

# Viral Replication

Biology

The lytic and lysogenic cycles, and what distinguishes them.

## Lytic cycle

- Attach, penetrate, replicate, assemble, lyse
- Host cell destroyed
- Rapid production of virions
- Symptoms appear quickly

## Lysogenic cycle

- Genome integrates into host DNA
- Replicated with the host
- Dormant as a prophage
- Can switch to lytic later
- Herpes and HIV use similar strategies

### THE DIFFERENCE THAT MATTERS

Retroviruses add a step: reverse transcriptase makes DNA from their RNA genome before integration.

Antiretroviral drugs target reverse transcriptase, integrase and protease — three steps unique to the viral cycle.