Public Toilets, Public Drinking Fountains and Public Spitting in Relation to the Conservation of Human Life.

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Public supplies and public conveniences are always public dangers, and for two reasons: they may affect large numbers of people, and they are always beyond the control of the individual who is obliged to use them. The municipality and the state has, therefore, a grave duty: viz., to control and to supervise public commodities of all kinds.

We no longer believe that disease is the result of the "malice of Satan," or a "rebuke of God," but rather consider it the result of personal or public ignorance and neglect. Decomposing potatoes and pin-holes in the sewer pipes are no longer believed by intelligent people to be the cause of typhoid fever, but every new case is new evidence of deficient civilization. Infectious diseases are caused by living germs and these parasitic germs live and grow only within the body of man, for the most part. They perish quickly in the harsh external environment. For the continuation of infections diseases it is necessary that a more or less direct transfer of fresh nasal, oral, urinary or alimentary excretions from one body to another susceptible body take place. The body must be frequently freed of these accummulations of wastes, for just as wastes in a community may "breed" ill health and nuisance, so much more important is it to rid the cell community—the body—of its wastes.

The problem of public sanitation is two-fold. First, it must reduce to a minimum the possibilities of transfer of the germ-laden body excretions from person to person. Secondly, it must provide every public need and commodity that tends to raise the vital resistance of the people. There is no more potent force tending to good health than the condition of the body; its resistance to variable external conditions and parasite invasions depends upon this general health tonus.

Toilet facilities should be furnished by railroads, hotels, bars, amusement places as theatres, fair-grounds, etc., and by municipalities in fre-

quested public places as squares, playgrounds and especially public schools. A sniff of, or a glance at the accommodations offered the public in railroad stations or theatres in many instances is argument enough against conditions as they exist about us.

Public toilets may be exchange places of disease germs. Evidence is not lacking that epidemic disease frequently spreads from these centers. Occasional cases of venereal disease or even of intestinal disease may be traced to toilets Trachoma and various infections are transmitted from person to person by the common roller towel. The indirect effect of inadequate facilities and revolting toilets, making it impossible or undesirable for people to free the body of its wastes, and hence affecting the resistance of the body, is much more important than the direct transmission of disease germs in this case. A nation's or a town's refinement, education and morality may well be noted by the comfort, privacy and inviting facilities it offers to its inhabitants for the evacuations of the body. It is beyond the scope of my paper to indicate the dire effects resulting from improper functioning and improper attention to this important need. Suffice it to say that many so-called functional diseases as liver and kidney trouble, frequent headaches, intestinal disorders and other disorders are frequent sequelæ due to neglect of ridding the body of its wastes. The impairment of the functioning of these vital organs tears down the general normal barriers to infectious diseases and so indirectly, lack of sufficient and inviting toilets is a cause of much sickness, suffering, and even of death.

The public drinking cup has been condemned because it affords an ideal vehicle for the mutual exchange of saliva. People who will laugh heartily at the joke when you suggest "swapping gum" serenely follow you to the public fountain and mouth the cup directly after you and dozens of others. In 1909 Kansas, Michigan and Mississippi first adopted regulations against the use of the common drinking cup in schools and railroad trains, and now several states, including Wisconsin, Massachusetts and California have legislated against this disease distributor.

As with toilets, the problem of public drinking facilities involves a question of direct transfer of disease virus and one of general body conditioning. It is a simple matter to demonstrate mouth epithelial cells and mouth streptococci on the edge of the public drinking cup, and it is obvious enough that disease germs are always potentially present and may pass in a few minutes, or even seconds from the mouth of the incipiently sick or

convalescing, or the healthy "carrier" of diphtheria, scarlet fever, tuberculosis, pneumonia, tonsilitis, mumps, whooping-cough, measles, infantile paralysis, common colds or other infectious diseases into the mouth of the healthy, willing susceptible.

The normal functioning of the body is absolutely dependent upon abundant water being furnished the system, and a deficiency leads to general ill health and lowered resistance. Abundance of water is almost as important as purity of water. Sufficient and attractive facilities as well as clean water offered from sanitary devices should be furnished the public.

The war against public spitting has been vigorously and efficiently waged for some time now and with undoubted good results. Just what the relative importance of large masses of sputum thrown into the environment is when contrasted with saliva exchanges that take place in more obvious and direct ways on things smeared either directly by the lips or by the fingers moistened with saliva, I do not venture to state. Our epidemiological evidence and our laboratory findings seem to be opposed to the theory that disease is very generally spread through the medium of the air. Sputum thrown upon the sidewalk or in the hotel lobby drys slowly as a rule and tends to adhere to the surface upon which it is dried. The dryness, light, time and other factors are germicidal and the disease germs present, especially, tend to quickly perish. Saliva deposited on food by the cook or waiter, on pencils exchanged by children in school, on street-car checks by conductors, on soda glasses, trolley straps, the leaves of books and a multitude of things that we come in contact with in the daily routine seems to find a more direct route and gives ample room for explaining obscure endemic cases of disease of the respiratory tract. For my part, I had rather have the car conductor spit on the floor than deposit a lesser amount on the check he hands me. I believe it is high time our anti-spitting league took on a new, broader work and began an anti-saliva campaign. Spitting may, and undoubtedly does spread disease. It is a vile habit and should be prohibited. The campaign against it will raise the public opinion of cleanliness and civic responsibility and will tend to improve the sanitary tone of a community.

The phenomenon of improved municipal health following the substitution of a pure or purified water supply, for a polluted supply is too common to need illustration. Other sanitary improvements, as installation of a proper sewage or garbage disposal plant or a clean milk campaign, like-

wise affect the public health in a spectacular and demonstrable way. It has frequently been observed that the decrease in death rate following these specific improvements is greater than would be expected. For example, a clean water supply may always be expected to lower the mortality of water-borne diseases, chiefly gastro-intestinal diseases. In many instances it has been found that the general death rate is lowered more than can be explained by the typhoid component and that diseases of the respiratory tract are reduced. This may be explained by supposing that diseases other than intestinal may be water-borne, or it may mean that the general vital resistance of the people of the community is raised by more abundant use of a pure water. When a community reaches that stage of sanitary enlightenment and common-sense cleanliness that it demands proper disposal of its wastes and provides for a pure public water, we may expect that other less spectacular sanitary reforms are being practiced, so that there are a number of contributory causes to improved health. Thus the general resistance tonus and the public's hygiene practice is a significant health factor. Providing sufficient and clean public toilet facilities; convenient, numerous and sanitary drinking fountains, and the abatement of the barbaric, disgusting habit of public spitting are plain civic duties, and are factors in the conservation of human life and happiness.

We would recommend:

1. Regeneration and extension of public toilet facilities, especially emphasizing the need of proper care of public toilets. The most perfectly constructed toilet will be unsanitary in a short time if not efficiently cared for. A score card might be used in inspection to give a picture of the conditions and to indicate improvement from time to time. I have devised and used such a score card effectively.

2. The final condemnation of the public drinking cup, especially in schools. One of the lessons in hygiene in schools might well be devoted to teaching children how to make their own paper drinking cups, the teacher furnishing them with clean paper of convenient size and shape throughout the year. Soda fountains are culpable and there should be legislation or action of some kind against the present soda fountain and glass, a public drinking cup.

3. The extension of our anti-spitting and anti-saliva campaign, including the dissemination of information relative to the more direct and dangerous modes of transfer of nasal and oral secretions.