

Who's Afraid of Reinfection?

Skeptics say, "Throw the condoms away." But with drug-resistant virus, STDs and other risks, positive couples are thinking twice.

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John Hatchett is a protease Lazarus, restored to health from death's door. "I was five months into chemo therapy for two lymphomas," he recalls. And he also had Cryptosporidium, the often deadly and incurable intestinal parasite. But three weeks after starting a Crixivan cocktail, "the Crypto symptoms were gone, and a week after that, my viral load was undetectable. This was unfolding during Gay Pride, which I spent in Italy with my lover, so I felt on top of the world. And we went directly from there to the Vancouver AIDS conference, which was a pep rally for protease." Having just finished his last chemo treatment, the broad-shouldered 37-year-old practically personified the optimism of that meeting: "In Vancouver," Hatchett recalls, "I could feel myself getting stronger day by day."

Perhaps because of the euphoria, it wasn't until several months later that he "started thinking about that old bugaboo of reinfection." The bugaboo -- postulated but never proved -- was that a positive person could contract a different, more virulent strain of HIV that would hasten illness or death. A more concrete hazard was contracting other STDs, which would burden the immune system and increase viral replication. Hatchett, the former executive director of the People With AIDS Coalition, knew the risks, but he also treasured the intimacy and pleasure of sex without latex. "For us," says Hatchett, speaking of himself and his lover of two years, Rino Varrasso, "sexual comfort and closeness is an integral part of how we define quality of life." So, like many positive-positive couples, Hatchett and Varrasso didn't use condoms, although they lessened their risk of reinfection by not ejaculating inside each other.

But suddenly, with Hatchett on his new regimen and Varrasso not taking any antiviral medicine, Hatchett started to worry "about transmitting an indinavir-resistant virus to him." If that happened, it would preclude Varrasso's taking indinavir -- and also, because of cross-resistance, ritonavir and probably saquinavir.

Hatchett also thought about the chance of getting a strain from Varrasso that could undermine his own successful regimen, but he was less concerned about this possibility. He figured that because Varrasso wasn't taking any anti-HIV drugs, his virus wasn't being forced down the path toward resistance. Now that Varrasso has embarked on a two-nucleoside combo, however, the couple is rethinking their sexual practices. As they and other couples struggle with whether and how to

change, scientific information is critical. But so are the emotions of love, pleasure and, now, longevity. "Our whole premise was, whatever time we have left we want to make the most of -- and that includes our sex life," says Hatchett. "What's really changed here is the expected survival time. If something is going to improve your quality of life, and you don't expect to survive for too long, then you're willing to take more risks. But what happens if I could actually be around for a lot of years?"

Like so much about AIDS, the science on reinfection -- what researchers call superinfection -- is cloudy. "In theory," says scientist David Ho, *Time* magazine's 1996 Man of the Year, "it is obviously possible that superinfection by a drug-resistant strain can occur. In practice, no one knows at this time." True, but evidence is mounting that reinfection can occur in the real world.

Years ago, vaccine trials in monkeys suggested reinfection could not happen. Harvard researcher Ronald Desrosiers inoculated macaques with a form of SIV -- HIV's simian cousin -- genetically engineered to delete key parts. This "live attenuated" vaccine is the same kind Albert Sabin used in his polio vaccine: The weakened virus doesn't cause disease but primes the immune system to fight off the full-strength virus. Desrosiers' vaccine did exactly that. Even when he injected the monkeys with a whopping dose of lethal SIV, the animals were protected. Desrosiers also challenged the monkeys with a different (but closely related) strain; it didn't infect them either.

No such vaccine has ever been tested in humans because of fears that even a genetically weakened HIV could cause AIDS or long-term problems such as cancer. But nature allowed for a similar experiment. Following more than 1,400 prostitutes in Senegal, researchers from Harvard discovered that women who were infected with HIV-2 were about half as likely to contract HIV-1 than their uninfected counterparts. (HIV-2 is less virulent and less infectious than its distant relative HIV-1, is largely confined to West Africa, and accounts for only a small proportion of worldwide HIV infections.) Still, many of the prostitutes infected with HIV-2 also got infected with HIV-1.

Researchers have also found humans co-infected with different subtypes of HIV-1. (What's the difference between a strain and a subtype? A strain indicates a slight variation between the genetic code of viruses, whereas a subtype -- also called a clade -- is genetically much different. To explain it another way, within each subtype there are many strains.) In North America and Europe, just one subtype predominates, but in many parts of the world, two or more clades are prevalent. It was in one of these places, Thailand, where researchers first documented a person infected with two subtypes. That was in 1994. Since then, several other teams have discovered at least nine co-infected people, most recently in Puerto Rico.

The crucial question is, when did these people acquire their second infection? Everyone agrees it's possible to get infected with different viruses in the weeks before one strain sets in and mobilizes an immune response. But for people with HIV, the real concern is about all the years after that.

Unfortunately, except for an unusual report involving a blood transfusion from different donors, no one knows the infection sequence for any of the documented co-infections. But experiments in

chimpanzees using HIV -- as opposed to monkeys with SIV -- suggest that reinfection can happen at any time. Researcher Patricia Fultz of the University of Alabama has been able to infect chimps with a second HIV subtype as long as two years after the animals were infected with the first subtype.

Of course, reinfection might not be an either/or situation. Just as HIV-2 provides some immunity against HIV-1, different strains might also offer partial immunity against one another. With closely related strains, such protection might be greater, though this is not yet known.

Finally, there's a kind of devil's dilemma: The longer people stay on effective anti-HIV therapy, the more vulnerable they might be to reinfection with a drug-resistant strain. "If the virus is completely suppressed, then it is reasonable to assume that immunity would wane," explains Ho. "This is indeed the case," he says, for newly infected patients he is treating: Their HIV antibodies are fading. But in Ho's patients who were infected for a long time before they started on protease cocktails, "there has been no evidence of a waning antibody response out to about 12 to 15 months."

Whether that will change remains unknown. But no matter what, says veteran researcher Anthony Fauci, "you shouldn't rely on your immune response, you should rely on not getting exposed. You should rely on safer sex."

"If you really follow this reinfection stuff," says Atlanta activist Dawn Averitt, "it seems like, 'Duh.' But I would be surprised if most treatment activists think of resistance in these terms." Indeed, some educators flatly tell clients that reinfection is not possible, though almost all warn about picking up other viruses and bacteria that can weaken the immune system and can hasten the progression to AIDS. Indeed, some STDs such as hepatitis B and certain intestinal parasites can kill.

Among ordinary people with HIV, there also "isn't very much discussion about reinfection," says Averitt. Many people simply don't want to think about such a depressing topic, especially when reinfection is still not proved. David Barr, who until recently ran treatment education at New York's Gay Men's Health Crisis, concurs: "We're not getting very many inquiries about this subject." Even Hatchett, who has thought a lot about reinfection, says he worries much more about other things: "How long will my health remain good? How long will my lover remain stable on his two-nuke combo? And what if he's someone for whom protease cocktails don't work?"

But Dennis deLeon, who heads the Latino Commission on AIDS, says he frequently gets questions about reinfection and other matters related to drug resistance. Indeed, deLeon worries that "all the buzz about resistance" has drowned out everything else and is frightening people away from the new drugs. "In people of color communities," he says, "this is a big problem."

DeLeon is based in New York City, where, says Moisés Agosto of the National Minority AIDS Council, "news travels fast." Agosto says that in other parts of the country, suspicion about the new drugs doesn't come from fear of drug resistance -- a topic he says "goes over the head of many doctors" -- but from "the whole Tuskegee thing." Agosto is referring to the infamous federal

experiment in which researchers allowed black men to die of tertiary syphilis merely to see how the disease developed. Because of this history, and their personal experience of racism, many people of color suspect that they are being used as guinea pigs, or even that the drugs are a plot to poison people of color. DeLeon worries that the specter of reinfection inflates these fears. "There's a mishmash of thinking," he says. "People are blurring all the talk about strains and resistance and unsafe sex, and it just becomes a drumbeat that the drugs are all bad. We have people so afraid of resistance, they're not starting therapy. It's probably true that there is a possibility of transmitting a different strain, but we don't know to what extent. We are vastly more concerned about overcoming treatment-phobia."

Still, deLeon thinks providing full information is important -- and if reinfection is possible, the ramifications could be dire. Notwithstanding their limitations, the protease cocktails are the best hope produced by 15 years of AIDS research. If one combination fails, a patient might be able to switch to another, and this flexibility should be enhanced by several new drugs that are nearing the end of the pipeline. But even with these drugs, cross-resistance in some patients might sharply limit options for switching regimens. To cut to the chase: If you get a strain that's resistant to several drugs, could you have blown your best shot? "Oh," replies Ho, with a rueful chuckle, "you definitely could have."

When Hatchett began wondering about reinfection, his lover had gone back to his native Italy for a few months. So, when he and Varrasso were reunited, "we just came together in a mad rush of passion and relief." It was only later, "in a much longer, all-night conversation about the relationship," that Hatchett raised his reinfection concerns. Varrasso "was perplexed at first," Hatchett recalls, "and I felt very sad. We had been on such a high, and suddenly it was like, 'Oh God, here's a downer.'" Even thinking about latex, he says, is "a reminder that I'm at high risk for another lymphoma."

There were deeper emotions. "This is a man with whom I made love when I was on chemo, and 15 pounds underweight, and not feeling or looking my best. That was painful and difficult and wonderful. Having been so close while I was very sick, it would be hard to adopt condoms now."

This resonates with other couples. "We've been through the whole process of getting sick and recovering together," says Bill, who didn't want his real name used. "We're really in the same boat, and our sex expresses our common lot -- the common danger and the common hope. And I'm grateful for that." Bill doesn't use latex with his lover, partly because he's pretty sure he got HIV from his lover when a condom broke. So, he figures, they've got the same strain. But with a casual partner, Bill would insist on condoms: "I feel lucky the drugs have controlled the strain I've got," he says. "I don't have enough faith that these drugs are going to work forever to test them with another strain."

Even with tricks, however, many positive men have not used condoms if they knew their partner was also positive. Indeed, some feel that unprotected sex was a small but cherished compensation for having HIV -- and that can be hard to give up. "My lover's negative," says David Barr, but with positive partners, he has occasionally left the condom in its wrapper. Doing so "was not just

exciting, it was fulfilling. I mean," he says, laughing, "sometimes I knew their names and not just their HIV status."

"After finding out I was positive," says Hatchett, "my first two relationships were with negative men. When those were over, I began dating positive men. I can't tell you the relief I felt, the relief of a tension and paranoia I hadn't fully understood before."

Averitt, who runs Women's Information Services Exchange, thinks reinfection is more of an issue "for the boys," meaning gay men. Straight culture hasn't accepted HIV, so a lot of positive women simply shut down sexually. "They feel they're not going to meet anyone," she says.

Hatchett agrees gay culture has been more accepting of positives having sex. But he insists that for all people with HIV, "the whole topic of sexuality is buried. There's still a tremendous amount of guilt and shame." He adds, "There's also a kind of aura that attaches to telling people you're positive: You have to have the healthiest diet and get the right amount of sleep, you have to exercise every day, and you can't smoke or drink. Suddenly every detail of your life has to be perfect, but no one can live that way. Life is sloppy -- that's one of the beautiful things about it."

Indeed, people's decisions will be based on a blend of science and emotion. This can lead to solutions that are almost amusing. Bill recently started a regimen that's different from his lover's, and he's wondering if the drugs are sending their viruses "down different resistance pathways." So now, Bill won't ejaculate inside his lover for fear of undermining his therapy, but Bill does let his lover cum inside him. "Does this sound baroque?" he says, laughing at his own inconsistency. "Well, we've been through so many changes and conversations. It's put together piecemeal." Hatchett wonders if the solution isn't for him and Varrasso to get on the same regimen. "Will that equalize the opposing viral forces? That's not scientific reasoning," he says, "but this is where the mind starts spinning around inside itself."

Barr, who is accustomed to counseling people, says, "We can't say, 'You should do this' or 'You should do that.' We have to acknowledge our feelings and say there's a choice we're making, and one thing we're risking is reinfection with resistant strain."

Hatchett and his lover are still going with their old policy -- no condoms, but no cumming inside each other. Still, he says: "It's in the back of our minds, and it's difficult. After all we've grown to mean to each other, and as much as we hate thinking about reinfection and resistance and condoms, we may decide we have to change our sex lives."