

# Anti-HIV drugs



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## Acknowledgements

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This booklet includes information on drugs that have been  
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**This booklet is a starting point for anyone who wants to find out about treatments for HIV. It provides information about the drugs used – known as antiretroviral drugs or antiretroviral therapy (ART).**

The booklet has been written to help you decide what questions to ask your doctor about any course of treatment you might be considering. It should not replace discussions with your doctor.

Information in this booklet has been reviewed by a panel of medical experts and includes information on issues such as side effects and drug interactions (with other antiretroviral drugs and drugs used for other conditions). For full details of side effects and drug interactions, see the information leaflets that are produced by drug manufacturers and included in the drug's packaging.

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The drugs sections are colour coded as above



**This is an interactive booklet.**

All page numbers, either on the contents page or mentioned within the booklet, are clickable. You can also click on the names of resources and organisations to go to the relevant web pages.

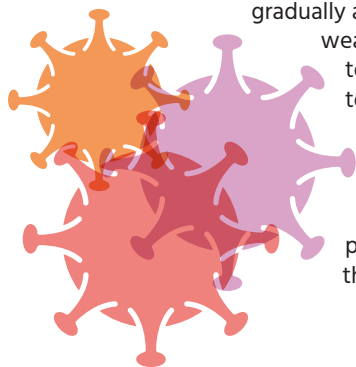
## The aim of HIV treatment

**HIV is a virus that attacks the body's defence against infection and illness – the immune system. If you are living with HIV, you can take drugs to reduce the level of HIV in your body.**

By taking these anti-HIV drugs, you can slow down or prevent damage to your immune system. By protecting your immune system earlier, you can help prevent health problems occurring now and in the future. These drugs are not a cure, but they can help you stay well and lead a longer and healthier life. Anti-HIV drugs are known as antiretroviral drugs, or antiretroviral therapy (ART). Almost all antiretroviral treatment is taken in the form of tablets. One combination is available as long-acting injectable treatment.

HIV mainly affects cells in the immune system called CD4 cells. Over many years of untreated HIV infection, the number of CD4 cells drops

gradually and the immune system is weakened. It becomes unable to fight infections leading to a condition called AIDS (acquired immune deficiency syndrome). Antiretroviral drugs stop HIV production and prevent HIV from reducing the number of CD4 cells.



Someone living with HIV who isn't taking HIV treatment may have thousands, or even millions, of HIV particles ('copies') in every millilitre of blood. These HIV particles are replicating all the time. The aim of treatment is to reduce the amount of HIV (known as the 'viral load') to very low levels; when the virus cannot be picked up on a blood test, this is called an 'undetectable' viral load.

To give you the best chance of reducing the amount of HIV in your blood to an undetectable level, your doctor will usually recommend that you take an effective combination of three antiretroviral drugs ('triple therapy'). In some cases, your doctor will recommend a two-drug combination that contains a very potent antiretroviral drug from the integrase inhibitor class. Once your viral load has become undetectable, your immune system should begin to recover and the number of CD4 cells will rise towards normal levels. In addition to keeping you well and preventing damage to your immune system, taking treatment and having an undetectable viral load also prevents HIV from being passed on to someone else during sex.

## When to start treatment

**In 2015 a large, well-conducted study demonstrated that there are health benefits to starting treatment as soon as possible.**

The study clearly demonstrated that starting HIV treatment earlier is beneficial and reduces the risk of most serious illnesses. While people sometimes worry about the side effects of anti-HIV drugs, the study also showed that people who began HIV treatment earlier had a better quality of life than people who waited.

Large studies have shown that taking treatment and having an undetectable viral load prevents HIV transmission during sex. This is the message that 'Undetectable = Untransmittable', or U=U.

Other research has shown that with HIV treatment, most people living with HIV can have a near-normal lifespan.

The sooner you start to take HIV treatment, the sooner you can benefit from it.

Current HIV treatment guidelines, both in the UK and elsewhere in the world, recommend that everyone living with HIV should take HIV treatment, regardless of their CD4 count (a measure of the quantity of CD4 cells and the health of the immune system).

If your CD4 cell count is below 200, it is especially important that you begin HIV treatment as soon as possible. The lower your CD4 cell count, the greater the risk of HIV making you ill. But even at higher CD4 cell counts, above 500, treatment will protect your health, both now and in the future.

While the medical case for starting treatment as soon as possible is clear, the decision to start treatment rests with the person living with HIV. Before starting treatment, it's important that you understand how it works and what it involves. You may need a little time before you feel ready to start.

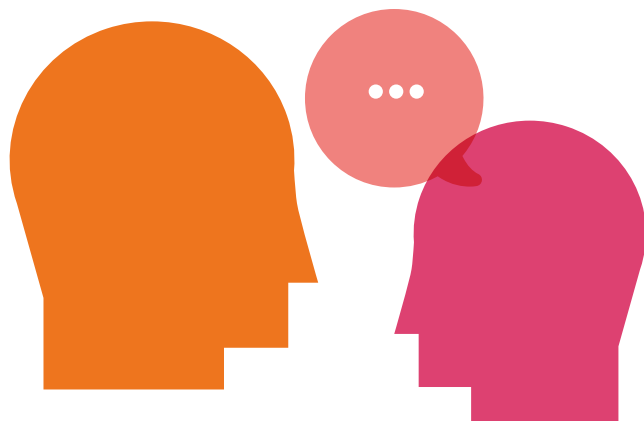


## Talking to your doctor

**Taking antiretroviral therapy is a long-term commitment. At present, once you start treatment, you will be on it for the rest of your life.**

For the treatment to work, it is really important that you take the drugs as prescribed. This is called 'adherence'. Being involved in decisions about when to start treatment and about which drugs to choose can make it easier to take medication.

Being honest about your lifestyle with yourself and with your doctor can help ensure that you start on a drug combination that is right for you.



Discuss your daily routine with your doctor, nurse or pharmacist to help establish the best times to take your anti-HIV drugs and to identify any concerns before you begin. The chances are that there will be a combination of anti-HIV drugs available that will mean you don't have to change your lifestyle at all or make only small changes to your routine.

Treatment guidelines change as new drugs become available, so it is important to keep talking to your doctor about your experience of treatment and your options at every visit, to make sure you are taking the right treatment combination for you.

If you miss doses, or you do not take the drugs as prescribed, the HIV in your body is more likely to develop resistance to therapy, and sometimes to other similar antiretroviral drugs. Resistance means the drugs can stop working. Developing a routine will help with taking medication, as can using other reminders such as the alarm or an app on your phone or a pill box.

For more information on preparing to start treatment, and tips on taking your treatment as prescribed, you may find the *Taking your HIV treatment* booklet in this series helpful.

## Managing side effects

**Like all medications, anti-HIV drugs can cause side effects. Quite often, these happen during the first few days or weeks of treatment, but then decrease or stop altogether.**

They are usually mild and not everyone will experience them. Your clinic doctor or GP may also prescribe other treatments to help you cope with side effects during this initial period.

Side effects most commonly reported include headache, nausea (feeling sick), diarrhoea and tiredness. You don't have to try to live with side effects – if they persist after the early period of therapy tell your doctor, especially if they are interfering with the quality of your life. If you feel you can't tolerate these side effects, there are many treatment options available and one of these may suit you better.

Certain side effects, such as rash or fever, should be reported to your doctor as soon as they happen (see entries on individual drugs for information on potentially dangerous side effects requiring quick action).

Most people gain some weight after starting antiretroviral treatment. Some people may gain a substantial amount of weight, especially women and people who start treatment with low CD4 counts, and the weight gain may increase the risk of diabetes or heart disease.

It's unclear if specific drugs increase the chance of substantial weight gain. If you are concerned about weight gain, ask your doctor which drugs will be most suitable for you.

If you are ever worried about a serious side effect you are experiencing, such as feeling unwell with a skin rash, and your clinic is closed (at the weekend or on a bank holiday), you can attend your nearest hospital emergency department.

In this booklet, we generally divide side effects into two types:

- **Common** — a side effect that occurs in at least one in a hundred people (more than 1%) who take this drug.
- **Rare** — a side effect that occurs in fewer than one in a hundred people (less than 1%) who take this drug. We have included rare side effects if they are potentially dangerous and life-threatening.

This booklet lists all the common side effects, but you may experience only a few, or none at all.

You can find out more about side effects and how to deal with them in aidsmap's booklet *Side-effects*.

## Managing drug interactions

**A drug interaction is a risky combination of drugs, when one drug interferes with the way another drug works.**

It is really important that your HIV doctor and pharmacist know about all other medicines and drugs that you are taking – this includes those prescribed by another doctor. If your GP knows about your HIV medications, they can check for drug interactions too.

Let them know about over-the-counter drugs, herbal and alternative treatments, non-tablet medications such as inhalers, nasal sprays, creams, eye drops and injections, and recreational drugs (especially GHB/GBL, ketamine, mephedrone, benzodiazepines and MDMA). Use of poppers along with erectile dysfunction drugs may cause a hazardous fall in blood pressure, especially if you are taking the boosting agents ritonavir or cobicistat as part of your treatment.

Some drug combinations should definitely not be taken together. Reasons for this include serious side effects, or interactions which can make one or both drugs ineffective or toxic.

Other interactions are less dangerous, but still need to be taken seriously. Levels of one or both drugs in your blood may be affected and you may need to change the doses you take.

You can find out more about drug interactions in aidsmap's booklet *Taking your HIV treatment* and on the website [www.hiv-druginteractions.org](http://www.hiv-druginteractions.org)

## Having a baby

**Antiretroviral drugs need to be taken during pregnancy in order to prevent the transmission of HIV to the baby.**

It is important to tell your doctor if you are pregnant or thinking about having a baby. You can find out more about HIV and pregnancy in aidsmap's page *Pregnancy and birth: information for people with HIV* at [www.aidsmap.com](http://www.aidsmap.com)

Some forms of hormonal contraception, including patches and implants, as well as oral ('the pill'), are less effective in women taking certain antiretroviral drugs, because of drug interactions.

Other forms of contraception are unaffected by HIV drugs and many HIV drugs do not affect contraception, so you should be able to find an HIV drug combination that fits with your choice of contraception. It is important that you discuss your contraception needs with your clinician, especially if your circumstances change.

You can find out more about contraception options from your healthcare team and in aidsmap's page *Contraception: information for people with HIV* at [www.aidsmap.com](http://www.aidsmap.com)





## How anti-HIV drugs are dispensed

**GPs are not currently able to prescribe antiretroviral drugs, so they are prescribed by specialist HIV clinics in most areas around the country.**

You will get a prescription for your HIV treatment when you attend your regular HIV clinic appointment, which you can take to either the specialist HIV pharmacy (in larger clinics) or to the hospital's outpatient pharmacy. Alternatively, you may be able to arrange with your clinic to have your HIV treatment delivered to you at home or a designated local pharmacy. Other high-street chemists will not usually be able to dispense antiretroviral drugs.



Unless you are taking injectable treatment, you should be given supplies to last until your next clinic appointment. Generally, the maximum that can be dispensed is a six-month supply.

The pharmacist will ask you if you are allergic to any medicines and explain how to take the drugs that have been prescribed to you. They will also ask you about the medicines you may be taking so that they can check for any potential interactions with these medicines and anti-HIV drugs.

Pharmacists can help you with managing your medication use, including adherence, side effects, drug interactions, food and drink requirements, storage, pill swallowing, and advice on taking your medicines while travelling. Pharmacists are also able to advise you on selecting a suitable over-the-counter medicine for conditions such as hay fever, colds or pain control.



## Generic medicines

Pharmaceutical drugs are given several names:

- an abbreviated name based on its chemical make-up or manufacturer, such as FTC
- a generic name which is the chemical name of the medicine, such as emtricitabine
- a brand name which belongs to a particular company. A brand name starts with a capital letter and is generally written in italics, such as *Emtriva*.

This booklet lists the most common names a drug has at the start of a drug entry.

The company that develops a drug will patent it, which means they have exclusive rights to manufacture it for a period of time.

Once the patent expires, other companies can produce their own versions of the same drug. These are called generic drugs.

Generics have the same active ingredients as branded drugs, but they are usually cheaper because there are reduced research and development costs associated with them. All generic versions of a drug contain the same active ingredients and work in the same way.

Where possible, the NHS prescribes generic medicines, because they are cheaper and they work just as well as branded drugs. You may receive generic drugs with different packaging or colours from time to time because your clinic may buy drugs from several manufacturers.

## Recommended treatment in the UK

**In the UK, the British HIV Association publishes expert treatment guidelines that recommend the safest and most effective treatment for HIV.**

The most recent guidelines (2022) recommend that most people should start treatment when they are ready with one of the following combinations:

- bictegravir / tenofovir alafenamide / emtricitabine (*Biktarvy*) – one tablet, once a day – see page 21 for more information
- dolutegravir / abacavir / lamivudine (*Triumeq*) – one tablet, once a day – see page 39
- dolutegravir / lamivudine (*Dovato*) – one tablet, once a day – see page 24
- dolutegravir (*Tivicay*) plus either tenofovir alafenamide / emtricitabine (*Descovy*) or tenofovir disoproxil / emtricitabine (non-branded pill) (two tablets, once a day) – see pages 57, 46 and 49.

Sometimes these combinations will not be suitable for you and your clinic will suggest another combination.

## Types of antiretroviral drugs

There are six main types ('classes') of antiretroviral drugs. Different classes work at different stages of the HIV lifecycle to stop it making new viruses. The four main classes, which most people are treated with, target one of three viral proteins which control HIV's lifecycle: reverse transcriptase, integrase and protease.

**Nucleoside reverse transcriptase inhibitors (NRTIs)**, target reverse transcriptase. This class of drugs is sometimes referred to as the 'backbone' of an HIV treatment combination.

**Integrase inhibitors (INIs)**, which target integrase, and stop the virus from inserting itself into human DNA.

**Non-nucleoside reverse transcriptase inhibitors (NNRTIs)**, which also target reverse transcriptase, but in a different way to NRTIs.

**Protease inhibitors (PIs)**, which target an HIV protein called protease.

**Entry inhibitors**, which stop HIV from entering human cells. These include fusion inhibitors, CCR5 inhibitors and attachment inhibitors. These types of drugs are rarely used and are not included in this booklet.

Each class of drug attacks HIV in a different way. Generally, drugs from two (or sometimes three) classes are combined to ensure a combined attack on HIV.

Historically, most people started HIV treatment on two NRTI drugs combined with either one NNRTI, one PI or one INI – hence, 'triple therapy'. Increasingly, some people are offered a two-drug combination containing an integrase inhibitor and a drug from another class. These two-drug combinations containing an integrase inhibitor are just as effective as three-drug combinations.

Many of the HIV drug combinations used today combine two or three drugs in one pill (a 'fixed-dose' combination). Or you may be offered a combination that consists of two drugs in one pill, accompanied by a third drug in another pill.

The next section of the booklet has information on each anti-HIV drug in current use. The single-tablet regimens are listed first, in alphabetical order. This is followed by sections on each drug class, and then injectable treatments. You can also find drugs by using the index at the end of the booklet.

## Single-tablet regimens

Fixed-dose pills combine two or three antiretroviral drugs from more than one drug class, allowing many people to take their HIV treatment in one pill, once a day. They are often known as 'single-tablet regimens'. However, the most appropriate medication for you will not necessarily be available as a single-tablet regimen, so you may need to take treatment with several pills.

There are also combination pills combining two drugs from a single class. These can reduce the number of pills in your treatment regimen, but they still need to be taken with at least one other drug as well. These combinations are listed later in this booklet.



## Biktarvy

**Contains:** bictegravir / emtricitabine / tenofovir alafenamide

*Biktarvy* provides triple-drug combination treatment in one pill. It contains 50mg of bictegravir, 200mg of emtricitabine and 25mg of tenofovir alafenamide. This is a combination of one integrase inhibitor and two NRTIs. The dose is one purple-brown tablet, once a day.

**Guidelines:** *Biktarvy* is a recommended option if you are starting treatment for the first time. It may also be an option if you are changing treatment.

**Tips on taking it:** *Biktarvy* is taken once a day, with or without food. *Biktarvy* should be taken at least 2 hours before, or 6 hours after, antacids containing magnesium or aluminium. *Biktarvy* can be taken at the same time as supplements containing calcium or iron if food is taken as well. *Biktarvy* should be taken at least 2 hours after supplements containing calcium or iron if taken on an empty stomach.

**Common side effects:** Nausea, diarrhoea, depression, abnormal dreams, headache, dizziness and tiredness.

**Rare side effects:** Suicidal thoughts and behaviour, severe rash (Stevens-Johnson syndrome).

**Children:** In the European Union, *Biktarvy* is approved for use in children weighing at least 25kg, with reduced-strength tablets available for children weighing between 14 and 25kg. *Biktarvy* reduced-strength tablets are **not** approved in the UK yet.

**Key drug interactions:** Avoid St John's wort (*Hypericum perforatum*), rifabutin, rifampicin, rifapentine, carbamazepine, oxcarbazepine, phenobarbital, carbamazepine, phenytoin, ciclosporin, and sucralfate.

*Biktarvy* can affect the diabetic medicine metformin, so make sure you speak to your doctor about this before starting either drug.



## Delstrigo

**Contains:** doravirine / lamivudine / tenofovir disoproxil

*Delstrigo* provides triple-drug combination treatment in one pill. It combines 100mg of doravirine, 300mg of lamivudine and 245mg of tenofovir disoproxil fumarate. This is a combination of one NNRTI and two NRTIs. The dose is one yellow tablet, once a day.

**Guidelines:** *Delstrigo* may be an option if you are starting treatment for the first time. It may also be an option if you are changing treatment.

**Tips on taking it:** *Delstrigo* is taken once a day, with or without food.

**Common side effects:** Abnormal dreams, difficulty in sleeping, nightmare, depression, headache, dizziness, drowsiness, cough, an irritated or runny nose, nausea, diarrhoea, abdominal pain, vomiting, hair loss, rash, muscle disorders, fatigue, fever.

**Rare side effects:** Lactic acidosis (too much lactic acid in the blood), suicidal thoughts, hepatitis, acute kidney failure or damage.

**Children:** *Delstrigo* is **not** approved for use in children.

**Key drug interactions:** Avoid St John's wort, carbamazepine, oxcarbazepine, phenobarbital, phenytoin, rifampicin, rifapentine, mitotane, enzalutamide, lumacaftor, nafcillin, telotristat ethyl, lesinurad, bosentan, dabrafenib and modafinil.

See the doravirine entry (page 63) for more information.



## **Dovato**

**Contains:** dolutegravir / lamivudine

Dovato is a two-drug combination treatment containing 50mg of dolutegravir and 300mg of lamivudine. This is a combination of one integrase inhibitor and one NRTI. No other antiretrovirals need to be taken with *Dovato*. The dose is one white tablet, once a day.

**Guidelines:** *Dovato* may be an option if you are starting treatment for the first time. It may also be an option if you are changing treatment.

**Tips on taking it:** *Dovato* is taken once a day, with or without food. Antacids containing magnesium should be taken at least 6 hours before or 2 hours after *Dovato*. Calcium supplements, iron supplements or multivitamins should be taken at the same time as *Dovato*, with a meal.

**Common side effects:** Headache, dizziness, drowsiness, tiredness, depression, anxiety, difficulty in sleeping, abnormal dreams, nausea, diarrhoea, abdominal pain, vomiting, flatulence, increased liver enzymes or creatinine phosphokinase, rash, itching, hair loss, muscle and joint pains.

**Rare side effects:** Suicidal thoughts, liver failure, lactic acidosis (too much lactic acid in the blood), hypersensitivity (allergic) reaction (severe rash, fever, weakness, facial swelling).

**Children:** *Dovato* can be taken by children 12 years or over, weighing at least 40kg.

**Key drug interactions:** Avoid cladribine or medicines containing sorbitol, xylitol, mannitol, lactitol, maltitol (may be present as fillers in liquid medicines). If *Dovato* is used with St John's wort, the tuberculosis (TB) treatment rifampicin or the anticonvulsants carbamazepine, phenobarbital, phenytoin or oxcarbazepine, an additional 50mg tablet of dolutegravir should be taken 12 hours after *Dovato*.

See the dolutegravir entry (page 57) for more information.



## Efavirenz / emtricitabine / tenofovir disoproxil

This tablet provides triple-drug combination treatment in one pill. It combines 600mg efavirenz, 200mg emtricitabine and 245mg tenofovir disoproxil. This is a combination of one NNRTI and two NRTIs. It is available as a generic drug, so its appearance will depend on which type your clinic dispenses. The branded version, called *Atripla*, is no longer used.

See the entries on efavirenz (page 64) and emtricitabine / tenofovir disoproxil (page 49) for more information.



## Eviplera

**Contains:** rilpivirine / emtricitabine / tenofovir disoproxil

*Eviplera* provides triple-drug combination treatment in one pill. It combines 25mg rilpivirine, 200mg emtricitabine and 245mg tenofovir disoproxil. This is a combination of one NNRTI and two NRTIs. The dose is one purplish-pink tablet once a day.

**Guidelines:** *Eviplera* is no longer recommended for people starting treatment for the first time. It may be an option if you are changing treatment.

**Tips on taking it:** Take one tablet once a day. Always take with food, such as your main meal of the day, otherwise you will not absorb enough rilpivirine and your treatment may fail. A nutritional drink is not sufficient.

**Common or very common side effects:** Raised cholesterol and triglyceride levels, loss of appetite, depression, sleep disorders, abnormal dreams, sleepiness, nausea, vomiting, diarrhoea, dizziness, insomnia, headache, weakness, rash, itching, abdominal pain, dry mouth, fatigue, bloating, flatulence, changes in kidney function, raised liver enzyme, amylase and creatine kinase levels, low blood phosphate levels, skin darkening, low white blood cell count.

**Rare side effects:** Lactic acidosis (too much lactic acid in the blood), kidney failure.

**Children:** *Eviplera* is **not** approved for use in children.

**Key drug interactions:** Do not take *Eviplera* with the anticonvulsants carbamazepine, oxcarbazepine, phenobarbital or phenytoin or with St John's wort. *Eviplera* should not be taken at the same time as the antibiotics rifampicin and rifabutin (often used to treat TB). Some other antibiotics can increase blood levels of rilpivirine.

Medicines that affect your stomach acidity can block the way *Eviplera* is absorbed:

- Don't take proton pump inhibitors (PPIs) such as omeprazole or lansoprazole with *Eviplera*.
- Indigestion remedies called H2-blockers such as ranitidine (*Zantac*) should be taken at least 12 hours before or at least 4 hours after taking *Eviplera* and at the lowest effective dose possible. Speak to your pharmacist or doctor for more advice.
- If taking other indigestion remedies, such as *Gaviscon* or *Rennies*, or calcium supplements, it is important that these agents are taken at least 2 hours before or at least 4 hours after taking *Eviplera*, as they can prevent it being absorbed properly.
- Make sure your doctor knows if you are taking any indigestion medication, even if you don't take it every day.

See the entries on rilpivirine (page 67) and emtricitabine / tenofovir disoproxil (page 49) for more information.

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## Genvoya

**Contains:** elvitegravir / cobicistat / emtricitabine / tenofovir alafenamide

*Genvoya* provides triple-drug combination treatment in one pill. It combines 150mg of elvitegravir, 150mg of cobicistat, 200mg of emtricitabine and 10mg of tenofovir alafenamide. This is a combination of one integrase inhibitor, one boosting agent and two NRTIs. The dose is one green tablet, once a day.

**Guidelines:** *Genvoya* is no longer recommended for people starting treatment for the first time. It may be an option if you are changing treatment.

**Tips on taking it:** Take one tablet once a day, with food. If you take *Genvoya* without food you may not absorb enough elvitegravir and your treatment may fail.

**Common or very common side effects:** Abnormal dreams, headache, dizziness, nausea, diarrhoea, vomiting, flatulence, rash, tiredness.

**Rare side effects:** Depression and suicidal thoughts are uncommon side effects, affecting people who have pre-existing mental health problems.

**Children:** *Genvoya* can be taken by children aged 12 years and over, weighing 35kg or more.



**Key drug interactions:** You should not take any supplements that contain calcium, iron, magnesium, aluminium or zinc at the same time as *Genvoya*, as they will reduce the absorption of elvitegravir. Take them at least 4 hours apart from *Genvoya*. It is likely that the boosting agent contained in *Genvoya*, cobicistat, will interact with many other drugs, because of the way it works. If you are using any product that contains steroids such as inhalers, eye drops, skin creams or injections, discuss with your pharmacist, as the cobicistat in *Genvoya* may also boost steroid levels, leading to harmful side effects.

The antibiotics used to treat TB, rifampicin and rifabutin, may reduce levels of tenofovir alafenamide, as may some anticonvulsants including phenytoin and carbamazepine.

See the cobicistat entry (page 82) for more information.



## *Juluca*

**Contains:** dolutegravir / rilpivirine

*Juluca* is a two-drug combination treatment containing 50mg of dolutegravir and 25mg of rilpivirine. This is a combination of one integrase inhibitor and one NNRTI. No other antiretrovirals need to be taken with *Juluca*. The dose is one pink tablet, once a day.

**Guidelines:** *Juluca* is not recommended for people starting treatment for the first time. It may be an option if you are changing treatment.

**Tips on taking it:** Take one tablet once a day, with a meal. H2-receptor antagonists such as famotidine, used to reduce the amount of stomach acid, should be taken at least 4 hours after or 12 hours before *Juluca*. Antacids containing magnesium should be taken at least 6 hours before or 4 hours after *Juluca*. Calcium supplements, iron supplements or multivitamins should be taken at the same time as *Juluca*, with a meal.

**Common side effects:** Difficulty in sleeping, abnormal dreams, depression, depressed mood, anxiety, headache, dizziness, drowsiness, fatigue, nausea, diarrhoea, abdominal pain, vomiting, flatulence, dry mouth, decreased appetite, rash, itching, increased liver enzymes or bilirubin or creatinine phosphokinase or lipase or pancreatic amylase, decreased white blood cell count, haemoglobin or platelet count, increased total or LDL cholesterol, increased triglycerides.

**Rare side effects:** Allergic (hypersensitivity) reaction (severe rash, fever, weakness, facial swelling), liver failure, suicidal thoughts and behaviour.

**Children:** *Juluca* is **not** approved for use in children.

**Key drug interactions:** Avoid St John's wort, the antibiotics rifampicin and rifapentine, carbamazepine, oxcarbazepine, phenobarbital and phenytoin (used to treat epilepsy and prevent seizures), proton pump inhibitors (PPIs), such as omeprazole, esomeprazole, lansoprazole, pantoprazole, rabeprazole, and systemic dexamethasone or dofetilide.

See the entries on dolutegravir (page 57) and rilpivirine (page 67) for more information.



## **Odefsey**

**Contains:** rilpivirine / emtricitabine / tenofovir alafenamide

Odefsey provides triple-drug combination treatment in one pill. It combines 25mg of rilpivirine, 200mg of emtricitabine and 25mg of tenofovir alafenamide. This is a combination of one NNRTI and two NRTIs. The dose is one grey tablet, once a day.

**Guidelines:** Odefsey is no longer recommended for people starting treatment for the first time. It may be an option if you are changing treatment.

**Tips on taking it:** Take one tablet once a day. Always take with food, such as your main meal of the day, otherwise you will not absorb enough rilpivirine and your treatment may fail. A nutritional drink is not sufficient.

**Common or very common side effects:** Difficulty in sleeping, abnormal dreams, depression, headache, dizziness, loss of appetite, nausea, abdominal pain, vomiting, dry mouth, indigestion, flatulence, diarrhoea, rash, tiredness, low white or red blood cell count, low platelet count, raised lipid or pancreatic enzyme or liver enzyme levels.

**Rare side effects:** Severe rash and fever.

**Children:** Odefsey can be taken by children aged 12 years and over, weighing 35kg or more.

**Key drug interactions:** It's not recommended that rilpivirine be used in combination with other NNRTIs.

Do not take rilpivirine with the anticonvulsants carbamazepine, oxcarbazepine, phenobarbital or phenytoin, or with St John's wort. Rilpivirine should not be taken at the same time as the antibiotics rifampicin and rifabutin (often used to treat TB). Some other antibiotics can increase blood levels of rilpivirine.

Medicines that affect your stomach acidity can block the way rilpivirine is absorbed:

- Don't take proton pump inhibitors (PPIs), such as omeprazole or lansoprazole with *Odefsey*.
- Indigestion remedies called H2-blockers (such as ranitidine, *Zantac*) should be taken at least 12 hours before or at least 4 hours after taking *Odefsey*. Speak to your pharmacist or doctor for more advice.
- If taking other indigestion remedies (such as *Rennies* or *Gaviscon*) or calcium supplements, take them at least 2 hours before or 4 hours after taking *Odefsey* as they can prevent it being absorbed properly.
- Make sure your doctor knows if you are taking any indigestion medication, even if you don't take it every day.

The antibiotics used to treat TB, rifampicin and rifabutin, may reduce levels of tenofovir alafenamide, as may some anticonvulsants including phenytoin and carbamazepine.

See the entries on rilpivirine (page 67) and *Descovy* (page 46) for more information.



## **Stribild**

**Contains:** elvitegravir / cobicistat / emtricitabine / tenofovir disoproxil

*Stribild* provides combination treatment in one pill. It combines 150mg of elvitegravir, 150mg of cobicistat, 200mg of emtricitabine and 245mg of tenofovir disoproxil. This is a combination of one integrase inhibitor, one boosting agent and two NRTIs. The dose is one green tablet, once a day.

**Guidelines:** *Stribild* is no longer recommended for people starting treatment for the first time. It may be an option if you are changing treatment.

**Tips on taking it:** Take one tablet once a day, with food. If you take *Stribild* without food you may not absorb enough elvitegravir and your treatment may fail.

**Common or very common side effects:** Nausea, diarrhoea, vomiting, abnormal dreams, headache, fatigue, dizziness, insomnia, rash, itching, abdominal pain, bloating, flatulence, constipation, sleepiness, weakness, skin darkening, low white blood cell count, low blood phosphate levels, raised triglyceride and blood sugar levels, and raised liver enzyme, amylase, creatinine or creatine kinase levels.

**Rare side effects:** Suicidal thoughts and behaviours, liver failure, kidney failure, pancreatitis, allergic (hypersensitivity) reaction, severe rash, lactic acidosis (too much lactic acid in the blood).

**Children:** *Stribild* can be taken by children aged 12 years and over, weighing 35kg or more.

**Key drug interactions:** You should not take any supplements that contain calcium, iron, magnesium, aluminium or zinc at the same time as *Stribild*, as they will reduce the absorption of elvitegravir. Take them at least 4 hours apart.

It is likely that the boosting agent contained in *Stribild*, cobicistat, will interact with many other drugs, because of the way it works. It will have a similar list of interactions to the booster drug ritonavir. See the protease inhibitor section (page 71) for more detail, but this includes some commonly prescribed drugs such as certain antibiotics, antidepressants and hormonal contraceptives.

If you are using any product that contains steroids such as inhalers, eye drops, skin creams or injections, discuss with your pharmacist, as the cobicistat in *Stribild* may also boost steroid levels, leading to harmful side effects.

See the entries on cobicistat (page 82) and emtricitabine / tenofovir disoproxil (page 49) for more information.



## Symtuza

**Contains:** darunavir / cobicistat / emtricitabine / tenofovir alafenamide

Symtuza provides combination treatment in one pill. It combines 800mg of darunavir, 150mg of cobicistat, 200mg of emtricitabine and 10mg of tenofovir alafenamide in one yellow tablet. This is a combination of one protease inhibitor, one boosting agent and two NRTIs. The dose is one yellow tablet, once a day.

**Guidelines:** *Symtuza* may be an option if you are starting treatment. It is also an option if you are changing treatment (see the entry for darunavir on page 77 for further options for use).

**Tips on taking it:** Take one tablet once a day, with food. If you take *Symtuza* without food you may not absorb enough darunavir and your treatment may fail.

**Common or very common side effects:** Allergic (hypersensitivity) reaction, loss of appetite, abnormal dreams, diabetes, raised lipid or liver or pancreatic enzyme or creatinine levels, headache, dizziness, diarrhoea, nausea, vomiting, abdominal pain, bloating, indigestion, flatulence, facial swelling, rash, itching, aching joints or muscles, tiredness, feeling weak.

**Rare side effects:** Severe rash with fever (Stevens-Johnson syndrome).

**Children:** *Symtuza* can be taken by children aged 12 years and over, weighing 40kg or more.

**Key drug interactions:** See *Protease inhibitors: drug interactions* for further details (page 71). If you are using any product that contains steroids such as inhalers, eye drops, skin creams or injections, discuss with your pharmacist, as the cobicistat in Symtuza may also boost steroid levels, leading to harmful side effects.

The antibiotics used to treat TB, rifampicin and rifabutin, may reduce levels of tenofovir alafenamide and darunavir, as may some anticonvulsants including phenytoin and carbamazepine.

See the entries on darunavir (page 77), cobicistat (page 82) and Descovy (page 46) for more information.



## Triumeq

**Contains:** dolutegravir / abacavir / lamivudine

*Triumeq* provides combination treatment in one pill. It combines 50mg dolutegravir, 600mg abacavir and 300mg lamivudine in one oval tablet. This is a combination of one integrase inhibitor and two NRTIs. The dose is one purple tablet, once a day.

**Guidelines:** *Triumeq* is a recommended option if you are starting treatment for the first time. It may be an option if you are changing treatment.

**Tips on taking it:** Take one tablet once a day, with or without food, preferably in the morning.

**Common or very common side effects:** Difficulty in sleeping, sleepiness, abnormal dreams, depression, headache, diarrhoea, nausea, fatigue, rash, itching, vomiting, stomach pain, dizziness, hair loss, depression, flatulence, abdominal pain, bloating, muscle pain and discomfort, joint pain, an irritated or runny nose, cough, indigestion, gastric reflux and loss of appetite, fever, anxiety.

**Rare side effects:** Allergic (hypersensitivity) reaction, lactic acidosis (too much lactic acid in the blood), suicidal thoughts and behaviours, liver failure. Some, but not all, studies have linked abacavir with an increased risk of heart attack. For this reason, abacavir is not recommended if you have other risk factors for heart disease. Your clinic should discuss this with you.



**Important warning:** Abacavir and dolutegravir, two of the active ingredients in *Triumeq*, can cause a serious allergic (hypersensitivity) reaction involving rash and fever soon after starting treatment. It is important that you discuss this with your doctor or pharmacist, before taking *Triumeq*.

Abacavir can cause a serious allergic (hypersensitivity) reaction in people who carry one particular gene. Before starting treatment with abacavir or any abacavir-containing regimen you should have an HLA-B\*5701 test to see if you have this gene. If the test is positive you **must not** take abacavir. If the test is negative, it is highly unlikely that an allergic reaction will occur, but contact your HIV clinic immediately (or A&E if out of hours) if you begin to feel unwell after starting the drug.

The particular side effects you should look out for during this time are:

- Any skin rash OR

if you get one or more symptoms from at least TWO of the following groups:

- fever
- shortness of breath, sore throat or cough
- nausea or vomiting, or diarrhoea or abdominal pain
- severe tiredness or achiness or generally feeling ill.

You should never retry *Triumeq*, or any combinations containing abacavir, if it has been stopped due to hypersensitivity.

Symptoms of allergic reaction to dolutegravir are similar to those for abacavir but may also include blisters, mouth ulcers and facial swelling. Again, contact your HIV clinic immediately if these symptoms appear after starting the drug.

**Children:** In the European Union, *Triumeq* tablets can be taken by children aged 12 years and over, weighing 25kg or more. There is also a dispersible tablet that can be prescribed for children weighing between 14 and 25kg.

**Key drug interactions:** You should not take antacids, to treat indigestion and heartburn, or multivitamins, calcium or iron supplements during the 6 hours before you take *Triumeq*, or for at least 2 hours after you take it.

*Triumeq* can affect the diabetic medicine metformin, so make sure you speak to your doctor about this before starting either drug. As with all antiretrovirals, speak to your clinic about all medicines you are taking or may take before you start *Triumeq*.

See the entries on dolutegravir (page 57) and abacavir / lamivudine (page 44) for more information.

## Nucleoside reverse transcriptase inhibitors (NRTIs)

These drugs may be available either as single agents or as part of a fixed-dose combination tablet.

### Abacavir

Abacavir is included in the following combination tablets:

- a generic tablet that also contains lamivudine (see page 44)
- *Triumeq* – with dolutegravir and lamivudine (see page 39).

See each combination for information on the approved dosing, taking it, side effects and drug interactions.

Single tablets only containing abacavir (including the branded version, *Ziagen*) are now rarely used.

generic

## Abacavir / lamivudine

This combination is available as a generic tablet, so its appearance will depend on which type your clinic dispenses. The branded version, called *Kivexa*, is rarely used. This tablet combines lamivudine and abacavir. The dosage is one tablet (600mg abacavir and 300mg lamivudine) once a day.

**Guidelines:** Abacavir / lamivudine is only recommended for people starting treatment for the first time if taken with dolutegravir (as two tablets or in the combination pill *Triumeq*). Abacavir / lamivudine in combination with another agent may be an option if you are changing treatment.

**Tips on taking it:** Take one tablet once a day, with or without food.

**Common or very common side effects:** Headache, nausea and vomiting, diarrhoea, stomach pains, loss of appetite, tiredness, lack of energy, fever, general feeling of being unwell, difficulty sleeping, muscle pain and discomfort, joint pain, cough, irritated or runny nose, skin rash, hair loss.

**Rare side effects:** Allergic (hypersensitivity) reaction, lactic acidosis. Some, but not all, studies have linked abacavir with an increased risk of heart attack. For this reason, abacavir is not recommended if you have other risk factors for heart disease. Your clinic should discuss this with you.



**Important warning:** Abacavir can cause a serious allergic (hypersensitivity) reaction. This is associated with the presence of a particular gene. Before starting treatment with an abacavir-containing regimen you should have a test to see if you have the HLA-B\*5701 gene. If the test is positive you **must not** take abacavir / lamivudine. If the test is negative, it is unlikely that an allergic reaction will occur, but you must contact your HIV clinic immediately (or A&E if out of hours) if you begin to feel unwell after starting the drug.

The particular side effects you should look out for during this time are:

- Any skin rash OR

if you get one or more symptoms from at least TWO of the following groups:

- fever
- shortness of breath, sore throat or cough
- nausea or vomiting, or diarrhoea or abdominal pain
- severe tiredness or achiness or generally feeling ill.

You should never retry abacavir, or take *Triumeq*, if it has been stopped due to hypersensitivity. These issues should be discussed with your doctor.

**Children:** Abacavir / lamivudine (600/300mg) can be taken by children weighing 25kg or more. Liquid formulations of each drug are available for younger children.

**Key drug interactions:** Phenytoin, used to treat epilepsy, may also interact with abacavir.





## Descovy

**Contains:** emtricitabine / tenofovir alafenamide

Emtricitabine and tenofovir alafenamide are combined in this pill. The dose is one grey tablet (200mg emtricitabine and 10mg of tenofovir alafenamide) or one blue tablet (200mg emtricitabine and 25mg of tenofovir alafenamide) taken once a day. The dose depends on which other drugs *Descovy* is combined with.

**Guidelines:** *Descovy* may be an option if you are starting treatment for the first time, in combination with another agent. Emtricitabine and tenofovir alafenamide are also available within several fixed-dose combinations. See *Tenofovir alafenamide* (page 52) for more details.

**Tips on taking it:** Take one tablet once a day with or without food. The pill containing 10mg of tenofovir alafenamide should only be taken if combined with the boosters ritonavir or cobicistat. The pill containing 25mg of tenofovir alafenamide should be taken with all other third agents, e.g. etravirine, raltegravir, efavirenz, dolutegravir.

**Common or very common side effects:** Nausea, abnormal dreams, headache, dizziness, diarrhoea, vomiting, stomach pain, flatulence, rash and fatigue.

**Rare side effects:** Swelling of the skin, face, lips, tongue or throat.

**Children:** *Descovy* can be taken by children aged 12 years and over, weighing 35kg or more.

**Key drug interactions:** The antibiotics used to treat TB, rifampicin and rifabutin, may reduce levels of tenofovir alafenamide, as may some anticonvulsants including phenytoin and carbamazepine.

## Emtricitabine

Emtricitabine is included in the following combination tablets:

- a generic tablet that also contains tenofovir disoproxil (see page 49)
- a generic tablet that also contains tenofovir disoproxil and efavirenz (see page 26)
- *Descovy* – with tenofovir alafenamide (see page 46)
- *Eviplera* – with tenofovir disoproxil and rilpivirine (see page 27)
- *Odefsey* – with tenofovir alafenamide and rilpivirine (see page 33)
- *Stribild* – with tenofovir disoproxil, elvitegravir and cobicistat (see page 35)
- *Genvoya* – with tenofovir alafenamide, elvitegravir and cobicistat (see page 29)
- *Biktarvy* – with tenofovir alafenamide and bictegravir (see page 21).

See each combination for information on the approved dosing, taking it, side effects and drug interactions.

Single tablets only containing emtricitabine (including the branded version, *Emtriva*) are now rarely used. Another name for emtricitabine is FTC.

In most guidelines emtricitabine and lamivudine (page 51) are considered interchangeable. However, the two drugs should not be taken together.



## Emtricitabine / tenofovir disoproxil

This combination is available as a generic tablet, so its appearance will depend on which type your clinic dispenses. The branded version, called *Truvada*, is rarely used. Emtricitabine and tenofovir disoproxil are combined in this pill. The dose is one tablet (200mg emtricitabine and 245mg tenofovir disoproxil) taken once a day.

**Guidelines:** Emtricitabine and tenofovir disoproxil are a recommended option if you are starting treatment for the first time, in combination with another agent. They may also be an option if you are changing treatment.

**Tips on taking it:** Take one tablet once a day, preferably with food, although you can take emtricitabine / tenofovir disoproxil on an empty stomach.

**Common or very common side effects:** Diarrhoea, vomiting, nausea, dizziness, headache, rash, feeling weak, pain, abdominal pain, difficulty sleeping, abnormal dreams, feeling bloated, flatulence, allergic reactions, such as wheezing, swelling or feeling light-headed, low blood phosphate levels, raised liver enzymes.

**Rare side effects:** Kidney failure, lactic acidosis (too much lactic acid in the blood), bone thinning, pancreatitis, hepatitis.

**Children:** Emtricitabine and tenofovir disoproxil can be taken by children aged 12 years and over, weighing 35kg or more. Alternative formulations of each drug are available for young children.

**Key drug interactions:** It is important your doctor knows about any other drugs you are taking in case they increase your risk of kidney problems. This includes creatine supplements used to increase exercise performance, as they can interfere with the results of kidney function blood tests. Make sure you tell your doctor if you are taking creatine.

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## Lamivudine

Lamivudine is included in the following combination tablets:

- a generic tablet that also contains abacavir (see page 44)
- *Triumeq* – with abacavir and dolutegravir (see page 39)
- *Dovato* – with dolutegravir (see page 24)
- *Delstrigo* – with doravirine and tenofovir disoproxil (see page 23).

See each combination for information on the approved dosing, taking it, side effects and drug interactions.

Single tablets only containing lamivudine (including the branded version, *Epivir*) are now rarely used. Another name for lamivudine is 3TC.

In most guidelines lamivudine and emtricitabine (page 48) are considered interchangeable. However, the two drugs should not be taken together.

## Tenofovir alafenamide

Tenofovir alafenamide is included in the following combination tablets:

- *Descovy* – with emtricitabine (see page 46)
- *Odefsey* – with emtricitabine and rilpivirine (see page 33)
- *Genvoya* – with emtricitabine, elvitegravir and cobicistat (see page 29)
- *Biktarvy* – with emtricitabine and bictegravir (see page 21)
- *Symtuza* – with emtricitabine, darunavir and cobicistat (see page 37).

See each combination for information on the approved dosing, taking it, side effects and drug interactions.

Single tablets only containing tenofovir alafenamide (*Vemlidy*) are not used to treat HIV. Another name for tenofovir alafenamide is TAF.

Tenofovir alafenamide and tenofovir disoproxil (see next page) are two different formulations of the same drug. Tenofovir alafenamide may have fewer harmful effects on the kidneys or bones and may be an option for people at higher risk of these side effects.

## Tenofovir disoproxil

Tenofovir disoproxil is included in the following combination tablets:

- a generic tablet that also contains emtricitabine (see page 49)
- a generic tablet that also contains emtricitabine and efavirenz (see page 26)
- *Eviplera* – with emtricitabine and rilpivirine (see page 27)
- *Stribild* – with emtricitabine, elvitegravir and cobicistat (see page 35)
- *Delstrigo* – with lamivudine and doravirine (see page 23).

See each combination for information on the approved dosing, taking it, side effects and drug interactions.

Single tablets only containing tenofovir disoproxil (including the branded version, *Viread*) are now rarely used. Another name for tenofovir disoproxil is TDF.

Tenofovir disoproxil and tenofovir alafenamide (see previous page) are two different formulations of the same drug. Tenofovir alafenamide may have fewer harmful effects on the kidneys or bones and may be an option for people at higher risk of these side effects.

generic

## Zidovudine

**Names:** Zidovudine, AZT, *Retrovir*

**Guidelines:** Zidovudine is no longer recommended in UK guidelines for people starting treatment for the first time, but may sometimes be used in specific circumstances, such as during pregnancy and in newborn babies, or for people with resistance to other drugs.

See the *A to Z of antiretroviral drugs* at **[www.aidsmap.com](http://www.aidsmap.com)** for further information about this drug.

## Notes:



### Dolutegravir

**Names:** Dolutegravir, DTG, *Tivicay*

**Approved dosage:** If taking dolutegravir as a separate pill, take one yellow 50mg tablet once a day. Dolutegravir should be taken twice a day if you have HIV known to be resistant to other integrase inhibitors.

**Combination tablets:** Dolutegravir is included in the following combination tablets:

- *Triumeq* – with abacavir and lamivudine (see page 39)

- *Juluca* – with rilpivirine (see page 31)

- *Dovato* – with lamivudine (see page 24).

**Guidelines:** Dolutegravir is a recommended option if you are starting treatment for the first time, with either abacavir / lamivudine (in the combination pill *Triumeq*), or lamivudine (in the combination pill *Dovato*), or with tenofovir and emtricitabine. Dolutegravir may also be an option if you are changing treatment.

**Tips on taking it:** Take the tablet either once or twice daily with or without food, preferably in the morning. If you have some resistance to integrase inhibitors, you should take it with food. Dolutegravir tablets are small and may be a good option if you are having difficulty swallowing tablets.

**Common or very common side effects:** Nausea, diarrhoea, headache, rash, itching, vomiting, stomach pain or discomfort, abnormal dreams, fatigue, flatulence, increase in liver enzymes, increase in creatine phosphokinase (enzymes produced in the muscles), depression, anxiety. People taking dolutegravir may also be at higher risk of some central nervous system side effects, most commonly insomnia, dizziness and headache.

**Rare side effects:** Allergic (hypersensitivity) reaction (rash, fever, muscle pain, blistering), liver inflammation, suicidal thoughts.



**Important warning:** An allergic (hypersensitivity) reaction has been reported in some people taking dolutegravir. This is rare, but you should see a doctor immediately if you think you are experiencing an allergic reaction. The symptoms are skin rash; fever; fatigue; swelling, sometimes of the face or mouth, causing breathing problems; mouth ulcers and blisters; muscle or joint aches.

**Children:** *Tivicay* is approved for use in children aged 6 years and over, weighing at least 14kg. It is also available as dispersible tablets for children aged 4 weeks and above, weighing at least 3kg.

**Key drug interactions:** You should not take antacids (used to treat indigestion and heartburn), calcium supplements, iron or zinc supplements or multivitamins, or medicine containing magnesium or aluminium for 6 hours before you take dolutegravir, or for at least 2 hours after taking dolutegravir.

If you are taking dolutegravir with the anti-epilepsy drugs carbamazepine, fosphenytoin, phenobarbital or oxcarbazepine, the antibiotic rifampicin or St John's wort, your dose of dolutegravir will be increased to 50mg twice a day.



## Raltegravir

**Names:** Raltegravir, RAL, *Isentress*

**Approved dosage:** Take one pink 400mg tablet twice daily or two yellow 600mg tablets once a day.

**Guidelines:** Raltegravir may be an option if you are starting treatment for the first time. It may be an option if you are changing treatment.

**Tips on taking it:** Take with or without food.

**Common or very common side effects:** Loss of appetite, headache, difficulty in sleeping, abnormal dreams, depression, dizziness, vertigo, restlessness, abdominal pain, bloating, flatulence, diarrhoea, nausea, vomiting, indigestion, rash, weakness, fatigue, fever, raised liver or pancreatic enzymes, raised triglycerides.

**Rare side effects:** Suicidal thoughts and behaviours, liver failure, kidney failure, allergic (hypersensitivity) reaction, severe rash.



**Important warning:** An allergic (hypersensitivity) reaction has been reported in some people using raltegravir. This reaction is rare. See your HIV clinic immediately (or A&E if out of hours) if you develop a rash together with any of these symptoms: fever; feeling generally unwell or extremely tired; muscle or joint ache; blistering of the skin; mouth ulcers; swelling of the eyes, lips, mouth or face; breathing difficulties; yellowing of the skin or eyes; dark urine; pale stools; or pain, aching or sensitivity on the right-hand side of the body, below the ribs.

**Children:** Raltegravir 400mg is approved for use in children weighing over 25kg. Chewable tablets or granules providing lower doses are available for younger children.

**Key drug interactions:** If you are prescribed the TB drug rifampicin, your dose of raltegravir may be increased to 800mg (two pink tablets) twice daily, as rifampicin can reduce drug levels of raltegravir. You should not take any supplements that contain magnesium, aluminium or calcium if you are taking raltegravir as they will reduce its absorption. These supplements should be taken at least 4 hours before or after raltegravir if you are taking it twice daily.

## Bictegravir

See *Biktarvy* (page 21)

## Cabotegravir

See *Rekambys* and *Vocabria* (injectable rilpivirine and cabotegravir) (page 87)

## Elvitegravir

See *Stribild* (page 35) and *Genvoya* (page 29)

Elvitegravir must be taken with the booster drug cobicistat. Currently, elvitegravir is only available as part of the combination pills *Stribild* or *Genvoya*, which also include cobicistat.



## Non-nucleoside reverse transcriptase inhibitors (NNRTIs)



### Doravirine

**Names:** Doravirine, DOR, *Pifeltro*

**Approved dosage:** One white 100mg tablet once a day.

**Combination tablet:** Doravirine is also available in a tablet that also includes lamivudine and tenofovir disoproxil, marketed as *Delstrigo* (see page 23).

**Guidelines:** Doravirine may be an option if you are starting treatment for the first time. It may also be an option if you are changing treatment.

**Tips on taking it:** Take one tablet once a day, with or without food.

**Common or very common side effects:** Abnormal dreams, difficulty in sleeping, nightmare, headache, dizziness, drowsiness, nausea, diarrhoea, abdominal pain, vomiting, rash, tiredness.

**Rare side effects:** Suicidal thoughts, acute kidney injury, depression, kidney stones.

**Children:** Doravirine is approved for use in children aged 12 years and older, weighing at least 35kg.

**Key drug interactions:** Carbamazepine, oxcarbazepine, phenobarbital, phenytoin, rifampicin, rifapentine (treatment for TB), St John's wort, mitotane, enzalutamide, lumacaftor.



## Efavirenz

**Names:** Efavirenz, EFV, *Sustiva*

**Approved dosage:** Efavirenz typically comes as 600mg tablets. It is available as a generic drug, so its appearance will depend on which type your clinic dispenses.

**Combination tablet:** Efavirenz is also available in a tablet that includes emtricitabine and tenofovir disoproxil (see page 26).

**Guidelines:** Efavirenz is no longer recommended for first-line HIV treatment, except during treatment for TB or as an alternative to an integrase inhibitor during pregnancy.

**Tips on taking it:** Take one tablet once daily on an empty stomach. Some people find taking it with food reduces side effects but avoid taking it with a high-fat meal; this may increase absorption of the drug, potentially increasing side effects. If efavirenz causes confusion or dizziness, taking the dose before going to bed can help reduce or prevent these side effects.

**Common side effects:** Rash, itching, abnormal dreams, difficulty concentrating, dizziness, headache, difficulty sleeping, drowsiness, abdominal pain, diarrhoea, nausea, vomiting, tiredness, anxiety, depression, raised triglyceride and liver enzyme levels.

Mood and sleep problems are most commonly experienced during the first four weeks of treatment and include feeling 'out of sorts', confusion, impaired concentration, sleep disturbance, abnormal dreams, anxiety and depression. In most cases these side effects go away by themselves and it isn't necessary to stop taking efavirenz. However, some people find them intolerable and need to change treatment as a result. If you have mental health problems, or have had them in the past, efavirenz may not be a good choice for you. Talk to your doctor about other treatment options.

**Rare side effects:** Severe rash, psychosis, suicidal feelings, liver failure.

**Children:** Efavirenz 600mg tablets are approved for use in children weighing 40kg or over.

**Key drug interactions:** Some drugs can interact with efavirenz and cause dangerous side effects. Some examples are ergot alkaloids (used to treat migraine and cluster headaches and to control labour), midazolam (an anaesthetic), or St John's wort.

Some drugs can interact with efavirenz and change blood levels of one or both drugs, so dose adjustments may be needed. This is the case for the antiretroviral drugs: ritonavir-boosted darunavir, lopinavir / ritonavir (*Kaletra*), ritonavir, ritonavir-boosted atazanavir and maraviroc.

This is also the case for some drugs used to treat bacterial infections such as TB (including clarithromycin, rifabutin and rifampicin), anti-fungal treatments, some drugs used to treat hepatitis C, anticonvulsants, statins, methadone, sertraline, calcium channel blockers, immunosuppressants and warfarin. It is important to discuss with your doctor any other medication you are taking before starting efavirenz, and to remind doctors that you are taking efavirenz before starting any new medicine.

Efavirenz may reduce the effectiveness of some hormonal contraceptives (such as the pill, patches or an implant). If you are using this type of contraceptive to prevent pregnancy, you should use an additional barrier method or a different type of contraception.



## Etravirine (*Intelence*)

Etravirine is used in drug combinations when resistance has developed to first-line or second-line drugs.

See the *A to Z of antiretroviral drugs* at [www.aidsmap.com](http://www.aidsmap.com) for further information about this drug.



## Rilpivirine

**Names:** Rilpivirine, RPV, *Edurant*

**Approved dosage:** One white 25mg tablet taken once a day.

**Combination tablets:** Rilpivirine is included in the following combination tablets:

- *Eviplera* – with emtricitabine and *tenofovir* disoproxil (see page 27)
- *Odefsey* – with emtricitabine and *tenofovir* alafenamide (see page 33)
- *Juluca* – with dolutegravir (see page 31).

An injectable form of rilpivirine (*Rekambys*) is available for use in combination with cabotegravir (*Vocabria*). See page 87 for more details.

**Guidelines:** Rilpivirine is no longer recommended for people starting treatment for the first time. It may be an option if you are changing treatment.

**Tips on taking it:** Take one tablet once daily. Always take with food, such as your main meal of the day, otherwise you will not absorb enough rilpivirine and your treatment may fail. Rilpivirine tablets are small, so may be a good option if you have difficulty swallowing tablets.

**Common side effects:** Insomnia (difficulty sleeping), abnormal dreams, sleep disorders, tiredness, drowsiness, nausea, vomiting, stomach pain or discomfort, reduced appetite, dry mouth, headache, dizziness, depression, low mood, rash, raised cholesterol, liver enzymes or pancreatic

amylase, reduced white or red blood cell count, low platelet count, raised triglyceride or lipase levels.

**Rare side effects:** Severe rash and allergic (hypersensitivity) reaction.

**Children:** Rilpivirine is approved for use in children aged 12 years and over.

**Key drug interactions:** It's not recommended that rilpivirine be used in combination with other NNRTIs.

Do not take rilpivirine with the anticonvulsants carbamazepine, oxcarbazepine, phenobarbital or phenytoin, the steroid dexamethasone or with St John's wort. Rilpivirine should not be taken at the same time as the antibiotics rifampicin, rifapentine and rifabutin (often used to treat TB). Some other antibiotics can increase blood levels of rilpivirine.

Medicines that affect stomach acidity can block the way rilpivirine is absorbed. Don't take proton pump inhibitors (PPIs), such as omeprazole, lansoprazole, rabeprazole or pantoprazole. Indigestion remedies called H2-blockers (such as ranitidine, *Zantac*) should be taken at least 12 hours before or at least 4 hours after taking rilpivirine. If you are taking other indigestion remedies (such as *Rennies* or *Gaviscon*) or calcium supplements, they should be taken at least 2 hours before or at least 4 hours after taking rilpivirine as they can prevent it being absorbed properly.

## Notes:

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## Protease inhibitors

Most protease inhibitors are prescribed together with either ritonavir or cobicistat. These drugs are used to 'boost' the effects of the protease inhibitor in your body. Without these boosters, your body would metabolise (break down) the protease inhibitor too quickly and it would not work effectively against the virus. See page 82 for more information about ritonavir and cobicistat.

## Drug interactions

Protease inhibitors have multiple drug interactions. Most of these are caused by the boosting effect of ritonavir or cobicistat, which increases the levels of many drugs, including protease inhibitors.

**Do not take any protease inhibitors with the following medication:**

- most steroid inhalers and nasal sprays. The steroid beclomethasone is OK but others, including fluticasone, budesonide and mometasone, are not.
- the injectable steroid triamcinolone (also known as *Kenalog*) which is used for inflamed joints.
- drugs for certain heart conditions, such as amiodarone, astemizole, flecainide, lercanidipine and quinidine.
- drugs to treat some severe mental health conditions such as psychosis or schizophrenia, including pimozide, quetiapine.
- alfuzosin (used to treat urinary problems).
- the anti-TB drug rifampicin.
- the lipid-lowering drugs simvastatin or lovastatin. Other statins such as rosuvastatin and atorvastatin can be used, but at lower doses.
- the anticoagulants (drugs that prevent blood clotting) rivaroxaban and dabigatran.

- midazolam, a benzodiazepine used as an anaesthetic. Midazolam can be used at reduced dose when injected as a sedative for certain procedures.
- erectile dysfunction drugs, such as sildenafil (*Viagra*), tadalafil (*Cialis*) or vardenafil (*Levitra*) used at full dose. Get advice from your HIV doctor or pharmacist before taking any drugs for erectile dysfunction.
- ergot derivatives (used to treat cluster headaches and migraines and to manage labour).
- antimalarial medications.
- St John's wort (*Hypericum perforatum*), the herbal antidepressant.

**Some drugs can interact with protease inhibitors and change blood levels of one or both drugs, so dose adjustments with careful monitoring may be needed. This is the case for:**

- calcium channel blockers (for example, diltiazem and verapamil)
- the heart drug digoxin
- the anticoagulant warfarin
- the asthma and allergy drugs fluticasone, salmeterol, budesonide, mometasone (including inhalers or nasal sprays)
- dexamethasone eye drops

- some steroid creams, especially if applied to large areas of skin, such as creams for eczema, psoriasis or rashes, and skin-lightening creams
- treatments for acid reflux and ulcers called proton pump inhibitors (PPIs) and H<sub>2</sub>-receptor antagonists
- indigestion remedies
- some anti-fungal treatments (although not shampoos)
- anticonvulsants (drugs used to treat epilepsy; for example, phenytoin, carbamazepine). Some anticonvulsants should never be used with some protease inhibitors (see individual entries).
- the anti-TB drugs rifabutin and rifapentine
- immunosuppressants
- injectable steroids such as depomedrone
- some chemotherapy drugs.

Methadone levels may be reduced by protease inhibitors and require an increase in dose to achieve the same effect.

Protease inhibitors may reduce the effectiveness of some hormonal contraceptives (such as the pill, patches or an implant). If you are using this type of contraceptive to prevent pregnancy you may need to use an additional or different type of contraception.



## Atazanavir



**Names:** Atazanavir, ATZ, Reyataz. Also available in the combination tablet *Evotaz*, with the boosting agent cobicistat.

**Approved dosage:** If taking atazanavir as a separate pill, take one 300mg capsule together with one 100mg ritonavir tablet once a day. Atazanavir is also available as a generic drug so its appearance will depend on which type your clinic dispenses. If taking *Evotaz*, take one pink combination tablet containing 300mg of atazanavir and 150mg of cobicistat once a day.

**Guidelines:** Atazanavir is no longer recommended for people starting treatment for the first time. It may be an option for second-line treatment.

**Tips on taking it:** Take once daily with food to improve absorption.

**Common side effects:** (Atazanavir) Nausea, diarrhoea, rash, abdominal pain, headache, vomiting, heartburn, tiredness, raised bilirubin levels, sometimes leading to jaundice. (*Evotaz*) Increased appetite, difficulty in sleeping, abnormal dreams, headache, dizziness, altered taste, raised bilirubin levels, sometimes leading to jaundice, nausea, vomiting, diarrhoea, indigestion, abdominal pain, bloating, flatulence, dry mouth, rash, tiredness.

Developing some yellowing of the skin and/or eyes (jaundice) is fairly common, especially when you first start the drug. Although this can look alarming, it is harmless and does not mean that your liver is damaged, or not working in any way.

**Rare side effects:** Kidney stones, severe rash and fever, changes in heart rhythm.

**Children:** Atazanavir is approved for use in children aged 6 years and over. *Evotaz* is approved for use in children aged 12 and over, weighing 35kg or over.

**Key drug interactions:** See the start of this section on protease inhibitors for more information on possible interactions.

Drugs that affect the acidity of your stomach and gastrointestinal tract can stop atazanavir being absorbed, meaning it may not be effective at suppressing the virus:

- Proton pump inhibitors (PPIs) (indigestion remedies that reduce gastric acid, such as lansoprazole, pantoprazole or omeprazole) should not be taken with atazanavir, unless they have been prescribed by your HIV doctor and the dose of atazanavir is increased.

- H2 blockers (treatments for ulcers, such as ranitidine (*Zantac*) should be taken only once a day, 4 to 12 hours after atazanavir (*Reyataz*). *Evogaz* should be taken with food at the same time as, or 10 hours after, an H2-receptor antagonist. If atazanavir is taken with tenofovir, you should never take H2-receptor antagonists without speaking to your doctor or pharmacist first.
- Indigestion remedies or calcium supplements should be taken at least 2 hours before or 1 hour after atazanavir.
- 'Buffered' medicines (drugs that have been prepared so they are released slowly into the body) should be taken at least 2 hours before or 1 hour after atazanavir.

Talk to your HIV doctor or pharmacist before taking any of these drugs with atazanavir, even if you only take them occasionally.

Taking NNRTI drugs with atazanavir is not recommended.



## Darunavir



**Names:** Darunavir, DRV, *Prezista*. Also available in the combination tablet *Rezolsta*, with the boosting agent cobicistat.

**Approved dosage:** If taking darunavir as a separate pill, take one 800mg tablet together with one 100mg ritonavir tablet once a day. For more resistant HIV, your doctor may prescribe one 600mg tablet together with one 100mg ritonavir tablet taken together **twice** a day. Darunavir is available as a generic drug, so its appearance will depend on which type your clinic dispenses.

Alternatively, you may be prescribed darunavir boosted by cobicistat (*Rezolsta*) if you do not have drug resistance. *Rezolsta* is a light pink-coloured combination tablet containing 800mg of darunavir and 150mg of cobicistat once a day.

**Combination tablets:** Darunavir is included in the following combination tablets:

- *Rezolsta* – with cobicistat (see above)
- *Symtuza* – with emtricitabine, tenofovir alafenamide and darunavir (see page 37).

**Guidelines:** Darunavir may be recommended for people starting treatment for the first time in some circumstances. It may also be an option if you are changing treatment.

**Tips on taking it:** Must be taken once or twice daily with food to improve absorption.



**Common side effects:** Elevated lipids, diabetes, insomnia, headache, dizziness, peripheral neuropathy, diarrhoea, nausea, vomiting and abdominal pain. Rash, itching, tiredness and fatigue are also common.

**Rare side effects:** Abnormal liver function, changes in heart rhythm, heart attack, pancreatitis, hepatitis.

**Children:** Approved for use in children of 3 years or older. An oral solution and reduced-dose tablets are available. Cobicistat is **not** recommended for use in children so darunavir should be boosted by ritonavir.

**Key drug interactions:** See the start of this section on protease inhibitors for more information on possible interactions.

The lipid-lowering drug pravastatin should be taken with caution with darunavir.

Darunavir should not be taken with the hepatitis C direct-acting antivirals elbasvir / grazoprevir (*Zepatier*), or paritaprevir, ombitasvir and dasabuvir (*Viekirax*).

## Evotaz (atazanavir / cobicistat)

See atazanavir (page 74)



## Lopinavir / ritonavir

**Names:** Lopinavir / ritonavir, LPV/r, *Kaletra*.

Lopinavir is only available in combination with ritonavir.

**Approved dosage:** 400mg lopinavir plus 100mg ritonavir twice a day, in tablets containing 200mg lopinavir and 50mg ritonavir; two tablets are taken twice daily. Once-daily dose of four tablets each containing 200mg of lopinavir and 50mg ritonavir is also available for people without resistance to protease inhibitors. It is available as a generic drug, so its appearance will depend on which type your clinic dispenses.

**Guidelines:** Lopinavir / ritonavir is no longer recommended if you are starting treatment for the first time. It is occasionally an option if you are changing treatment.

**Tips on taking it:** The tablet can be taken with or without food, but must not be broken, chewed or crushed. Taking the doses with food can reduce potential irritation of the stomach.

**Common side effects:** Nausea, vomiting, diarrhoea, abdominal pain, bloating, flatulence, tiredness, weakness, headache, heartburn and indigestion, pancreatitis, raised lipids or blood sugar, diabetes, high blood pressure, raised liver enzymes, cough, sore throat, runny nose, sinus infections, skin infections, rash, itching, allergic swelling, peripheral nerve damage, difficulty in sleeping, dizziness, muscle pain, erectile dysfunction, menstrual disorders.

**Rare side effects:** Changes in heart rhythm, reduced kidney function.

**Children:** A tablet containing 100mg of lopinavir and 25mg of ritonavir is available for use by children aged 2 years and over who can swallow a tablet. A liquid formulation is also available.

**Key drug interactions:** See the start of this section on protease inhibitors for more information on possible interactions.

Efavirenz and nevirapine reduce levels of lopinavir / ritonavir and dose adjustments are sometimes recommended when taking this medication twice-daily.

Once-daily lopinavir / ritonavir should not be taken with carbamazepine, phenobarbital or phenytoin (used to treat epilepsy).

Do not take lopinavir / ritonavir with fentanyl (for pain relief), trazodone, *Zyban*, or anti-cancer drugs called tyrosine kinase inhibitors.

## Rezolsta (darunavir / cobicstat)

See darunavir (page 77).

## Notes:

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## Boosting agents



### Cobicistat

**Names:** Cobicistat, Tybost

**Approved dosage:** Cobicistat is a boosting agent available as a 150mg tablet (Tybost) for boosting of darunavir or atazanavir, or incorporated in several other tablets.

**Combination tablets:** Cobicistat is included in the following combination tablets:

- *Evotaz* – with atazanavir (see page 74)
- *Rezolsta* – with darunavir (see page 77)
- *Stribild* – with elvitegravir, tenofovir disoproxil and emtricitabine (see page 35)
- *Genvoya* – with elvitegravir, tenofovir alafenamide and emtricitabine (see page 29)
- *Symtuza* – with darunavir, tenofovir alafenamide and emtricitabine (see page 37).

**Common side effects:** Raised blood sugar, increased appetite, difficulty in sleeping, drowsiness, abnormal dreams, headache, dizziness, altered sense of taste, nausea, diarrhoea, abdominal pain, bloating, flatulence, dry mouth, jaundice, rash, and tiredness.

**Rare side effects:** Kidney stones.

**Key drug interactions:** As a boosting agent, cobicistat can also interact with other medicines. See drug interaction information for the agents listed above for specific drug interaction information.

Cobicistat should not be used with alfuzosin, ranolazine, dronedarone, carbamazepine, phenobarbital, phenytoin, rifampicin, lurasidone, pimozide, dihydroergotamine, ergotamine, cisapride, lovastatin, simvastatin, triazolam or oral midazolam.

## generic Ritonavir

**Names:** Ritonavir, RTV, *Norvir*

**Approved dosage:** Ritonavir was one of the first protease inhibitors developed, but is no longer used as an anti-HIV drug due to its side effects. However, it is given at very low doses (too low for anti-HIV effects) to 'boost' the level of other protease inhibitors such as darunavir and atazanavir. When used for its boosting effects, the dose of ritonavir is usually 100mg once or twice daily (depending on the frequency with which you take the protease inhibitor it is boosting). It is available as a generic drug, so its appearance will depend on which type your clinic dispenses.

**Tips on taking it:** Take with food to reduce nausea. Do not chew, break or crush tablets. Ritonavir tablets and the powder for oral suspension should always be stored at room temperature.

**Common side effects (at low dose):** Raised lipid levels, diarrhoea.

**Rare side effects:** Changes in heart rhythm, severe allergic (hypersensitivity) reaction and rash (Stevens-Johnson syndrome).

**Key drug interactions:** You should not take ritonavir with any of the following drugs: alfuzosin, amiodarone, astemizole, bepridil, avanafil, chlorazepate, cisapride, colchicine, diazepam, dihydroergotamine, dronedarone, elbasvir / grazoprevir, ergonovine, ergotamine, estazolam, flecanaide, flurazepam, fusidic acid, lovastatin, lurasidone, ombitasvir / paritaprevir / ritonavir, methylergonovine, midazolam taken orally, pethidine, pimozide, piroxicam, propafenone, quetiapine, ranolazine, sildenafil (for hypertension), simvastatin, St John's wort, terfenadine, triazolam, vardenafil.

Ritonavir interacts with many other medications. Consult your doctor or HIV pharmacist before taking any other drugs with ritonavir or a ritonavir-boosted drug (including steroid-containing inhalers, nasal sprays, eye drops, creams, as well as medicines bought from a high-street chemist, herbal preparations and recreational drugs).

## Entry and CCR5 inhibitors



### Fostemsavir (*Rukobia*)

Fostemsavir is an entry inhibitor used in drug combinations when resistance has developed to first-line or second-line drugs.



### Ibalizumab (*Trogarzo*)

Ibalizumab is an entry inhibitor used in drug combinations when resistance has developed to first-line or second-line drugs. It is not licensed in the UK and must be imported on a named-patient basis.



### Maraviroc (*Celsentri*)

Maraviroc is a CCR5 inhibitor used in drug combinations when resistance has developed to first-line or second-line drugs.

See the *A to Z of antiretroviral drugs* at [www.aidsmap.com](http://www.aidsmap.com) for further information about these drugs.

## Injectable treatment



### Rekambys and Vocabria

**Contains:** Injectable rilpivirine and cabotegravir

*Rekambys* and *Vocabria* are injectable medications which, when taken together, provide a complete treatment regimen. *Vocabria* contains 600mg of cabotegravir, which is an integrase inhibitor. *Rekambys* contains 900mg of rilpivirine, which is an NNRTI.

**Guidelines:** *Rekambys* and *Vocabria* are not recommended if you are starting treatment for the first time. This combination may be an option if you are changing treatment, or if taking pills proves to be challenging.

**Tips on taking it:** You will either start treatment with this combination by taking the tablet versions of each drug for a month, to check for serious side effects, or start receiving injections as soon as you start the combination. Your doctor will discuss which approach is best for you.

You will receive separate injections of *Rekambys* and *Vocabria*. Both injections are given into the muscle of the buttocks, a few minutes apart. You will receive follow-up injections every two months. If you are unable to go to the clinic for your injections and you can't attend within one week of your original appointment, you will be given a supply of cabotegravir and rilpivirine tablets to take each day until you can go back for more injections.

**Common side effects:** Injection site reactions (bumps, swellings, pain) that go away in most people within a week. Injection site reactions are most common with the first injection and decrease over time. Other side effects: Headache, dizziness, depression, anxiety, difficulty in sleeping (insomnia), abnormal dreams, raised temperature, feeling hot, aches and pains, muscle pain, tiredness, feeling weak, nausea, vomiting, abdominal pain, diarrhoea, rash.

**Rare side effects:** Fainting after injection, liver toxicity.

**Children:** *Rekambys* and *Vocabria* are **not** approved for use in children.

**Key drug interactions:** Avoid carbamazepine, oxcarbazepine, phenobarbital, phenytoin, rifabutin, rifampicin, rifapentine, dexamethasone, except as a single-dose treatment, St John's wort.

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## Lenacapavir (*Sunlenca*)

Lenacapavir is capsid inhibitor used in drug combinations when resistance has developed to first-line or second-line drugs. Lenacapavir is taken by injection under the skin twice a year; it is used in combination with other drugs which may require daily dosing.

See the *A to Z of antiretroviral drugs* at **[www.aidsmap.com](http://www.aidsmap.com)** for further information about this drug.

## Summary

- Combination HIV treatment prevents HIV from damaging your immune system, and so prevents ill health and prolongs lives.
- Everyone who has diagnosed HIV is recommended to take HIV treatment. It is better for your health to begin HIV treatment sooner, rather than later.
- Combinations of two or three anti-HIV drugs provide the best chance of reducing the amount of HIV in your blood to very low levels (an undetectable viral load).
- Combination HIV treatment prevents HIV from being passed on during sex when your viral load is undetectable.

- It is important to take your anti-HIV drugs as prescribed in order to prolong the benefit you will get from them and reduce the risk of resistance to the drugs developing.
- Tell a member of your HIV healthcare team (doctor, nurse or pharmacist) if you are having problems, including side effects, with your anti-HIV drugs. Make sure they know about any other medicines you are taking (including those bought from a chemist, herbal preparations and recreational drugs).

## Glossary

**adherence** The act of taking treatment exactly as prescribed, i.e. at the right times, with or without food as needed.

**antiretroviral** A medicine that acts against retroviruses such as HIV.

**BHIVA** The British HIV Association, the expert group which issues guidelines for HIV treatment in the United Kingdom.

**CD4** A molecule on the surface of some white blood cells onto which HIV can bind. The CD4 cell count roughly reflects the state of the immune system.

**drug interaction** A risky combination of drugs, when drug A interferes with the functioning of drug B. Blood levels of the drug may be lowered or raised, potentially interfering with effectiveness or making side effects worse. Also known as a drug-drug interaction.

**generic** A medication manufactured and sold without a brand name, in situations where the original manufacturer's patent has expired. Generic medications contain the same active ingredients as branded drugs, and have comparable strength, safety, efficacy and quality.

**immune system** The body's mechanisms for fighting infection and getting rid of cells that are not working properly.

**regimen** A drug or treatment combination and the way it is taken.

**resistance** A drug-resistant HIV strain is one that is less susceptible to the effects of one or more anti-HIV drugs.

**side effect** Any additional, unwanted, effect caused by a drug.

**undetectable viral load** A level of viral load too low to be picked up by the viral load test being used. Achieving an undetectable viral load is the aim of HIV treatment.

**viral load** Measurement of the amount of virus in a sample of blood. HIV viral load is checked to see if treatments are working.



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## Notes:

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## aidsmap's booklets

aidsmap's booklets are available from HIV clinics which are members of our Patient Information Scheme.

Ask for our booklets at your clinic.

- A long life with HIV
- Anti-HIV drugs
- CD4, viral load & other tests
- HIV & hepatitis
- HIV, mental health & emotional wellbeing
- HIV & sex
- HIV & women
- HIV, stigma & discrimination
- Nutrition
- Side-effects
- Taking your HIV treatment
- Your next steps

## More from aidsmap

aidsmap's website is full of useful information resources and the latest news on HIV and related topics: **[www.aidsmap.com](http://www.aidsmap.com)**

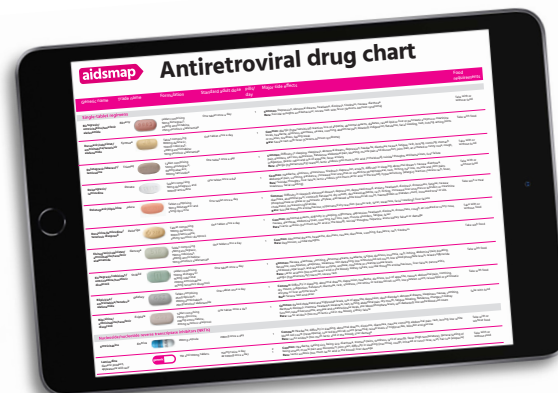
Subscribe to our bulletins and news feeds, and connect with us on social media:

**[www.aidsmap.com/about-us/connect-us](http://www.aidsmap.com/about-us/connect-us)**

All of aidsmap's booklets and resources for members of our Patient Information Scheme are on the clinic portal: **[clinic.nam.org.uk](http://clinic.nam.org.uk)**

## Antiretroviral drug chart

A one-page reference guide to all the anti-HIV drugs licensed for use in the UK or European Union, with information on formulation, dosing, key side effects and food requirements.



**aidsmap** values all feedback which helps us to improve our resources. If you have any comments or feedback about any of our resources, please email us at **[info@nam.org.uk](mailto:info@nam.org.uk)**

The information in this booklet isn't intended to replace discussion with your doctor about your treatment and care, but it may help you to think about any questions you'd like to ask your healthcare team.

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