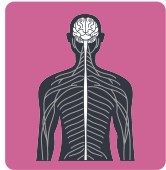


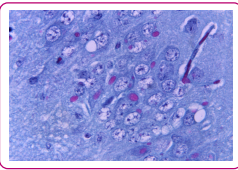
TOPIC: RABIES



Rabies

Viral

_____ Virus
Enveloped



(CDC, 1966).

CAUSE

Rabies virus → _____ *virus rabies*.

- ◆ **Zoonosis:** spreads from _____ to humans; typically through bites.
 - Most commonly contracted from _____ in US.
- ◆ **Pathogenesis:**
 - First infects muscles → nerves of the PNS → _____.
 - Doesn't travel through blood or lymph, making immune detection difficult.
 - Nearly 100% _____ once symptomatic.
 - Progressive encephalitis.



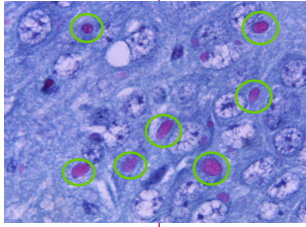
SPREAD

_____ from bite or scratch from infected animal.

SYMPTOMS

_____ incubation time as virus moves through nervous system.

- ◆ **Initial:** mild & non-specific.
- ◆ **Progression:** once the disease moves into the CNS:
 - Intervals of _____ and calm.
 - Increased _____ production.
 - Muscle spasms in the mouth and pharynx in response to water.
 - Damage to nerve cells of CNS & spinal cord → Negri bodies.



Negri bodies (CDC, 1966)

DIAGNOSIS

Antibody tests done post-mortem; RT-_____ tests for live patients.

- ◆ Important to test _____ source in bite cases.
 - Direct Fluorescent Antibody Test (DFA).
 - Direct Rapid Immunohistochemical Test (DRIT).

TOPIC: RABIES

TREATMENT

Post exposure prophylaxis (PEP):

- Wash wound with soap and water.
- **Human Rabies Immune Globulin (HRIG)**, if not previously vaccinated.
- Rabies _____ - 4 shots over 2 weeks.

IMMUNITY

Rabies vaccine: inactivated vaccine.

- Nearly _____% effective if given promptly after exposure.
- Given to high-_____ groups (veterinary staff, researchers, etc.)

References:

Van Orden, S. (1966). [Photomicrograph of brain tissue from an unknown source showing Negri bodies]. Centers for Disease Control and Prevention. <https://phil.cdc.gov/Details.aspx?pid=21620>

EXAMPLE

A patient comes to your clinic saying they were scratched and might have been bitten by a raccoon while doing yardwork about an hour earlier. Their wound looks like a deep scratch that drew some blood, but there do not appear to be bite marks. The animal ran away into the woods after the incident. As the physician, what are three actions that you would recommend for post-exposure prophylaxis for this patient? Justify each action in a few words.

| Action | Justification |
|----------|---------------|
| 1. _____ | _____ |
| 2. _____ | _____ |
| 3. _____ | _____ |
| 4. _____ | _____ |

TOPIC: RABIES

PRACTICE

If found in the brain of an individual post-mortem, which of the following would indicate rabies infection as the cause of death?

- a) Tubercles.
- b) Negri bodies.
- c) Damage to the blood-brain barrier.
- d) Plaques.

PRACTICE

For which other infection does the recommended post-exposure prophylaxis most closely resemble the recommended post-exposure prophylaxis for rabies?

- a) Tetanus.
- b) Bacterial meningitis.
- c) Botulism.
- d) Leprosy.