

# Preventing infections

Last updated June 2012/ Due for review June 2014

Because HIV can weaken the immune system, it leaves the body vulnerable to some infections it would normally be able to fight off. These are often called opportunistic infections because they take the opportunity of a weak immune system to take hold. The best way to prevent opportunistic infections is to take a combination of potent anti-HIV drugs. It is currently recommended that HIV treatment should be started when your CD4 cell count is around 350.

For most people with HIV, the longer they have HIV, the more damage the virus does to their immune system. After this damage reaches a certain point you can become ill from illnesses that your body could have easily fought off before. These are called opportunistic infections. If you are diagnosed with HIV whilst you still have a reasonably strong immune system, you should be regularly monitored to make sure that you start taking HIV treatment before you are at risk of developing any serious infections. Many people, however, are only diagnosed with HIV when they have a very weak immune system and are at risk of developing or already ill with an infection.

Doctors can predict when you are at risk from opportunistic infections by counting the number of immune cells called CD4 cells (or T-helper cells) in your blood. For adults, your risk of developing most serious infections is low if your CD4 count is above 200. But the number and frequency of infections that you may develop increases the further your CD4 count falls below 200.

If your immune system is so weak that you are vulnerable to opportunistic infections then you should take HIV treatment.

Your doctor may also recommend that you take medication to prevent particular infections. This is called primary prophylaxis – preventing an illness *before* it occurs. If you do develop an infection, once you have recovered you may need drugs to prevent it from recurring. This is called secondary prophylaxis or maintenance therapy.

Better drugs for opportunistic infections have increased the life expectancy of people with HIV. For some infections there are very effective drugs – PCP, a pneumonia which used to be the main cause of death for people with AIDS, can now be largely prevented. However, not all infections can be prevented, and clinics may have different views on which treatments are appropriate.

Treatment with anti-HIV drugs can suppress HIV replication to very low levels and lead to an increase in CD4 count and immune function. Even if you are taking anti-HIV drugs, if you have a CD4 cell count below 200, it is still very important to continue to take medication which protects you against developing infections, until your immune system has recovered to such an extent that it can once again fight such infections by itself. It is normally safe to stop treatment to prevent infections once your CD4 cell count has increased to above 200 for a few months.

Deciding whether to take prophylaxis means weighing up the benefits of preventing the infection against the inconvenience of taking medication and the risk of side-effects. For some infections, such as PCP, the balance is clearly in favour of prophylaxis. For others such as CMV and MAI, the balance is less clear. It's important to consider the following issues when deciding.

First you should consider whether you are at risk of a particular infection. Partly this depends on your CD4 count. But your doctor can also offer blood tests to see if you are infected with certain organisms, such as toxoplasmosis and CMV. If you are not yet infected, you may be able to take steps to avoid exposure, rather than taking drugs.

If you are at risk, find out how effective the medication is likely to be, and what side-effects it may cause. But remember, every person is different. There is no way to tell whether you will develop a particular side-effect. Most side-effects from preventive drugs will go away if you stop taking them.

Some drugs must be taken with particular foods or no food at all, or at particular times of day. This may require changes in your routine that could

affect your quality of life. There may be several possible drugs, so you can choose one that suits you best.

Some people may not be able to find an acceptable prophylaxis treatment. Others may not like the idea of taking any medication whilst they still feel well. An alternative is for your doctor to monitor you for the earliest signs of each opportunistic infection. When caught early on, most infections respond well to treatment.

However, opportunistic infections are serious – they are a major cause of death among people with AIDS.

## When should you consider primary prophylaxis?

Below 200	PCP	<i>Septin</i> , pentamidine, dapsone
Below 200	Toxoplasmosis	<i>Septin</i>
Below 100	MAI	Rifabutin, clarithromycin
Below 100	CMV	Oral ganciclovir

However, it should again be emphasised, that HIV treatment is recommended once your CD4 count is around 350. If your CD4 cell count is 200 to 250, or below, you should start taking anti-HIV drugs immediately.