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### SCIENCE NEWS, March 30 1991, pg 207

#### **Shocking Treatment Proposed For AIDS**

Zapping the AIDS virus with low voltage electric current can nearly eliminate its ability to infect human white blood cells cultured in the laboratory, reports a research team at the Albert Einstein College of Medicine in New York City. William D Lyman and his colleagues found that exposure to 50 to 100 microamperes of electricity - comparable to that produced by a cardiac pacemaker - reduced the infectivity of the AIDS virus (HIV) by 50 to 95 percent. Their experiments, described March 14 in Washington D.C., at the First International Symposium on Combination Therapies, showed that the shocked viruses lost the ability to make an enzyme crucial to their reproduction, and could no longer cause the white cells to clump together - two key signs of virus infection. The finding could lead to tests of implantable electrical devices or dialysis-like blood treatments in HIV-infected patients Lyman says. In addition, he suggests that blood banks might use electricity to zap HIV, and vaccine developers might use electrically incapacitated viruses as the basis for an AIDS vaccine.

#### LONGEVITY, Dec 1992, pg 14

#### "Electrocuting" The AIDS Virus, A Safer-Yet Blood Supply

Despite official reassurances about the safety of the nation's blood supply, concern lingers that small amounts of HIV-infected blood may be sneaking through, especially since current screening detects only antibodies to the virus, which can take months to form. But now a new electrical process for cleaning blood of viruses may solve the problem. At the Albert Einstein College of Medicine in New York City, Steven Kaali, M.D., has found that most of the AIDS viruses in a blood sample will lose their infectious capability after being zapped by a very low-level current. Repeated exposure appears to leave blood virtually free of HIV, as well as Hepatitis- without harming blood cells. Kaali cautions that it will take years of testing before a virus-electrocuting device is ready for use. But, ultimately, he predicts, it could be used not just to purify blood, but to treat people with AIDS, by channeling their blood out of the body, exposing it to virus-killing current and then returning it. - Sharon McAuliffe

## THE HOUSTON POST, March 20, 1991, section A-10 Your Health/Medicine Scientists say Electric Current may help fight AIDS

Reuters News Service New York - Doctors at a prestigious New York medical center are testing a new way to fight AIDS - using electrical energy to weaken the killer virus - and say their first results are encouraging. Researchers William Lyman and Steven Kaali of the Albert Einstein College of Medicine said Tuesday that initial laboratory tests have shown electrical current can weaken the virus believed to cause acquired immune deficiency syndrome. The two men said they plan to move to the next phase of the experiment in April using blood samples from people with AIDS. If their tests are successful, the researchers hope it could lead to a new way to treat AIDS patients, possibly involving a dialysis-type machine in which an AIDS patient's blood would be treated with electrical current outside the body. "What we have done is expose the AIDS virus in laboratory circumstances to electrical current and then incubated the virus with white blood cells susceptible to the virus. We found that the virus became much more ineffective," Kaali, a specialist in the medical use of electrical current, said. He added that the use of electrical energy has no toxic side effects and that a similar technique has been used as a treatment for reducing Herpes.