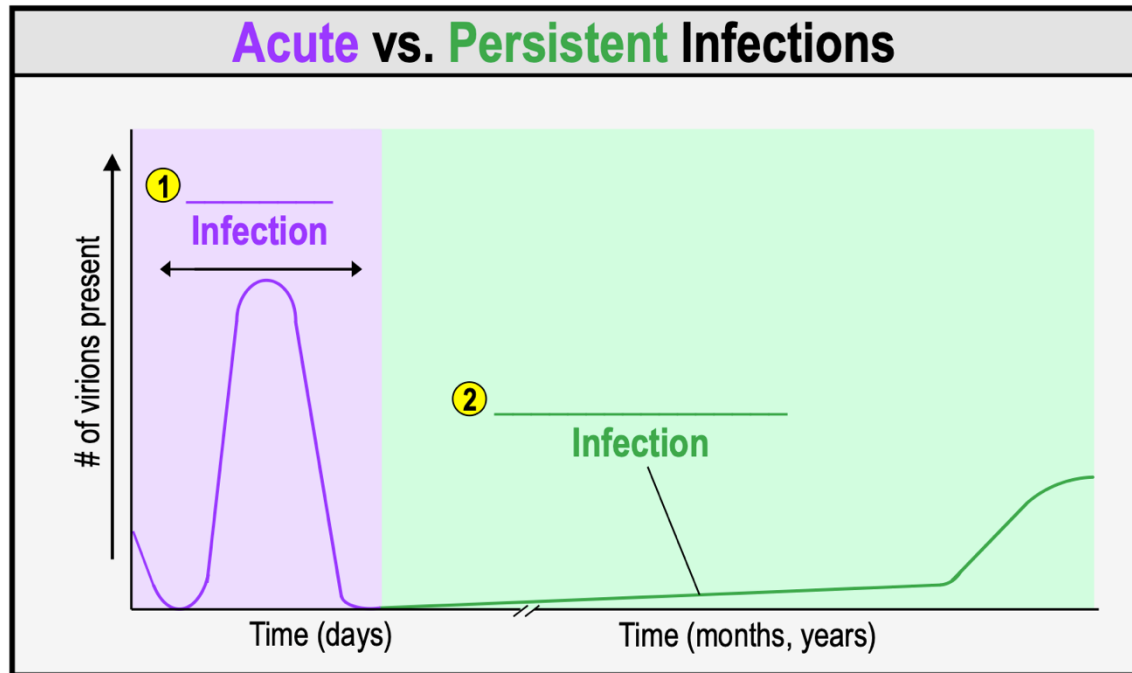


CONCEPT: ACUTE VS. PERSISTENT VIRAL INFECTIONS

● Animal virus infections can be divided into _____ main categories:

1) **Acute Infections:** infections that have sudden onset of symptoms over a relatively _____ period.

2) **Persistent Infections:** infections that can last for a _____ period or the entire life of the host.



PRACTICE: An infection in which the virus is continually present in the body is referred to as:

- a) Acute.
- b) Balanced.
- c) Determinant.
- d) Persistent.

PRACTICE: Diseases of short duration frequently followed by long-term immunity are referred to as:

- a) Intermittent infections.
- b) Chronic infections.
- c) Acute infections.
- d) Persistent infections.

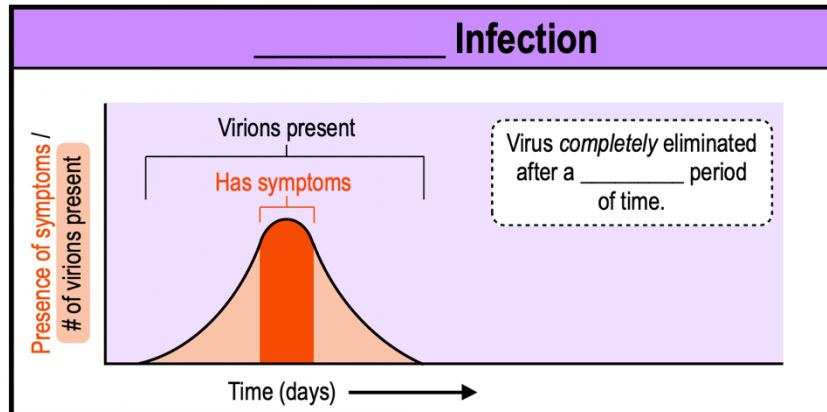
PRACTICE: Which of the following viral infections is considered an acute infection? (Answer choices show the name of the virus and the time it remains present in the body).

- a) Human immunodeficiency virus (HIV); Remains in body from initial infection until the death of the host.
- b) Influenza virus (flu); Remains in the body for around 14 days.
- c) Varicella-zoster virus (chicken pox); Remains in the body for years or until the death of the host.

CONCEPT: ACUTE VS. PRESISTENT VIRAL INFECTIONS

Acute Viral Infections

- Recall: _____ **Infections** have a sudden onset of symptoms over a relatively *short* period (ex. days).
 - Results in release of viruses from an infected host cell during *apoptosis*; however, host/human may still survive.
 - Host immune system *gradually* eliminates the virus from the body over a _____ period of time.
 - Examples include *influenza (the flu)*, *poliomyelitis (polio)*, *mumps*, & *COVID-19*.



PRACTICE: Which of the following statements about acute viral infections is *false*?

- Acute viral infections cause the host organism to acquire long term immunity to the virus.
- Acute viral infections are entirely eliminated by the host over a short period of time.
- Acute viral infections can remain dormant in the body for years.
- Acute viral infections result in cell apoptosis and the release of newly created viruses.

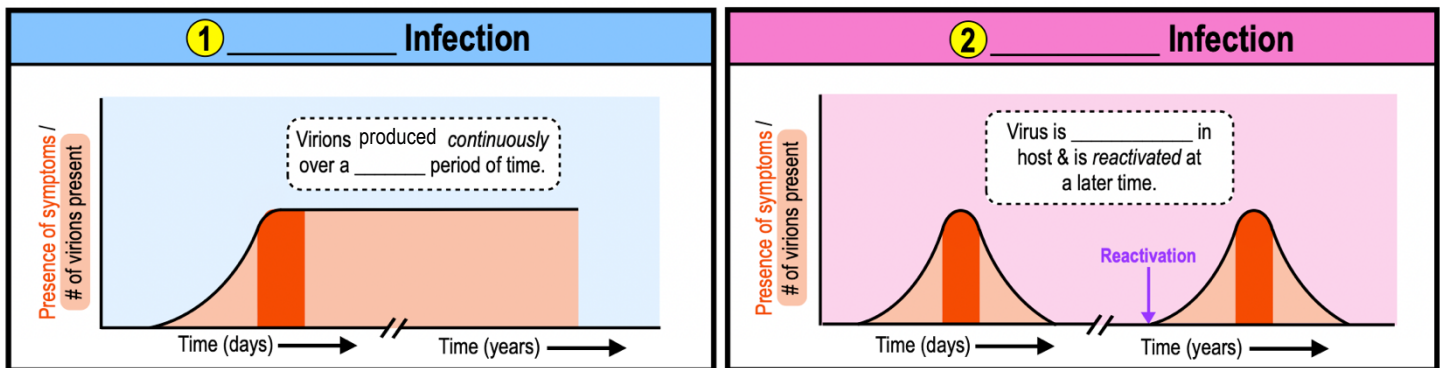
PRACTICE: A vaccine to a virus allows the body to be exposed to inactive portions of the virus and not get sick. This allows the body to recognize the virus and better fight the virus if the person does become infected. How would a vaccine help someone deal with a virus which causes an acute infection?

- The vaccine could shorten the duration of the viral infection.
- The vaccine could worsen the symptoms of the viral infection.
- The vaccine entirely stops the virus from entering the cells of the individual.

CONCEPT: ACUTE VS. PRESISTENT VIRAL INFECTIONS

Persistent Viral Infections

- **Recall: Persistent Infections:** can last for a _____ period (ex. years) or the entire life of the host.
- Persistent infections can be further categorized into _____ groups:
 - 1) **Chronic Infections:** _____ production of virus particles over *long* periods of time.
 - 2) **Latent Infections:** viral genome is *silent* in a host cell BUT reactivates causing a _____ infection.
 - Viral genome can _____ into a eukaryotic host chromosome creating a **provirus**.
 - Virus is _____ eliminated from the organism & symptoms can *reoccur* later in life.



PRACTICE: Varicella is an infectious disease commonly known as chicken pox which results in a moderate to severe body rash. This disease is caused by a DNA virus that stays dormant in the body after the rash has disappeared. The virus can be reactivated in the body years or decades later creating a rash known as shingles. What type of infection is occurring when the virus is dormant in the body for years?

- Acute infection.
- Chronic Infection.
- Latent infection.
- Transformation into a malignant cell.