

New combinations of drug therapies for the treatment of the human immunodeficiency virus (HIV) appear to thwart the virus in both newly infected patients as well as those who have been infected for long periods. Researchers attending the international conference on AIDS in Vancouver, British Columbia, presented findings from two separate studies that offer hope—but not a cure—for HIV using two older drugs (AZT and 3TC) with protease inhibitors, a new class of drugs.

The first study, conducted at the Aaron Diamond AIDS Research Center in New York, included nine patients newly infected with the HIV. The subjects had been infected with the HIV for no more than 90 days. At the time they were enrolled in the study, the patients had more than 91,000 copies of the virus before starting the combination therapy, which included the protease inhibitor zidovudine. After being followed up for 90 to 300 days, the subjects showed no evidence of the HIV in their blood.

A second trial, involving four centers around the United States and led by researchers at New York University, found that the combination of the protease inhibitor zidovudine with AZT and 3TC also *appears* to rid the bloodstream of the HIV. Of the 97 adults who had been taking AZT for an average of 2.5 years, 7 patients completed 48 weeks of combination treatment. Six of the seven patients had no evidence of HIV infection.

Although these results appear promising, there are drawbacks. Patients are required to take as many as 15 pills daily, often on an empty stomach. Also the annual cost of more than \$15,000 would make the regimen prohibitive for many HIV-infected patients, particularly in developing countries where many of the HIV-infected population resides. Likewise, the investi-

gators from both studies emphasized that the current drug therapies are *not* a cure for the HIV infection.

"We don't know if the virus will rebound if patients were to cease the regimen," admitted Martin Markowitz, MD, who was one of the lead investigators in the Aaron Diamond study. Nor has it been established if the HIV will develop resistance to the combined therapy.

Similarly, it is not yet known whether the virus remains present in other tissues throughout the body. However, investigators from both studies intend to examine the patients' lymph nodes for the HIV after 1 year of treatment to determine the long-term efficacy of the treatment. Long-term side effects of the regimen are not yet known either, concede researchers.

Intelligence in males apparently is at least partly inherited from their mothers, according to Australian geneticist Gillian Turner. In an essay appearing in the June 29 issue of *Lancet*, Dr Turner explains how at least 154 genes on the X chromosome have been linked to mental retardation, including nonspecific X-linked mental retardation with mutations in genes coding for intelligence. Because one of the two X chromosomes in females becomes inactivated during embryogenesis, females are less likely to inherit mental retardation or a genius intellect than are males. This tendency may explain why the mean IQ scores between the sexes is similar but a wider distribution can be found in IQ scores among males.

Despite the apparent genetic connection, the nurture/nature debate surrounding intelligence will likely continue. ♦

From HHS

Americans slacker when it comes to exercise

It's time to drop the television remote and get moving. That's the bottom line of the Surgeon General's Report on Physical Activity and Health, released in July. Among the sorry statistics found in the report:

- More than 60% of adults fail to reach minimal recommended amounts of physical activity.
- Twenty-five percent of adults are *not* active at all.
- Thanks to such inactivity, 300,000 Americans die prematurely each year from sedentary-related diseases, such as hypertension, heart disease, and colon cancer.
- Almost 50% of teenagers and young adults between the ages of 12 and 21 are not vigorously active either. Daily enrollment in physical education classes fell from 42% in 1991 to 25% in 1995.

The report suggests Americans burn 150 calories a day or 1000 calories per week to become more physically fit. Bicycling, working in the yard, and walking are just a few activities that, if engaged in 30 minutes several times a week, will help Americans shape up and shed our slothful image. ♦