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The Possibilities of Bacterial Infection,
Along 2 Miles of Country Road.

Madge Ruth McKeen.

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Outline.

- I. Introduction (point of view etc.)
- II. Bacterial Infection
 - (a) Bacterial Infection defined.
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 - (b) How the road and its surroundings may become infected.
 - (1.) Travelers
Local
immigrants
tramps
 - (2) Dogs, rabbits, etc.
 - (3) winds + waters.
 - (c) Infection of man and animals from the infected road.
 - (1.) air
dust

(2.) Rain, snow, etc.

(3.) Foods

stored near road.

growing near road.

(4.) Wells

hail

cups

tubs etc.

(d) Infection of produce carried
over the road.

(1) Milk

dust etc.

(3) flesh

(4) vegetables.

(2) Butter & cheese.

III. Conclusion

(a) Precautions necessary to
avoid infection
(b) Beneficial results of this
precaution.

The subject of bacterial infection is an exceedingly broad one consequently a limitation is necessary. The writer has chosen a small section of country, which was familiar, and has observed as much as possible the real application of it to this subject. This country road is also accompanied by two railroads running nearly parallel, thus presenting a new phase of the subject.

Crookshank says, "Bacteria are minute vegetable cells, or plants, destitute of chlorophyll." These plant like bodies act much the same, with similar effects, on both man and the lower animals. These small plants multiply very rapidly by fission and by fructication.

Bacterial infection has been defined as the power of bacteria to cause the communication of disease from one plant or animal to another plant or animal. Some diseases are more easily communicated than others, depending upon the condition of the body which is to be infected.

The first source of infection to our local road is the local traveler. These

consist of all classes and kinds of people, from the careful individuals to the careless ones. It is the latter of which we should be suspicious, they tend to spread diseases without restraint on their part.

Not only the local travelers are to be looked upon as sources of infection, but also many of the so called immigrants, or that class of people who travel from place to place in a covered wagon. These people in traveling from place to place may contract some disease in one town or city and then pass on and spread the infection in the next city. Not only the people themselves carry bacteria but their dogs and horses aid in the spreading of infectious diseases.

The two railroads, already mentioned bring tramps and tramps from all parts of the country; aside from being a nuisance because they beg food, they may introduce many infectious diseases into the community. If small pox rages in a city and some of these tramps have the disease, the tendency is to spread the infection to other cities; yellow fever, scarlet fever, diphtheria and many

other diseases maybe transmitted in this way. There are many things to be considered in suppressing the so called tramping, and the possibilities of bacterial infection should be one of the strongest motives.

Tramps are not the only means of spreading pathogenic bacteria, the lower animals as well as man aid in spreading infection to other lower animals and even to man. The dogs we so often see following immigrant wagons may become infected with pathogenic bacteria. And since dogs go out of the road more than man, it is easy to understand how they might infect sections of the country where the infected immigrants would not go. Farmers have had their cattle, horses, and hogs infected from some unknown source, unless it was from the infected horses or dogs of some traveler. Many authorities consider rabbits the most common carriers of bacteria because the fur catches and holds many small particles contaminated with bacteria and they may thus transfer the infection from one place to another even more readily than the domestic animals.

Inanimate things may also be carriers of bacteria. Dust particles containing bacteria may be carried a long distance by the wind oftentimes infecting a new community with some disease. Scarlet fever, small-pox and some other diseases may be spread in this way.

Water is also a common source of pathogenic bacteria; the drinking water may become contaminated with disease germs from some underground source, many miles away. Stagnant water furnishes a good source of infection both to man and the lower animals. If a stream of water which runs near the public road become infected with glanders, or some disease peculiar to horses, then healthy horses drinking from this stream of water may contract glanders.

We will now turn our attention to the results of bacterial infection on both the lower animals and on man. Strong winds are very prevalent in this country, and the wind carries dust, pieces of old paper, weeds, and in fact almost anything along with it. This same dust and paper may contain dried sputum from a consumptive

and be thus blown by the wind. Local travelers may inhale this infected dust and become victims of consumption. Then the people of that locality immediately begin to talk about the dangers of heredity.

Other diseases of a dangerous character may be transmitted in a similar manner.

Often times a rain or snow storm brings to the earth pathogenic bacteria while winds would have carried them to some other sections of the country, if the rain had not caused them to descend.

These facts have been proven by the many experiments of prominent bacteriologists hence we can not doubt their truth.

Another way in which man may be infected is by the consumption of vegetables or fruit that are grown or stored near a public road; these products are likely to become contaminated by the processes of infection given above, then when man ingests the food,

especially if it was not cooked, he would be likely to contract the disease, if the foods were infected. Horses and cattle as well as man may contract a disease from the vegetation which they eat.

Public drinking cups should be avoided as they are a common source of bacterial infection. There is experimental evidence that certain infectious diseases have been transmitted from one person to another by drinking from the same cup at a public well. The sooner we realize the facts and make good use of our knowledge the better it will be for the human race as a whole.

One reason why some farmers are so very particular about allowing strange cattle or horses to drink out of their watering trough, is because of the danger of infecting their own horses and cattle with some disease which other stock may have. For the same reason some farmers avoid public watering places, and if more people would follow their example it would be a good plan.

Aside from all these facts the water itself may be infected, and that is not necessarily due to tramps, or immigrants, or infected stock, but to some underground source of infection.

Nearly every community has a creamery where the farmers carry their milk to sell the cream, or else they make butter and cheese, taking it to the nearest town to sell it. Precautions should be taken to see that none of the cows are affected with tuberculosis because man is susceptible to this disease and may be infected by milk from a tuberculous cow. This fact necessitates a tuberculin test of each milk cow, by an expert. If any of the cows react to the tuberculin test they should be condemned, killed, and the carcass burned.

Again uncleanness of any description around milk cans etc., affords an excellent place for growth of bacteria which produces sour milk or may produce what is known as red milk, or this same can of milk may receive infectious bacteria from the dust that flies about while we are passing along the road.

Perfect cleanliness in the home is essential to good pure butter, otherwise we may get what is known as "strong" butter, usually due to bacterial action of some kind.

Meat of various kinds may become infected while it is being handled by some person who is in a diseased condition, or by contact with an infected blanket in which it is wrapped before taking it to market, or by disease bacteria coming from the dust of both the railroad and the wagon road.

Almost any kind of produce may be infected in a similar manner unless extreme care is used to prevent it.

If all consumers would carefully wash the animal and vegetable material previous to cooking and then see that the articles named are well cooked, much trouble and sickness might be avoided and if, perchance, we wish to use some vegetable uncooked the only things necessary are to know where they came from and to see that they are thoroughly cleansed and disinfected.

If meat is well cooked all bacteria will be killed during the process and it

is a well known fact that if exposed to the sunlight bacteria will die. So we may sometimes use this means of sterilizing uncooked vegetables, etc.

If every one would be strictly clean about everything with which they come in contact, the moral as well as the physical development would be wonderfully improved. And it is, in my opinion, the duty of every one of us to perform our part in this respect.