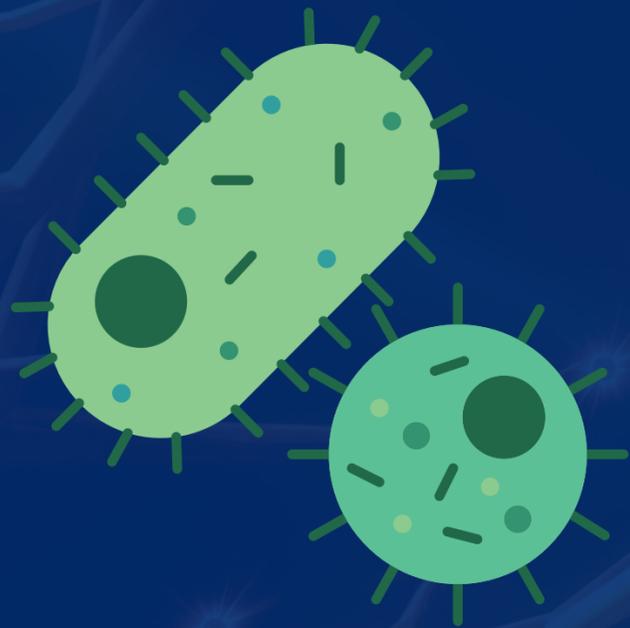


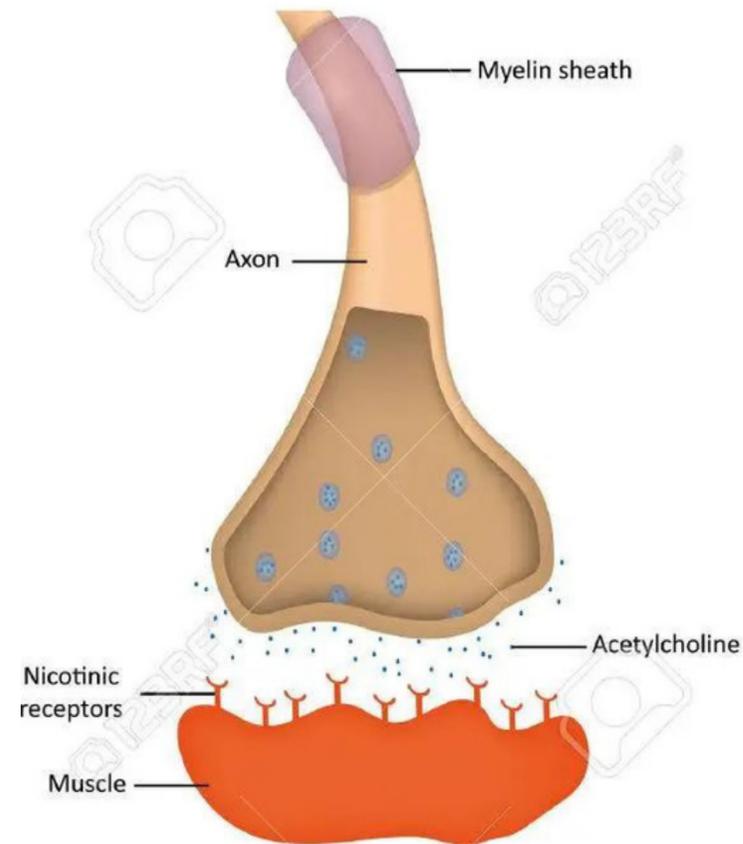
# Botulism

BY: MELANIE ESTONINA

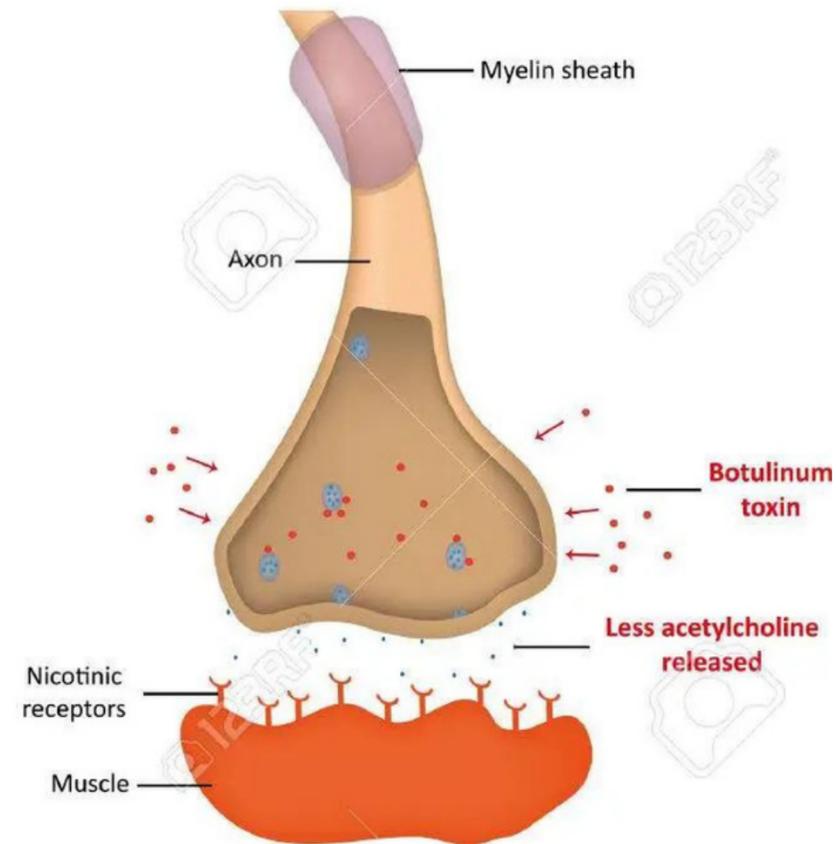


# Botulinum Toxin Poisoning

## Healthy Neuromuscular Junction



## Neuromuscular Junction with Botulinum Poisoning

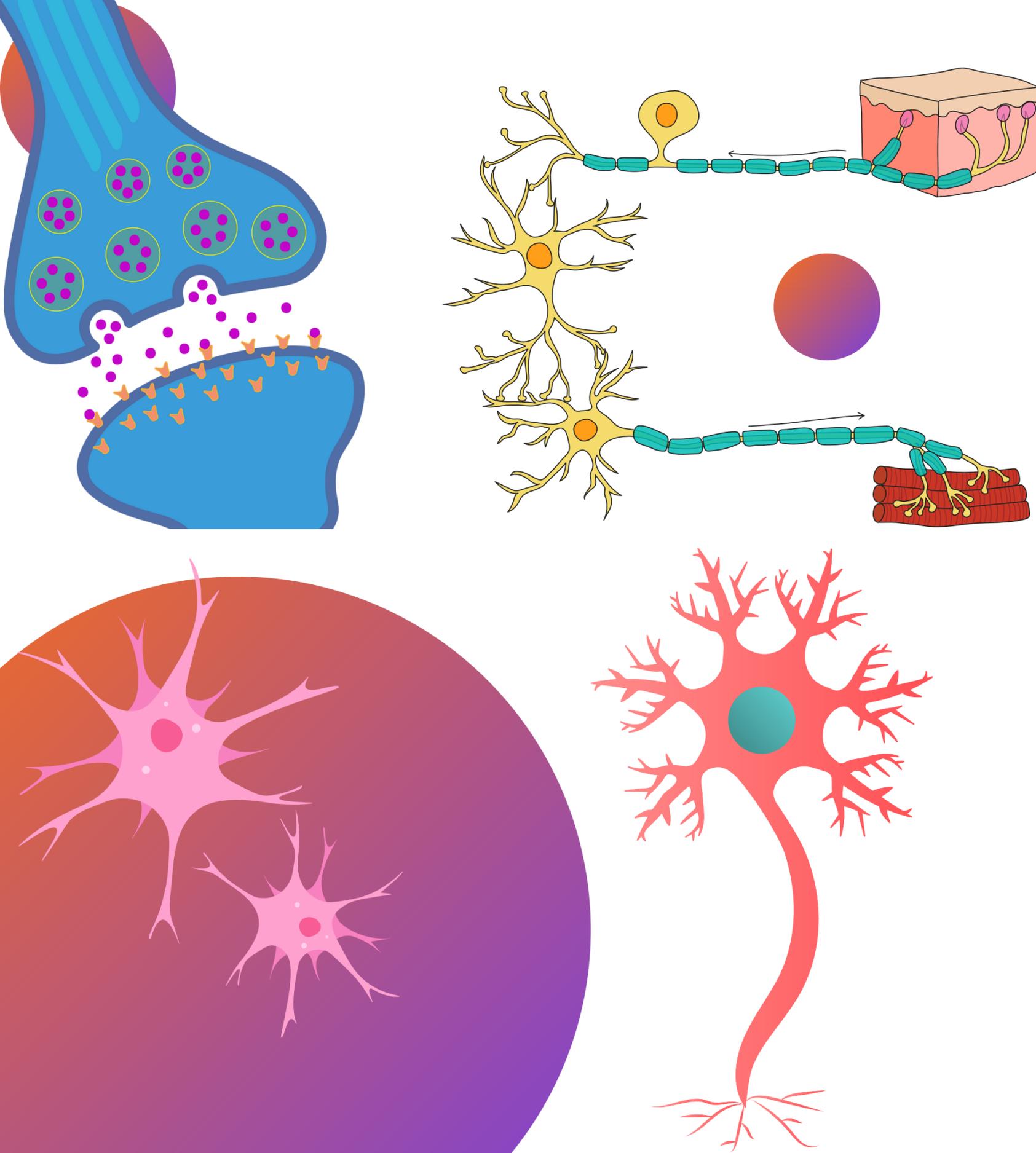


# Overview

- Physiology
- Signs & Symptoms
- Diagnostic Testing
- Potential Complication
- Treatment
- Prevention & Client Education

# Physiology

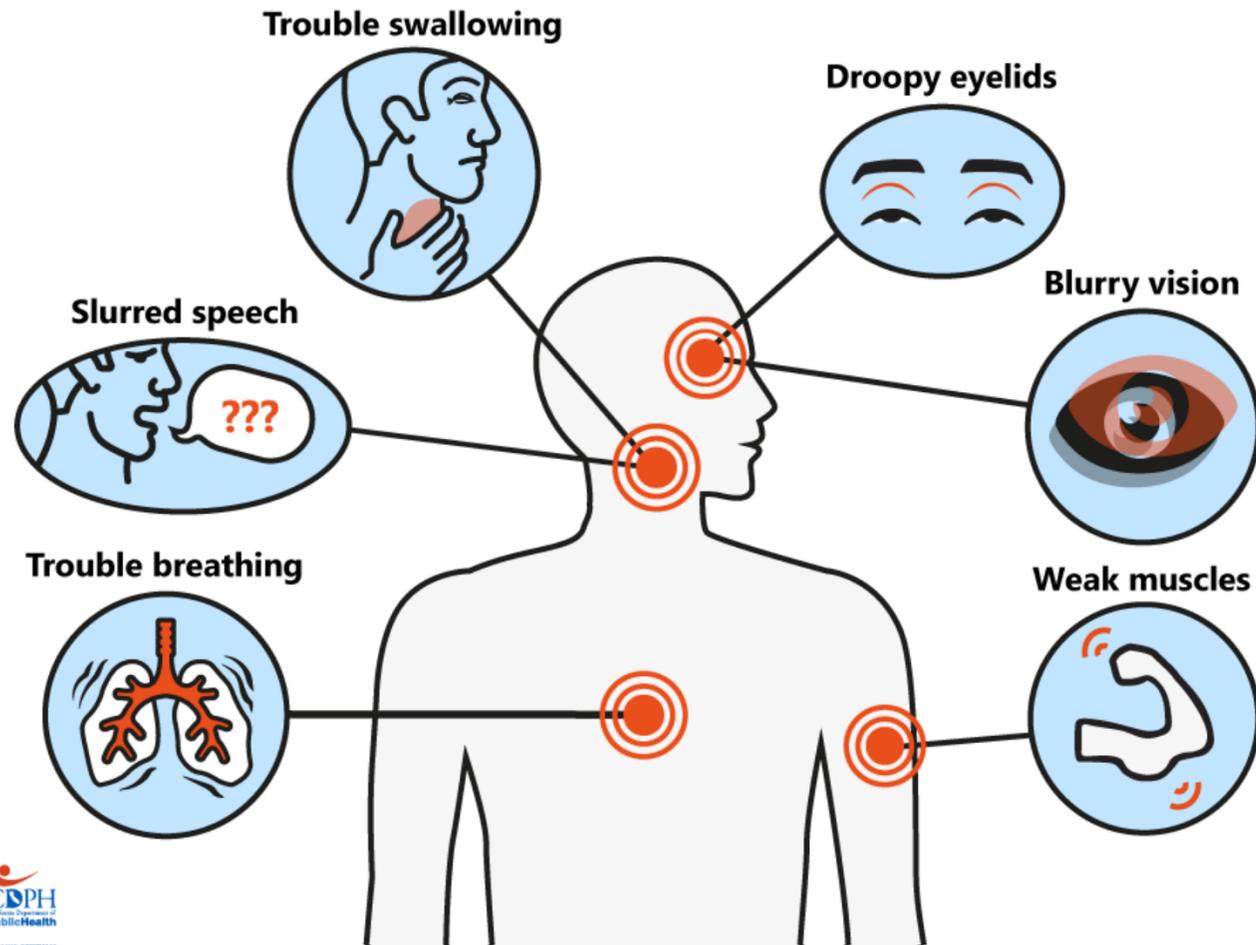
- The CDC defines Botulism as a rare serious illness that poses harm on the body's nervous system. (CDC 2022) What happens at a physiological level during botulism is directly related to nerves. The beginning of botulism starts with the nerve tremors that cause weakness down the trunk of the nerve, smooth muscle tissues and extremities. This eventually leads to paralysis. (Jeffrey & Karim 2022)
- The neurotoxin involved with Botulism most commonly involves a 150kDa protein in the form of the serotype BoNT/A and BoNT/B.
- Exposure is usually when an infant does not have an immune system strong enough to fight of *C. colonies* via digestive tract or bronchioles. It occurs via ingestion of spores, or from contact through a wound and the toxin travels through the blood stream to the nerves.



## BOTULISM SYMPTOMS

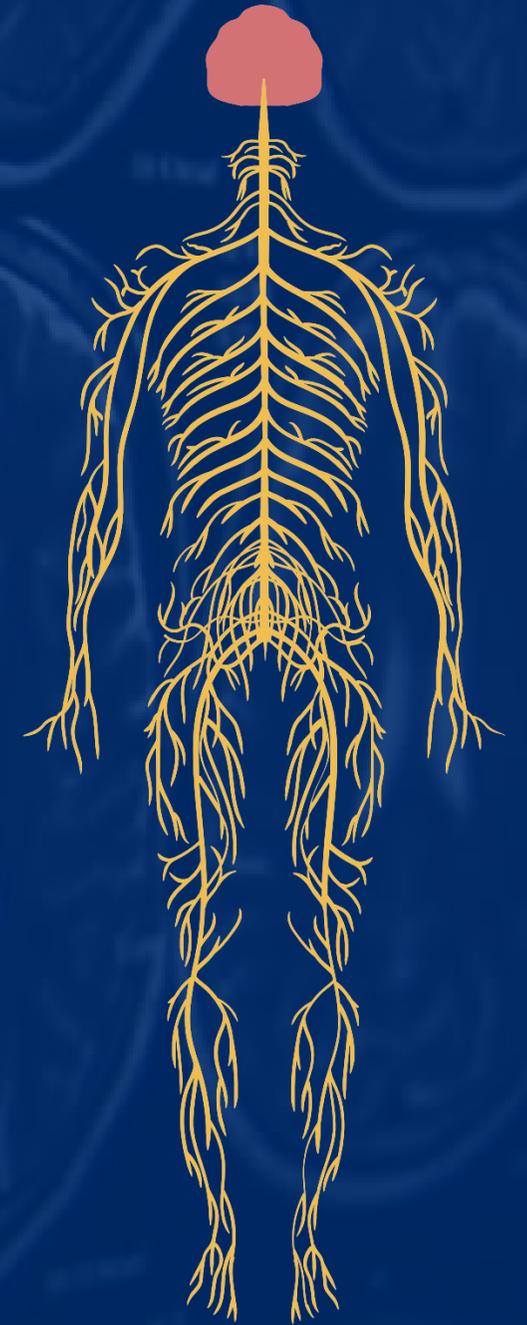
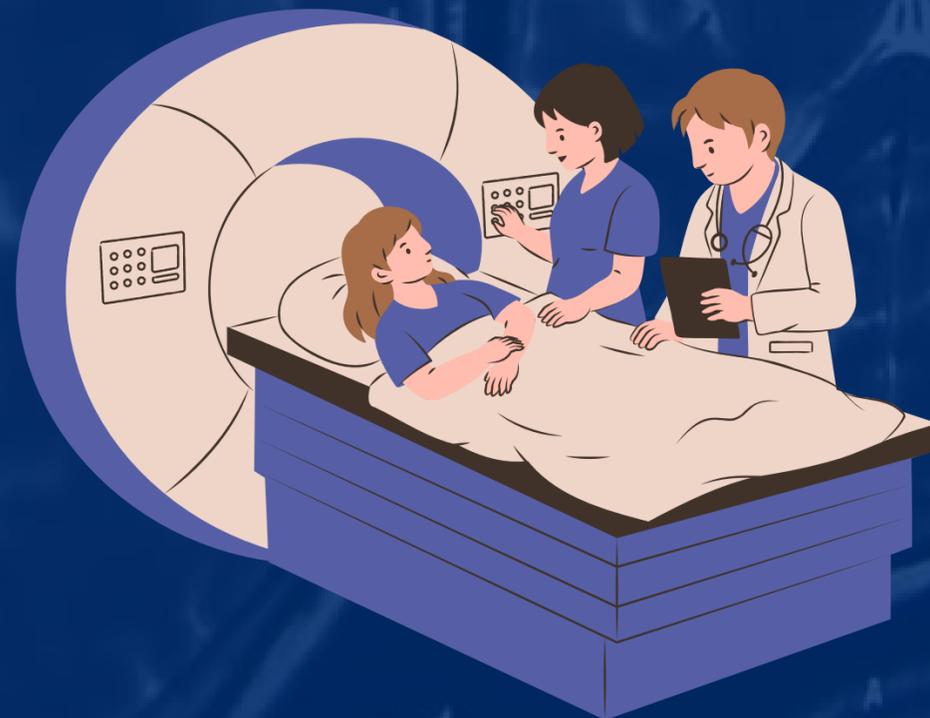
# Signs & Symptoms

- muscle weakness (CDC 2022)
- difficulty swallowing (CDC 2022)
- drooping eyelids (CDC 2022)
- face showing less expression (CDC 2022)
- difficulty breathing & moving eyes (CDC 2022)
- slurred speech (CDC 2022)
- double vision (CDC 2022)
- vomiting (CDC 2022)
- nausea (CDC 2022)
- Pupils slow to react to light (CDC 2022)



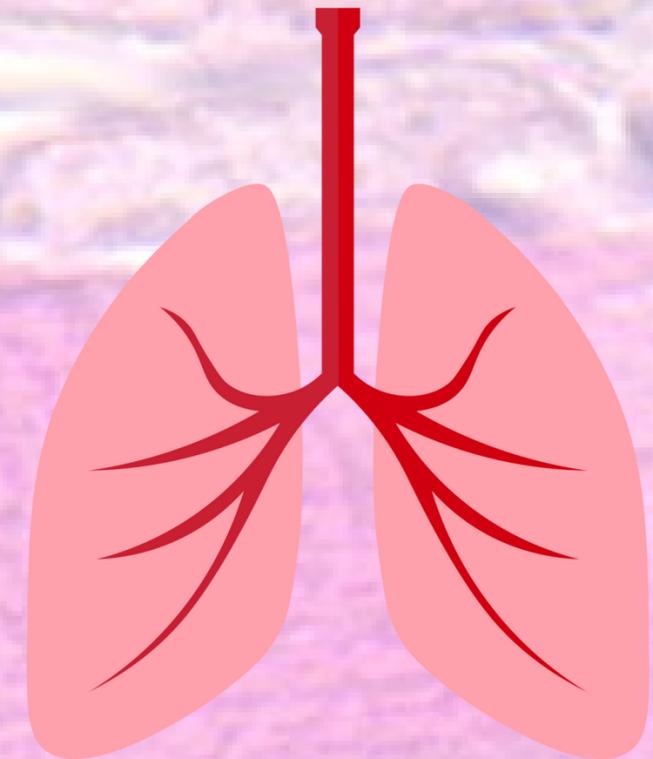
# Diagnostic Testing

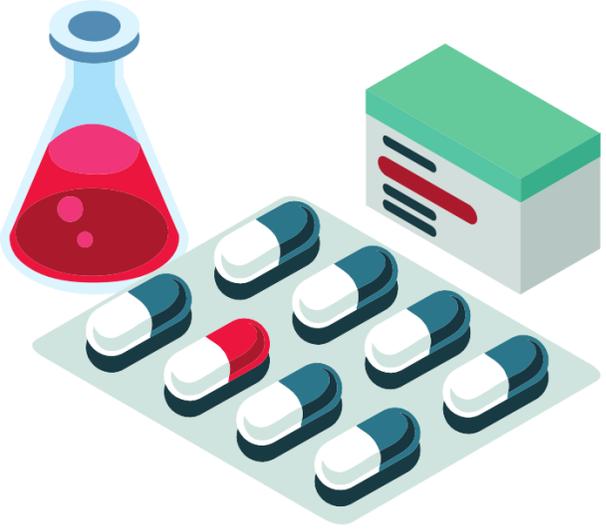
- Brain Scan
- Spinal Fluid Exam
- Nerve and muscle function tests (nerve conduction study electromyography)
- Tensilon test for myasthenia gravis



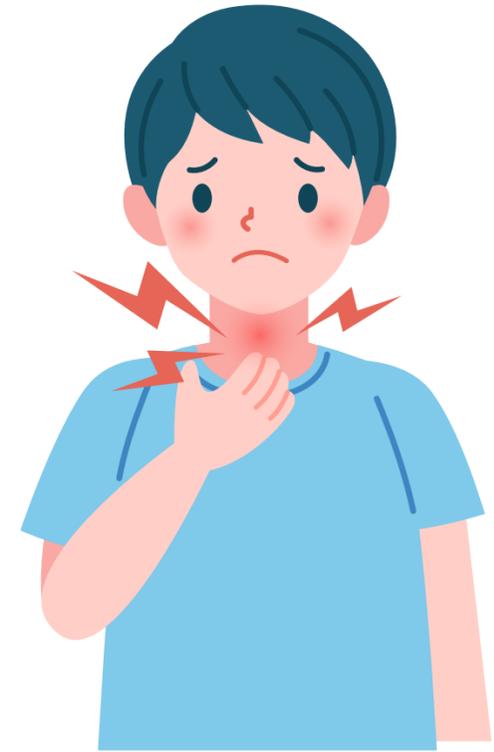
# Complications

- complete muscle paralysis of breathing muscles, arms, legs, and neck. (CDC 2022)
- Difficulty Speaking
- Trouble Swallowing
- Shortness of breath
- Total inability to breathe without assistive device

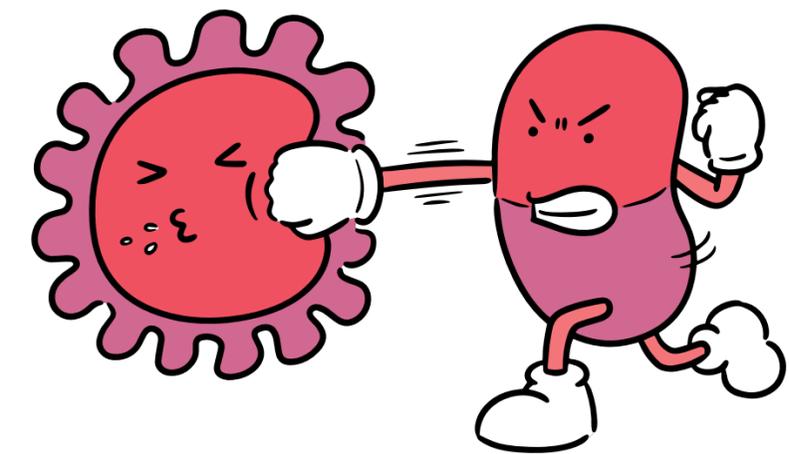


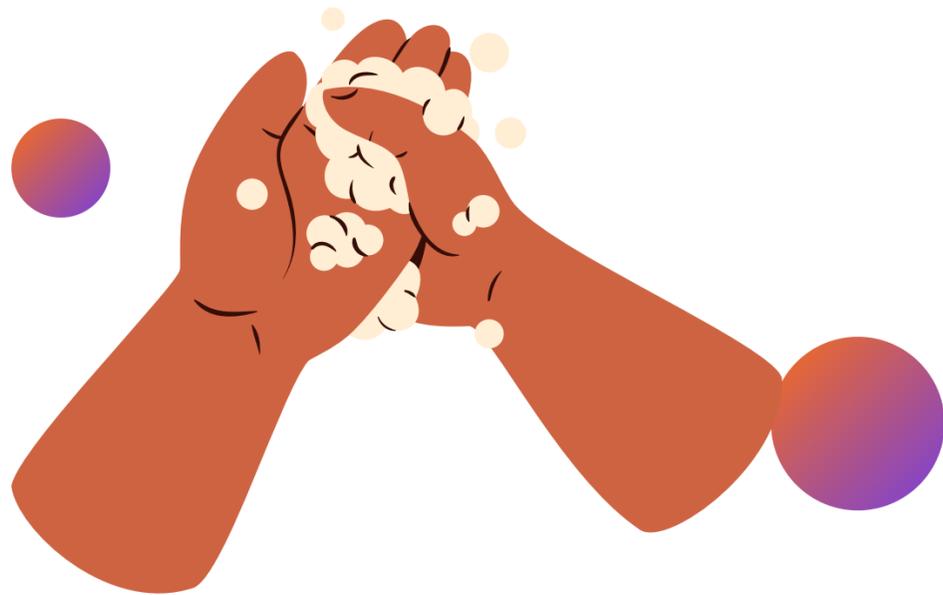


# Treatment



- Antibiotics for wound botulism (Mayo Clinic 2022)
- Anti-toxin for foodborne or wound botulism via injection to lower any further complications (Mayo Clinic 2022)
- Breathing assistance via mechanical ventilator until body gets rid of the toxicity. (Mayo Clinic 2022)
- Rehabilitation of speech, swallowing or any other areas of impairment from the toxin (Mayo Clinic 2022)





# Prevention & Education

- Avoid certain foods, specifically: canned asparagus, canned green beans, canned beets, canned corn, canned potatoes, canned cheese sauce, canned tomatoes, chopped garlic in oil, carrot juice, baked potatoes wrapped in foil. (CDC 2022)
- Keep wounds clean and seek care ASAP if any signs of infection are present. (CDC 2022)
- Avoid honey pacifiers in infants. (CDC 2022)
- Only receive injections of botulinum toxin from licensed practitioners. (CDC 2022)
- Educate patients on diet to avoid possible contamination.
- Educate patients on signs of infection and proper hand hygiene.



# Resource

- Botulism. (2022, June 08). Retrieved March 2, 2023, from <https://www.cdc.gov/botulism/index.html>
- Jeffrey, I., & Karim, S. (2022, July 18). Botulism - StatPearls - NCBI Bookshelf - National Center for ... Retrieved March 2, 2023, from <https://www.ncbi.nlm.nih.gov/books/NBK459273/>
- Botulism. (2022, July 12). Retrieved March 2, 2023, from <https://www.mayoclinic.org/diseases-conditions/botulism/symptoms-causes/syc-20370262>
- Botulism. (2022, July 12). Retrieved March 2, 2023, from <https://www.mayoclinic.org/diseases-conditions/botulism/symptoms-causes/syc-20370262>



# Thank You

SLIDE PRESENTATIONS DESIGN