

Infections and Bugs and Germs... Oh My!

*A guide to keeping infections at bay—
and boosting immune health while you're at it*

BY LARK LANDS

For people living with HIV/AIDS (PHAs), a “minor” infection—think cold, flu or sinus infection—can have some major consequences. Avoiding infections, and treating them effectively when they sneak up on you, is a good idea. Here's why:

- It's much easier for your body to knock out an infection when your immune system is strong. Anti-infection drugs (antibiotics, anti-fungals and antivirals) don't work alone—they need a hard-working immune system to help them eliminate bugs and germs. If you let an infection drag on, you'll have more trouble fighting it off further down the road if your highly active anti-retroviral therapy (HAART) fails and your immune strength diminishes. And with decreasing immune function, the infection may get worse and could cause more serious problems. Treating an infection as early as possible increases the chances of completely eliminating it.
- Every time your body has to crank up your immune system to fight an infection, the HIV living inside the immune cells gets cranked up, too. “HIV replicates most effectively within immune-competent cells



when these cells are activated,” says Anthony Fauci, MD, director of the National Institute of Allergy and Infectious Diseases at the U.S. National Institutes of Health. “When a person gets another infection, the immune system gets activated, or ‘turned on,’ to fight this infection. This activation puts the immune system in a more vulnerable state for the replication of HIV.” So, although the fever and aches and pains related to an infection may be all you’re feeling, what’s going on beneath the surface may include rapidly growing HIV.

This issue is not just a concern for those not on HAART. Although HIV activation is definitely greater in someone with unsuppressed virus, even people on HIV meds who have undetectable viral loads may have problems. Dr. Fauci says that although HAART generally lessens the increase in HIV activation that another infection can cause, if your immune system has to work overtime to fight other infections that activity can end up making your meds less effective at suppressing HIV. So preventing (where possible) or otherwise quickly treating infections may help preserve HAART’s ability to keep HIV in check.

Which infections are of most concern? In general, the infections most likely to boost HIV replication are those that cause body-wide (systemic) symptoms: fever, muscle aches, fatigue and “malaise”—that all-over yucky feeling. You know how you feel when you get a cold or flu or your sinusitis starts acting up? That’s what we’re talking about. These symptoms are indicators that your immune system has been activated enough to likely increase HIV activity.

Those are some reasons why it’s important to prevent infections—and treat them quickly when they do occur. Read on for tips on how to avoid and treat four common infections that can activate HIV: colds, flus, sinus problems and hepatitis.

COLDS AND FLUS

Achy all over, feverish, sniffing, coughing and just generally miser-



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able—that’s probably how you felt the last time you had a nasty cold or flu. Even worse, the flu can lead to pneumonia, and the risk of this is greater in the immune-compromised. Plus, the infection can stress your immune system and may activate HIV. Here’s what you can do to prevent or quickly knock out these misery-makers if they occur. If you notice you’re getting colds and flus a lot more than usual, tell your doctor.

Prevention: “Start with what your mother always told you: Wash your hands and otherwise practice good hygiene,” says Ottawa Hospital’s Curtis Cooper, MD. Indeed, research has shown that the biggest factor in the transmission of colds and flus is touching contaminated surfaces. A classic example: grabbing a doorknob that an infected person touched after blowing his nose. Bingo. His cold becomes yours when your hand later touches your eyes, mouth or nose.

- Avoid directly touching surfaces in public places that are likely to be contaminated—stair rails, door-knobs, faucets, toilet handles—or use a tissue when doing so. Wash your hands when you return home from a public place. If someone’s ill

in your own household, extend those rules to the home-front.

- Avoid eating anything that you or anyone else has touched with unwashed hands or that’s been in contact with an unwashed surface. Don’t drink or eat from the same containers that someone with a cold or flu has used.
- It may not sound friendly but try to avoid being around people with a contagious illness like colds or flus as much as you can, and try not to touch any surfaces they’ve touched when you are around them.
- When the flu vaccine becomes available every fall, get in line to get yours. The small amount of immune activation that a vaccination may cause is nothing compared to the effects of a full-blown infection. To prevent pneumonia, check with your doctor about getting the pneumonia vaccine (Pneumovax).

Treatment Tips: Rest, plenty of fluids and a fever med are the standard recommendations for colds and flus (and try my famous chicken veggie soup recipe in the spring/summer 2004 *Positive Side!*). For influenza, there’s a prescription drug called TAMIFLU (oseltamivir phosphate) that might make the flu flee faster. It should be started within the first two days after symptoms strike.

There are also complementary therapies that many people swear by. Some of these have not been tested in PHAS, so it’s hard to be sure about drug interactions and effectiveness. As with many natural therapies, it’s best to take them under the supervision of a naturopath or natural health practitioner experienced with HIV.

- **Beta 1,3 glucans.** Beta-glucans are components of plant cell walls found in oats, mushrooms (maitake, reishi and shiitake) and baker’s yeast (the source for most supplements). They appear to indirectly boost the immune response to infections. Many people who’ve tried beta-glucan supplements say that they greatly shorten the duration of colds and flus (2–3 500-mg capsules taken when first symptoms appear, followed by 1–2 capsules every hour

or two until symptoms disappear, usually within a day). Long-term use is not advisable because beta-glucans may end up activating HIV, just the thing we're trying to avoid here, but a couple days' worth to head off a viral infection appears to be safe.

- **Vitamin C.** Several studies have shown that vitamin C—2–6 grams (2,000–6,000 mg) daily, with doses spread throughout the day—can help prevent or shorten colds and alleviate symptoms. It works best if taken when symptoms first appear. Different people can tolerate different amounts of C, so start with a low dose and build up gradually. Too much C can cause sudden, very watery diarrhea. Once you stop taking it the diarrhea should go away.
- **Echinacea.** This herb has long been recommended by naturopaths to treat colds and flus, usually in doses of several capsules or drops of a tincture daily from the very beginning of the infection until it's gone. Long-term use is not recommended because the herb may promote the production of potentially harmful immune system chemicals that are already too high in PHAs. Echinacea has the potential to interact with certain HIV and other drugs, so check with your pharmacist before using it.
- **Zinc acetate lozenges.** Several studies have shown a shortening of the duration of colds if one of these lozenges is held in the mouth and allowed to dissolve slowly every two hours until symptoms disappear, followed by use every 4–6 hours the day after symptoms disappear to help prevent recurrence. They work best if used at the very beginning of the infection. The lozenges may cause nausea if taken on an empty stomach, so have a snack before popping one.

SINUS PROBLEMS

Achy face, stuffy nose dripping yellow or greenish goo, wretched headache and fever—not exactly the recipe for a happy day. For many PHAs, it's a combo of misery that happens too

often as the result of sinusitis, an inflammation of the sinuses. And the symptoms are an indication that HIV is probably being activated. Sudden-onset (acute) sinusitis usually stems from an infection that may be bacterial, viral or fungal. Long-term (chronic) sinus problems may be allergy related but also frequently result from persistent infections. Sinusitis can return more often or linger longer in people with compromised immune function.

The focus in the past has been on bacteria as the most likely cause of sinus infections. However, recent research from the Mayo Clinic has shown that in most people the more likely culprits are fungi. The air is filled with fungal spores that we breathe in. This causes no problem in most people, but in the extra-sensitive there's a hyped-up immune system response which results in the typical symptoms.

Seasonal and other allergies (to dust, mold, etc.) contribute to sinus problems in many people. When caused by allergies, the most common

symptoms are watery mucous production, sneezing, wheezing, itchy nose or eyes, headaches and swelling of the nasal membranes.

Prevention: If allergies are the suspect, check with your doctor about allergy testing, followed by desensitizing allergy injections, if appropriate. There are reservations about using such allergy shots in people with uncontrolled virus (due to the risk of HIV activation), and they may not work in those with seriously compromised immune function (low CD4 cells). In the case of pollen, dust, mold and other airborne sources of allergies, keep your living space as clean and free of them as possible. Air filters can help.

Treatment Tips: Specialists recommend a thorough diagnostic work-up to determine exactly what is causing your symptoms. This can include an endoscopy of the nose and a sinus CT scan.

- If a bacterial infection is diagnosed, appropriate antibiotics usually clear up the infection, although lengthy treatment is sometimes required. It's important to accompany such treatment with acidophilus (either via supplements, 1–2 capsules several times daily, or regular consumption of live-culture yogurt) in order to replace the “good” bacteria that are inadvertently killed off by antibiotics. These good bacteria serve important functions, including aiding in digestion and helping prevent various infections and yeast overgrowth.
- If a fungal infection is found, an antifungal nasal spray (amphotericin B, usually used twice a day for three months or longer if necessary) has been shown by Mayo Clinic researchers to successfully eliminate the problem in some people. Although amphotericin B is not approved for this purpose, it can be prescribed off-label and prepared by a compounding pharmacy.
- Frequent use of a saline spray can help eliminate infections by keeping the area cleaned out and less hospitable to infectious organisms.
- If there's serious congestion that makes it impossible to effectively

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use the saline spray, it may be helpful to use a spray decongestant to open up the nostrils. Spray each nostril once, and wait a minute or two to allow the lower nasal mucosal lining of the sinus to shrink. Then spray each nostril again in order to reach the upper mucosal lining. Spray decongestants should only be used when absolutely necessary since long-term use can create dependence. When you can breathe through your nose, you can wash out your nostrils with saline spray once a day to thoroughly cleanse the area.

- For serious inflammation many doctors recommend a steroid nasal spray. This should be used with caution and only for as long as necessary because of the theoretical possibility of immune suppression from the steroid in the nasal cavity.
- If allergies are contributing to sinus problems, talk to your doctor about appropriate meds such as antihistamines. Some may interact with your HIV drugs so be sure to discuss any choices, even over-the-counter varieties, with your doctor or pharmacist. Naturopaths recommend stinging nettle, an herbal remedy that's effective for stopping hay-fever symptoms by helping your body stabilize the histamine reaction. (Histamine is a chemical produced when your body is exposed to pollen or something else you're allergic to; it causes itchy eyes, dripping nose and frequent sneezes.) Stinging nettle capsules are available from herb and supplement companies.

HEPATITIS VIRUSES

In a much more serious league are the infections created by the hepatitis viruses A, B and C, all of which can activate HIV as well as cause serious symptoms. Both hep B and C can become chronic infections in some people, leading to serious liver problems. Hep A never turns into a chronic infection, but it may take longer for PHAs to recover. Although hep A is much less common in North America than in the developing world, it's a

possibility, especially when risky foods are eaten.

Prevention: "It's really important to see if people are immune to hepatitis A and B," says Ottawa Hospital's Curtis Cooper, MD. "We always run tests and recommend vaccinations for both hep A and B." Two hep A vaccines are available: Havrix and Vaqta. Both require two injections, usually given six months apart. Two hep B vaccines are available: Recombivax HB and Engerix-B. These require three injections over a six-month period. A combination vaccine for A and B is also available (Twinrix), which requires three injections over a six-month period. There's some concern that PHAs with more advanced immune suppression are less likely to benefit from the vaccines, so they should be given when CD4 counts are at higher levels, when possible. These vaccines can come in mighty handy, along with a shot of immune globulin if you think you've recently been exposed to hep B.

Avoiding exposure to the viruses is another prevention tool.

Hepatitis A is shed via the bowel movements of infected people. Transmission can occur through:

- Direct person-to-person contact: It helps to use a latex barrier like a dental dam for oral-anal sex.
- Exposure to contaminated water, ice or shellfish harvested from sewage-contaminated water: Drink safe, purified bottled water, especially in areas where water safety is an issue, avoiding ice in such areas. Don't eat shellfish if there's any risk that they were taken from sewage-contaminated waters.
- It can be risky to eat raw fruits, vegetables or other foods that may have been contaminated during harvesting or handling. Take great care with food choices. In general, avoid eating uncooked fruits or vegetables that aren't washed, peeled or prepared by you.

Hepatitis B is transmitted through activities that involve contact with blood or blood-derived fluids. The best approach to prevention is to try to have protected sex and never share drug equipment. Hep B can also be spread if you use items that could be contaminated with someone else's blood, such as razors, toothbrushes and needles for body piercing or tattooing.

Hepatitis C is transmitted primarily through the exchange of blood, so sharing drug equipment is very risky. Avoid possibly contaminated needles for body piercing or tattooing. Be sure to practice safe sex.

Treatment Tips: For acute infection with any hepatitis virus, here's the drill: bed rest, lots of fluids and, if necessary, over-the-counter pain relievers. Other drug treatments are sometimes used for chronic infection with either hep B (interferon, 3TC or adefovir) or C (interferon with ribavirin). Naturopaths recommend that people with hepatitis viruses support the liver with nutrients like alpha-lipoic acid and N-acetylcysteine (NAC), which boost levels of glutathione, a liver-protective antioxidant, and with liver-protective herbs like silymarin (milk thistle extract).

In the creepy, crawly world of germs and bugs, it's us against them. But knowing the enemy and learning how to avoid or treat an infection can keep you working at the top of your game. +

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