

**Class 16: Zoonotic diseases – prevention and control (Anthrax, Tuberculosis, Brucellosis, and Rabies)**

ZOONOSES : Are diseases of animals including Homo sapiens. Its infective agents have become adapted to a particular animal species during course of evolution and can exist in these animals by uninterrupted infection chains. In narrow (epidemiological) sense, transfer of causative agent of an animal disease to human beings is zoonoses.

They are diseases and infections the agents of which are naturally transmitted among other vertebrate animals and man. Also included are a number of infections, which are shared but not naturally transmitted.

**Classification**

- a. Direct Z. – example rabies
- b. Cyclo Z. – eg. -teaniasis
- c. Sapro Z. – eg. – histoplasmosis
- d. Meta Z. – eg. – Japanese encephalitis
- e. Anthrapo Z. – Eg. Brucellosis

<b>Disease</b>	<b>Cause</b>	<b>Non human principal hosts</b>	<b>Modes of infection</b>	<b>Symptoms</b>	<b>Class of zoonoses</b>
Brucellosis	Brucella abortus Br.melitensis Br.Suis Br.canis	Cattle, goat, sheep, swine, caribou, dog.	Occupational exposure through air, contact, Ingestion of infected milk /food	IP 1-3 weeks, or month; septicaemic; continued, intermittent or irregular fever, chills, profuse sweating, weakness, fatigue,	Direct anthroozoonoses

				<p>patients get up as normal in the morning to fall in bed with high temperature in the afternoon, insomnia, headache, arthralgia, splenomegaly, disease lasts for weeks, months or even years.</p>	
<p>Anthrax</p>	<p>Bacillus anthracis</p>	<p>Cattle, sheep, goat, horse, wild herbivores</p>	<p>Occupational exposure through contact, airborne, vehicle (meat)</p>	<p>1 P.2-5 days Cutaneous form : Vesicles develop into black depressed eschar, generally uncared, not treated in time resulting into septicaemia and death. Pulmonary (wool sorters disease)</p>	<p>Direct anthroponosis</p>

				<p>resemble common infection of upper respiratory tract : 1, P 3-5 days, acute, fever, shock and death. gastrointestinal form IP 4 days, gastroenteritis blood in stools, death.</p>	
Tuberculosis	Mycobacterium bovis	Cattle	Occupational exposure through contact; ingestion of raw milk, inhalation	<p>Extra pulmonary form most common. Cervical adenitis, genitourinary, bone, joint infections; meningitis, pulmonary form in occupational groups, transmit back to cattle.</p>	Direct anthroponoses

<p>Leptospirosis Weil's disease</p>	<p>Leptospira interrogans</p>	<p>Rodent, domestic and wild mammals, contaminate soil water at neutral to alkaline pH</p>	<p>Occupational and recreational exposure through contaminated water, ingestion</p>	<p>IP 1-2 weeks, as short as 2 days, septicaemic phase (1-10 days), leptospiuria (1 week to several months) Icteric form (weil's disease), hepatonephritic form fever, headache conjunctivitis, vomiting, diarrhoea and constipation.</p>	<p>Direct anthropozoonosis</p>
-------------------------------------	-------------------------------	--	---	---	--------------------------------