

made at the expense of the German government, by Dr. Robert Koch, "one of the most successful detectives of disease causing germs, seem to demonstrate, what general observation of the disease had already indicated, that cholera is caused by the growth and reproduction in the body of innumerable bacilli or one-celled plants of a kind peculiar to this disease, invisible to the naked eye; that these bacilli may enter the body by the air inhaled, but are far more likely to enter by food or drink taken into the stomach; that they are present in the excreta of a person sick with cholera, and in clothing soiled thereby, and may be on almost everything that comes in contact with his body." Dr. Koch's investigations show that "the bacillus of cholera can live and reproduce its kind indefinitely in certain but not in all substances outside the body, namely, in certain alkaline but not in acid solutions; and as the normal condition of the stomach is acid, that it cannot live in the human stomach in its normal condition. The intestinal juices being normally alkaline, the bacillus can probably reproduce itself therein without limit whenever it can pass through the stomach." This makes it of special, indeed, it appears to us, of the first importance, that in times of danger from cholera the stomach should be kept in a natural healthy condition.

PRECAUTIONARY OR PREVENTIVE MEASURES.—The means by which the cholera germ or bacillus may be prevented taking root, developing and spreading in any locality, may be summed up in the following words: The *complete* removal and destruction of *all* waste, used up, excrete, dead matters, from the blood, from the person, from the dwelling, from the yard, from the neighborhood. It is in used up, excrete matters only, it appears, that these organisms grow and multiply. The very name of the class or group to which the cholera bacillus belongs, *Saprophytes*, signifies plants which live upon decaying organic matter. For example, we find, on the one hand, that Roulon, where the disease first

made its appearance in Europe, about a month ago, and has been so destructive of life, is said to be "an extremely filthy place" "one of the most filthy places in Europe." In a like condition is Calcutta, when there has been a serious outbreak of cholera, and where there were in April last over 800 deaths from the disease. On the other hand, there is a small Moravian colony, called Sarepta, in a bend of the river Volga, noted and eulogized for its minute and absolute cleanliness. The cholera has never made its appearance in this spot, it appears, but has passed by it again and again, and committed terrible ravages around it.

PERSONAL PREVENTIVE MEASURES.—The strictest temperance in all things, personal cleanliness and regular habits should be observed by every individual; and the diet should be plain but nutritious. This in order that all the bodily functions may be kept in as perfect a state as possible and that there be no waste, used up matters retained in the blood or fluids. These, with a fearless, tranquil contented mind, usefully employed, will do more to protect an individual from cholera, even in the midst of an epidemic, than all other preventive measures combined. Fear of the disease—mental trepidation, depresses the body and retards functional activity, and so predisposes to the disease. Trust in perfect preventive measures and have no fear.

GENERAL PREVENTIVE MEASURES.—It is not necessary to enumerate the places which should be cleaned and kept clean—the yards, stables, closets, cess-pools, slaughter-houses,—but *every place*, every corner, should be kept absolutely free from every trace of contamination. All places where filth has been should be disinfected or lime washed, or both—lime-washing indeed being a sort of disinfection. All sewers should be freely flushed and these and the street gullies most liberally disinfected. The water and food supply should be carefully looked after and only the purest used.

Dr. Saunders, medical health officer, London, Eng., recommends that the roadways be daily sprinkled with water containing some "germicide"; the courts