

*DEPARTMENT OF VETERINARY PUBLIC
HEALTH AND EPIDEMIOLOGY*

INFECTIONS

Tetanus





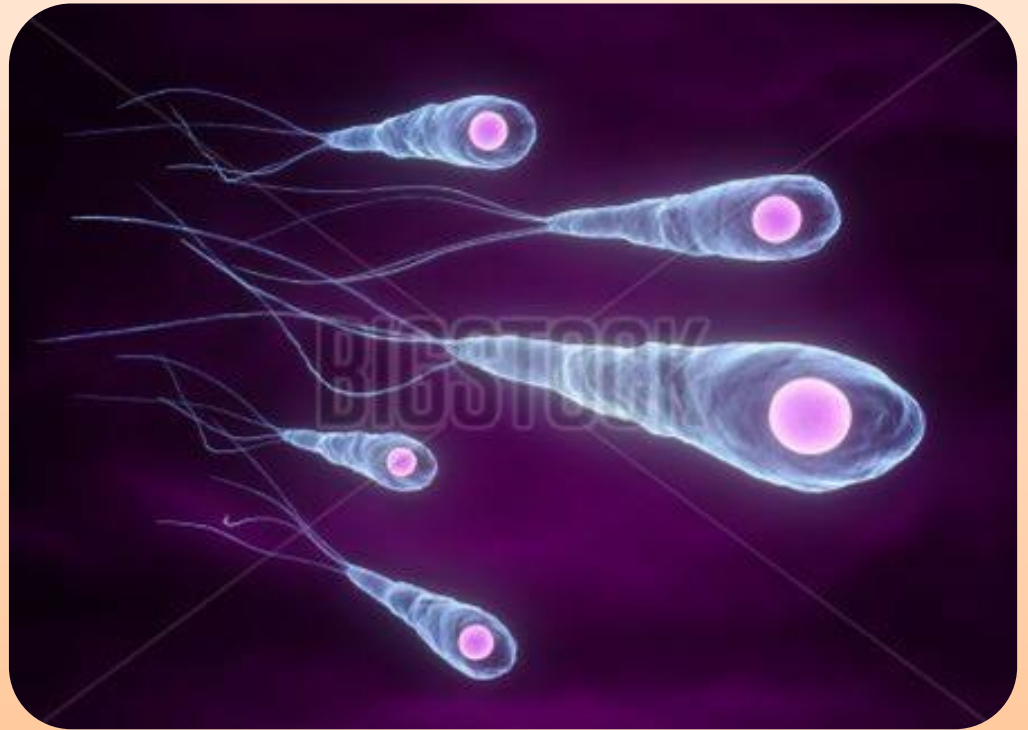
LEARNING OBJECTIVES

- INTRODUCTION
- EPIDEMIOLOGY
- PATHOGENESIS
- MODE OF TRANSMISSION
- CLINICAL SIGNS
- DIAGNOSIS
- PREVENTION AND CONTROL
- VACCINATION



INTRODUCTION

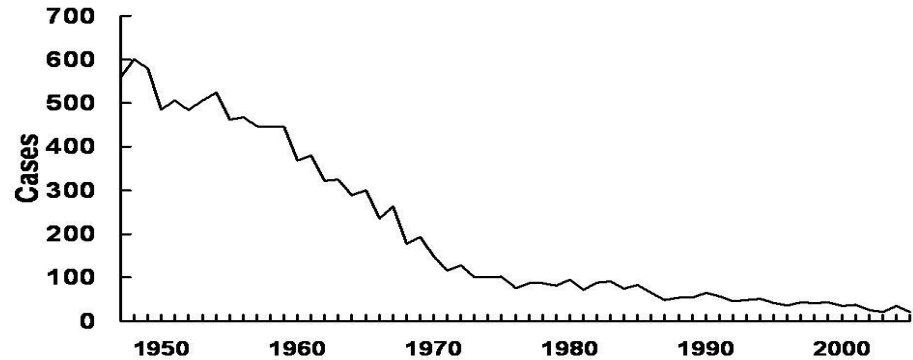
- DEFINITION – Tetanus is highly fatal infectious disease caused by *Cl.tetani* bacteria
- ETIOLOGY - *Clostridium tetani*
- Large bacteria
- Gram positive
- Fermentative in nature
- Require enriched media
- Straight anaerobic
- Drum stick appearance
- HABITAT –
 - Soil contaminated by faeces
 - Organism are transiently present in the intestine



EPIDEMIOLOGY

- World wide distribution
- Horses and mules are most susceptible
- Sheep, goat, dogs and swine may also be infected
- Birds are resistant

Tetanus—United States, 1947-2005*

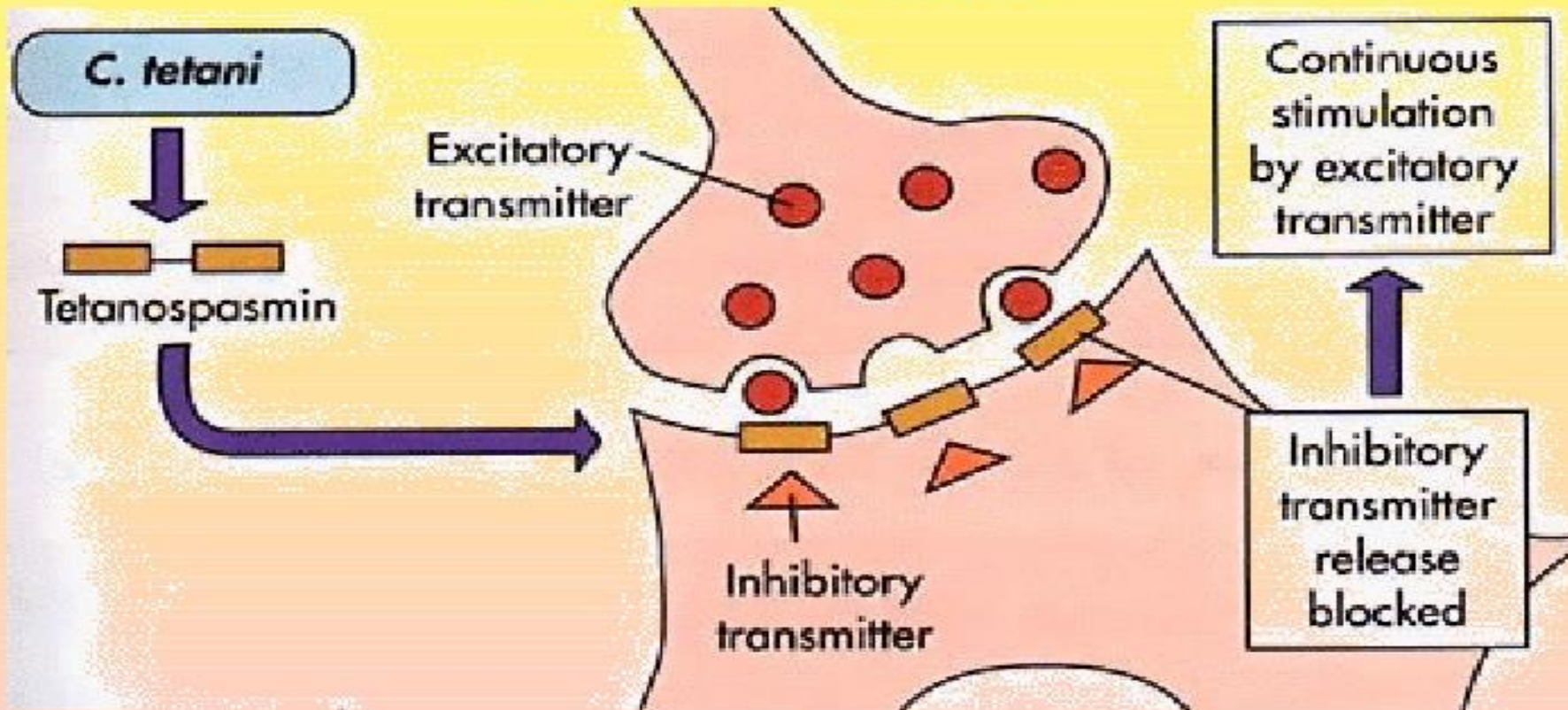


*2005 provisional total

Year



Mechanism of Action of Tetanus Toxin



CLINICAL SIGNS IN ANIMALS



- Muscle contraction
- 3rd eyelid droops due to paralysis
- The muscle of jaw are firmly contracted so it causes LOCK JAW
- Muscles of deglutination are paralysed so the saliva drools
- Any water or food ingested may come out through the nostrils
- The back become arched
- The fore legs are extended stiffly towards forwards and hind legs backwards
- Death may occur and sometimes temprature will rise after death

SYMPTOMS IN HUMANS

- Fever
- Sweating
- Increased blood pressure
- Spasm and stiffness in jaw muscles
- Difficult swallowing
- Stiffness of abdominal muscles
- Painful body spasms lasting for several minutes



DIAGNOSIS

- No test for confirmation for tetanus diagnosis
- Only sign and symptoms can help in diagnosis

- Clinical Tetanus sometimes known as “lock jaw”
 - Spores deposited in tissue
 - wound, burn, ulcer, compound fracture, operative wounds, drug injection
 - tetanus neonatorum: infection of umbilical stump
 - necrotic tissue (poor blood supply, anoxia)
 - mixed infections, foreign bodies also contribute
 - Toxins affect the central nervous system by causing continual impulses to be sent to the muscles. They contract and become remain rigid.
 - If not treated the person often dies a painful death as more and more of the muscles are affected.



PREVENTION AND CONTROL



VACCINATION



Administering Td Vaccine for Wound Management Recommendations of CDC's Advisory Committee on Immunization Practice (ACIP)¹

Prior Doses of Tetanus Toxoid-Containing Vaccine	Vaccination History	Td Administration ^c	
		Clean, minor wounds	All other "tetanus prone" wounds
Unknown or less than 3 doses		Yes	Yes ^d
3 or more doses	More than 5 years, but less than 10 years, since last dose	No	Yes
3 or more doses	More than 10 years since last dose	Yes	Yes



THANK YOU.....

