

Dealing with side effects

Practical ways to prevent and manage unwanted symptoms

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All medications have side effects and anti-retrovirals (ARVs) are no exception. Whether you're starting ARVs for the first time or thinking about switching to something new, knowing the possible side effects of each drug and asking yourself what you're willing to live with is a huge part of deciding what regimen is best for you.

Though side effects can sometimes be serious enough to make you change medication, they're usually manageable — as long as you know what to look for and take action when appropriate. Many side effects will go away on their own once your body gets used to the treatment, but others may stick around for longer. Be honest with your doctor and with yourself about what you're willing to live with. Together, you'll find a treatment plan that keeps unpleasant symptoms to a bare minimum.

Gastrointestinal symptoms

Stomach problems are among the most commonly reported side effects of ARVs. In fact, over three quarters of people living with HIV will experience some type of gastrointestinal (GI) problem, such as nausea, vomiting, diarrhea, stomach cramps and loss of appetite.

Generally speaking, stomach problems tend to occur shortly after starting therapy and are mild or moderate in severity, but they can still have a significant impact on your quality of life. Very rarely, more severe GI symptoms can interfere with the absorption, and therefore the effectiveness, of your ARVs and lead to dehydration, malnutrition and weight loss.

GI side effects are most commonly associated with protease inhibitors, like ritonavir (Norvir®), lopinavir (Kaletra®), nelfinavir (Viracept®) and indinavir (Crixivan®). The reverse transcriptase inhibitors AZT (Retrovir®, also in Combivir® and Trizivir®) and didanosine (ddl, Videx®) can also be involved.

How to cope

Nausea and vomiting are often short-lived and will go away on their own within a month of starting treatment. Eating something small (like a piece of toast or some crackers) with your medication and having more frequent, smaller meals can ease that queasy feeling and help you keep things down. Also try to avoid spicy foods, dairy products, coffee, cigarettes, alcohol and aspirin, all of which irritate the stomach and can make your symptoms worse. Over-the-counter (OTC) medications like Gravol® may also help.



Diarrhea is a disturbing, often chronic and unrelenting side effect. It may interfere with the absorption of vitamins and nutrients from food and lead to dehydration. Protease inhibitors are the ARVs most likely to cause these symptoms, but it's not always easy to tell if the diarrhea is related to treatment, HIV itself, or other causes. Nelfinavir (Viracept®)-induced diarrhea can often be relieved with 500 mg of calcium carbonate twice daily. In other cases, bulking up your stool with OTC medications containing clay (e.g. Kaopectate®) or fibre (e.g. Metamucil®) is the classic approach.

Medications like Imodium® (OTC) or Lomotil® (by prescription only), which slow down the movement of the intestines, can also help relieve diarrhea.

Central nervous system effects

Some ARVs cause neurological and psychological symptoms — dizziness, abnormal dreams, poor concentration, anxiety and depression. These are collectively known as central nervous system (CNS) effects. These side effects, though rarely life-threatening, can have a significant impact on your day-to-day life. Several medications, including AZT (Retrovir®), interferon and especially efavirenz (Sustiva®, also found in Atripla™) have been known to cause CNS symptoms.

Take-home tip

OTC medications like Gravol®, Kaopectate® and Imodium® are also available by prescription and are covered by some formularies. If cost is preventing you from buying these medications, talk to your doctor about writing you a prescription.

Most people find that CNS symptoms go away within a couple of weeks after starting the medication. For example, people who start taking efavirenz report feeling “stoned,” especially on the first day of treatment and during the first few hours after taking the medication, but this usually gets better over time.

Occasionally, CNS effects can persist for one or two months. After two years of treatment, only a small minority of people still report symptoms, and at this point they are almost always mild.

How to cope

Since CNS side effects are usually worst during the first few days of treatment and in the first few hours after you take a dose, it's probably best to take your medication at night before bed. Also try to start your drug regimen before a weekend break from work or a short vacation to give you some time to adapt.

Avoiding stimulants, like caffeine and recreational drugs, can help ward off anxiety or insomnia. Regular exercise, medication and relaxation can also help minimize these symptoms. Try not to watch horror movies or anything you know will make you anxious before bed. If you're having trouble sleeping, a short course of prescription sleeping aids can help you rest during the first few days.

Difficulty concentrating is another possible side effect, so try not to schedule activities, meetings or events you know will be taxing during the first week or so of treatment. If this isn't possible, try adjusting the time you take your medication so that you're most alert when you need to be. If you're busiest in the morning and you find that your symptoms are at their worst at this time, try



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taking your medication a little earlier in the evening, so the concentration of the drug in your blood will be lower in the morning. Some people find that splitting their doses in two (morning and night) makes it easier to stay focused (see “Simplicity vs. side effects”, right).

Depression and anxiety can be a little harder to manage because it’s sometimes difficult to tell if they’re caused by the medication, HIV itself, or other factors, like genetics or stress. If you think you may be suffering from either of these conditions, talk to your doctor. He or she will perform a thorough evaluation and may recommend psychotherapy and/or medication. In some cases, when your doctor suspects your HIV medication is aggravating these symptoms, it may be best to switch to another drug or drug class.

Simplicity vs. side effects

People usually prefer the simplest drug regimen possible and would rather take a stronger dose only once a day if they can. Reducing the number of pills you have to take each day also makes it easier to remember to take them and improves **adherence**.

With some medications, splitting the dose in two can ease the side effects, because you’re taking less medication at a time. Many ARVs are available in different dosages, so if side effects are bothering you, talk to your doctor about the possibility of taking lower doses of your medication two or more times a day.

Kidney problems

The kidneys are very important organs. They maintain the balance of liquid and **electrolytes** in your body and are responsible for eliminating toxins and certain medications.

Kidney disease has many possible causes and everyone, regardless of HIV status, can be affected. However, the HIV virus can damage kidney cells directly, as can certain ARVs. Other risk factors are age, a family history of kidney disease, co-infection with hepatitis B or C, diabetes, high blood pressure and race (African Americans and members of First Nations are most at risk).

Kidney disease can be acute or chronic. Things like infection, kidney stones or a reaction to medication can lead to an acute (sudden and temporary) kidney problem. Other problems are chronic: glomerulonephritis, for example, is a condition in which the kidneys are unable to remove waste and excess fluid from blood. HIV-associated nephropathy is another type of kidney disease that’s directly related to HIV. It’s seen almost exclusively in African Americans who are HIV+ and is treated with (not caused by) ARVs.

The protease inhibitor indinavir (Crixivan®) was the first HIV medication to be linked to kidney problems. This medication can cause a painful buildup of stones, a phenomenon sometimes called “indinavir sludge”. More recently, there have been reports of tenofovir (Viread®) causing kidney problems. It’s estimated that 1-1.5% of people who take tenofovir will experience a significant decrease in kidney function, and the frequency is

higher in people who have underlying kidney problems or other risk factors for kidney disease. Most people recover completely when the medication is stopped.

How to cope

People with HIV should be monitored carefully with regular kidney function tests, and these should be done more frequently in people who have one or more of the risk factors noted above.

Creatinine and urine protein tests measure the levels of creatinine and protein in your blood and urine, respectively. Your creatinine levels (along with your age, race, gender and other factors) can then be used to calculate your **glomerular filtration rate**, which is the best way to measure how well your kidneys are working.

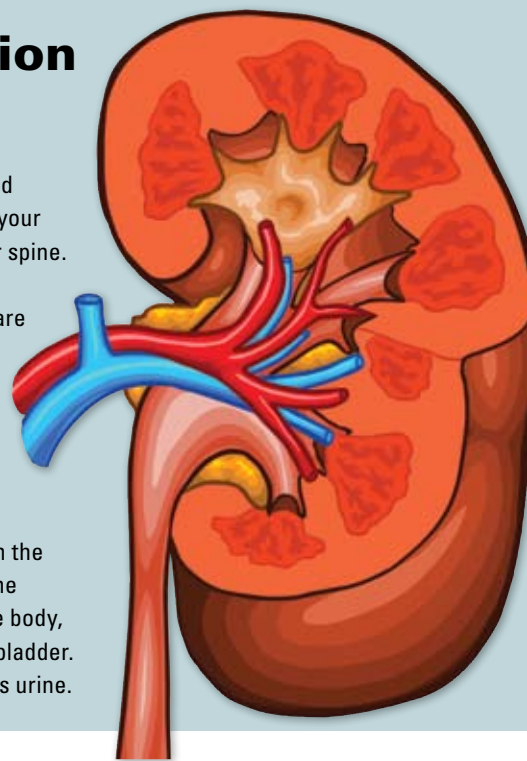
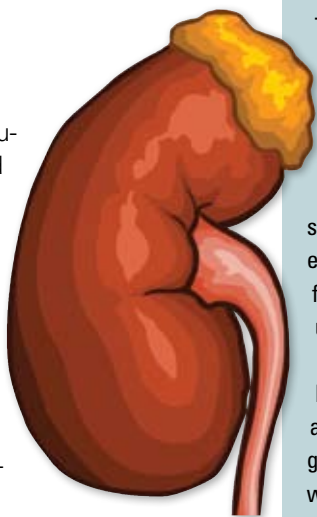
If your kidney function is being affected by your medication, the dose may be adjusted or the medication stopped entirely and replaced with another drug.

People who are taking tenofovir should also be careful about using non-steroidal anti-inflammatories (NSAIDs) such as Advil®, Motrin® and Naprosyn®, because these medications have also been associated with kidney problems. It may be okay to take these medications for a short period of time, but always talk to your doctor or pharmacist first.

Kidney function at a glance

The kidneys are two bean-shaped organs located at the small of your back, one on each side of your spine. Each kidney contains about a million filters (glomeruli) that are attached to the opening of a small tube (tubule). Together, each glomerulus and tubule forms a nephron, the functional unit of the kidneys.

Blood enters the kidneys through the arteries. After being filtered by the glomeruli, blood is returned to the body, while the waste is carried to the bladder. From there, it will be eliminated as urine.



Several different drugs and drug classes are now available to treat HIV, and each comes with its own list of possible side effects. The best way to deal with them is to be prepared. If you know what to expect, you'll be less anxious or afraid if you do experience symptoms. And remember, despite the potential side effects, the risk of not taking ARVs almost always outweighs the risk of serious side effects. Always consider the pros and cons of each option carefully with your doctor or healthcare professional before deciding what's best for you. **R**

