Nobody can predict the future. However, new antiretroviral drugs are constantly being developed—some that belong to existing classes of drugs and some that belong to entirely new ones. As this guide is being written, a new class of drugs called *integrase inhibitors* is already available both for people who are starting treatment for the first time and for those who are “treatment experienced,” and studies are looking at drugs from other classes as first-time options as well. The more options, the more alternatives to switch to down the road. Having entirely new classes to work with makes it much easier for people whose HIV is resistant to multiple drugs to build effective combinations.

Caution is needed with any new drug: Drug toxicities do not always show up right away and may only become apparent after people have been on medications for some time. There may be longer-term problems with integrase inhibitors and other newer meds that we will only become aware of in the future. This tends to divide people with HIV and their doctors into more conservative and more adventurous camps. Some prefer to stay with more “tried and true” drugs, despite the drugs’ known shortcomings. Others are more willing to try out newer options that appear to be safe and effective in the short term, despite not knowing the possible long-term risks.

In addition to antiretroviral drugs, other forms of treatment are being studied as well:

- **Immune boosters**—Immune boosters do not interfere directly with the HIV virus. Rather, they are intended to increase the number of CD4 and other immune cells, or otherwise boost the body’s immune function.

- **Therapeutic vaccine**—Although most vaccines are designed to protect people from infection in the first place, HIV-positive people may also one day benefit from a type of vaccine called a therapeutic vaccine, meant to improve the immune system’s ability to fight HIV.

So far, the results of studies of immune boosters and therapeutic vaccines have been disappointing. Some people hope that, one day, these sorts of treatments might delay the need for antiretroviral drugs, by keeping the immune system strong for a longer period of time. Most experts do not believe they will ever replace antiretroviral drugs. Only time and further study will tell whether this turns out to be the case.