

The Funky Fungus Among Us

Planning to pop antifungals to stop a rush of thrush? A new study advises that you resist the urge.

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Who knew that “Don’t it always seem to go/You don’t know what you’ve got till it’s gone” is as relevant to fighting fungus as to paving paradise? Joni Mitchell’s world-weary lyric makes for a perfect accompaniment to recent findings about PWAs’ long-term use of antifungal meds. The study, coordinated by Joseph Wheat, MD, of the Indiana University School of Medicine, found that some HIVers taking itraconazole (Sporanox) to prevent fungal infections developed *Candida* (yeast) strains resistant not only to that drug but also to fluconazole (Diflucan), another first-line antifungal. Raise high the “Superfungus” red flag as another HIVers’ ill rears its mutant head.

If this type of preventive drug use continues, the candidiasis infections of the throat and mouth (thrush), vagina, anus and intestines that especially plague people with advanced HIV are certain to become harder to treat. Even worse, previous research showed that resistant *Candida* can be spread via deep kissing, oral-anal and oral-vaginal contact—meaning that drug-proof strains are likely to become more common. A 1997 study found that 26 percent of PWAs with CD4s below 200 had resistant *Candida*, leading the National Association of People With AIDS to issue a warning against fluconazole overuse (see [“Thrush Gets Smart,”](#) POZ, March 1998).

The new study followed 295 PWAs with CD4 counts below 150, the level at which some doctors start patients on itraconazole as a prophylaxis (preventive) against the life-threatening fungal infection histoplasmosis, although federal guidelines do not recommend it. One group received the drug, the other took placebos (dummy pills); then the *Candida* strains of both groups were tested for resistance to two antifungals. While the itraconazole group did have fewer outbreaks of candidiasis, their *Candida* was less susceptible to both itraconazole and fluconazole. In the placebo group, 98 percent of the yeast fungus was susceptible to itraconazole treatment—but only 63 percent of the *Candida* from the itraconazole group remained vulnerable to the drug. As for fluconazole, 96 percent of isolates from the placebo group responded to this drug compared to 78 percent of those from the itraconazole patients.

If *Candida* treatments such as fluconazole, itraconazole and the related drug ketoconazole (Nizoral) fail, then options are severely limited. The powerful antifungal drug amphotericin B is highly toxic—many PWAs call it “ampho-terrible” for the kidney damage and debilitating “shake and bake” side effects (intense fevers and chills) it can cause. As a result, efforts to avoid

resistance to first-line treatments are crucial.

There is some good news, however. Wheat's study began when histoplasmosis was more common; since then, rates of the disease have fallen thanks to HAART, leaving even less reason to consider prophylaxis. And because *Candida* infections are usually quite treatable, federal guidelines say that the risk of creating resistance outweighs the benefits of using itraconazole or fluconazole to prevent *Candida*. "I wouldn't want to pay such a high price for such a modest gain," says Richard Elion, MD, a Washington, DC-based AIDS doctor. "I would just treat *Candida* if it came up."

A federal study of people with low CD4 counts who have had recurring bouts of candidiasis is now examining whether resistance to fluconazole is more likely if it is used long term vs. only when outbreaks occur. (Current federal guidelines recommend prophylaxis only if episodes are frequent or severe.)

There are also alternative methods of preventing *Candida* outbreaks. "You should eat as little sugar as possible and follow a low carbohydrate-high protein diet," Elion says, so save the Krispy Kremes for special occasions (see below). He also recommends preventively taking capsules of acidophilus, a bacterium normally present in the body that helps prevent fungal overgrowth. A recent study of PWAs found acidophilus to have prophylactic effects against *Candida* that were comparable to antifungal drugs.

Meanwhile, a new drug is in the pipeline. Elion says that based on preliminary data, Schering-Plough's SCH-56592 "looks good," although it won't be available commercially for two years.