

VIII. PROTOZOA AS CAUSES OF DISEASE

Protozoa are classified as animal organisms. There is some uncertainty as to whether some organisms included in this group should not be considered as vegetable in nature. The more important point for our purposes is whether they produce disease and what defensive hygiene methods are necessary to combat their activities.

Protozoa are simple one-celled organisms. About 7,000 species have been described. Each of them has a characteristic "life cycle." Diseases caused by a few of the protozoa will be discussed.

Malaria--still an important public health problem.

- (a) Cause--Three distinct parasites (plasmodium).
- (b) Source of Infection--Blood of infected individuals.
- (c) Mode of Transmission--Anopheles mosquito--parasite undergoes life cycle in body of mosquito and infection is transmitted to another individual by bite of mosquito.
- (d) Carriers--Common in infected regions.
- (e) Prevention--Screening active cases--quinin prophylaxis and suppression of mosquitoes.

Dysentery--(Amebic)--Most frequent in Tropics but many cases demonstrated in United States.

- (a) Cause--Endamoeba histolytica.
- (b) Mode of Transmission--Intestinal discharges of infected individual. Transferred by drinking water, contact with fresh discharges, flies, etc.

Trypanosomiasis or Sleeping Sickness--(African)--Next to Malaria, the Trypanosomas are man's most deadly enemies among the protozoa.

- (a) Cause--Trypanosoma (two species).
- (b) Mode of Transmission--Tsetse fly--Life cycle of parasite in the body of the fly.

Syphilis--one of the major plagues of the world.

- (a) Cause--Spirochaeta pallida or treponema pallidum. A very small organism, but larger than the average bacteria. Discovered by Schandin and Hoffman, 1905.
- (b) Prevalence--Estimated 8% of population (Rosenau).
- (c) Organisms--Blood, tissue juices, secretions, and sores of infected persons.
- (d) Modes of Transmission--(a) Directly, most commonly by sexual intercourse, less frequently by kissing. (b) Indirectly, common drinking cups, instruments, pipes, etc. (c) Congenitally, organisms pass from mother to child.
- (e) Prevention and Cure and Social Control.

IX. METOZOA AS CAUSES OF ILL-HEALTH

Metozoa are the so-called higher animal parasites that often cause disease by means of their eggs, embryos, and larvae. The more important members of this group are: (a) Flukes, (b) Tapeworms, (c) Round worms, and (d) Hook worms.