

# Experts say AIDS prevention pill close

Researchers believe they are close to developing a pill that people could take to avoid getting HIV, the virus that causes AIDS.

A cocktail of two drugs already used to treat HIV infection, *FTC* and *tenofovir*, has shown such promise in monkey studies that human tests are being expanded in the U.S. and Africa



**FTC, emtricitabine:**  
Chemical known as a **nucleoside analogue**. FTC inhibits activity of a viral enzyme, **nucleoside reverse transcriptase**, which controls HIV replication

**Tenofovir disoproxil fumarate:** Chemical known as a **nucleotide analogue**. Nucleotides are the building blocks of RNA and DNA. Drug stops HIV incorporating its RNA into human cell

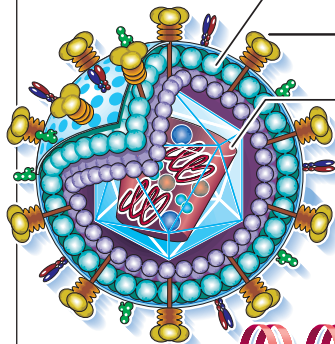


## Inside the HIV virus

## Protein capsule

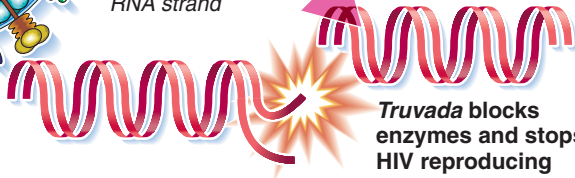
**Binders:** Dock with **receptors** on surface of human host cell

**Capsid:** Contains genetic material RNA and three enzymes, reverse transcriptase, protease and integrase



RNA strand

These enzymes enable RNA to replicate once inside host cell



**Truvada blocks enzymes and stops HIV reproducing**

Sources: Gilead Sciences,  
U.S. Centers for Disease  
Control and Prevention  
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