



Uniformed Services University
of the Health Sciences
4301 Jones Bridge Road
Bethesda, MD 20814-4799

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Contact: Ken Frager, Office of External Affairs

Voice: 301-295-3981 **Cell:** 240-281-2738

Email: kenneth.frager@usuhs.mil

Obesity may have adverse role in HIV treatment

Bethesda, Md -- The immune systems of HIV patients who are obese don't respond to antiretroviral therapy as well as do those of people of normal weight, according to a study conducted by researchers from the Uniformed Services University of the Health Sciences (USU). The findings were presented by San Diego-based Nancy Crum-Cianflone, MD at the annual meeting of the Infectious Diseases Society of America.

"Obese patients were found to regain fewer CD4-positive T cells after they start therapy than do people with normal weight," said Dr. Crum-Cianflone. "These findings don't align with some of the earlier studies done prior to the advent of modern highly active antiretroviral therapy (HAART), when patients who were obese did better than those of normal or below-normal weight," she said. According to Crum-Cianflone, this recent data may imply that obesity -- which has known ill effects -- poses an additional risk to people with HIV.

This research was based on data collected by the USU's Infectious Disease Clinical Research Program (IDCRP) from participants in the U.S. Military Natural History Study, which includes 1,119 people with documented dates of HIV seroconversion between 1986 and 2008.

"The irony is that in the past we have been concerned that patients with HIV infection were losing too much weight," said Captain (Dr.) Greg Martin, director of the IDCRP, "yet this research is showing that there needs to be more of a focus on maintaining a balanced weight without going to the other extreme."

Previous research has shown that prior to the availability of HAART, patients who were obese lost CD4 cells -- a hallmark of HIV infection -- more slowly than people who had normal or below-normal weight.

The use of HAART results in immune system recovery, measured by an increase in the number of CD4 cells, Crum-Cianflone noted.

The study "suggests that low CD4 counts may be another adverse consequence of obesity," she said, adding that patients should work toward maintaining a normal weight.

Crum-Cianflone said it's not clear why obesity should have such an effect.

Among other possibilities, she said, it might be that standard drug dosing -- set in clinical trials -- may not be enough for obese patients, or there may be something about the extra weight that limits the effects of medications.

Located on the grounds of Bethesda's National Naval Medical Center and across from the National Institutes of Health, USU is the nation's federal school of medicine and graduate school of nursing. The University educates health care professionals dedicated to career service in the Department of Defense and the U.S. Public Health Service. Medical students are active-duty uniformed officers in the Army, Navy, Air Force and Public Health Service who are being educated to deal with wartime casualties, natural disasters, emerging infectious diseases, and other public health emergencies. Of the University's nearly 4,400 physician alumni and more than 400 advanced practice nurses, the vast majority serve on active duty and are supporting operations in Iraq, Afghanistan, and elsewhere, offering their leadership and expertise. The University also has graduate programs open to civilian and military applicants in biomedical sciences and public health committed to excellence in the didactic and research training which have awarded more than 300 Ph.D. and 100 M.S. degrees to date.

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