

Diarrhea

An increased movement of stool and excessive loss of water characterize diarrhea. Patients usually suffer from larger bowel movements and may have to go to the toilet more frequently. In most people, diarrhea is usually due to an infection in the digestive system (stomach, small and large intestine), which can be caused by a bacterium, a parasite, a fungus or a virus.

Diarrhea is relatively common in people with HIV, especially in people with a low CD4 count, and can be more or less serious (from semi-loose to completely liquid stool). Other common symptoms include stomach pains, a loss of appetite and a loss of weight. It is very important to see a doctor if diarrhea becomes persistent for several days.

Doctors used to believe that in most people with advanced AIDS, diarrhea was due to the effects of HIV on the intestine. This point of view has been rejected and a larger number of factors are now taken into account. In some cases, diarrhea can be a side effect of anti-HIV agents such as nelfinavir (Viracept), zidovudine (Retrovir), ddI in pills (Videx), foscarnet (Foscavir) and interferon alpha (Roferon or Intro). It can also be due to bacterial, parasitic, fungal or viral infections. Finally, there are many other causes which can also result in the apparition of diarrhea.

Diagnostic

It can sometimes be difficult to determine the real causes of diarrhea. It is highly recommended that your doctor first look for every possible causes until he finds the most probable one. For a better diagnostic, it is preferable to analyze a recent sample of stool.

Although infectious agents cannot always be found in the stool, they usually show in the intestinal tissue (mucous). In that case, your doctor may also take a rectal biopsy if necessary, which consists in taking a sample of the tissue either orally to the stomach or the small intestine (endoscopy), or by rectal way up to the rectum or the colon in the lower part of the intestines (sigmoidoscopy or colonoscopy). If the analysis shows no infectious organism and you are under treatment, your doctor may conclude that your diarrhea is due to the treatment.

However your doctor must take every factor into account. He will have to know what you have eaten and drunk the few days prior to the analysis and/or in the course of the diarrhea. Indeed, certain types of food and drinks may cause diarrhea.

Treatment

To treat diarrhea efficiently you must take three aspects into account:

Causes, symptoms and effects

Diarrhea is usually caused by a number of opportunistic infections commonly including parasitic and bacterial infections such as *Cryptosporidium*, *Microsporidium*, *Shigella*, *Campylobacter* and *Salmonella*. The other opportunistic infections which can result in diarrhea and also affect other body parts, are caused by the *Citomegalovirus* (CMV) and the *Micobacterium avium intracellulare* (MAI). Those agents penetrate the body when the immune system has been seriously affected by AIDS and infect it.

If your diarrhea is due to anti-HIV drugs such as protease inhibitors (PI), your doctor will probably decide to reduce the doses or offer you a new treatment. In some cases a change will not be necessary. Indeed some drugs can be associated to certain types of food, drinks and/or specific food complements (calcium, for instance), therefore facilitating their absorption and avoiding gastrointestinal effects. Your doctor should adapt your treatment to you as best as possible.

What happens if diarrhea is not treated?

The most serious short-term consequence is dehydration due to an excessive loss of water, salts and vitamins, which are essential to the body. If it is not treated, dehydration will rapidly result in a loss of weight (wasting syndrome). If diarrhea persists for too long, dehydration can finally result in the patient's death.

Therefore, diarrhea can become a very serious problem if it is not treated in time. The most important is to stop diarrhea as soon as possible and regain a normal level of water and salts to avoid major problems. It is thus highly recommended to go to your closest health center and ask for medical support. If you don't speak the language of the country where you are staying at or you don't know which center to go, or you are scared because you don't have residency papers, go to any immigration support associations and tell them about your situation. They can help you.

Weight Loss

The loss of weight, also known as cachexia, is one of the most common symptoms of HIV infection and can appear at any stage of infection. This is why you should be very aware of any irregular weight loss, above all when it is not intentional. Indeed it could be due to an HIV related infection or be a sign of disease. Malnutrition can reduce the immune system activity. This is why it is recommended to always maintain a complete and balanced diet.

What are the causes of a weight loss?

Weight loss happens when the body uses more nutrients than it receives from food. It can be due to several causes during HIV infection:

- HIV itself can increase the amount of nutrients needed by the body. In other words, it increases its metabolism.
- HIV itself can modify intestinal tissue and make the absorption of nutrients more difficult. This is known as "bad absorption".
- Other intestinal infections can also result in bad absorption and/or diarrhea.
- A loss of appetite resulting from an infection will make you eat less than you really need to.
- Other specific conditions such as mouth and throat infections can also make it harder for you to feed yourself.
- Some drugs can lower your appetite or cause secondary effects, such as nausea, vomiting, indigestion, and can change the flavor of food, making it harder for you to tolerate food.

How can weight loss be prevented?

The most important is to start treating all infections related to HIV as soon as possible and make sure that you eat properly. It is easier to avoid weight loss without to have to gain weight later.

After you have been diagnosed with HIV, it is highly recommended to go to a health center and ask to see a nutritionist, preferably specialized in HIV. He/she will be able to elaborate a special diet for you and adapt it to your metabolism in order to avoid weight loss.

The nutritionist can adapt your diet to include the most important types of nutrients and introduce the necessary changes for your diet to be best adapted to your treatment. This will permit you to control certain problems such as diarrhea. If necessary he/she can also recommend complementary food and drinks to improve your nutrition. This is particularly important during or just after the times when you are not feeling healthy.

If you have symptoms such as a loss of appetite, persistent nausea and/or serious nausea, you should go and see an HIV specialist as soon as possible. He/she will be the only one who can help you to find the exact cause of the weight loss and recommend you an appropriate treatment to lower the symptoms. If the problems are caused by any of the drugs included in your HIV treatment, he/she can also prescribe you other drugs.

It is also highly recommended to maintain good hygiene in food preparation. It is wise to cook your food well and to make sure it is always well conserved. These measures can help you to reduce the risk of getting intestinal infections such as Salmonella and Campilobacter. Amongst other basic precautions, it is recommended to boil water and avoid direct contact with human or animal stool in order to avoid parasitic infections such as Criptosporidium.

HIV treatments often result in a considerable gain of weight. This is why the choice of your HIV treatment is essential to avoid or rectify the loss of weight. One of the most beneficial strategies would be to make your immune system stronger in order to fight intestinal parasites such Criptosporidium and Microsporidium, which are hard to treat directly.

Make some efforts to gain weight

If you have lost weight after an HIV related infection, your nutritionist might recommend you to increase the amount of calories and proteins you are taking in order to gain more weight. He/she will sometimes recommend you to take appetite stimulators, although they tend to make you gain weight by accumulating fat, when what you really want is to gain muscle mass. This is why you have to talk to your nutritionist to determine your priorities and your options.

Some nutritionists can prescribe you anabolic steroids for a short period of time. In association with moderated physical exercises, they could help you increase your body mass.

How to prevent infections

In most people with HIV, the prolonged duration of HIV infection can seriously damage the immune system. Long-term HIV+ patients will suffer from diseases their body would have effectively fought off before. These diseases are known as opportunistic infections.

Doctors can evaluate the risks to develop opportunistic infections by measuring the count of immune cells -also known as CD4 cells or auxiliary T lymphocytes, or T cells- in the blood. It is established that adults' risk of developing a serious infection is lower when their CD4 count is superior to 200/mm3. But the accumulation and the frequent apparition of new opportunistic infections in a patient can cause a decrease in CD4 count.

Your doctor might recommend you to start taking an anti-HIV treatment to prevent the apparition of opportunistic infections, above all when your CD4 count falls below the safety levels. This type of therapy is known as primary prophylaxis and its objective is to prevent infections before they appear. But after this infection is treated, you will be advised to take a treatment preventing it to appear again. This is known as secondary prophylaxis or maintenance therapy.

The larger amount of drugs available against opportunistic infections has permitted to prolong HIV+ people's survival. For instance, such infections as PCP (a form of pneumonia caused by the organism called *Pneumocystis carinii*), which was probably the most common cause of death among people with AIDS, can now be treated with efficient drugs that can prevent further episodes for a long time. However, all infections cannot be prevented and the choice of a treatment might vary depending on your doctor.

HIV treatments can reduce viral load to very low levels and help CD4 counts to increase and the immunity to be restored. Whether or not you are under treatment, you should continue the prophylaxis that protects you from new infections, until your immunity system is strong enough to face new infections alone.

Before taking a prophylactic treatment, you have to decide whether or not it is worth it: you might want to prevent opportunistic infections from developing but do not forget that you might also suffer from the side effects of treatment. With infections such as PCP, it is highly preferable to start prophylaxis as soon as possible, whereas for other infections (CMV and MAI for instance) you really can give it a thought. All factors have to be taken into account before making your decision.

Above all it is recommended to evaluate with a CD4 count which is the real risk of developing an infection. If you develop an opportunistic infection, your doctor will probably recommend you to do a blood analysis to determine what type of organism causes the infection (toxoplasmosis or CMV

for instance). If no opportunistic infections show in the results, it is better to avoid being exposed to any of them than to have to take a treatment later.

If there is a real risk of developing an opportunistic infection, make sure to chose an efficient treatment and understand the possible side effects. However, do not forget that each person is different and it is therefore impossible to know for sure what type of side effects might appear. Most of the side effects which are caused by preventive therapies disappear shortly after treatment interruption.

Certain treatments do not require any food restrictions but others can only be taken with certain types of food and at very strict hours. You should expect to readjust your day-to-day life and accept a change in your life style. However, there is a large number of treatment options among which you can chose the one that will be best adapted to your day-to-day life.

Some patients seem to be unable to adapt themselves to any prophylactic treatments and others refuse to take any treatment because they are feeling healthy. In any case, it is important to make sure to detect any infection in time, considering that treatments are usually efficient against most of them.

Do not neglect the consequences of opportunistic infections, which are still the most common cause of death in people with AIDS. If you develop an opportunistic infection, you might lose weight and have a hard time to gain it back, which will make it easier for other infections to appear.

When should primary prophylaxis be taken

CD4 COUNT	INFECTION	EFFICIENT TREATMENTS
> 200	PCP	Septtrin®, pentamidine and dapsone
> 200	Toxoplasmosis	Septtrin®
> 100	MAI	Rifabutin and clarithromycin
> 100	CMV	oral ganciclovir

Unsafe sex

Unsafe sex is when there is any sort of anal, oral or vaginal sexual contact without using a male or female condom or any other protection. Most STDs (sexually transmitted diseases) are transmitted during unprotected sexual intercourse.

Unprotected sexual penetrations -introduction of the penis inside the genitals of another person-, either anal or vaginal, present the highest risk of STD transmission, although these infections can also be transmitted through unprotected oral sex -when the mouth is in contact with genitals- or through oral anal sex -when the mouth is in contact with the anus.

People practicing oral sex sometimes like to use flavored condoms. If you have anal sex, it is very important to use a condom with water-based lubricant and to avoid oil-based lubricants such as Vaseline, which can damage the latex of the condom. Also, nonoxynol-9 spermicides are not recommended for they can cause irritations and facilitate the transmission of HIV and other infections.

Sex with HIV- people or people whose status is unknown

If you are HIV+ and you have sex with HIV- people or people whose status is unknown, the best way to protect them against HIV and protect yourself against possible STDs is to use a condom. Even if anti-HIV drugs have suppressed your viral load to undetectable blood levels, you can still transmit HIV to other people for there is still a sufficient quantity of virus in the sperm and vaginal secretions.

Sex with HIV+ people

If you are HIV+ and you have sex with other HIV+ people, it is highly recommended and much safer to use a condom during sexual intercourse, for the following reasons:

You will avoid unwanted pregnancies. For serodiscordant couples -when one of the partners only is HIV+, the use of condoms during pregnancy and breast-feeding will allow the baby to avoid getting infected.

You will avoid getting infected by new HIV strains which might cause the failure of a treatment which could have been efficient. Indeed several studies have proved that there is a risk of cross-contamination with different HIV strains which could be more aggressive than the infection and resistant to HIV drugs.

You will also avoid getting or transmitting other sexually transmitted diseases.

Sexually transmitted diseases (STDs)

Bacteria-caused MSTs, such as gonorrhea or chlamydia, can

be treated easily and efficiently in both most of HIV+ and HIV- people, if they are detected and treated. Premature treatment interruption can lead to sterility problems and sometimes to internal organ deterioration. Syphilis, particularly in people whose immune system has been damaged, can be hard to diagnose and treat. This MST can be more aggressive when the immune system is damaged.

Viral STDs such as genital herpes or genital warts are not curable even in HIV- people. They can be controlled with a treatment but can appear again in the future and be harder to control. In HIV+ people they can appear more frequently and be harder to treat. Genital herpes is associated to a higher risk of HIV transmission, especially in the case of ulcers. Some HIV strains which cause genital warts are associated to cervical and anal genital cancer.

Hepatitis A and B, and -not as easily- hepatitis C, can be transmitted during unprotected sexual intercourse and present more complications in people living with HIV. Hepatitis can have serious effects on the liver, which will sometimes reduce the number of treatment options and be responsible for tolerance problems.

Vaccines are available against hepatitis A and B, although not against hepatitis C. They can usually be obtained in HIV treatment centers. It is especially recommended for men having sex with men to be vaccinated against hepatitis A and B. After, you will have to do regular immunity controls to make sure the vaccine is still efficient against hepatitis A and B.

Some of the opportunistic infections that affect HIV+ people are sexually transmitted. For instance there are good reasons to believe that Kaposi sarcoma is sexually transmitted through a certain type of herpes. HIV- and HIV+ people can get intestinal infections such as Giardia, Entamoeba (little parasites that settle in the abdomen and can cause diarrhea), Cryptosporidium and Microsporidium, which can be transmitted through unprotected anal/oral contact or any type of sexual act involving a contact between the mouth and contaminated stool. They can result in serious diarrhea, above all in people whose immune system is seriously damaged.

HIV+ people who also have STDs show higher HIV levels in their genital fluids, which makes the risk of transmitting HIV higher during sex. It is recommended to people with an active sexual life to do regular sexual health tests. Many treatment centers have departments specialized in sexual health, where tests and free treatments are confidentially available.

Oral Sex

Historically it has been very difficult to establish what influence oral sex has in the transmission of HIV with only a few cases recorded. On the other hand, many people have vaginal or anal sex, which are the well known forms of HIV transmission. Even though there have been apparently some cases of HIV transmission through oral sex, health professionals have focused more on the ways of transmission that present more risks. This strategy may have played a role in the low risk profile associated with oral sex and may have left some people confused about the different options for risk reduction.

What risks are involved with oral sex?

HIV can be transmitted from one person to another depending on the type of contact they have had together. For example, HIV transmission will be more likely to happen through unprotected sexual contacts (i.e. without condoms), non sterilized needle exchange between intravenous drug users, and through mother-to-child vertical transmission.

It has been proved that oral sex is the least risky of all types of sexual relations. However it is not completely free of risk. Also it is very important to take into account that other sexually transmitted diseases such as syphilis, herpes and gonorrhoea, can be easily transmitted through oral sex.

A few years ago some studies were published on the risk of HIV transmission through oral sex. One study in North America showed that out of 122 gay men living with HIV, 8% declared that oral sex was their only risky activity. However, some of the participants who had first made that statement, later admitted that they had also had unprotected anal sex.

When is oral sex the most risky?

The greatest risk of HIV transmission through oral sex is when another sexually transmitted disease is present and has not been cured or treated correctly. There is also a risk of transmission through oral sex if there are open sores, lesions or abrasions in the mouth or gums, and if one of the partners has an infection, including sexually transmitted diseases, in the throat or the mouth, which could cause inflammation.

Viral load tests show that HIV particles are almost always found in semen. A high viral load in the blood can indicate a high viral load in the semen. Meanwhile the opposite may not be certain: having an undetectable viral load in the blood does not mean that there is no HIV particles in the semen.

The idea that if an anti-HIV treatment is being taken it will reduce the risk of infection or protect the other sexual partner, is absolutely unfounded.

In the case of vaginal fluid the viral load levels can vary. Evidently these levels are higher during the menstruation period: when the cells that carry HIV get into the cervix, there is a higher possibility that they will be found in the vaginal

fluid along with blood. This situation increases the risk of transmission through oral sex during the menstruation period.

How can risks be reduced?

There are many ways of reducing the risks that are involved with oral sex. Naturally some will be more acceptable than others depending on the person. You will be the only one to decide what level of risk is acceptable for yourself. If you wish, you can talk to your doctor about it or go to an NGO that you feel comfortable with. Many of the following strategies also offer some protection against other sexually transmitted diseases.

- You may go on having oral sex if you think the risk of HIV transmission is low, or you may decide to stop even though you know the risk is low.
- You may consider reducing the number of partners with whom you practice oral sex, or go on with it provided that you are using protective barriers such as condoms with men, and a latex ring or a female condom with women.
- You may decide to only receive oral sex, which seems safer than giving it to another person.
- You may decide to ejaculate, or not to, in the mouth of your partner, and the other way round.
- You may decide not to have oral sex with a woman during her menstruation period.
- The risks of HIV transmission through oral sex increase if you have problems with bleeding gums, ulcers, open wounds or sores in the mouth. Before having oral sex you may also decide not to brush your teeth, nor use dental floss to avoid micro lesions in the gums.

If you think that you have contracted some type of sexually transmitted disease it is highly recommended that you go to your doctor for a check up, which will make it possible to treat it in time if you do have one, and will reduce the risk to transmit that disease, along with HIV, to your sexual partners. This way, you will also reduce the risk of contracting HIV if you are HIV-.