AIDS-AWARE AT MIT
CONCERN ABOUT AIDS: Part IV
Testing for AIDS: Accuracy and Privacy Issues

The examination of blood for the presence of antibodies to human immunodeficiency virus (HIV), the only virus causing AIDS became possible in 1982. However, it was not readily available on a large scale until 1985 when the testing of blood for transfusion became routine in the United States. Testing for the antibodies detects specific blood proteins which are generated by infected individuals in response to contact with the virus. Methods for detecting the virus itself or various HIV proteins, rather than antibodies, have also been developed. They are occasionally useful when antibody is absent or in spite of suggestion that HIV infection has occurred. This circumstance is unusual but exists under some conditions. The first of these occurs shortly after infection, usually within the first six to eight weeks, before detectable amounts of antibody have been manufactured. The other condition occurs in severely ill patients in whom advanced infection has suppressed the body's ability to make antibodies. The detection of antibody remains the mainstay of testing to identify if infection with HIV has occurred, but these antibodies don't appear to be protective. Two methods are used to detect the presence of HIV antibodies. The screening test, usually the so called ELISA test, is very sensitive and will signal the presence of small amounts of antibody. Indeed, the method is so sensitive that it will detect viruses similar to HIV as well as HIV itself. For this reason a positive screening test must be confirmed by a more specific method such as the Western Blot Test. The Western Blot Test will eliminate false positive ELISA tests where antibody was generated in response to infections with HIV-related viruses. The combination of these two tests is very reliable. Positive tests done through the MIT Medical Department are only reported to the physician after the confirmatory (Western Blot) test has indicated that specific HIV antibodies are present in the patient.

Under Massachusetts law, the HIV test cannot be ordered without the written consent of the patient. The law also mandates additional safeguards to protect the confidentiality of those who have been tested. The procedures in place at the MIT Medical Department meet and exceed the requirements of the law. At MIT, special methods of coding specimens and handling data guarantees confidentiality with respect to results as well as the fact that the test has been ordered. The test results are available only to the physician ordering the test and the individual who requested it. Neither the signed consent, the physician's order for the test, nor the test results appear in the medical record. The laboratory performing the test never receives the name of the person whose blood is being examined. Results are available to the patient within 12 days of obtaining the specimen. Many laboratories outside of MIT may take as long as 12 weeks from the time of request to the time of availability of test results. Reasons why people may request HIV testing include concern about undiagnosed illness, risk of sexual or blood contact, or because of a requirement in the case of military service or travel to certain countries. There may even be circumstances when risk of infection seems highly unlikely but HIV antibody testing makes good sense. A good place to discuss these issues and personal concerns, in confidence, is with one's health care provider. The Medical Department stands ready to discuss these issues and, if appropriate, implement testing.

John Moses, M.D.
MIT Medical Department

For more information about AIDS or other AIDS-AWARE activities, please call the MIT Medical Department's Health Education Service at 253-1316.

PHYSICS OR ENGINEERING RESEARCH TECHNICIAN

Experienced research technician with a degree in physics or engineering to manage and maintain x-ray Diffraction Laboratory. The position requires a responsible, organized individual with mechanical skills. Maintenance of X-ray optics and diffraction camaras requires precision and attention to detail. Some knowledge of vacuum technology and electronics useful. The ability to perform light machining a plus. We seek someone with precision and attention to detail. Some knowledge of vacuum technology and mechanical skills. Maintenance of X-ray optics and diffraction cameras requires precision and attention to detail. Some knowledge of vacuum technology and electronics useful. The ability to perform light machining a plus. We offer a stimulating research environment focused on determining the structure of proteins, DNA-protein complexes and viruses. Send resume to Professor Don C. Wiley or Professor Stephen C. Hirstrom at Howard Hughes Medical Institute, Laboratory of Structural Molecular Biology, at Harvard University, 7 Divinity Avenue, Cambridge, MA 02138.