Strategies for managing opportunistic infections

HIV (human immunodeficiency virus) infects the cells of your body’s immune system. This, in turn, weakens the immune system, causing it to lose its ability to fight disease. This includes fairly common infections that may cause little or no harm in a healthy person, but take the opportunity of a weakened immune system to cause serious and even life-threatening disease. This is why they’re called opportunistic infections, or OIs.

Regardless of where you are in your HIV disease, there are things that you can do to prevent and treat OIs. Preventing OIs applies to people at all stages of HIV disease. It includes:
1. understanding what OIs are,
2. learning how to prevent them,
3. using preventive treatment when needed,
4. treating them as they occur, and
5. using maintenance therapy when needed.

A plan for treating OIs includes:
• Seeing your doctor regularly. This generally means every 3–6 months for most people or more often for people dealing with complications. A doctor experienced in HIV disease who has treated people with HIV is better able to recognize and treat OIs and should be more familiar with preventive therapy.
• Noting and telling your doctor(s) about all the symptoms you have so they can diagnose problems early.
• Treating infections as they occur, completing treatment and using maintenance therapy when needed. This may include the need for lifelong therapy.

Understanding OIs
The Centers for Disease Control (CDC) created a list of serious and life-threatening diseases, listed in the chart on pages 3 & 4. When these diseases occur in HIV-positive people, they’re called AIDS-defining conditions. (AIDS is short for Acquired Immune Deficiency Syndrome.) So when a person has an AIDS-defining condition, it results in an AIDS diagnosis for that person. An AIDS diagnosis can also occur if CD4 counts go below 200 or CD4 percentages fall below 14%.

OIs can be fairly common infections, like genital herpes. But that doesn’t mean every HIV-positive person who has herpes also has AIDS. This is because herpes becomes an OI only when it uses a weakened immune system to become more aggressive, persistent and harder to treat. So, if you have HIV and genital herpes you don’t automatically have AIDS; but, having a herpes outbreak that persists for a month despite its treatment, is.

It’s possible for people to get conditions that aren’t on the CDC’s list. Occasionally the CDC revises its list to include these new conditions. For example, hepatitis C is not currently an AIDS-defining OI. But more data show that people with HIV are at higher risk for more aggressive hepatitis C disease.

Learning how to prevent OIs
Some OIs can be prevented. Others are more difficult to prevent because they’re common and we’re exposed to them often, like MAC. Or, we just don’t know how they’re spread, like PCP. But you can reduce your risk of some of these infections by practicing
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Safer sex, washing food well, handling animals properly, and getting screened for them.

Several sexual infections can be found on the CDC’s list. So if you’ve never been exposed to them, like herpes or HPV (which can cause cervical and anal cancers), then you can change your sexual behavior to reduce your risk for these infections. Project Inform’s publication, Sex and Other Prevention Concerns for Positive People, contains information on how you can prevent many of these infections.

If you like to cook, then thoroughly washing meats and peeling and washing fruits and vegetables can help reduce your risk for several dangerous infections. Boiling water, getting a good water filter and avoiding raw and undercooked food can go a long way to protecting you. Ask questions about the food you want to order at restaurants.

Handling animals, whether they’re pets in your home or on a farm or in the wild, can introduce several serious infections, including toxo. You don’t have to give up your pet. You can achieve this by making sure your cat or bird doesn’t go outside, washing your hands well after handling every time, and avoiding their feces.

People with HIV should be screened for many OIs when they first find out they’re HIV-positive, as part of their early lab screenings. In some cases, this allows people to know if they’re already exposed to an organism and helps them learn how to prevent infections they don’t already have. You can also consider getting vaccines for some infections like hepatitis A and B, which can cause more severe disease in HIV-positive people.

Other suggestions on preventing OIs:
- Wear gloves when gardening or changing a litter box.
- Learn about the infections you could get.
- Use a separate towel to wipe off gym equipment.
- Avoid being around people with known disease, such as pneumonia or TB.
- Don’t share syringes.

Treating OIs as they occur
Because HIV replicates more as your immune system battles other infections, treating those infections as they occur is critical not only in clearing them, but also curbing further damage done by HIV.

The earlier something is diagnosed and treated, the more likely its treatment will be successful and result in full recovery. This means regular checkups by your doctor (every 3–6 months) and talking to him or her about your symptoms.

If you experience a new symptom and are between doctor visits, make an appointment. Don’t wait to have something looked at. Keep a health journal or diary, or jot down when a symptom occurs and how long it remains. This may help your doctor figure out if a symptom is a drug side effect, a sign of an OI or something else.

Many OIs have the same symptoms, and some infections can mask others. So, treatment may only deal with part of a problem. Dealing with multiple infections may take diligence on your part when seeing many doctors and specialists. But it can easily become a full time job juggling your appointments as your different doctors order many different lab tests. It’s your primary doctor’s job to manage all of this, even when s/he is busy. It can help prepare for your appointments, write down your questions beforehand, and have someone like an advocate with you to record the answers.

Once an illness is diagnosed, completing your treatment is vital. Also, drugs that treat some OIs may interact with your HIV meds. Any time a new drug is added to your regimen, it’s wise for you, your doctor or pharmacist to assess whether it’s safe to use with your other meds and adjust doses as needed.
Using preventive therapy

OIs are generally not a problem for people whose CD4 counts remain stable above 200. It's very rare for people with HIV to die of AIDS at this level. However, as your CD4s decline, your risk for getting OIs increases.

In general, if CD4 counts fall below 200, people are at higher risk for PCP. Preventive therapy is advised. For people with other symptoms of HIV infection, such as repeated fungal infections, PCP preventive therapy should be started sooner. If CD4 counts fall below 200, then preventive therapy for toxo is recommended for people who test positive for it. If CD4 counts fall below 100–150, preventive therapy for MAC and CMV is advised. For people who suspect they’ve been exposed to TB, preventive therapy is also warranted.

Perhaps the best strategy for preventing OIs is to keep your CD4s above 200. This is reflected in the Federal Guidelines, which recommend all people should consider starting HIV therapy regardless of their CD4 counts. This is because HIV therapy stops HIV from destroying immune cells, preventing the further decline of the immune system.

Using maintenance therapy

After treating an OI, it's sometimes necessary to take medicines to prevent it from coming back. This is called maintenance therapy, and it could be taken for life. In some cases, it may be stopped if a person’s immune system recovers by using potent HIV therapy.

Some people with repeated herpes outbreaks will take long-term therapy to prevent them from coming back. Similarly, some people troubled with repeated fungal infections will take long-term anti-fungal drugs. However, maintenance therapy is somewhat controversial. This is because these organisms can develop resistance to the drugs, leaving a person few options if or when a serious infection occurs.

When these types of infections continue to happen, it may come down to a quality of life issue. Maintenance therapy may be the only viable option for a person. So carefully weighing the risks and benefits is critical to making the right choice. Some will choose to risk losing viable treatments later to ease the problems of recurrent infections. Others will simply choose to treat these infections as they happen in hopes of preserving future treatment.

List of AIDS-defining OIs from the Centers for Disease Control

Candidiasis (thrush) of throat (esophagus, trachea) or lungs

Fungus. Most people have candida in their body. Generally the body keeps it under control. Sugars (including alcohol) are food for it. There may be ways to adjust diet to help prevent it from being a problem.

Cervical cancer, invasive and/or recurrent

Cancer/Virus. Often caused by human papilloma virus (HPV), which causes genital warts. Safer sex may help reduce the risk of HPV infection. =Many women are already infected. Get regular GYN exams.

Coccidioidomycosis, outside lungs and/or throughout body

Fungus. (Valley Fever) Found in soil in the southwestern US. Passed through the air, in dust and dirt, but not from person to person. Most problematic in Kern/Tulare counties and San Joaquin Valley in California.

Cryptococcosis, outside lungs

Fungus. Found in soil, with bird droppings. Passed through air, not person to person. Avoid handling birds and avoid areas with lots of bird droppings.
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Cryptosporidiosis with diarrhea more than 1 month
*Parasite.* Found in feces of many species and contaminated drinking water. Avoid feces and contaminated water. Avoid drinking from rivers and streams. Use filters that can filter out crypto.

Cytomegalovirus disease, other than liver, spleen or lymph nodes
*Virus.* Most (50–85%) people likely infected already. Passed through sex, saliva, urine and other body fluids and from mother to child. If not infected, safer sex may help prevent it.

Encephalopathy (“AIDS dementia”)
*Virus.* Caused by HIV. Possibly preventable by using HIV drugs that cross blood-brain barrier.

Herpes outbreak lasting over 1 month, or infections in lungs/throat
*Virus.* Genital herpes is passed sexually. Safer sex can decrease risk of infection. Oral-to-genital spread possible.

Histoplasmosis, outside lungs and/or throughout body
*Fungus.* Found in eastern/central US, in soil contaminated with bat or bird droppings. Can pass through the air when disturbed.

Isosporiasis with diarrhea more than 1 month
*Parasite.* Found in feces, contaminated food or water. Most common in tropical and subtropical region of the US. Avoid feces and contaminated water.

Kaposi’s sarcoma (KS)
*Cancer/Virus:* Human herpes virus 8. Passed through close sexual contact and mother to child. Practicing safer sex may help prevent.

Lymphoma of the brain
*Cancer.* Unknown cause, but Epstein Barr Virus may play role in risk for lymphoma.

Lymphoma – Burkitt, non-Burkitt, immunoblastic
*Cancer.* Unknown cause.

Mycobacterium avium complex (MAC) or *M. kansasii* disease, outside lungs and/or throughout body
*Bacteria.* Found everywhere—soil, food and animals. Avoid handling soil, carefully handle and prepare food. Difficult to prevent exposure.

Mycobacterium disease of unknown type, outside lungs and/or throughout body
*Bacteria.* Likely found in soil, food, animals. Difficult to prevent exposure.

Toxoplasmosis of brain
*Parasite.* Cats and birds are major sources of infection. Keep cats/birds indoors at all times. Avoid cat feces, use gloves to change litter. Avoid handling birds. Toxo also found in undercooked meats.

Wasting syndrome
*Virus.* Caused by various factors. Possibly preventable, to some degree, by improving nutrition.