

Teen Talk

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Ah, the hallmarks of youth: acne...MTV...an active thymus? While the desirability of the first two are questionable, the third turns out to be especially valuable for teens with HIV. A recent study of 270 adolescents with and without HIV, conducted by the nationwide Adolescent Medicine HIV/AIDS Research Network, found that those with HIV who are on HAART may be able to control the virus more effectively than adults can. A possible reason is a working thymus, the chest gland that churns out finished T cells (both CD4s and CD8s) after their initial production in the bone marrow. “Many adults—both HIV positive and negative—have limited function of this gland,” says Steven Douglas, MD, lead author of the study, “and young children infected at birth lose thymus function early.” But kids who don’t get the virus until adolescence appear to retain functioning thymus glands. “Adolescents have not lost thymic function,” he says, “yet their thymuses are mature enough to better withstand the damage inflicted by HIV.”

The study found that teens maintain high levels of HIV-fighting naive CD4 and CD8 cells—immune-system soldiers that have never before battled germs. Over time, the thymus halts production of naive cells, leaving most adults to rely on memory T cells—those that have already combatted invaders—which can limit HAART’s effectiveness. “Starting antiretroviral therapy early to protect naive cells is definitely a good idea,” Douglas says. “Immune-based therapies and structured treatment interruptions [drug holidays] may enhance the function of these cells, but it’s way too early to tell.”
