more than ten dollars. Twenty dollars' or even \$100 worth of phosphate alone, applied per acre, would not double a crop as compared with an unmanured acre, nor would an excessive quantity of potash alone prove beneficial. On the contrary such applications would injure the crop and prove worse than no manure at all.

The same is true of an excessive use of nitrogen without potash and phosphates. All of the reputable official fertilizer experiments show that complete fertilizers are necessary, and that potash and phosphates must be used regularly—nitrogen may be largely obtained through the cultivation of clovers, cow-peas, field peas, etc.

For all grain crops the fertilizer must contain fully as much potash and phosphoric acid; a small amount of nitrogen is always advisable, but the farmer cannot afford to pay much money for nitrogen when he can grow his own so cheaply. For fruit and vegetable crops, the potash must nearly double the phosphate. It is needless to go into the actual fertilizer needs of different crops here. The principal experiment stations have frequently published tables of analyses of the principal crops, and farmers will do well to consult these tables.

After having determined the proper proportions of fertilizers for a particular crop, we come to a matter of full equal importance—the proper time to use them. All forms of nitrogen should be applied closely after seedling time. Good growing weather means good weather for making urea and ammoniates available. In the case of nitrate of soda, application is frequently made after seed planting. Potash and phosphates should be used before seeding, probably some months before. For example, if it is intended to follow your corn this year with crimson clover, the potash and phosphate should be broadcasted as early as possible after the corn is seeded. There is very little danger of loss from drainage, and by the time the young clover is ready to use the mineral fertilizers to enable it to store up nitrogen, it will find them at hand in forms suitable for immediate assimilation.

By all means apply the mineral fertilizers for next year's early potatoes, late the coming fall; it is perfectly safe to apply in the fall, and perfectly safe to broadcast. For wheat, use a fertilizer containing say 2 per cent. of ammonia, 6 per cent. of potash and 6 per cent. of phosphoric acid applied with the seed.

Next spring, apply 150 pounds of nitrate of soda per acre as soon as the last snow is well out of the way. This is the way the French farmers get the 80 bushels of wheat per acre, which seems almost impossible to our farmers.

Mix right and use right solves the problem of fertilizing with chemicals, but do not feed niggardly; don't try to get something for nothing.

OVERHEATED HORSES.

The symptoms of overheating are easily noticed, as the horse will suddenly stop and refuse to work, or in more severe cases stagger and fall. The horse should be unharnessed at once and removed to a shady place and freely sprinkled with water, head and body. Sponging the mouth and nostrils with water or with vinegar and water will revive the animal. In ordinary cases it will take several hours before the horse can safely be removed, as in the process of recovery it is liable to stagger and fall. The sacrificing and bleeding of the mouth and ears, not infrequently practiced by drivers who are frightened and do not know what to do are useless and senseless and only excite the horse, then in a condition where rest and quiet are most essential to recovery. The prevention of sunstroke lies in the judicious care of the horse at this particular time. The patient and careful driver will have little to fear from the heat, whereas the man who hurries or otherwise abuses his horses invites sunstroke. It is well to call the attention of drivers and foremen of barns to the liability of horses to sore shoulder at the present time, when perspiration is shed so freely, and the sun is so hot. The remedy is to wash the shoulders of horses with water and soap when they return from the day's work, and if there are any visible swellings or sores, they should be bathed with salt and water, and in cases of open or running sores a carbolio salve or other disinfecting ointment should be applied. Horses in this condition should be kept from work until the sores are healed, although in the case of small sores pads of straw or felt may be attached to the collars or other harness parts in such a way as to prevent further irritation and pressure. If this can be accomplished, the sores will heal, while at the same time the horse may be moderately worked. We would call attention to the fact that free use of drinking fountains, in great heat, the horse should be allowed to drink frequently, but a little at a time.

UPWARD TREND OF DAIRYING.

The old proverb that he who makes two blades of grass grow where only

one sprang up before is a public benefactor, ought to be widened in its scope so as to take in the dairyman who, by careful management increases the value of his herd.

It is no slight achievement to have been able to take a lot of poor cows which scarcely paid for their keeping and bring them up to the point where the quantity of milk produced is from one-fourth to one-half greater than at first, and the value of the product increased in still greater proportion. This is what many herdsmen have done and are now doing.

The man who is satisfied to drift along in the old way is unwilling to believe the reports of those who have built up their dairies, from small beginnings to a place of profit. "Stuff and nonsense!" he says: "I know that no cow can be made to produce four hundred pounds of butter in a year. Why, that is more than any four of my cows will do, and they are good ones, too!" We may well believe this latter statement if we visit his farm and note his methods. Cows selected with no idea of their true value as milk or butter makers; poor pastures; scanty supply of water; unventilated stables; out-of-date appliances in the house; slipshod ways of caring for milk, and butter—no dairy paper on the table—can afford to take it—these indicate truthfully the state of this man's business.

And still, we do not know that many men have brought their dairies up to the point of perfection spoken above; and they are not yet satisfied. It is possible to start with just such a herd as has been described, and, by making it a study, so elevate the capacity of the individual members of the flock, that in a few years it will be a source of profit instead of an expense to the owner.

THE LADIES ARE LEARNING.

Among the hitherto unnoted benefits conferred upon humanity by the bicycle is the development in women of a tendency to observe "the rules of the road," not only when riding on their wheels, but while passing along crowded sidewalks and in many similar places, where, until recently, the feminine habit has been to inconvenience other people as much as possible. This habit, usually ascribed to stupidity, but really due to lack of that instinctive courtesy, as distinguished from acquired courtesy, which is the one-trait setting men apart from women, has been much weakened by the absolute necessity imposed upon all bicyclists of giving to others a fair share and the right share of the road. Non-riding women still cling to the old, bad way, but a marked improvement is visible in the younger representatives of the incon-siderate sex.

HELPING MOTHER.

Minister—Ah, Tommy, is that you? I trust you are always a good boy, Tommy?

Tommy—Yes, sir. Minister—That's right. I am sure you are always kind to your good mother.

Tommy—Yes, sir. I was helping her yesterday.

Minister—Very glad to hear it, Tommy. What did you do for her yesterday?

Tommy—I helped her with the washing, sir. She said she couldn't get on with the washing if we didn't take our dinner an hour sooner, and I took it as soon as she had it ready.

MORPHINE IN FRANCE.

The injection of morphine is a habit that is, unfortunately on the increase in France, especially among the middle classes. On statistics furnished by the pharmacists it is estimated that there are in Paris at least 50,000 victims of the morphine habit, the majority of whom are women.

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