Double Positive

People who already have HIV brace for a second assault

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Back when HIV was identified,in 1983, scientists theorized that superinfection—contracting a second HIV strain after initial infection—was likely. Their fear: A second strain could complicate treatment and spur HIV progression. Only 21 apparent superinfection cases have been charted since 2002, however, so health experts might have cried wolf without explaining who, precisely, should fear the beast.

Couples like John Hughes and Robert Choate, both positive, say they find sex “complicated” and worry about swapping their different viral strains. “I’m not med resistant, but Robert is,” says Hughes, 41, a health educator in Chico, California. Choate, 46, an embalmer, says, “If John gets my virus, does that automatically make him resistant to the drugs I’m resistant to?” New data suggest that Hughes and Choate—both diagnosed more than ten years ago—needn’t sweat the superstuff so much. Robert Grant, MD, of San Francisco’s Gladstone Institute, says, “The risk of superinfection appears high in the first year or two of [having HIV]” and plummets thereafter.

In Grant’s Positive Partners study, which tracks 50 couples who’ve had HIV for at least a year, no superinfection has emerged, though partners typically expose each other to distinct HIV strains. Meanwhile, four new superinfection cases documented last year occurred in recently infected people; only one had HIV for more than two years.

Grant says that positive people “have stronger and broader antibody immune responses against HIV” after more than a year; indeed, study subjects seemed to develop antibodies in response to their partners’ strains. Among the newly positive, antibodies couldn’t yet fight the superinfection.

Todd Allen, PhD, of Partners AIDS Research Center in Boston, says many with long-term HIV take meds, which can reduce the risk of superinfection. Not all the Positive Partners are on meds, but Grant acknowledges his theory’s uncertainty and says, “You can never be sure” that superinfection won’t occur after the initial year or two.

Distinguishing between super and dual infection is key. “Dual infection means [contracting] a second virus at the very beginning of HIV, before displaying an immunologic response to the virus,” says Rick Hecht, MD, who works with Grant. A dual infectee gets HIV and a day or week later is exposed to a second strain. With superinfection, the immune system has responded to the

first virus but can't deflect a second. Hecht says, "No one has ever traced the [HIV] sources of people who are dual or superinfected," clouding whether the documented cases are dual or super. If some superinfection cases are really dual, the risk of contracting a second strain may be highest within days or weeks of getting HIV, not years. A recently reported case of a man with a second infection 12 years after the first could well be dual, not super, says Grant colleague Jeff McConnell,MD: The second strain appeared only briefly; a superinfection would have lingered and replaced the original strain.

Meanwhile, Hughes says he and Choate have decided that for them—having taken meds and been positive for so long—"superinfection is super unlikely." But they're still careful since they know it hasn't been proved impossible. Choate, who says he was "a sexaholic" before meeting Hughes, was able to make safer-sex adjustments "when I realized I was falling more deeply in love with a man than I was with sex." Super.
