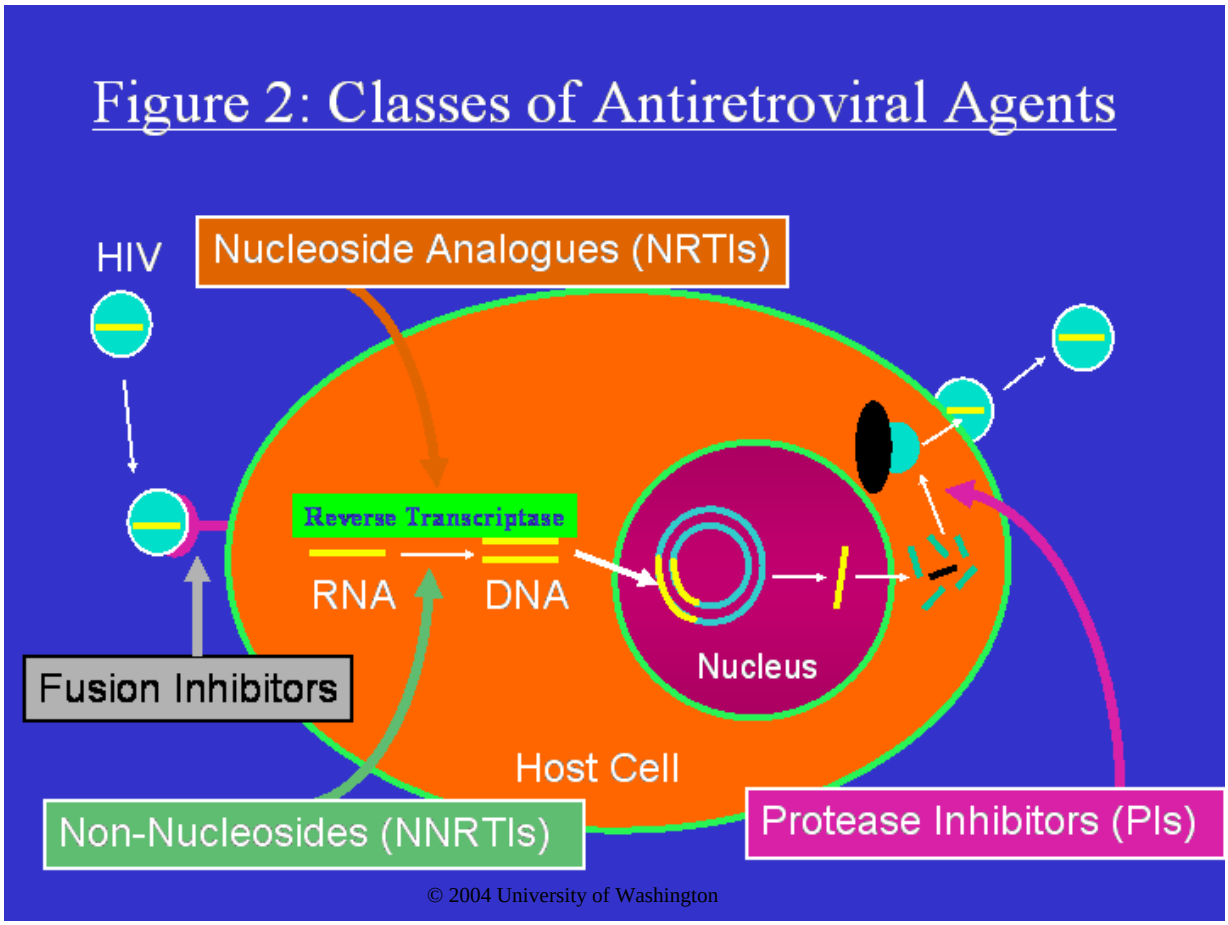
***CLASSES AND CHARACTERISTICS OF ARVs***

HAART regimens are typically constructed using agents selected from two or three drug classes. These classes are based on their mechanisms of action in suppressing HIV replication (see *Figure 2*). The three main classes include the nucleoside reverse transcriptase inhibitors (NRTIs),[1] non-nucleoside reverse transcriptase inhibitors (NNRTIs), and protease inhibitors (PIs). NRTIs and NNRTIs suppress HIV replication by inhibiting the action of *HIV reverse transcriptase*, while PIs inhibit the *HIV protease* enzyme. A fourth class of ARV agents has recently been introduced with enfuvirtide, a fusion inhibitor that blocks HIV cell entry. However, enfuvirtide is not available in oral form, is very expensive, and is generally only considered for patients with very few remaining ARV options




(see *Table 1* for a summary of these ARV agents).

HAART regimens typically consist of two NRTIs (the *nucleoside backbone*) combined with an NNRTI or one to two PIs. Choosing which combination to use depends on considerations of drug potency, tolerability, potential for adherence, and resistance as discussed later in this chapter.

[1]Tenofovir diproxil fumarate (TDF) is considered a member of the NRTI class, though technically, it is a nucleotide reverse transcriptase inhibitor because it is monophosphorylated, whereas the nucleoside reverse transcriptase inhibitors are not phosphorylated.

***Table 1:*** *ARVs for Treatment of HIV Infection. (Agents in* ***bold*** *are commonly available in the Caribbean. Commonly used abbreviations are in parentheses. Note that many of these agents are available in combination forms of two or more medications combined into a single pill.)*

| NRTIs | NNRTIs | PIs | FUSION INHIBITORS |
|---|---|---|---|
| **zidovudine (ZDV, AZT)** | **nevirapine (NVP)** | **nelfinavir (NFV)** | enfuvirtide (ENF) |
| **lamivudine (3TC)** | **efavirenz (EFV, EFZ)** | **ritonavir (RTV)** | |
| **stavudine (d4T)** | delavirdine (DLV) | **saquinavir (SQV)** | |
| **didanosine (ddI)** | | **indinavir (IDV)** | |
| abacavir (ABC) | | **lopinavir/ritonavir (LPV/r)** | |
| tenofovir (TDF) | | atazanavir (ATV) | |
| emtricitabine (FTC) | | amprenavir (APV) | |
| zalcitabine (ddC) | | fos-amprenavir (fos-APV) | |

***Table 2:*** *Combination NRTI/NNRTI Tablets for Antiretroviral Therapy. (Listed are common co-formulations of ARV agents. Please note that this list may not be complete given that new formulations may have been developed since these guidelines were published, and not all formulations may be readily available in the region.)*

| COMBINATION TABLET NAME(S) | COMPONENT MEDICATIONS |
|---|---|
| Combivir© | AZT/3TC |
| Trizivir© | AZT/3TC/ABC |
| Tri-immune© | d4T/3TC/NVP |
| Duovir© | AZT/3TC |
| Duovir-N© | AZT/3TC/NVP |

A more comprehensive review of these ARV agents, including adult dosing schedules, metabolism, and common adverse effects can be found in *Appendix A.*