2015 COMPLETE HIV TREATMENT GUIDE

Everyone needs to know about the meds we take, so *Plus* offers our most comprehensive look ever at the medications approved by the Food and Drug Administration for the treatment of HIV and opportunistic infections as well as a state-by-state map of drug assistance programs plus info on complementary therapies and drug trials. Remember, before you take anything you should talk with your doctor about what meds you're on, any drug allergies, whether you smoke, drink, or take other supplements or recreational drugs, if you breast-feed, or are pregnant or want to be. This info was culled from the National Institutes of Health's drug database, the FDA, and the individual pharmaceutical companies.





PROTEASE INHIBITORS

Help prevent replication of HIV; drugs in this class block activation of protease, an enzyme HIV needs to reproduce.

MEDICATION

Generic name

Traditional dosage

Drug interactions, precautions, and recommendations

Side effects

APTIVUS

Generic name tipranavir

Boehringer Ingelheim



500 mg (two 250-mg capsules or 5 milliliters of oral solution) with 200 mg (two 100-mg capsules/tablets or 2.5 milliliters of solution) of Norvir, twice daily. If taken with Norvir capsules or solution, may be taken with or without meals; if taking Norvir tablets, must be taken with meals

For treatment-experienced patients only. Take with at least two other anti-HIV drugs, but do not use with other protease inhibitors. Do not take with Rifadin, ergot derivatives, Saint-John's-wort, certain antiarrhythmic drugs, Revatio, Uroxatral, Altoprev, Mevacor, Orap, Zocor, or Halcion. If taking birth control pills, switch to another method of contraception. Use with caution with Flonase. Viagra, Cialis, Levitra, or Seroquel, or if taking certain antiseizure medications. Use with caution if you have hemophilia or other conditions that increase the chance of bleeding, or liver disorders.

Most serious: severe or fatal liver disease, severe bleeding in the brain, new or worsened diabetes Other: diarrhea, nausea, fever, vomiting, tiredness, headache, and stomach pain

CRIXIVAN

Generic name indinavir Merck



800 mg, taken every eight hours, with water or another beverage, without food (one hour before or two hours after a meal) or with a light meal

Do not take with oral Versed, Propulsid, Zocor, Mevacor, Orap, Cordarone, Hismanal, Halcion, Xanax, Revatio, Uroxatral, Rifadin, Rimactane, Rifamate, Rifater, Saint-John's-wort, Wigraine, Cafergot, D.H.E. 45, Migranal, Ergotrate, Methergine, or Reyataz. Use with caution with Viagra, Cialis, Levitra, Lipitor, Seroquel, and Crestor. Drink plenty of fluids and do not take the drug with meals that are high in calories, fat, and protein.

Most serious: liver failure, kidney stones, changes in body fat, diabetes, anemia, severe pain, muscle weakness Other: abdominal pain, fatigue or weakness, low red blood cell count, flank pain. painful urination, feeling unwell, nausea. upset stomach, diarrhea, vomiting, acid regurgitation, increased or decreased appetite, back or shoulder pain, headache, dizziness, taste changes, rash, itchy skin, vellowing of the skin and/or eyes, upper respiratory infection, dry skin, sore throat

INVIRASE

Generic name saquinavir mesylate

Hoffmann-La Roche



1,000 mg (five 200-mg capsules or two 500-mg tablets), in combination with 100 mg of Norvir, twice daily, at least two

Do not use with Aptivus-Norvir combination, Uroxatral, Cordarone, Vascor, Tikosyn, Tambocor, intravenous lidocaine, Rythmol, Quinidine, Propulsid, ergot medications such as Parlodel, Migranal, Ergonovine, Bellamine, Cafergot, Ergomar, Methergine, or Permax, oral Versed, Orap, Rifadin, Revatio when used to treat pulmonary hypertension, Mevacor, Advicor, Zocor, Juvisync, Simcor, Vytorin, Desvrel, Oleptro, Halcion, Saint-John's-wort, garlic capsules, or fusidic acid products. Use with caution with Reyataz, Crixivan, Kaletra, Viracept, Rescriptor, Viramune, Lipitor, Crestor, Viagra, Levitra, Cialis, Adcirca, Seroquel, hormonal contraceptives, certain calcium channel blockers, certain antibiotics and antifungals, some antipsychotics or antidepressants, and proton pump inhibitors. Do not use if you have severe liver problems, low potassium or low magnesium in your blood. Congenital Long QT Syndrome, or complete atrioventricular block. Use with caution if you have other heart or liver problems, hemophilia, or diabetes.

Most serious: worsening of liver problems, increased bleeding with hemophilia, diabetes or high blood sugar, elevated cholesterol or triglycerides, changes in body fat, immune system, or heart rhythm Other: Nausea, vomiting, diarrhea, fatigue, abdominal pain

KALETRA

lopinavir and ritonavir AbbVie



800 mg, typically four tablets, once daily, or 400 mg, typically two tablets, twice daily. Swallow tablets whole; do not chew, break, or crush. An oral solution is available but should be taken with food

Do not take with Halcion, midazolam oral syrup, certain steroids, Incivek, Orap, Mevacor, Zocor, Rimactane, Rifadin, Rifater, Rifamate, Revatio when used to treat pulmonary arterial hypertension, Stendra, Uroxatral, Victrelis, Xarelto Saint-John's-wort, ergot-containing medicines, including ergotamine (Cafergot and others), dihydroergotamine (D.H.E. 45 and others), ergonovine (Ergotrate), and methylergonovine (Methergine). Use with caution with Viagra, Cialis, Levitra. Adcirca, birth control pills or contraceptive patches containing estrogen, Tasigna, vomiting, weakness, headache Sprycel, Lipitor, Crestor, Atripla, Crixivan, Sustiva, Viramune, Lexiva, Viracept, Viramune, Viread, Videx, Selzentry, Dilantin, Tegretol, Mycobutin, Flonase, Serevent, Advair, Colcrys, Tracleer, Duragesic, Ionsys, Fentora, Deltasone, Depakote, Lamictal, Seroquel, drugs containing budesonide, and methadone

Most serious: changes in heart rhythm. severe liver problems, pancreatitis, changes in immune system, changes in body fat, new or worsened diabetes, elevated triglyceride or cholesterol levels Other: diarrhea, nausea, stomach pain,



MEDICATION

Generic name

Traditional dosage

Drug interactions, precautions, and recommendations

Side effects

LEXIVA

Generic name fosamprenavir

Maker

ViiV Healthcare



For those used to protease inhibitors, 700 mp plus a 100-mg capsule of Norvir, twice daily. For those new to therapy, 1,400 mg of Lexiva twice daily, sometimes paired with Norvir, depending on the patient. Lexiva is available in tablets or oral solution; tablets can be taken with or without food, oral solution without food. Reduced dosage recommended for patients with liver impairment

Do not take with Incivek, Victrelis, Rescriptor, Uroxatral, Rifadin, Rimactane, Saint-John's-wort, certain arrhythmia medications, ergot-based medications, Propulsid, Zocor, Mevacor, Orap, Revatio when used to treat pulmonary arterial hypertension, Versed, or Halcion. If you take oral contraceptives, consider alternative birth control methods. Do not take with Viramune unless also taking Norvir. Use with caution with Seroquel, H2 blockers and calcium channel blockers. Do not use if you have Stevens-Johnson syndrome or if you take drugs that use the enzyme CYP3A4 to metabolize.

Most serious: severe skin reactions including Stevens-Johnson syndrome, new or worsened diabetes, redistribution of body fat, elevated cholesterol, anemia, spontaneous bleeding, kidney stones Other: diarrhea, rash, nausea, vomiting, headache

NORVIR

Generic name ritonavir

Maker AbbVie



600 mg (six 100-mg tablets), twice daily, with a meal. Swallow tablets whole with water; do not chew, break, or crush. Also available in capsules or oral solution. Reduced dosage recommended for people taking other protease inhibitors

Do not take with Xatral, Cordarone, Tambocor, Vascor, Rythmol, Fucidin, Hismanal, Seldane, Orap, Propulsid, Cafergot, Migranal, D.H.E. 45, Ergotrate, Maleate, Vfend, Mevacor, Zocor, Halcion, Versed, Advair, Serevent, Levitra, Revatio if used for pulmonary arterial hypertension, Saint-John's-wort. Do not take with both Invirase and any version of rifampin (Rimactane, Rifadin, Rifater, or Rifamate), and use with caution with either of those drugs separately. Use with caution with Seroquel, Olysio, Lipitor, Crestor, Viagra, Levitra, Cialis, Adcirca, Tracleer, Rapamune, Flonase, Crixivan, Viracept, Videx, Mycobutin, Aptivus, Rescriptor, Reyataz, Celsentrin, Telzir, Prezista, Tiazac, Adalat, Isoptin, Nizoral, Sporanox, Demerol, Tegretol, Dilantin, phenobarbital, Mycobutin, Biaxin, Duragesic, theophylline, Colcrys used for treatment of gout, certain anticancer medications, certain antidepressants. Use with caution if you have other liver problems or diabetes.

Most serious: worsening of liver disease, pancreatitis, diabetes or high blood sugar, elevated cholesterol or triglycerides, changes in body fat, increased bleeding among hemophiliacs, severe skin reactions Other: rash, abdominal pain, diarrhea, feeling weak or tired, headache, nausea, vomiting, changes in taste, loss of appetite, dizziness, tingling feeling or numbness in hands, in feet, or around the lips

PREZISTA

Generic name darunavir

Janssen



One 800-mg tablet with one 100-mg Norvir capsule, once daily, with food, or one 600-mg tablet for patients without drug resistance Do not take Prezista with Uroxatral, Victrelis, D.H.E. 45, Embolex, Migranal, Cafergot, Ergomar, methylergonovine, Propulsid, Orap, oral midazolam, Halcion, Saint-John's-wort, Mevacor, Altoprev, Advicor, Zocor, Simcor, Vytorin, Rifadin, Rifater, Rifamate, Rimactane, Revatio when used to treat pulmonary arterial hypertension, Crixivan, Kaletra, Invirase, or Incivek. Use with caution if taking Viagra, Revatio, Levitra, Staxyn, Cialis, Adcirca, Lipitor, Crestor, Pravachol, Seroquel, Colcrys, or Col-Probenecid, Coartem, or Riamet. May reduce birth control pills' efficacy; take other precautions.

Most serious: severe liver disease, severe rash or pustules, high blood sugar or diabetes, changes in body fat or immune system Other: diarrhea, nausea, mild rash, headache, stomach pain, vomiting

REYATAZ

Generic name atazanavir

Bristol-Myers Squibb



300 mg, in capsule form, taken with 100 mg of Norvir, once daily, with food. For adults unable to tolerate Norvir, 400 mg of Reyataz with food is recommended. Take at the same time every day

Do not take with Versed, Halcion, Cafergot, Migranal, D.H.E. 45, Methergine, other ergot medicines, or Orap, Camptosar, Crixivan, Mevacor, Zocor, Uroxatral, Revatio, Rimactane, Rifadin, Rifater, Rifamate, Saint-John's-wort, Viramune, Diskus, or Advair. Do not take Vfend or Victrelis if you are taking Reyataz and Norvir, and do not take Tegretol, Dilantin, or drugs containing phenobarbital with Reyataz alone. If you are taking Videx, Videx EC, or antacids, take Reyataz two hours before or one hour after those medicines. Use with caution if taking drugs for indigestion, heartburn, or ulcers; depression; allergies or asthma; abnormal heart rhythm; blood clots; cholesterol; erectile dysfunction; gout; and certain other conditions. If taking Reyataz with Norvir and also taking Lamictal, dosage of the latter may need to be adjusted.

Most serious: severe rash, yellowing of skin or eyes, heart rhythm change, diabetes, kidney stones, changes in body fat, changes in immune system, worsening liver disease, increased bleeding problems, gallbladder disorders Other: nausea, headache, stomach pain, vomiting, diarrhea, depression, fever, dizziness, trouble sleeping, muscle pain, numbness, tingling, or burning of hands or feet

VIRACEPT

nelfinavir

Maker

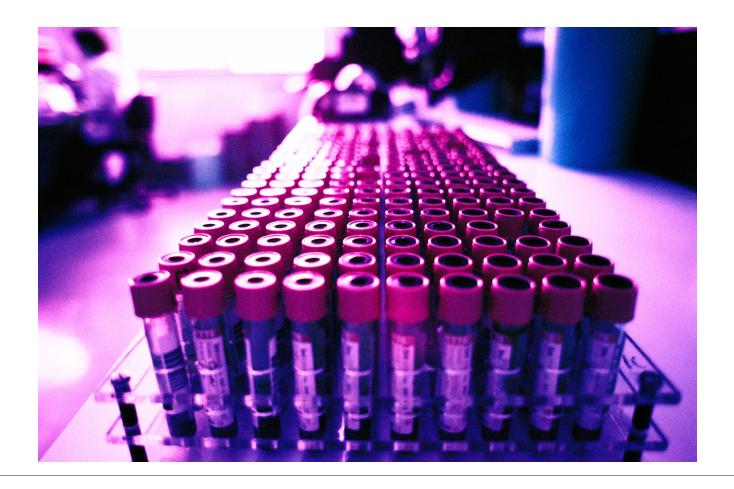
ViiV Healthcare

625

1,250 mg (five 250-mg tablets or two 625-mg tablets), twice daily, or 750 milligrams (three 250-mg tablets) three times daily. Each dose should be taken with a meal. An oral powder is also

Do not take with Cordarone, Orap, Quinidine, Quinaglute, Cardioquin, Quinidex, D.H.E. 45 Injection, Ergomar, Migranal, Wigraine, Cafergot, Methergine, Halcion, Versed, Revatio if used for pulmonary arterial hypertension, Uroxatral, Prilosec, Rimactane, Rifadin, Rifater, Rifamate, Saint-John's-wort, Mevacor, Zocor, or Serevent. Use with caution with Seroquel, Lipitor, Crestor, Pravachol, Lescol, Viagra, Levitra, Cialis, Adcirca, or Tracleer. If also taking Videx, take Viracept with food one hour after or more than two hours before you take Videx. May reduce effectiveness of birth control pills, so use additional or alternative form of contraception. Doses of Crixivan, Norvir, Invirase, Fortovase, Mycobutin or Dilantin may need to be adjusted. Rescriptor may lower the amount of Viracept in the blood or vice versa. Do not take if you have moderate to severe liver impairment.

Most serious: diabetes and high blood sugar, high blood pressure, changes in body fat, changes in immune system Other: diarrhea, nausea, rash



How an HIV Med Makes It to Market

By Dawn Ennis

The process of getting a drug to your local pharmacy's pickup shelf can be something akin to the fantasy world of *The Matrix*. But it's not nearly as simple as choosing between a red or blue pill. Every drug takes a unique path, but the road from the development lab to your medicine cabinet is usually long and complex. According to the Tufts Center for the Study of Drug Development at Tufts University, it takes an average of 15 years for an experimental drug to go from lab to patient.

Here's the process: The Beginning

The Food and Drug Administration calls the first step the Investigational New Drug Application, or IND. This is when a pharmaceutical company seeks advice from the FDA about a new medication. But in truth, this stage comes long after that drug is conceived, developed, and tested on animals. One of the early tests must involve a type of animal that has a condition similar to HIV. The burden is on those companies and research institutions to show the FDA the results of their tests on laboratory animals and to explain their proposals for the next stage.

Human Testing

Most drugs that undergo animal testing never even make it to human testing and review by the FDA. The human trials phase can begin only after an IND is reviewed by the FDA and an institutional review board—a panel of scientists and nonscientists in hospitals and research institutions that oversees clinical research—and the drug is found reasonably safe to move forward with testing the drug on people.

Phase I

The very first human trials, also known as Phase I studies, are usually conducted in healthy volunteers. These studies will reveal are the drug's most frequent side effects and, often, how the drug is metabolized and excreted. The number of subjects typically ranges from 20 to 80 people. Sometimes one phase is all that's needed; the drug is determined to be unsafe and the manufacturer goes to the drawing board.

Phase I

But if there are no serious side effects or deaths, or what the FDA calls "unacceptable toxicity," the drug moves to Phase II to test its effectiveness in people who have HIV. This is when something called a controlled trial begins. Patients receiving the drug are compared with similar patients receiving only a placebo, or an entirely different drug. The focus is on short-term side effects on the human test subjects, ranging from a few dozen to about 300.

Phase III

If the drug works as promised in Phase II, then it's on to Phase III, where scientists study how the drug affects a variety of populations, what dosages are most effective, and how the drug interacts with other drugs. As few as several hundred people are tested, or as many as about 3,000.

Wrapping It Up

There are talks between the FDA and the drug's developer, called the sponsor, to figure out how it will be sold to the public. And then that sponsor formally asks the FDA for approval. It's called the New Drug Application, or NDA. The FDA has 60 days to decide whether to take the next step. The agency reviews at least 90 percent of NDAs for standard drugs no later than 10 months after the applications are received. For priority drugs, that timeline is about six months.

Final OK-or Not

The final stage is for the FDA to evaluate the sponsor's research on the drug's safety and effectiveness, and to review the information that will appear on a drug's instructional label, specifically the directions for use. The FDA then either approves the application so the drug can be manufactured and sold, or it issues the agency's equivalent of a "Dear John" letter, a rejection response that explains why the drug is not approved.



ENTRY AND FUSION INHIBITORS

Help prevent replication of HIV; drugs in this class help block HIV from entering T cells. They are always taken with other HIV medications.

MEDICATION

Generic name

Traditional dosage

Injection of 90 mg in the upper arm,

upper leg, or stomach twice daily

Drug interactions, precautions, and recommendations

Side effects

FUZEON

Generic name enfuvirtide

Roche Laboratories (brand name); Trimeris (generic)



Some people use the Biojector 2000, a needle-free device, to administer Fuzeon, but in some it causes nerve pain, tingling, bruising, and collection of blood under the skin

Most serious: injection-site infections or reactions such as itching, swelling, redness, pain or tenderness, hardened skin, bumps at the site of injection; allergic reactionsalso, patients taking Fuzeon may develop bacterial pneumonia more often than others, although it is unclear if the drug is the cause Other: pain and numbness in feet or legs, loss of sleep, depression, decreased appetite, sinus problems, enlarged lymph nodes, weight decrease, weakness or loss of strength, muscle pain, constipation, and pancreas problems

SELZENTRY

Generic name maraviroc

ViiV Healthcare

300 mg twice daily, or 150 mg twice daily if given with potent CYP3A inhibitors, or 600 mg twice daily if given with potent CYP3A inducers

Do not take Saint-John's-wort, as it can lower the amount of Selzentry in the blood, Several medications, including Prezista, Kaletra, Revataz, Sustiva, Atripla, and others, may also affect the amount of Selzentry in the blood. Tell your doctor if you have a history of hepatitis B or C, have heart or kidney problems, of if you have low blood pressure or take medication to lower it

Most serious: heart or liver disorders. lowered blood pressure when standing up, possible increased risk of cancer and other infections, changes in the immune system, severe rash or allergic reaction leading to hepatotoxicity Other: cough, fever, dizziness, headache, lowered blood pressure, nausea, bladder irritation, upper respiratory infection



INTEGRASE INHIBITORS

Help prevent replication of HIV; drugs in this class block integrase, an enzyme HIV needs to reproduce. They are always taken with other HIV medications.

ISENTRESS

Generic name raltegravir

Merck



One 400-mg tablet, twice daily, available in oral suspension or chewable tablet for children, with dosage varying by weight

Do not take with antacids that contain aluminum or magnesium hydroxide. Tell your doctor if you take the tuberculosis medication rifampin or if you have liver problems or phenylketonuria. If you miss a dose, skip the missed dose and go back to your regular schedule. Do not double your next dose.

Most serious: severe skin reactions and allergic reactions, liver problems, changes in your immune system Other: headache, trouble sleeping, nausea, tiredness; less common side effects include weakness, stomach pain, dizziness, depression, and suicidal thoughts and actions

TIVICAY

Generic name dolutegravir

GlaxoSmithKline



One 50-mg tablet, once daily for those new to integrase inhibitors or antiretroviral drugs generally, twice daily for those patients if given in combination with certain other antiretrovirals, and twice daily for patients who have taken integrase inhibitors previously and may have resistance to such drugs

Do not take with dofetilide (brand name Tikosyn), a drug used to treat atrial fibrillation. Do not take with etravirine (Intelence) without coadministration of Norvir (ritonavir) and either Reyataz (atazanavir), Prezista (darunavir), or lopinavir (a combination of ritonavir and lopinavir is sold under the brand name Kaletra). Do not take with oxcarbazepine, phenytoin, phenobarbital, carbamazepine, or Saint-John's-wort. Take two hours before or six hours after any medication containing substances known as polyvalent cations, including certain antacids and laxatives, the ulcer drug sucralfate (brand name Carafate), oral iron or calcium supplements, and buffered medications. Patients who are starting or stopping the diabetes drug metformin at the same time as Tivicay should be monitored closely, and dosage of metformin may need to be adjusted. For patients who are also taking rifampin, a drug that treats tuberculosis and other infections, twice-daily dosage of Tivicay is recommended. Tivicay may be taken with or without food Take during pregnancy only if potential benefit outweighs risk.

Most serious: hypersensitivity reactions characterized by rash, constitutional findings, and sometimes organ dysfunction, including liver injury (consult your doctor immediately if these reactions occur, as treatment may need to be stopped); worsening of hepatitis B or C; accumulation or redistribution of body fat; changes in immune system. Other: insomnia, headache



INTEGRASE INHIBITORS

Drugs in this class block integrase, an enzyme HIV needs to reproduce.

MEDICATION

Generic name Maker

Traditional dosage

inhibitor.

One 85-mg or 150-mg tablet once daily

with food, in combination a protease

Drug interactions, precautions, and recommendations

Side effects

VITEKTA

Generic name elvitegravir

Gilead Sciences



Do not take if you are taking other medications that contain elvitegravir, such as Stribild, or if you are taking Tybost with a protease inhibitor. Do not take with Sustiva, Viramune, Videx, Videx EC, Rifadin, Rifamate, Rifater, Rimactane, Priftin, Victrelis, Incivek, Saint-John's-wort, Use with caution with Carbatrol, Epitol, Equetro, Tegretol, Trileptal, Dilantin, Phenytek, Luminal, Mycobutin, hormonal contraceptives, if you have liver problems, or if you are pregnant or plan to become pregnant. Do not

breast-feed. Take antacids at least two hours before or after Vitekta.

Most serious: changes in immune system Other: diarrhea

NUCLEOSIDE REVERSE TRANSCRIPTASE INHIBITORS (NRTIS)

Help prevent replication of HIV; drugs in this class block reverse transcriptase, an enzyme HIV needs to reproduce.

COMBIVIR

lamivudine and zidovudine

ViiV Healthcare (Brand name); Hetero Labs, Aurobindo, Teva Pharmaceuticals (Generic)



One tablet, containing 150 mg of lamivudine and 300 mg zidovudine (both NRTIs), twice daily

Do not take with other medicines containing lamivudine, zidovudine, or emtricitabine (such as Epivir, Epivir-HBV, Retrovir, Epzicom, Trizivir, Atripla, Emtriva, and Truvada). Use caution with if taking interferon alfa, ribavirin, doxorubicin, or ganciclovir. Tell your doctor if you've previously had any kidney or liver problems (such as hepatitis or cirrhosis), pancreatitis, or low red/white blood cell counts.

Most serious: low white and red blood cell counts, serious allergic reactions, buildup of lactic acid in the blood, liver toxicity or worsening of liver disease, pancreatitis, muscle disorders and inflammation, changes in body fat, changes in the immune system Other: headache, nausea, fatigue, diarrhea, cough, stuffy nose, general feeling of discomfort

EMTRIVA

Generic name emtricitabine

Gilead Sciences

One 200-mg capsule or 240 mg of oral solution, once daily

Do not use with other drugs containing emtricitabine, such as Atripla, Complera, Truvada, or Stribild,

Most serious: buildup of lactic acid in the blood, liver problems including flare-up of hepatitis B after discontinuation Other: headache, diarrhea, nausea, fatique, dizziness, depression, insomnia, abnormal dreams, rash, abdominal pain, asthenia, increased cough, rhinitis





MEDICATION

Generic name

Traditional dosage

Drug interactions, precautions, and recommendations

Side effects

EPIVIR

lamivudine or 3TC

ViiV Healthcare



300 mg daily, in one or two doses, in tablets or oral solution

Do not take with Emtriva, Combivir, Epzicom, Trizivir, Atripla, Truvada, Stribild, or Complera. Epivir is not recommended for use in combination with zalcitabine. If you have hepatitis C, there is a chance of severe liver decomposition if you are taking combination antiretroviral therapy and interferon alfa drugs for hep C

Most serious: changes in the immune system, buildup of lactic acid in the blood, severe liver problems, changes in body fat Other: headache, nausea, malaise and fatigue, nasal problems, diarrhea, and cough

EPZICOM

Generic name abacavir sulfate and lamivudine

ViiV Healthcare



One tablet, containing 600 mg of abacavir sulfate and 300 mg of lamivudine (both NRTIs), once daily

Do not take if you have kidney problems or are prone to heart disease. Use with caution if you already take Atripla, Combivir, Emtriva, Epivir, Trizivir, Truvada, Ziagen, methadone, or medicines used to treat hepatitis. If you have hepatitis B, do not run out of Epzicom or stop taking it without talking to your health care provider. Your provider should monitor your health and do regular blood tests to check your liver if you stop taking Epzicom. Do not take if you have moderate to severe liver problems, or if you are breast-feeding.

Most serious: severe allergic reactions buildup of acid in the blood, liver problems Other: insomnia, depression, headache, tiredness, dizziness, nausea, diarrhea, rash, and fever

RETROVIR

Generic name zidovudine or AZT

ViiV Healthcare: generic versions also available

600 mg a day, taken in divided doses, in tablets, capsule, or syrup. Can also be given as an intravenous infusion, one mg per kilogram of body weight, over one hour, every four hours

Do not take with other medicines that contain the same active ingredients, including Combivir and Trizivir. Not recommended for use with the antihepatitis drugs Copegus, Rebetol, RibaTab, or Ribasphere. Use with caution if taking ganciclovir or interferon alfa. Do not use Retrovir with stavudine or doxorubicin. Retrovir can also be used to prevent transmission of HIV from a mother to her unborn child.

Most serious: neutropenia and anemia (low white and red blood cell counts), myopathy and myositis (muscle disorders and inflammation), buildup of lactic acid in the blood, severe liver problems, changes in the immune system, changes in body fat Other: headache, malaise, nausea, anorexia, and vomiting



TRIZIVIR

abacavir sulfate, lamivudine, and zidovudine

Maker

ViiV Healthcare



One tablet (300 mg of abacavir sulfate, 150 mg of lamivudine, and 300 mg of zidovudine, all NRTIs), twice daily

Do not take if you have certain liver problems or weigh less than 90 pounds. Take with caution if you have a particular gene variation called HLA-B*5701, hepatitis B, kidney or heart problems, low blood cell counts, high blood pressure, high cholesterol, or diabetes. Use with caution if you take Bactrim, Septra, Cytoyene, DHPG, interferon-alfa, Adriamycin, Copegus, Rebetol, Virazole, bone marrow suppressive medicines or cytotoxic medicines, Atripla, Combivir, Complera, Emtriva, Epivir or Epivir-HBV, Epzicom, Retrovir, Truvada, Zerit, or Ziagen.

Most serious: severe or fatal allergic reactions, heart attack, buildup of lactic acid in the blood, liver disorders, blood problems, muscle weakness, changes in body fat, changes in immune system Other: nausea, vomiting, headache, weakness or tiredness, diarrhea, fever and/ or chills, depression, muscle and joint pain, skin rashes, cold symptoms, nervousness, and ear, nose, and throat infections

TRUVADA

emtricitabine and tenofovi disoproxil fumarate

Gilead Sciences



One tablet, containing 200 mg of emtricitabine and 300 mg of tenofovir disoproxil fumarate, once daily

Do not take Truvada if you take Atripla, Combivir, Emtriva, Epivir or Epivir-HBV, Epzicom, Trizivir, or Viread, which have the same or similar active ingredients. You may need to adjust dosage if also taking Videx, Reyataz, or Kaletra. Do not take with Hepsera. If you have had kidney problems or take other drugs that can cause kidney problems, your doctor should do regular blood tests to check your kidneys. In 2012, the FDA approved Truvada for use in HIV prevention among HIV-negative people who are at high risk of acquiring the virus. The FDA's updated labeling on the drug notes that persons using the drug preventatively need to be confirmed as HIV-negative every three months and use the drug as prescribed, in combination with safer-sex practices and counseling. In treatment of HIV-positive people, Truvada is always used in combination with other drugs.

Most serious: buildup of lactic acid in the blood, serious liver problems, flare-ups of hepatitis B virus infection, kidney problems, thinning bones, changes in body fat, symptoms of inflammation from previous infections Other: diarrhea, dizziness, nausea, vomiting, headache, fatigue, abnormal dreams, sleeping problems, rash, depression, shortness of breath, pain, fatty liver, stomach pain, weakness, indigestion, intestinal gas, high volume of urine, excessive thirst, skin discoloration. In patients using Truvada for prevention, the most common side effects have been headache, abdominal pain, and weight loss.



MEDICATION Traditional dosage

Generic name Maker

Drug interactions, precautions, and recommendations

Side effects

VIDEX EC

Generic name didanosine

Bristol-Myers Squibb



Depends on weight. For individuals weighing 132 pounds or more, the recommended dose is 400 main enteric-coated capsules, once daily. For adults weighing less than 132 pounds, the recommended dose is 250 mg. once daily. Take the drug on an empty stomach, and swallow the capsules whole: do not chew, break, crush, or dissolve. A powder form to be mixed with water is available for children

Do not take if you take Lopurin or Zyloprim, which are used to treat gout and kidney stones, or the antihepatitis drugs Copegus, Rebetol, RibaTab, or Ribasphere. Use with caution if taking methadone or ganciclovir, or any drugs that may cause toxicity to the pancreas or nervous system. If you are also taking Viread, the dose of Videx EC should be reduced, and it should be taken on an empty stomach or with a light meal.

Most serious: pancreatitis, buildup of lactic acid in the blood, liver disorders, vision problems, changes in immune system. changes in body fat, peripheral neuropathy Other: diarrhea, nausea, vomiting, headache, stomach pain, skin rash

VIREAD

Generic name fumarate

Gilead Sciences

tenofovir disoproxil Maker

One 300-mg tablet, once daily. Adults who are unable to swallow tablets whole may take 7½scoops of Viread oral powder. Patients with kidney problems may be prescribed a lower dose

Do not take Viread if you are taking other medicines that contain tenofovir (Atripla, Complera, Truvada, or Stribild) or adefovir (Hepsera). Dosages may need to be changed if you are taking Videx EC, Reyataz, or Kaletra.

Viread is also used to treat henatitis B.

Most serious: buildup of lactic acid in the blood, severe liver problems, changes in body fat, changes in the immune system, bone pain, softening, or thinning Other: nausea, rash, diarrhea, headache, pain, depression, weakness



ZERIT

Generic name stavudine or d4T Maker

Bristol-Myers Squibb



For patients weighing 132 pounds or more, 40 mg, in capsules or oral solution, twice daily; for patients weighing less than 132 pounds, 30 mg twice daily

Do not take with Retrovir (zidovudine) or any zidovudine-containing products, such as Combivir or Trizivir. Do not take with hydroxyurea, which is marketed under brand names Droxia and Hydrea. Use with caution with Videx EC, Adriamycin, Rubex, Copegus, Rebetol, Ribasphere, Virazole, Roferon-A, and Intron-A. Use with caution if you have liver, pancreas, or kidney problems, peripheral neuropathy, or gallstones. For patients with renal impairment or undergoing hemodialysis, dosing adjustments may be needed. Do not drink alcohol Most serious: buildup of an acid in the blood, serious liver problems, pancreatitis, changes in body fat, changes in immune system, peripheral neuropathy Other: headache, diarrhea, rash, nausea, vomiting

ZIAGEN Generic name

abacavir GlaxoSmithKline

600 mg in tablets daily, administered as either 300 mg twice daily or 600 mg once daily. Also available as an oral solution. Patients with mild liver impairment should take 200 mg twice daily

Do not take if you have moderate to severe liver impairment. Do not breast-feed while taking the drug. If you have a severe allergic reaction, do not resume taking Ziagen or any other abacavir-containing drug (Epzicom, Trizivir). Risk of allergic reaction is higher if you have a gene variation called HLA-B*5701.

Most serious: severe allergic reaction, buildup of lactic acid in the blood with liver enlargement, changes in body fat, changes in immune system, increased risk of heart attack, especially if you have other risk factors such as smoking, history of heart trouble, diabetes, high blood pressure, or high cholesterol Other: nausea, vomiting, tiredness, headache, diarrhea, trouble sleeping, fever and chills, and loss of appetite



NONNUCLEOSIDE REVERSE TRANSCRIPTASE INHIBITORS (NNRTIS)

Help prevent replication of HIV; drugs in this class attack the same enzyme NRTIs do, in a different way.

EDURANT

Generic name

rilpivirine

Innecen



One 25-mg tablet, once daily, with a meal

Edurant is for patients who have not previously taken antiretroviral drugs and have a viral load of 100,000 copies per millilliter of blood or less. It is always administered with other antiretrovirals. Do not take Edurant with nonnucleoside reverse transcriptase inhibitors, and use with caution with protease inhibitors. Do not with antiseizure drugs like Tegretol, Trileptal, and Dilantin; antibacterials Mycobutin, Rifadin, Rimactane, or Priftin; proton pump inhibitors such as Nexium, Vimovo, Prevacid, Prilosec, Protonix, and Aciphex; more than one dose of dexamethasone; or Saint-John's-wort. Use with caution with antifungals taken orally, antibiotics such as Biaxin and Ketek, and methadone. Take antacids or H2 blockers at least 12 hours before or four hours after

Most serious: depression or mood changes (including suicidal thoughts), changes in body fat, changes in immune system, kidney disorders Other: insomnia, headache, rash

INTELENCE

Generic name

etravirine

Maker

Janssen



200 mg (one 200-mg tablet or two 100-mg tablets), twice daily

Do not take with nonnucleoside reverse transcriptase inhibitors; the protease inhibitors Aptivus or Lexiva, or other protease inhibitors without ritonavir; epilepsy and seizure medicines Tegretol, Carbatrol, Luminal, Dilantin, or Phenytek; herbal products containing Saint-John'swort; or the antibacterial drugs Mycobutin, Rifadin, Rifater, Rifamate, or Priftin. Use with caution with Tivicay, Triumeq, the antimalarial drug Coartem and drugs that inhibit or induce the genetic features CYP3A, CYP2C9, and/or CYP2C19. Always take after a meal and swallow the pill with a full glass of water; do not chew.

Most serious: severe skin reactions such as Stevens-Johnson syndrome Other: changes in body shape or body fat, changes in immune system, tingling or pain in the hands or feet, numbness

RESCRIPTOR

Generic name

delavirdine

Maker

ViiV Healthcare



400 mg (two or four tablets) three times daily

When taking Rescriptor, do not take Versed, Halcion, Xanax, D.H.E. 45 Injection, Ergomar, Migranal, Wigraine, Cafergot, Orap, Propulsid, Hismanal, Seldane, rifampin, phenobarbital, Dilantin, Tegretrol, Saint-John's-wort, Mevacor, or Zocor. Talk to your doctor before taking Vigara, Lipitor, Baycol, or Lescol. If taking Vidax or antacids, take an hour before or an hour after taking Rescriptor. Doses of protease inhibitors Crixivan, Invirase, Fortovase, Kaletra, Norvir, and Viracept may need to be adjusted. Talk with your doctor if you have liver or kidney disease.

Most serious: severe skin rash accompanied by blisters, fever, joint or muscle pain, redness or swelling of the eyes, or sores in the mouth Other: headache, nausea, diarrhea, and tiredness

SUSTIVA

Generic name

Maker

Bristol-Myers Squibb



600 mg (three capsules at once or one tablet), taken daily

Do not take with other NNRTIs, Atripla, Vascor, Propulsid, Versed, Orap, Halcion, Victrelis, Olysio, or ergot medications (such as Wigraine and Cafergot). The following medicines may need to be replaced with another when you are taking Sustiva: Fortovase, Invirase, Biaxin, Carbatrol, Tegretol, Noxafil, Sporanox, and Reyataz (if this is not the first time you have been treated for HIV). The following drugs may require a change in the dose of either Sustiva or the other medicine: Cardizem, Tiazac, Covera HS, Isoptin SR, Lipitor, Pravachol, Zocor, Crixivan, Kaletra, methadone, Mycobutin, Reyataz, Rifadin, Rifamate, Rifater, Selzentry, Vfend, Gengraf, Neoral, Sandimmune, Prograf, Rapamune, Wellbutrin, Zoloft, and Zyvan. If you are taking Sustiva and Reyataz, you should also be taking Norvir. Tell your doctor if you have had hepatitis or other liver problems, mental illness, or seizures. Take Sustiva on an empty stomach, preferably at bedtime, with water.

Most serious: severe liver problems, rashes, and skin reactions Other: changes in the immune system, changes in body fat, dizziness, nausea, headache, insomnia, tiredness

VIRAMUNE

Generic name nevirapine

Maker

Boehringer Ingelheim; generic versions also available



One 200-mg tablet daily for first 14 days, then one 200-mg twice daily; also available in oral suspension; or 100-mg tablet for children. Also available in an extended-release formulation, for which dosage is one 200 mg tablet of immediate-release Viramune once daily for the first 14 days, followed by one 400 mg tablet of Viramune XR once daily

Do not take with Saint-John's-wort, Sustiva, Atripla, Kaletra, Lexiva, Reyataz, Nizoral, Sporanox, Rifadin, Rifamate, Rifater, Victrelis, Incivek, or birth control pills. Tell doctor if taking Biaxin, Diflucan, Crixivan, methadone, Viracept, Mycobutin, Coumadin, Jantoven, or Invirase. Discontinue immediately if you develop signs of hepatitis, severe skin reactions, or rash with systemic symptoms.

Most serious: severe psychiatric problems, including suicidal thoughts; liver disorders; severe rash Other: dizziness, nausea, vomiting, diarrhea, rash, sleep disturbances, drowsiness, trouble concentrating, or unusual dreams



COMBINATION DRUGS

Help prevent replication of HIV; drugs in this class combine two or more drugs that attack HIV in different ways.

MEDICATION

Generic name

Traditional dosage

Drug interactions, precautions, and recommendations

Side effects

ATRIPLA

Generic name efavirenz, emtricitabine, and tenofovir disoproxil fumarate

Maker

Bristol-Myers Squibb & Gilead Sciences



One tablet, once daily, on an empty stomach, preferably at bedtime (600 mg of efavirenz, 200 mg of emtricitabine, and 300 mg of tenofovir disoproxil fumarate). If you are also taking Rifadin, add 200 mg of efavirenz

Efavirenz is a nonnucleoside reverse transcriptase inhibitor (NNRTI), and the other components are nucleoside reverse transcriptase inhibitors (NRTIs); the different types of drugs attack HIV at different stages in its replication process. Do not take Atripla with anti-HIV drugs Combivir, Complera, Emtriva, Epivir or Epivir-HBV, Epzicom, Trizivir, Truvada, Viread, or Stribild, which have the same or similar active ingredients. Take with Sustiva only if your doctor recommends. If you are taking Kaletra, dosage of that drug may need to be adjusted. Do not take with Vfend or Hepsera. Use with caution with Fortovase, Invirase, Videx, Reyataz, Crixivan, Selzentry, Biaxin, Noxafil, Sporanox, calcium channel blockers (such as diltiazem and verapamil, which have various brand names), immunosuppressant drugs (such as cyclosporine, tacrolimus, and sirolimus, sold under various brand names), methadone, Mycobutin, Rifadin, Rimactane, Lipitor, Pravachol, Zocor, Zoloft, or seizure meds (such as phenytoin, carbamazepine, and phenobarbital). If you have hepatitis B and stop taking Atripla, you may experience a flare-up of the disease. Do not take if you have severe kidney impairment. Do not take while breast-feeding. Discontinue if severe rash develops.

Most serious: severe skin reactions such as Stevens-Johnson syndrome, buildup of lactic acid in the blood, severe liver or kidney problems, serious psychiatric problems, thinning bones (a vitamin D supplement may be indicated for the latter) Other: dizziness, headache, insomnia, drowsiness, trouble concentrating, unusual dreams, fatigue, upset stomach, nausea, vomiting, gas, diarrhea

COMPLERA

Generic name

emtricitabine, rilpivirine, and tenofovir disoproxil fumarate

Maker

Gilead Sciences



One tablet, once daily, with a meal (200 mg of emtricitabine,

25 mg of rilpivirine, and 300 mg of tenofovir disoproxil fumarate)

patients who have not previously taken antiretroviral drugs and have a viral load of 100,000 copies per milliliter of blood or less, or it can be used as a replacement regimen for patients who have a viral load of 50 copies/mL or less. Do not take with medicines that contain lamivudine (Epivir, Epivir-HBV, Epzicom, Combivir, and Trizivir), other HIV antiretroviral medications, drugs to treat seizures or tuberculosis, proton-pump inhibitors such as Kapidex or Dexilant, Hespera, Saint-John's-wort, or more than one dose of dexamethasone. Use caution when taking antacids, antifungal medications, H2-receptor antagonists, antibiotics, or methadone.

Rilpivirine is an NNRTI, the other components NRTIs. Complera is for

Most serious: buildup of lactic acid in the blood, severe liver problems, kidney damage, hepatitis B virus infection flare-ups, depression, bone thinning, and changes in the immune system Other: insomnia, headache, rashes, diarrhea, nausea, fatigue, dizziness, depression, abnormal dreams, vomiting, stomach or other pain, and skin discoloration

EVOTAZ

Generic name

atazanavir and cobicistat *Maker*

Bristol-Myers Squibb



One tablet once daily with food, in combination with other antiretroviral drugs; each tablet contains 300 mg of the protease inhibitor atazanavir (marketed under brand name Reyataz and 150 mg of boosting agent cobicistat (marketed under brand name Tybost).

Do not take with Uroxatral, Propulsid, Propulsid Quicksolv, Mitigare, Colcrys, Multaq, D.H.E. 45, Embolex, Migranal, Cafergot, Migergot, Ergomar, Ergostat, Medihaler, Wigraine, Wigrettes, Ergotrate, Methergine, Crixivan, Camptosar, Advicor, Altoprev, Mevacor, Latuda, Versed, Viramune, Viramune XR, Orap, Ranexa, Rimactane, Rifadin, Rifater, Rifamate, Revatio when used for lung problems, Zocor, Vytorin, Simcor, Halcion, or Saint-John's-wort or a product that contains it. Use with caution if you have heart problems, liver problems, kidney problems, diabetes, or hemophilia, if you are pregnant or plan to become pregnant, and if you are using hormonal birth control. Do not breast-feed.

Most serious: heart rhythm changes, kidney or gallbladder problems, worsening of liver problems, severe skin rash, diabetes or worsening diabetes, increased bleeding in people with hemophilia, changes in body fat, changes in immune system Other: nausea, yellowing of the skin or whites of the eyes

PREZCOBIX

Generic name
darunavir and cobicistat
Maker



One tablet twice daily with food; each tablet contains 800 mg of the protease inhibitor darunavir (marketed under brand name Prezista) and 100 mg of the boosting agent cobicistat (marketed under brand name Tybost).

Do not take with Uroxatral, Propulsid, Propulsid Quicksolv, Colcrys, Mitigare, Multaq, D.H.E.45, Embolex, Migranal, Cafergot, Ergomar, Ergostat, Medihaler, Migergot, Wigraine, Wigrettes, Methergine, Altoprev, Advicor, Mevacor, Latuda, Versed, Orap, Ranexa), Rifadin, Rifater, Rifamate, Rimactane, Revatio when used for pulmonary arterial hypertension, Simcor, Vytorin, Zocor, Saint-John's-wort or a product that contains it, or Halcion. Use with caution if you have liver or kidney problems, or if you are pregnant, breast-feeding, or plan to become pregnant or breast-feed.

Most serious: liver problems, severe or life-threatening skin rashes or reactions, high blood sugar, diabetes or worsening diabetes, increased bleeding in people with hemophilia, changes in body fat, changes in immune system Other: diarrhea, nausea, rash, headache, abdominal pain, vomiting



MEDICATION

Generic name

Maker

Traditional dosage

Drug interactions, precautions, and recommendations

Side effects

STRIBILD

Generic name elvitegravir, cobicistat, emtricitabine, tenofovir disoproxil fumarate

Maker

Gilead Sciences



One tablet, once daily, with a meal (150 mg of elvitegravir, 150 mg of cobicistat, 200 mg of emtricitabine, and 300 mg of tenofovir disoproxil fumarate)

Stribild is not approved for treatment of patients who have hepatitis B, as Stribild can exacerbate the disease and cause flare-ups. Stribild should not be used for patients with an estimated creatinine clearance below 70 mL per minute. Do not use with other anti-HIV drugs containing emtricitabine or tenofovir disoproxil fumarate, including Atripla, Complera, Emtriva, Truvada, or Viread; do not use with drugs containing lamivudine or with drugs or regimens containing irlonavir, such as Combivir, Epivir, Epivir, HBV, Epzicom, or Trizivir. Do not administer in combination with Hepsera. Do not use with sildenafil when branded as Revatio, though sildenafil when dosed as Viagra may be safe, so consult your doctor. Do not use with alfuzosin, rifampin, cisapride, primozide, or the herbal remedy Saint-John's-wort. Do not take Stribild with ergot derivatives (such as dihydroergotamine, ergotamine, or methylergonovine), HMG-CoA Reductase inhibitors (such as lovastatin and simvastatin), or with sedative hypnotics.

Most serious: buildup of lactic acid in the blood; severe liver or kidney problems, which could lead to potentially fatal renal failure; thinning bones, and changes in the immune system Other: nausea and diarrhea

TRIUMEQ

Generic name

dolutegravir, abacavir sulfate, and lamivudine *Maker*

ViiV Healthcare



One tablet once daily, with or without food; each tablet contains 50 mg of dolutegravir (an integrase strand transfer inhibitor marketed under brand name Tivicay), 600 mg of abacavir, and 300 mg of lamivudine (both nucleoside reverse transcriptase inhibitors marketed under brand names Ziagen and Epivir, respectively).

Do not take with Epzicom, Trizivir, Ziagen, Combivir, Epivir , Epivir-HBV, Epzicom, Emtriva, Atripla, Complera, Stribild, Truvada, Tikosyn, Viramune, Carbatrol, Epitol, Equetro, Tegretol, Trileptal, Dilantin, or Saint-John's-wort. Do not take if you have the HLA-B*5701 gene variation or moderate to severe liver problems. Use with caution if you have hepatitis B or C or taking interferon, ribavirin, Sustiva, Norvir combined with Lexiva or Aptivus, Rifadin, Glumetza, Fortamet, Glucophage, or Riomet. Take two hours before or six hours after iron or calcium supplements. certain antacids, or buffered medications.

Most serious: worsening of hepatitis B or C, changes in body fat, changes in immune system, increased risk of heart attack Other: trouble sleeping, headache, fatigue



DRUGS THAT TREAT HIV-RELATED CONDITIONS

AMBISOME, AMPHOTEC, ABELCET, AMPHOCIN

Generic name: amphotericin B Maker: Astellas, Alkopharma, Sigma-Tau, Pfizer

Traditional dosage: No more than 1.5 mg per kg of body weight, administered intravenously, once daily

What it does: Treats fungal infections, including cryptococcal meningitis, which are more common in people with HIV

What to know: Individuals who cannot normally take traditional amphotericin B because it causes damage to their kidneys may be able to take the formulations in AmBisome, Abelcet, or Amphotec.

Side effects: Most serious: allergic reaction, kidney problems, rash, irregular heartbeat, muscle cramps or pain, weakness, bleeding, hearing loss, blurred vision, hepatitis Other: fever, shaking, chills, weight loss, nausea, headache, jaundice

ANDROGEL

Generic name: testosterone gel Maker: AbbVie

Traditional dosage: In amount and frequency determined by physician, applied topically. Comes in 1 percent and 1.62 percent concentrations, in packets or bottles. Apply AndroGel 1 percent only to shoulders and upper arms, or stomach area (abdomen), or shoulders, upper arms, and stomach area; 1.62 percent only to shoulders and upper arms.

What it does: Treats low testosterone in adult men, which can be a complication of HIV, especially for men over 50

What to know: Apply at same time every day, after bathing or showering, to clean, dry skin. Wash hands immediately after applying. Cover the application area with clothing after the gel dries. Avoid letting others, especially women and children, have skin-to-skin contact with application area; if they do, they should wash the contact area right away. Tell your health care provider about all your health conditions, especially if you have breast or prostate cancer; difficulty in urination due to enlarged prostate; heart, kidney, or liver problems; or sleep apnea. Also tell your provider what other medications you are taking, especially insulin, corticosteroids, or medicines that decrease blood clotting.

Side effects: Most serious: Enlarged prostate, possible increased risk of prostate cancer, lowered sperm count, enlarged or painful breasts, sleep apnea, blood clots in legs or lungs, swelling of ankles, feet, or body Other: Increased prostate-specific antigens, mood swings, high blood pressure, increased red blood cell count, skin irritation, more frequent or longer-lasting erections

AXIRON

Generic name: testosterone topical solution Maker: Lilly

Traditional dosage: 30, 60, 90, or 120 mg, as determined by your physician, and with frequency determined by physician. Apply only under the arms.

What it does: Treats low testosterone in adult men, which can be a complication of HIV, especially for men over 50

What to know: Wash hands immediately after applying. Cover the application area with clothing after the solution dries. Avoid letting others, especially women and children, have skin-to-skin contact with application area; if they do, they should wash the contact area right away. Tell your health care provider about all your health conditions, especially if you have breast or prostate cancer; difficulty in urination due to enlarged prostate; heart, kidney, or liver problems; or sleep apnea. Should not be used if you have breast cancer, or have or might have prostate cancer. Also tell your provider what other medications you are taking, especially insulin, corticosteroids, or medicines that decrease blood clotting.

Side effects: Most serious: Enlarged prostate, possible increased risk of prostate cancer, lowered sperm count, enlarged or painful breasts, sleep apnea, blood clots in legs or lungs, swelling of ankles, feet, or body Other: Increased prostate-specific antigens, increased red blood cell count, skin irritation or redness, headache, diarrhea, vomiting, more frequent or longer-lasting erections

BACTRIM, SEPTRA, SULFATRIM

Generic name: sulfamethoxazole/trimethoprim

Maker: Various (see HIVPlusmag.com)

Traditional dosage: 400 mg (two or four tablets) three times daily

What it does: Treats and helps prevent recurrence of Pneumocystis pneumonia in HIV-positive patients; also used on other bacterial infections

What to know: Take at the same time every day. Try not to miss a dose.

Consult with doctor if pregnant, as there is chance of fetal damage.

Side effects: Most serious: skin rash, joint or muscle aches, sore throat or fever, unusual bleeding or bruising Other: dizziness, nausea, vomiting, diarrhea, loss of appetite, fatigue, headache, low blood sodium

BARACLUDE

Generic name: entecavir Maker: Bristol-Myers Squibb

Traditional dosage: 0.5 or 1.0 mg, once daily, in tablet form or oral solution. Should be taken without food, on an empty stomach at least two hours after a meal and two hours before the next meal

What it does: Treats chronic hepatitis B. May also help inhibit HIV replication, although this use has not been studied

What to know: People with HIV should be receiving antiretroviral treatment for that as well, as resistance to anti-HIV drugs may develop otherwise. May affect concentration of drugs that reduce kidney function or vice versa. Those with decreased kidney function may need to reduce dosage.

Side effects: Most serious: worsening of hepatitis B after discontinuation of treatment, other liver problems, buildup of lactic acid in the blood Other: headache, fatique, dizziness, nausea



BIAXIN

Generic name: clarithromycin
Maker: AbbVie

Traditional dosage: 500 mg, 2 or 3 times daily, depending on the infection. Available in immediate release tablets, extended release tablets, and granules to be mixed with water

What it does: Fights bacterial infections, especially Mycobacterium avium complex (MAC)

What to know: There have been life-threatening interactions with Colcrys and serious interactions with Altacor, Altoprev, Mevacor, Zocor, Lipitor, and blood pressure drugs. Use caution when taking with Viagra.

Side effects: Most serious: abdominal pain, fever, nausea, vomiting, bleeding or bruising, diarrhea, colitis, liver failure, hepatitis Other: milder diarrhea, headache, nausea and vomiting, change in taste

COPEGUS

Generic name: ribivarin Maker: Roche

Traditional dosage: 800 to 1,200 mg daily, depending on patient's weight and type of virus, taken twice daily in 200-mg capsules, with food

What it does: In combination with Pegasys, treats chronic hepatitis C infection

What to know: Do not use if you take Videx or Videx EC. Use caution when taking with NRTIs like Combivir, Epivir, Epzicom, Retrovir, Trizivir, as drug interactions could lead to toxicity. Do not take if you have certain blood disorders, such as thalassemia major or sickle-cell anemia, or certain types of hepatitis. Do not take if you are pregnant or if you or your partner plan to become pregnant.

Side effects: Most serious: severe eye, blood, lung, or liver problems, pancreatitis, depression or suicidal thoughts, high blood sugar or diabetes, fetal abnormalities Other: flu-like symptoms, tiredness and weakness, nausea and vomiting, loss of appetite, skin reactions, hair thinning, trouble sleeping

CRESEMBA

Generic name: isavuconazonium sulfate Maker: Astellas

Traditional dosage: Initial "loading" dose of 372 mg every eight hours for six doses, through intravenous infusion or two capsules 186-mg taken orally, followed by maintenance dose of two capsules once daily or one 372-mg infusion daily, beginning 12 to 24 hours after loading dose. Capsules can be taken with or without food.

What it does: Treats rare fungal infections invasive aspergillosis and invasive mucormycosis, which are more common in people with HIV

What to know: Do not take with Norvir, the antiseizure medicine carbamazepine, the tuberculosis drug rifampin, Saint-John's-wort, or long-acting barbiturates.

Side effects: Most serious: liver problems, infusion reactions, severe allergic and skin reactions Other: nausea, vomiting, diarrhea, headache, abnormal liver blood tests, low potassium levels in the blood, constipation, shortness of breath, coughing, tissue swelling

CYTOVENE-IV, VITRASERT

Generic name: ganciclovir

Maker: Roche Laboratories (Cytovene-IV), Pharmaforce
(generic): Bausch and Lomb (Vitrasert)

Traditional dosage: Vitrasert, surgically implanted in the eye, consists of a 4.5-mg pellet of ganciclovir coated with polymers. For Cytovene-IV, dosages vary but should not exceed 6 mg per kg of body weight

What it does: Treats the eye infection cytomegalovirus retinitis in transplant recipients and people with weakened immune systems, such as those with HIV

What to know: Do not take with blood dyscrasia-causing medications, bone marrow depressants, radiation therapy, nephrotoxic medications, or Retrovir. Dosage may need adjustment if you have kidney problems or take Videx or Videx EC. Use caution if you take anti-HIV medications containing zidovudine or didanosine.

Side effects: Most serious: blood disorders, black or tarry stools, cough, sore throat, fever or chills, pain, painful urination, seeing flashes or sparks of light, floating spots, or a partial veil across vision, unusual bleeding, and unusual tiredness or weakness Other: abdominal pain, changes in behavior, diarrhea, fever, headache, increased sweating, loss of appetite, vomiting, weight loss

DAUNOXOME

Generic name: daunorubicin liposomal Maker: Galen

Traditional dosage: Injected intravenously at a strength of 40 mg per square meter of body surface area every two weeks

What it does: Treats advanced HIV-related Kaposi's sarcoma

What to know: Do not use if you have less than advanced KS.

Side effects: Most serious: suppression of the bone marrow's production of blood cells and platelets; patients should have regular blood counts Other: back pain, flushing, chest tightness



DIFLUCAN

Generic name: fluconazole
Maker: Pfizer

Traditional dosage: Doses vary based on targeted infection.

Available as tablets, a powder to be mixed with water and taken orally, or an injection formula

What it does: Treats many types of fungal infections, including AIDSrelated Candida oral, esophageal, urinary, or vaginal yeast infections

What to know: Do not take with Quinaglute, Quinidex, Hismanal, Propulsid, Orap, or erythromycin. Use with caution with antidiabetic agents, anticonvulsants, blood pressure medications, immunosuppressive drugs, protease inhibitors, blood thinners, and vitamin A nutritional supplements. Use with caution if pregnant or if you have heart problems or kidney dysfunction. Do not take if you have sugar intolerance.

Side effects: Most serious: liver problems, potentially severe allergic reaction, seizures Other: rash, nausea, headache, vomiting, diarrhea, dizziness

DOXIL

Generic name: doxorubicin, liposomal Maker: Janssen

Traditional dosage: For AIDS-related Kaposi's sarcoma, 20 mg per square meter of body surface, every three weeks by intravenous infusion

What it does: Treats Kaposi's sarcoma in patients who cannot tolerate other medicines or whose disease is advanced

What to know: Dose may need to be adjusted if you have liver problems.

Side effects: Most serious: congestive heart failure, decrease in blood cells, secondary oral cancers Other: tingling or burning, swelling, blisters, mouth sores, fever, nerve damage and more (see HIVPlusMag.com)

EGRIFTA

Generic name: tesamorelin Maker: EMD Serono

Traditional dosage: 2 mg injected subcutaneously (just below the skin), once daily

What it does: Helps reduce HIV-related excess belly fat by encouraging the body to produce natural growth hormones that reduce fat

What to know: Do not take if you have or had issues involving your pituitary gland, if you have active cancer, or if you are pregnant or breast-feeding.

Side effects: Most serious: severe allergic reaction or fluid retention, injection site reactions, or increase in glucose intolerance/diabetes Other: pain, swelling, muscle soreness, tingling, numbness and pricking, nausea, vomiting, rash, itching

EPOGEN, PROCRIT

Generic name: epoetin alfa Maker: Amgen (Epogen); Janssen (Procrit)

Traditional dosage: 100 units per kilogram of body weight, three times a week, given intravenously

What it does: Treats anemia that results as a side effect of Retrovir

What to know: Do not take if you have uncontrolled high blood pressure. Iron supplements may be needed for patients who undergo blood transfusions. Talk to your doctor if you have cancer, as there is an increased risk of tumor progression or shortened survival.

Side effects: Most serious: high blood pressure, seizures, development of antibodies against the drug, severe allergic reactions Other: joint, muscle, or bone pain, fever, cough, rash, nausea, vomiting, soreness of mouth, itching, headache, pain at injection site

ERAXIS

Generic name: anidulafungin Maker: Pfizer

Traditional dosage: For esophageal candidiasis, 100 mg by injection the first day, followed by followed by 50 mg daily dose thereafter for a minimum of 14 days; for candidemia and other Candida infections, 200 mg by injection the first day, followed by 100 mg daily dose, with the number of days depending on the patient. Eraxis comes as a powder that is mixed with sterile water for infusion

What it does: Treats esophageal candidiasis, candidemia, and other Candida infections

What to know: Effects on women who are pregnant or breast-feeding have not been studied, so discuss possibility of pregnancy with your doctor.

Side effects: Most serious: abnormal liver function, anaphylactic shock Other: nausea, diarrhea, vomiting



ETOPOPHOS

Generic name: etoposide Maker: Bristol-Myers Squibb

Traditional dosage: Dosages vary for small cell lung cancer and testicular cancer, used in combination with other chemotherapeutic agents

What it does: Treats various types of cancer; being tested for treatment of non-Hodgkin's lymphoma and Kaposi's sarcoma

What to know: High-dose cyclosporine and drugs such as levamisole hydrochlor can cause interactions. Use of a live virus vaccine could be complicated by weakened immune mechanisms. Do not deliver by bolus intravenous injection. Side effects: Most serious: severe allergic reaction, alopecia (hair loss), chills or fever, nausea, constipation, abdominal pain Other: rash, unusual tiredness

FAMVIR

Generic name: famciclovir Maker: Novartis

Traditional dosage: 500 mg in tablets twice daily for seven days; tablets come in 125, 250, or 500 mg strengths

What it does: Treats recurrent episodes of orolabial herpes (cold sores) or genital herpes

What to know: Dosage may need to be reduced for patients with kidney impairment. The drugs Benemid and Probalan, used to treat gout, may increase the level of Famvir in the patient's body, so this level should be monitored.

Side effects: Most serious: acute kidney failure Other: headache, nausea, skin or subcutaneous tissue disorders, heart palpitations

FORTESTA

Generic name: Testosterone gel Maker: Endo Pharmaceuticals

Traditional dosage: Initial dose is 40 mg of gel, applied to the thighs once daily, in the morning; amount may be adjusted by your physician

What it does: Treats low testosterone in adult men, which can be a complication of HIV, especially for men over 50

What to know: Apply at same time every day, after bathing or showering, to clean, dry skin. Wash hands immediately after applying. Cover the application area with clothing after the gel dries. Avoid letting others, especially women and children, have skin-to-skin contact with application area; if they do, they should wash the contact area right away. Tell your health care provider about all your health conditions, especially if you have breast or prostate cancer; difficulty in urination due to enlarged prostate; heart, kidney, or liver problems; or sleep apnea. Also tell your provider what other medications you are taking, especially insulin, corticosteroids, or medicines that decrease blood clotting.

Side effects: Most serious: enlarged prostate, possible increased risk of prostate cancer, lowered sperm count, enlarged or painful breasts, sleep apnea, blood clots in legs or lungs, swelling of ankles, feet, or body Other: increased prostate-specific antigens, skin redness or irritation, abnormal dreams

FOSCAVIR

Generic name: foscarnet sodium Maker: Hospira

Traditional dosage: Initial dose of Foscavir, a liquid solution, is an intravenous infusion of 90 mg per kilogram of weight every 12 hours or 60 mg/kg every eight hours for two to three weeks, followed by a maintenance dose of 90 mg/kg to 120 mg/kg daily. Dosage should be individualized according to patients' kidney function but should not exceed the recommended amount or frequency.

What it does: Treats CMV retinitis

What to know: May be used in combination with ganciclovir drugs in patients who have relapsed after treatment with either drug by itself, but no other drug should be delivered in the same infusion. Use with caution with intravenous pentamadine.

Side effects: Most serious: impairment of kidney function, electrolyte abnormalities, seizures, anemia Other: headache, nausea, vomiting, diarrhea, fever



FULYZAQ

Generic name: crofelemer

Traditional dosage: One 125-mg delayed-release tablet, twice daily, with or without food. Tablets should be swallowed whole and not crushed or chewed

What it does: Relieves diarrhea that is a side effect of antiretroviral drugs

What to know: Patients should be tested to make sure the diarrhea is not caused by an infection or gastrointestinal disease.

Side effects: Most serious: upper respiratory tract infection, bronchitis, cough, flatulence, and increased levels of the liver enzyme bilirubin

GAMIMUNE N, GAMUNEX, GAMMAGARD

Generic name: immune globulin

Maker: Bayer Biological, Talecris Biotherapeutics, Baxter

Healthcare

Traditional dosage: 300 to 600 mg per kg of body weight, every three to four weeks, administered intravenously

What it does: Helps fight bacterial infections in children with HIV

What to know: May interfere with immune response to live-virus vaccines for measles, mumps, or rubella.

Side effects: Most serious: depression, suicidal behavior, severe pain, difficulty breathing, vision problems, high fever, bleeding or bruising Other: headache, nausea, diarrhea, chills, fatigue

HARVONI

Generic name: ledipasvir and sofosbuvir Maker: Gilead

Traditional dosage: One tablet daily, containing 90 mg of ledipasvir and 400 mg of sofosbuvir (the latter is marketed separately under the brand name Sovaldi). Treatment duration is either 12 or 24 weeks, depending on whether a patient has been treated for hepatitis C previously and whether the patient also has cirrhosis of the liver.

What it does: Treats chronic hepatitis C infection

What to know: Unlike other hep C drugs, Harvoni does not need to be taken with ribavarin or interferon. Do not use with Saint-John's-wort, Cordarone, Crestor, Mycobutin, Rifadin, Olysio, Sovaldi, anticonvulsant drugs, the combination of HIV drugs Aptivus and Norvir, or the combo drug Stribild, Use with caution with HIV drugs that contain tenofovir, such as Viread, Truvada, and Atripla. If taking antacids, leave at least four hours between Harvoni and antacid consumption. Use with caution if pregnant or breast-feeding.

Side effects: General: fatigue, headache

HEPSERA

Generic name: adefovir dipivoxil Maker: Gilead

Traditional dosage: One 10-mg tablet daily

What it does: Treats chronic hepatitis B infection

What to know: Do not take with Viread, Atripla, Truvada, Complera, or Stribild. Use caution when taking with drugs that affect kidney function or are eliminated by the kidneys, or with other NRTIs.

What it does: Treats chronic hepatitis B infection

Side effects: Most serious: worsening of hepatitis B, kidney malfunction, buildup of lactic acid in the blood Other: weakness, headache, abdominal pain, nausea, diarrhea, indigestion, gas

INTRON A

Generic name: interferon alfa-2b Maker: Schering

Traditional dosage: 30 million international units per square meter of body surface, subcutaneously or intramuscularly, three times a week for Kaposi's sarcoma; 3 million IUs three times a week for chronic hepatitis C

What it does: Treats AIDS-related Kaposi's sarcoma and hepatitis infection, especially hepatitis C

What to know: Use caution if taken with Retrovir, theophylline, or Tyzeka. Do not take if you have autoimmune hepatitis, decompensated liver disease, thalassemia major, sickle-cell anemia, or problems with creatinine clearance. Use with caution if you have history of cardiovascular or cerebrovascular diseases. Side effects: Most serious: depression, suicidal thoughts, severe flu-like symptoms Other: difficulty sleeping, nervousness, muscle pain or numbness, blood in urine or stools, painful or difficult urination, chest pain, fever, chills, unusual bleeding or bruising



MARINOL

Generic name: dronabinol Maker: AbbVie

Traditional dosage: Varies, but usually starts with one 2.5-mg capsule taken twice daily, before lunch and dinner. Also available in 5-mg or 10-mg capsules. Take the capsules whole; do not crush or chew

What it does: Helps stimulate the appetite of HIV patients

What to know: Can interact dangerously with alcohol, Valium, Librium, Seconal, Xanax, or Nembutal. Do not smoke marijuana, as this can cause an overdose. Can become habit-forming.

Side effects: Most serious: amnesia, confusion, delusions, mood changes, feelings of unreality, hallucinations, depression, nervousness, anxiety, and rapid heartbeat Other: clumsiness or unsteadiness, dizziness, drowsiness, euphoria, trouble thinking, nausea, vomiting

MEGACE ES

Generic name: megestrol acetate Maker: Strativa

Traditional dosage: 625 mg (one teaspoon), once daily

What it does: Treats appetite loss, severe malnutrition, or unexplained, significant weight loss

What to know: May decrease effectiveness of Crixivan. If you have a history of blood clots, check with your doctor before taking.

Side effects: Most serious: Cushing's syndrome, development or worsening of diabetes

Other: decreased sexual desire or performance, flatulence, rash, high blood pressure, insomnia, upset stomach, increased blood sugar, between-period bleeding

MEGACE ORAL SUSPENSION

Generic name: megestrol acetate Maker: Bristol-Myers Squibb

Traditional dosage: 800 mg, once daily

What it does: Treats severe malnutrition, appetite loss, or significant weight loss

What to know: No significant interactions discovered to date. If you have a history of blood clots, check with your doctor before taking.

Side effects: Most serious: Cushing's syndrome, diabetes Other: decreased libido, flatulence, high blood pressure, insomnia, upset stomach, increased blood sugar, between-period bleeding

MEPRON

Generic name: atovaquone Maker: GlaxoSmithKline

Traditional dosage: For prevention, 1,500 mg of oral solution, once daily, with a meal; for treatment, 750 mg of solution, twice daily, with meals

What it does: Helps prevent and treat mild to moderate Pneumocystis pneumonia in patients who cannot tolerate other drugs

 ${\it What to \, know:}$ If also taking rifampin, consider alternatives, as it may reduce the amount of Mepron in the body.

Side effects: Most serious: rash, diarrhea, nausea

MYCOBUTIN

Generic name: rifabutin

Maker: Pfizer (Mycobutin); Lupin Ltd. (generic)

Traditional dosage: 300 mg in capsules, once daily. If prone to nausea or vomiting, split into two doses daily, with food

What it does: Helps prevent disseminated Mycobacterium avium complex (MAC) disease

What to know: Do not use with Rescriptor or Norvir. May reduce effectiveness of Sporanox, Biaxin, Fortovase, and Invirase as well as oral contraceptives. Cut dose in half if also taking Crixivan or Viracept. Do not take if you have active tuberculosis.

Side effects: Most serious: neutropenia Other: rash, gastrointestinal disorders, flu-like symptoms



NEBUPENT

Generic name: pentamidine isethionate Maker: APP Pharmaceuticals

Traditional dosage: 300 mg every four weeks, via oral inhalation

What it does: Helps prevent Pneumocystis pneumonia in patients with a history of the disease or low T-cell counts

What to know: Use with caution with aminoglycosides (a class of antibiotics), amphotericin B (an antifungal drug marketed under various brand names), Platinol, Foscavir, or Vancocin. If breast-feeding, take only if doctor determines benefits outweigh risks.

Side effects: Most serious: acute pancreatitis Other: night sweats, anemia, bronchitis, nonspecific herpes, herpes zoster, nonspecific influenza, oral Candida, pharyngitis, sinusitis, headache, chest pain, cough, wheezing

OLYSIO

Generic name: simeprevir Maker: Janssen

Traditional dosage: 150-mg capsule, once daily, with food, in combination with ribivarin (marketed under brand names Copegus, Rebetol, and others) and peginterferon alfa (PegIntron or Pegasys). Has also been approved for prescribing in combination with another hepatitis C drug, Sovaldi

What it does: Treats chronic hepatitis C infection

What to know: Do not take if you or partner are pregnant or plan to be, as birth defects or fetal death can result. Use with caution if taking Tegretol, Mycobutin, Rifadin, Saint-John's-wort, Norvir, Kaletra, Biaxin, cimetidine, antifungal meds, or grapefruit juice.

Side effects: Most serious: severe rash, fetal damage Other: milder rash, itching, sensitivity to light, nausea

PANRETIN GEL

Generic name: alitretinoin Maker: Eisai

Traditional dosage: This topical gel should initially be applied twice a day to KS lesions, with frequency increased to three or four times a day, depending on tolerance, or reduced if skin is irritated or if there is a toxic reaction. Apply enough to cover the lesion thoroughly, but avoid getting on normal skin surrounding the lesion, and allow the gel to dry before covering the skin with clothing. Treatment can continue as long as needed

What it does: Provides topical treatment for KS lesions

What to know: Avoid using with products that contain DEET, a common ingredient of insect repellents. Minimize skin's exposure to sun.

Side effects: Most serious: toxic skin reactions

PEGASYS

Generic name: peginterferon alfa-2a Maker: Genentech

Traditional dosage: 180 micrograms, once weekly, by subcutaneous injection

 $\textit{What it does:}\ \ \text{Treats chronic hepatitis C or B, alone or in combination with other drugs}$

What to know: Do not take if you have autoimmune hepatitis or liver problems. Do not take with Copegus or Rebetol if you are pregnant, if you or your partner plan to become pregnant, or if you take Videx. Use with caution if taking Tyzeka, Theo-24, Elixophyllin, Uniphyl, Theolair, methadone, Azasan, or Imuran.

Side effects: Most serious: severe eye, blood, liver, nerve, thyroid, or lung problems, pancreatitis, colitis, high blood sugar or diabetes, allergic reaction Other: flu-like symptoms, tiredness and weakness, stomach problems, loss of appetite, skin reactions, hair thinning, trouble sleeping

PEGINTRON

Generic name: peginterferon alfa-2b Maker: Merck

Traditional dosage: 1.5 micrograms per kilogram of body weight, once weekly, by subcutaneous injection

What it does: Treats chronic hepatitis C, alone or in combination with other drugs

What to know: Use with caution with drugs metabolized by CYP2C8/9 or CYP2D6. Monitor for toxicities when used with NRTIs. Do not take if you have autoimmune hepatitis or certain other liver problems.

Side effects: Most serious: severe eye, blood, liver, nerve, thyroid, or lung problems, pancreatitis, colitis, high blood sugar or diabetes, allergic reaction Other: flu-like symptoms, tiredness, appetite problems, skin reactions, hair thinning



RADIESSE

Generic name: calcium hydroxylapatite Maker: Merz Aesthetics

Traditional dosage: Varies; the drug is available in single-use vials with 0.3, 1, or 1.3 milliliters of calcium hydroxylapatite suspended in a water-based gel. It is injected into the skin, and results can last up to a year

What it does: Treats facial fat loss (lipoatrophy) and stimulates the body's collagen production to combat HIV-related facial wasting

What to know: Users of blood thinners or aspirin may have bleeding or bruising at the injection site. For 24 hours after treatment, avoid significant movement, massage, sun exposure, or makeup use.

Side effects: Most serious: prolonged swelling, irritation, redness, swelling, itching, burning, or tenderness at the injection site may occur, but typically resolve shortly after treatment

REBETOL

Generic name: ribivarin Maker: Schering, Merck

Traditional dosage: 800-1,400 mg daily, based on patient's weight, by capsule or oral solution, taken with food

What it does: In combination with Intron-A or PegIntron, treats chronic hepatitis C infection

What to know: Do not use if you take Videx or Videx EC. Do note take if you have autoimmune hepatitis, certain blood disorders, or severe kidney disease. Do not take if you are pregnant or if you or your partner plan to become pregnant. Use caution when taking with NRTIs such as Combivir, Epizicom, Retrovir, or Trizivir.

Side effects: Most serious: severe eye, lung, or blood problems, pancreatitis, severe depression or suicidal thoughts, dental problems caused by dry mouth Other: less serious mood changes, flu-like symptoms, headache, fever, stiffness, anorexia

RIFADIN, RIFADIN IV

Generic name: rifampin Maker: Sanoifi-Aventis

Traditional dosage: 10 mg per kg of body weight, once daily, orally in capsule form (Rifadin) or intravenously (Rifadin IV).
Daily dosage should not exceed 600 milligrams. Oral dosage should be one hour before or two hours after a meal with water

What it does: Helps prevent or treat infections caused by a certain type of bacterium, including the one that causes tuberculosis

What to know: Do not take if taking Reyataz, Prezista, Lexiva, Fortovase, Invirase, or Aptivus. Dosage of anticoagulant drugs should be adjusted. Use with caution if you have diabetes. Switch to nonhormonal contraceptives.

Side effects: Most serious: gastrointestinal distress, changes in liver function, headache, drowsiness, dizziness, menstrual irregularities, jaundice, darkened urine Other: loss of appetite, fever, joint pain

ROFERON-A

Generic name: interferon alfa-2
Maker: Roche

Traditional dosage: 3 million IUs per square meter of body surface, subcutaneously or intramuscularly, three times a week

What it does: Treats chronic hepatitis C

What to know: Use caution if taken with Retrovir and similar anti-HIV drugs; theophylline, marketed under various names to treat breathing problems; or Tyzeka.

Side effects: Most serious: depression, suicidal behavior, pain, breathing and vision problems, fever, bleeding or bruising Other: flu-like symptoms, sleep disturbances, headache, thyroid problems, fatigue

SCULPTRA

Generic name: injectable poly-L-lactic acid Maker: Dermik Laboratories

Traditional dosage: Amount and frequency varies by patient; delivered by subcutaneous injection

What it does: Helps restore or correct signs of facial fat loss (lipoatrophy)

What to know: If you have an active skin infection or inflammation in or near the treatment area, do not use until this condition is under control. Minimize exposure to sunlight or sun lamps.

Side effects: Most serious: bruising, edema, hematoma, injection site reactions



SEROSTIM

Generic name: somatropin Maker: EMD Serono

Traditional dosage: 0.1 mg per kilogram of body weight daily (up to 6 mg), injected subcutaneously at bedtime

What it does: Treats wasting (HIV-related weight loss)

What to know: Do not use if you have acute critical illness following open heart or abdominal surgery, multiple accidental trauma, or acute respiratory failure. Do not use if you have neoplasia.

Side effects: Most serious: glucose intolerance, which may require adjustment of diabetes medications for patients with this disorder; musculoskeletal discomfort; carpal tunnel syndrome; swelling of the hands and feet

SOVALDI

Generic name: sofosbuvir Maker: Gilead

Traditional dosage: One 400-mg tablet, once daily, in combination with ribivarin (marketed under brand names Copegus, Rebetol, and others); with some types of hep C virus, peginterferon alfa (PegIntron or Pegasys) should be used

What it does: Treats chronic hepatitis C infection

What to know: Do not take if you or partner are pregnant or plan to be, as birth defects or fetal death can result. Do not take with Aptivus, Tegretol, Dilantin, Tileptal, Mycobutin, Rifadin, Priftin, Saint-John's-wort, or drugs containing phenobarbital. Side effects: Most serious: fetal damage Other: fatigue, headache, nausea, insomnia, anemia

SPORANOX

Generic name: itraconazole Maker: Janssen

Traditional dosage: 200 mg daily, in oral solution, for one to two weeks for oral candidiasis; 200 mg daily in capsule form, for other fungal infections, such as histoplasmosis and blastomycosis

What it does: Treats fungal infections such as oral candidiasis, also known as thrush

What to know: Do not take if taking D.H.E. 45, Migranal, Germinal, Hydergine, Ergotrate, Bellergal-S, Cafergot, Ergomar, Wigraine, Methergine, Sansert, Altocor, Altoprev, Mevacor, Zocor, Halcion, methadone or felodipine. Use caution if you have heart, lung, or kidney disease or take protease inhibitors. Do not take capsules if you have heart failure.

Side effects: Most serious: liver failure, neuropathy, hearing loss Other: nausea, diarrhea, vomiting, fever, respiratory disorders, rash, headache

TAXOL

Generic name: paclitaxel

Maker: Bristol-Myers Squibb (name brand); Teva Parenteral

Medicines (generic)

Traditional dosage: 135 mg per square meter of body surface, intravenously over three hours every three weeks, or 100 mg per square meter of body surface, intravenously over three hours every two weeks

What it does: Provides second-line treatment for Kaposi's sarcoma

What to know: Use caution when taking with Versed, Buspar, Vansar, Plendil, Altocor, Altoprev, Mevacor, Zocor, Relpax, Revatio, Viagra, Halcion, Reyataz, Biaxin, Crixivan, Sporanox, Feoris, Nizoral, Serzone, Viracept, Norvir, and several other drugs. (See HIVPlusMag.com for others.)

Side effects: Most serious: bone marrow disorders Other: tiredness, weakness, shortness of breath, nausea, vomiting, diarrhea, unusual bleeding or bruising, joint pain or numbness. hair loss

TESTIM

Generic name: Testosterone gel Maker: Endo Pharmaceuticals

Traditional dosage: 50 mg in premeasured tube, applied to upper arms and shoulders, once daily

What it does: Treats low testosterone in adult men, which can be a complication of HIV, especially for men over 50

What to know: Apply at same time every day, after bathing or showering, to clean, dry skin. Wash hands immediately after applying. Cover the application area with clothing after the gel dries. Avoid letting others, especially women and children, have skin-to-skin contact with application area; if they do, they should wash the contact area right away. Tell your health care provider about all your health conditions, especially if you have breast or prostate cancer; difficulty in urination due to enlarged prostate; heart, kidney, or liver problems; or sleep apnea. Also tell your provider what other medications you are taking, especially insulin, corticosteroids, or medicines that decrease blood clotting.

Side effects: Most serious: Enlarged prostate, possible increased risk of prostate cancer, lowered sperm count, enlarged or painful breasts, sleep apnea, blood clots in legs or lungs, swelling of ankles, feet, or body Other: Skin irritation at application site, increased red blood cell count



TYZEKA

Generic name: telbivudine Maker: Idenix/Novartis

Traditional dosage: One 600-mg tablet, once daily, or 30 milliliters of oral solution for patients who have difficulty swallowing tablets

What it does: Treats hepatitis B

What to know: Do not take Pegasys. If using oral solution, close bottle and clean dosing cup immediately after dosing, keep cup dry between uses, and do not use for anything else.

Side effects: Most serious: buildup of lactic acid in body, severe liver problems, muscle pain or weakness, nerve problems, flare-up of hepatitis B after discontinuation Other: diarrhea, abdominal pain or swelling, cough, headache, dizziness, sore throat, fever

VALCYTE

Generic name: valganciclovir Maker: Genentech

Traditional dosage: Two 450 mg tablets, twice daily, for 21 days, then two tablets once daily

What it does: Treats the eye infection cytomegalovirus retinitis

What to know: Use with caution if also taking Retrovir, Benemid, CellCept, Myfortic, or Videx. Since Valcyte can cause seizures, do not drive until you know how the medication affects you.

Side effects: Most serious: anemia, fertility impairment, fetal abnormalities, kidney failure Other: diarrhea, vomiting, fever, tremors, and seizures

VFEND

Generic name: voriconazole
Maker: Pfizer

Traditional dosage: For esophageal candidiasis, 200 mg in tablets or oral solution, every 12 hours, at least an hour before or after a meal. For other fungal infections, treatment starts with an intravenous infusion of 6 mg per kilogram of weight every 12 hours for the first 24 hours, followed by a maintenance dose of either 4 mg per kilogram of weight every 12 hours or 200 mg in tablets or oral solution every 12 hours. Duration of treatment varies according to the infection

What it does: Treats fungal infections, such as esophageal candidiasis

What to know: Do not use with Atripla or high-dose Norvir; use with caution with low-dose Norvir. Do not use with Saint-John's-wort, ergot alkaloids, terfenadine, astemizole, cisapride, pimozide, quinidine, or rifabutin. Use with caution in patients with heart arrhythmias.

Side effects: Most serious: severe liver problems, heart arrhythmias, visual disturbances Other: fever, nausea, rash, vomiting, chills, headache

VISTIDE

Generic name: cidofovir Maker: Gilead

Traditional dosage: Delivered by intravenous infusion, the initial dose depends on the patient's weight, gender, and kidney function, with the latter measured by a test that determines how well the kidneys clear creatinine from the blood. Maintenance dose is 5 mg per kilogram of body weight, by infusion, once every two weeks

What it does: Treats CMV retinitis

What to know: The antigout drug probenecid (brand name Benemid or Probalan) should be taken orally with each Vistide treatment. Retrovir should be temporarily discontinued or the dosage halved on the day of each Vistide infusion. Do not use with any drugs that have the potential to cause kidney toxicity. Do not take if you have high creatinine levels, as measured by creatinine clearance test.

Side effects: Most serious: kidney toxicity, decreased interocular pressure
Other: nausea, vomiting, fever

Use of complementary or alternative medicine used in conjunction with antiretrovirals has proved popular with those who have HIV, with studies showing 70 percent have tried it at some point. Here's a look at what works and what can cause more harm than good. By Jacob Anderson-Minshall

PROBIOTICS

Three of the top four side effects of HIV meds are gastrointestinal, such as chronic diarrhea. That's because the gut is a major spot for HIV replication, which then diminishes immune cells. But probiotics—essentially live bacteria and yeasts—do more for a good gut than anything else, reducing inflammation and improving CD4-cell counts.

ZINC

A deficiency in zinc occurs in over half of HIV-positive adults, and studies indicate that zinc delays immunological failure and decreases a nasty side effect, diarrhea.

ALGAE

A study in Journal of Acquired Immune Deficiency Syndromes found that blue-green algae (also known as spirulina) inhibited HIV replication.

Supplements You Should Consider

MULTIVITAMINS

One study found that multivitamins reduced HIV-positive women's risk of death by 30 percent.

VITAMIN D

Up to 75 percent of the general population is deficient in vitamin D. For people with HIV, vitamin D reduces the risk of osteoporosis, produces proteins that help fight bacteria, reduces inflammation, improves muscle strength, and improves blood sugar control, reducing the risk of diabetes, according to numerous studies.

SELENIUM

Some studies suggest that HIV needs selenium in order to reproduce. Add that to the fact that most of us get more than enough selenium in our food and there's no reason to take this supplement.

COLLOIDAL SILVER

The FDA doesn't consider it to be safe. Among its many side effects is argyria, an irreversible bluish discoloration of the skin.

Things You Should Avoid

MANGANESE

Studies from over
a decade ago showed
that increasing manganese
in cells can decrease HIV's
ability to replicate, but since
then there's been little further
research and no evidence
that dietary manganese
has any effect on HIV.

SAINT-JOHN'S-WORT

A study conducted by the National Institutes of Health showed this herb has negative interactions with both protease inhibitors and nonnucleoside reverse transcriptase inhibitors. The Food and Drug Administration also recommends that Saint-John'swort not be combined with any type of antiretroviral medication.

SUTHERLANDIA

Many traditional healers in southern and western Africa give people with HIV Sutherlandia, derived from a native bush, to treat HIV, but studies have shown it puts users at risk of treatment failure, viral resistance, or drug toxicity.

TRANSCENDENTAL MEDITATION

Over 340 studies on the benefits of TM have shown it reduces stress, anxiety, depression, anger, PTSD symptoms, high blood pressure, and more. When used in conjunction with HIV antiretroviral medication, studies indicate that TM decreases HIV-related physical problems by 51 percent and increases vitality by 43 percent. (That's one reason why the David Lynch Foundation last year announced a new initiative to teach TM to 10,000 people living with HIV across the nation.

ACUPUNCTURE

It reduces symptoms of HIV and side effects of medications, including fatigue, pain, headache, forgetfulness, and nausea.



Complementary Therapies That Work

TAI CHI

Studies indicate that practitioners see significant improvements in quality of life, HIV-related psychological distress, and coping skills.

YOGA

Numerous studies have shown it has a positive physiological effect and helps alleviate symptoms of HIV or medication side effects.

TRADITIONAL

MASSAGE

Mayo Clinic says it

lowers anxiety, pain, and blood pressure;

releases endorphins,

improves circulation,

and boosts overall

immunity.

CHINESE MEDICINE
Few studies on the
effectiveness of using these
herbal remedies to treat HIV have
been published by peer-reviewed
medical journals. One published in 2014,
concluded they "could increase survival
and lengthen the life span of people
living with HIV," but with too many
unknowns about the interactions
between herbal medications
and HIV drugs, "could" help
isn't worth the risk.

AYURVEDIC MEDICINE

This traditional system of healing arts originated in India and involves using preparations of spices, herbs, vitamins, proteins, minerals, and metals. Unfortunately, Ayurvedic products are generally not reviewed or approved by the Food and Drug Administration. There's also little or no research into how these preparations interact with HIV meds.

REIKI

According to the
National Institutes of
Health, the few studies that
have been done on this therapy
that purports to move the body's
energies to improve health has
been poorly structured and failed to
show any positive health outcome.
Bottom line: "Reiki hasn't been
clearly shown to be useful
for any health-related
purpose."

Those That Haven't Been Proven

HOMEOPATHY

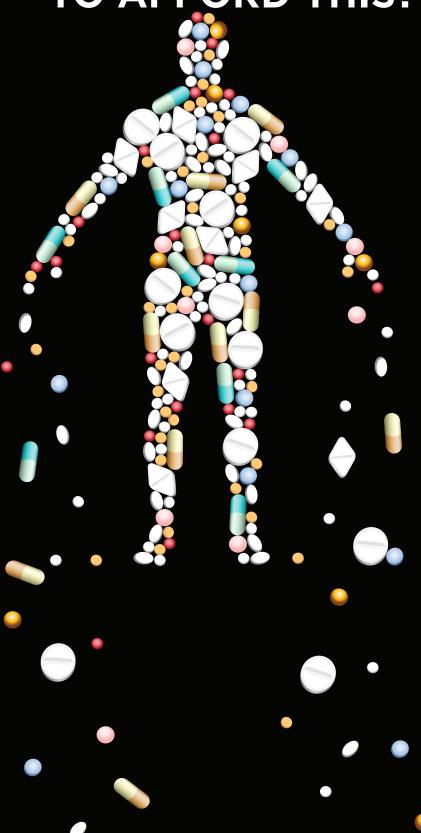
Homeopathic remedies are prepared from diluted extracts of animal, plant, and mineral substances. Several clinical trials in Europe suggest that they shouldn't be dangerous. But there are no studies on using homeopathy to treat HIV.

JUICING

Some poz folks
rely on liquid diets
because they have difficulty
chewing or digesting whole foods.
There's no scientific evidence that
juice cleanses and liquid-only "detox"
diets that offer quick weight loss or
claim to flush out toxins actually work.
But they can be downright dangerous
for those with HIV because they
don't provide enough protein
and other nutrients to
maintain health.



HOW ARE YOU GOING TO AFFORD THIS?



HIV meds are often expensive, but if you don't have private insurance or a low enough income to qualify for Medicaid, there are other programs that can help you pay. Also, if you are insured but have a high co-pay, help is available for that as well.

The Affordable Care Act, a.k.a. Obamacare, requires insurers to provide prescription drug coverage, whether it's a policy you buy through the ACA marketplace or (in most cases) another plan, such as insurance provided by your employer. They also must cover at least one drug in every class and count your out-of-pocket drug costs—usually meaning co-pays—toward your lifetime cap on out-of-pocket expenses. The ACA marketplace has made coverage available to millions of previously uninsured Americans, as has Medicaid expansion, enacted through the ACA and a related bill. Find more information at Healthcare.gov.

Also, the federally created, state-managed AIDS Drug Assistance Program (ADAP) can help uninsured or underinsured people pay for their HIV medications. The requirements vary by state, but typically you have to be a resident, have HIV, and earn less than a certain amount per year, calculated as a percentage of the federal poverty level.

Following is a guide to ADAP income requirements and contact information. Each state's Maximum Qualifying Income (MQI) to be in ADAP is shown as a percentage of the federal poverty level as well as the dollar amount for a one-person household (for 2015, in the 48 contiguous states the federal poverty level for one person is \$11,770; add \$4,160 per family member).

ALABAMA

Website: adph.org/aids Phone: (334) 206-5364 MQI: 250% or \$29,425

ALASKA

Website: bit.ly/ALASKAadap (907) 452-4222 MQI: 300% or \$44,160

ARIZONA

Website: bit.ly/ARIZadap Phone: (800) 334-1540 MQI: 300% or \$35,310

ARKANSAS

Website: bit.ly/ARadap Phone: (501) 661-2408 MQI: 200% or \$23,540

CALIFORNIA

Website: bit.ly/CAadap Phone: (916) 449-5900 MQI: less than \$50,000

COLORADO

Website: bit.ly/COadap Phone: (303) 692-2716 MQI: 400% or \$47,080

CONNECTICUT

Website: bit.ly/CTadap Phone: (800) 233-2503 MQI: 400% or \$47,080

DELAWARE

Website: bit.ly/DEadap Phone: (302) 744-1050 MQI: 500% or \$58,350

DISTRICT OF COLUMBIA

Website: bit.ly/DCadap Phone: (202) 671-4900 MQI: 500% or \$58,850

FLORIDA

Website: floridaADAP.org Phone: (800) 352-2437 MQI: 400% or \$47,080

GEORGIA

Website: bit.ly/GEORGIAadap Phone: (404) 657-3100 MQI: 300% or \$35,310

HAWAII

Website: bit.ly/adapHawaii Phone: (808) 586-4400 MQI: 400% or \$54,200

IDAHO

Website: safesex.idaho.gov Phone: (208) 334-6527 MQI: 200% or \$23,540

ILLINOIS

Website: bit.ly/ILLadap Phone: (217) 782-4977 MQI: 300% or \$35,310

INDIANA

Website: bit.ly/indianaADAP Phone: (866) 588-4948 MQI: 300% or \$35,210

IOWA

Website: bit.ly/iowaADAP Phone: (515) 281-0926 MQI: 200% or \$23,540

KANSAS

Website: bit.ly/KANadap Phone: (785) 368-8218 MQI: 300% or \$35,310

KENTUCKY

Website: bit.ly/kentuckyADAP Phone: (866) 510-0005 MQI: 300% or \$35,310

LOUISIANA

Website: hiv.dhh.louisiana.gov Phone: (504) 568-7474 MQI: 300% or \$35,310

MAINE

Website: bit.ly/MEadap Phone: (207) 287-3747 MQI: \$55,850, add \$3,960 per

dependent

MARYLAND

Website: bit.ly/MDadap Phone: (800) 205-6308 MQI: 500% or \$58,850

MASSACHUSETTS

Website: bit.ly/MAadap Phone: (800) 228-2714 MQI: 500% or \$58.850

MICHIGAN

Website: michigan.gov/dap Phone: (888) 826-6565 MQI: 450% or \$52,965

MINNESOTA

Website: bit.ly/minnesotaADAP Phone: (800) 657-3761 MQI: 300% or \$35,310

MISSISSIPPI

Website: bit.ly/mississippiADAP Phone: (601) 362-4850 MQI: 400% or \$47,080

MISSOURI

Website: bit.ly/missouriADAP Phone: (866) 628-9891 MQI: 300% or \$35,310

MONTANA

Website: bit.ly/montanaADAP Phone: (406) 444-4744 MQI: 330% or \$38,841

NEBRASKA

Website: bit.ly/NEadap Phone: (402) 559-4673 MQI: 200% or \$23,540

NEVADA

Website: bit.ly/nevadaADAP Phone: (775) 684-4247 MQI: 400% or \$47,080

NEW HAMPSHIRE

Website: bit.ly/NHadap Phone: (603) 271-4502 MQI: 300% or \$35,310

NEW JERSEY

Website: bit.ly/newjerseyADAP Phone: (877) 613-4533 MQI: 500% or \$58,850

NEW MEXICO

Website: nmhivguide.org Phone: (505) 827-2435 MQI: 400% or \$47,080

NEW YORK

Website: bit.ly/adapNewYork Phone: (800) 542-2437 MQI: 435% or \$51,199

NORTH CAROLINA

Website: bit.ly/adapNCar Phone: (877) 466-2232 MQI: 300% or \$35,310

NORTH DAKOTA

Website: ndhealth.gov/HIV Phone: (800) 472-2180 MQI: 300% or \$35,310

OHIO

Website: bit.ly/OHadap Phone: (800) 777-4775 MQI: 300% or \$35,310

OKLAHOMA

Website: bit.ly/OKADAP Phone: (405) 271-4636 MQI: 200% or \$23,540

OREGON

Website: bit.ly/oregonADAP Phone: (800) 805-2313 MQI: 400% or \$47,080

PENNSYLVANIA

Website: bit.ly/PennADAP Phone: (800) 922-9384 MQI: 500% or \$58,850

RHODE ISLAND

Website: bit.ly/RhodelslandADAP Phone: (401) 462-3294 MQI: 400% or \$47,080

SOUTH CAROLINA

Website: bit.ly/SCadap Phone: (800) 569-9954 MQI: 300% or \$35,310

SOUTH DAKOTA

Website: bit.ly/SDakADAP Phone: (605) 773-3737 MQI: 300% or \$35,310

TENNESSEE

Website: bit.ly/TNadap Phone: (615) 532-2392 MQI: 300% or \$35,310

TEXAS

Website: bit.ly/texasADAP Phone: (800) 255-1090 MQI: 200% or \$23,540

UTAH

Website: bit.ly/utahADAP Phone: (801) 538-6197 MQI: 250% or \$29,425

VERMONT

Website: bit.ly/vermontADAP Phone: (802) 863-7245 MQI: 500% or \$58,850

VIRGINIA

Website: bit.ly/virginiaADAP Phone: (855) 362-0658 MQI: 400% or \$47,080

WASHINGTON

Website: bit.ly/WAadap Phone: (360) 236-3426 MQI: 400% or \$47,080

WEST VIRGINIA

Website: bit.ly/WestVAADAP Phone: (304) 558-2195 MQI: 400% or \$47,080

WISCONSIN

Website: bit.ly/Wladap Phone: (800) 991-5532 MQI: 300% or \$35,310

WYOMING

Website: bit.ly/WYadap Phone: (307) 777-5856 MQI: \$40,150-\$45,100, depending on county

ADAP also covers Puerto Rico, Guam, the Virgin Islands, and Pacific Island Territories. Visit bit.ly/HHSadap for more information.

PHARMACEUTICAL COMPANIES' PATIENT ASSISTANCE PROGRAMS

Major pharmaceutical companies have patient assistance programs, which can help with prescription costs, including co-pays. Find the maker of your specific medication and contact it directly.

Abbott, AbbVie

www.abbviepaf.org (800) 222-6885

Bristol-Myers Squibb

www.bmspaf.org (800) 736-0003

Boehringer Ingelheim

us.boehringer-ingelheim.com (800) 556-8317

Genentech (includes Hoffman-LaRoche)

www.genentech-access.com/patients (866) 422-2377

Gilead

www.gilead.com (800) 226-2056

GlaxoSmithKline

www.gskforyou.com

Janssen

www.janssenprescriptionassistance.com

Merck

www.merckhelps.com

ViiV

www.viivhealthcareforyou.com





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VIEKIRA PAK

Generic name: ombitasvir, paritaprevir, and ritonavir tablets packaged with dasabuvir tablets

Maker: AbbVie

Traditional dosage: Two ombitasvir, paritaprevir, ritonavir 12.5/75/50-mg tablets once daily (in the morning) and one dasabuvir 250 mg tablet twice daily (morning and evening) with a meal without regard to fat or calorie content, for 12 weeks. For patients with HCV genotype 1a and cirrhosis, ribivarin should be added.

What it does: Treats chronic hepatitis C infection

What to know: Do not take with Uroxatral, Carbatrol, Epitol, Equetro, Tegretol, Sustiva, Atripla, Cafergot, Migergot, Ergomar, Ergostat, Medihaler, Wigraine, Wigrettes, D.H.E. 45, Migranal, Ergotrate, Methergine, ethinyl estradiol-containing medicines, Lopid, Advicor, Altoprev, Mevacor, oral midazolam, Dilantin, Phenytek, Luminal, Orap, Zocor, Vytorin, Simcor, Saint-John's-wort or a product that contains it, Halcion, Rifadin, Rifamate, Rifater, Rimactane, or Revatio when taken for pulmonary artery hypertension. Do not take if you have severe liver problems or have had a severe skin rash after taking ritonavir (Norvir). Use with caution if you have any liver problem other than hep C, if you have had a liver transplant and take the medicines Prograf, Gengraf, Neoral, or Sandimmune, or if you are pregnant or plan to become pregnant or if you are preast-feeding or plan to breast-feed.

Side effects: With ribavirin: tiredness, nausea, itching, skin reactions such as redness or rash, sleep problems, feeling weak Without ribavirin: nausea, itching, sleep problems

ZITHROMAX

Generic name: azithromycin

Maker: Pfizer (Zithromax); various others (generic)

Traditional dosage: For treatment of Mycobacterium avium complex, one 600-mg tablet daily, with 15 mg of Myambutol; for prevention, two 600-mg tablets, once weekly, which may be combined with Mycobutin

What it does: Treats and helps prevent Mycobacterium avium complex

What to know: When this drug is used with Viracept, which can increase concentrations of Zithromax, the patient should be monitored closely for known side effects of Zithromax, such as liver enzyme abnormalities and hearing impairment.

Side effects: Most serious: irregular heart activity, in rare cases fatal; liver enzyme abnormalities and other liver problems, severe diarrhea, hearing impairment Other: nausea, vomiting, mild to moderate diarrhea, abdominal pain

ZOVIRAX

Generic name: acyclovir Maker: GlaxoSmithKline

Traditional dosage: Dosage varies depending on type of infection; available in capsules, tablets, oral suspension, topical cream, and as intravenous injectable

What it does: Treats and controls herpes viral infections, like shingles, genital warts, and chicken pox

What to know: Use with caution with Retrovir, antifungal agents, Benemid, interferon, intrathecal methotrexate, and drugs that can cause kidney toxicity. Drink plenty of fluids while taking the drug.

Side effects: Most serious: severe allergic reaction, blood and liver disorders, hepatitis, peripheral edema (blood clotting leading to swelling of the legs or arms), gastrointestinal upset, nausea, alopecia (hair loss), jaundice, seizures, confusion, hallucination Other: headache, visual impairment, tremors, rash or stinging skin with topical ointment