

V. CAUSES OF ILL-HEALTH

With the establishment of the correctness of the germ theory of disease and development of scientific knowledge has come an ever increasing accumulation of information about the exact causes of ill health.

For purposes of study these causes of ill health may be classified as to:

(a) Exciting Agents

1. Living or animate, as: micro-organisms.
2. Mechanical, as: automobile accidents, etc.
3. Chemical, as: lead poisoning, etc.
4. Physical, as: heat, cold, or electricity, etc.

or as to:

(b) Mode of Transmission

1. Communicable, as: diphtheria, etc.
2. Non-communicable, as: heart disease.

LIVING CAUSES OF ILL HEALTH

Our remarkable progress in the control of disease has come as a result of the proof that certain of our deadliest diseases are caused by living micro-organisms. For these contributions to the welfare of mankind we have to thank that remarkable group of scientific workers who founded the science of bacteriology.

The list of these benefactors is too long for us to any more than mention a few of the more prominent ones. Pasteur, Koch, Neisser, Laveran, Eberth, Klebs, Loeffler, Shandinn, Hoffman and Noguchi. We are prone to remember and honor the men of history who were great generals or admirals and were famous for destroying human life while we are apt to ignore or forget the men whose fame rests upon preserving human life. Review the lives of a few of this latter group.

Micro-organisms and Disease

Year after year we have seen a gradually lengthening list of micro-organisms that have been convicted of causing disease in man. These organisms may be classified in two great groups: (a) Bacteria; (b) Protozoa.

Bacteria--The group of bacteria includes a long list of members which may be considered from the standpoint of their action when taken into the human body, as:

- (a) Pathogenic or disease producing.
- (b) Non-pathogenic or non-disease producing.

Non-Pathogens. The importance of non-pathogenic bacteria to humans and plants is seldom fully realized. The carbon cycle and nitrogen cycle are necessary for life. They are dependent upon the action of non-pathogenic bacteria. Commercially these bacteria are essential for the production of butter, cheese, tanning hides, curing tobacco, etc.