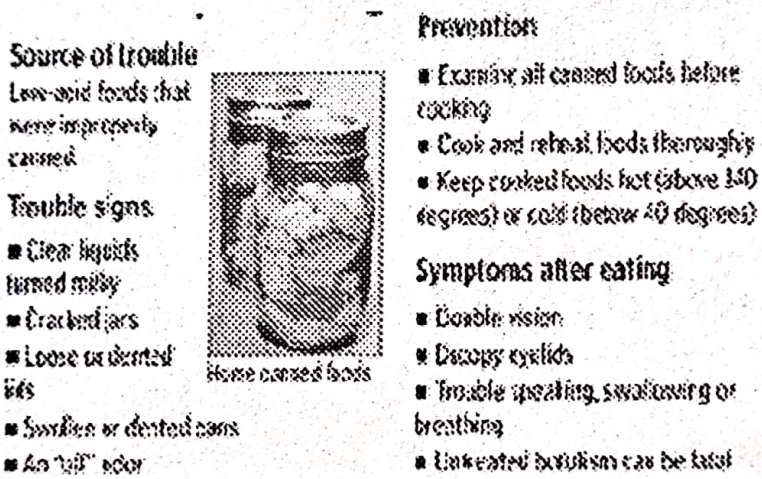
Clostridium botilinum SGD

35 year female presented with symptoms of diplopia, dysphagia and flaccid paralysis with history of consuming canned beans on regular basis.

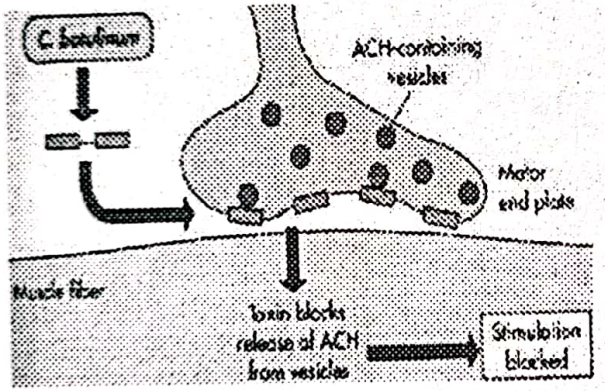


1. What is the causative agent and the disease?
2. How is this disease acquired and what are the types of this disease?
3. What is the pathogenesis of this disease?
4. What are the uses of toxin produced by this organism?

KEY:

1. Clostridium botilinum and botulism
2. **Oral route: Spores, widespread in soil, contaminate vegetables & meats. When foods are canned or vacuum-packed without adequate sterilization, spores survive & germinate in anaerobic environment. Toxin produced within canned food & ingested preformed.**
   Wound botulism: associated with drug abuse.
   Infant botulism: Ingestion of honey containing organisms
3. **Botulinum toxin absorbed from gut & carried via blood to peripheral nerve synapses, blocking release of acetylcholine. (stimulatory neurotransmitter).**
   It is a protease that cleaves proteins involved in acetylcholine release.

Mechanism of Action of Botulinum Toxin



4. **Botox: Commercial preparation of exotoxin A used to remove wrinkles on face.**
   Minute amounts of toxin effective in treatment of certain spasmodic muscle disorders such as torticollis, "writer's cramp," and blepharospasm.