STATE OF MICHIGAN
IN THE MACOMB COUNTY CIRCUIT COURT

PEOPLE OF THE STATE OF MICHIGAN,

Plaintiff,

v. Case No.: 09-004960-FH

D[redacted] A[redacted] Hon. Peter J. Maceroni

Defendant.

_____/

AMICUS CURIAE BRIEF OF THE AMERICAN CIVIL LIBERITES UNION FUND OF MICHIGAN

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INTEREST OF AMICUS

The American Civil Liberties Union Fund of Michigan is the Michigan affiliate of a nationwide nonpartisan organization of over 500,000 members dedicated to protecting the rights guaranteed by the U.S. and Michigan Constitutions. The ACLU of Michigan has long been committed to protecting the due process and equal protection rights of all people in this country, including the rights of people who are facing any loss of liberty. The ACLU of Michigan has a Lesbian Gay Bisexual and Transgender (LGBT) Project, which serves as the legal arm for Michigan's LGBT community, working for equal opportunity for LGBT persons through litigation, legal education and public policy advocacy. The LGBT Project also assists persons living with HIV/AIDS who have been discriminated against, and is involved with HIV/AIDS related public policy issues, including testing and counseling, HIV confidentiality, and law enforcement. The ACLU of Michigan has played an active role in proposed legislation that would revise HIV testing procedures in hospitals and private physician offices, and has spoken out against the use of anti-terrorism laws to prosecute persons living with HIV/AIDS.

STATEMENT OF FACTS

D[redacted] A[redacted], an HIV positive man, is being charged with assault with intent to maim and aggravated assault for allegedly biting his neighbor, Winfred Fernandis, during an altercation between the two men which occurred on October 18, 2009. According to the Clinton Township police report Mr. A[redacted] allegedly bit Mr. Fernandis while they were fighting.

Nothing in the police reports or witness statements indicate that A[redacted]'s mouth was bleeding at the time the alleged biting occurred. A[redacted] does not recall biting anyone, maintaining that he was attacked by Fernandis, his wife, and Fernandis' father, and was fighting back in self-defense. Medical records from the Mount Clemens Regional Medical Center indicate that A[redacted] was bitten on his finger during the altercation. (Exhibit A). A[redacted] also states that he has been a victim of both physical and verbal harassment by the Fernandis family because of his sexual orientation. After the alleged incident, A[redacted] filed a personal protection order against the Fernandis family and a criminal complaint with the township police.[1] A[redacted] was charged with assault with intent to maim and aggravated assault.

At the November 2, 2009 arraignment, Macomb County Prosecutor Eric Smith announced that his office was bringing additional charges against A[redacted] under a state anti-terrorism law, passed in the wake of the Oklahoma City bombing and an anthrax scare in Michigan, to punish those who planned or carried out biological, chemical and radioactive attacks. MCL 750.200i. The bioterrorism provision of the law upon which the prosecutor's office relied provides:

> A person shall not manufacture, deliver, possess, transport, place, use or release any of the following for an unlawful purpose:
>
> (a) a harmful biological substance or a harmful biological device.

[1]Michigan Messenger, "State Lawmakers Question Terrorism Charges for HIV-Positive Man," November 10, 2009, http://michiganmessenger.com/30306/hiv-as-terrorism-case-could-set-legal-precedent.

A[redacted]'s attorney has filed a Motion for Dismissal and the ACLU submits this *amicus curiae* brief in support of such dismissal.

ARGUMENT

I. THE MICHIGAN BIOTERRORISM LAW WAS NOT INTENDED TO PUNISH A PERSON LIVING WITH HIV/AIDS WHO IS ALLEGED TO HAVE BITTEN A NEIGHBOR IN PHYSICAL ALTERCATION.

Courts do not exist in a vacuum. They may take cognizance of facts and events surrounding the passage and purpose of legislation, *Wilkins v Ann Arbor City Clerk*, 385 Mich 670, 691 (1971). A court may refer to the history of the legislation in order to determine the underlying intent of the legislature. *Luttrell v Department of Corrections*, 421 Mich 93, 102 (1984).

The legislative history behind Michigan's bioterrorism law, MCL 750.200i, makes it clear that the statute was not intended to cover incidents involving an HIV positive person biting another person. The law was passed as part of a package of bills in 1998, "in the wake of the Oklahoma City federal building bombing…as well as an incident in which police in Lansing stopped a van driven by a Battle Creek man for a traffic violation only to discover weapons and a bomb reportedly intended to be used to kill someone in Lansing. The apprehended man was found to have been manufacturing anthrax in his basement."[2]

According to the legislative analysis of both Senate Bill 443 and House Bill 4289, which eventually became MCL 750.200i:

> The Bill would criminalize and punish the unfortunately increasing likelihood that harmful biological, chemical and radioactive substances will be used to terrorize, harm, or kill people. This would address not only the recent incident in Lansing where a man was reportedly trying to cultivate the deadly anthrax toxin in his basement, but also

[2] House Legislative Analysis Section, Senate Bills 443 and 997, May 19, 1998, http://www.legislature.mi.gov/(S(yirtskn4p2gsxr45gxo3cf55))/documents/1997-1998/billanalysis/House/pdf/1997-HLA-0443-A.pdf.

> situations where an extremist sect released a deadly nerve gas in metropolitan subway stations. While nothing like the Japanese incident has occurred yet in Michigan, the use of harmful biological, chemical or radioactive substances or devices clearly is a possibility that the law ought to address.[3]

State Rep. Mark Meadows, who chairs the House Judiciary Committee, said in an interview in the *Michigan Messenger*, that he does not believe the legislature had the neighborhood fight situation in mind when it drafted the terrorism laws. The Democrat from East Lansing also said he thought the prosecution was "silly" because the law was never designed to punish what occurred in this case:

> Is this a dangerous instrumentality? It's like saying that because I breathed on you and I have tuberculosis and we are fighting, that somehow because I have this disease it suddenly becomes more than just that I have this disease," said Meadows, a former assistant attorney general. "The other charges are more than sufficient to deal with the issues involved.[4]

The ACLU of Michigan believes that, to the best of its knowledge, this is the first time a terrorism law has been used in connection with an HIV-infected person's prosecution. Not only is Michigan's bioterrorism law being misapplied, but such charges by the Macomb Prosecuting Attorney's office have the effect of demonizing people living with HIV, promoting both fear and ignorance regarding how HIV is transmitted and discriminating against people living with this virus. It was never the intent of Michigan's legislature to use laws prohibiting bioterrorism to prosecute persons with a physical condition such as HIV and the Prosecuting Attorney's office has created a dangerous precedent in doing so. There may be sufficient evidence to charge Mr. A[redacted] with assault or some other crime, but not bioterrorism.

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[3] House Legislative Analysis Section, House Bill 4289 and Senate Bills 97, 443, and 997, August 24, 1998, page 9, http://www.legislature.mi.gov/(S(ik3oxb45sg5y41fdcmez5n55))/documents/1997-1998/billanalysis/House/pdf/1997-HLA-4289-B.pdf.

[4] Michigan Messenger, "State lawmakers question terrorism charges for HIV-positive man," November 10, 2009, http://michiganmessenger.com/29816/state-lawmakers-question-terrorism-charges-for-hiv-positive-man.

II. TERRORISM CHARGES MUST BE DISMISSED WHERE (1) IT IS MEDICALLY IMPOSSIBLE TO TRANSMIT HIV THROUGH BITING WHERE THE BITER IS NOT BLEEDING AND (2) NO EVIDENCE HAS BEEN PRESENTED THAT DEFENDANT WAS BLEEDING WHEN HE ALLEGEDLY BIT HIS NEIGHBOR.

Even if the bioterrorism law was intended to apply to an HIV positive person engaged in a physical fight, the statute cannot be applied under the facts of this case. As discussed below, HIV simply cannot be transmitted through a bite unless the biter is bleeding from the mouth. Since Mr. A[redacted]'s mouth was not bleeding when he allegedly bit his neighbor during the scuffle, he could not have delivered a "harmful biological substance or device" as those terms are defined by the statute.

MCL 750.200i provides, in relevant part, that 'a person shall not manufacture, deliver, possess, transport, place, use or release any of the following for an unlawful purpose: . . . a harmful biological substance or a harmful biological device."

"Harmful biological substance" and "harmful biological device" are defined in MCL 750.200h:

(f) "Harmful biological device" means a device designed or intended to release a harmful biological substance.

(g) "Harmful biological substance" means a bacteria, virus or other microorganism or a toxic substance derived from or produced by an organism that can be used to cause death, injury, or disease in humans, animals, or plants.

The undisputed medical and scientific evidence regarding transmission of HIV makes it clear that the HIV virus cannot be spread by saliva unless it contains blood. The Center for Disease Control states that contact with saliva, tears and sweat alone has never been shown to transmit HIV. (Centers for Disease Control, *HIV and its Transmission,* July 1999, Exhibit B).

Saliva is an unlikely vehicle for HIV transmission, according to the UCLA Department of Epidemiology because the virus is uncommon in saliva and, when present, tends to be there at very low levels[5] Furthermore, there appears to be a factor in saliva that inhibits viral transmission, making it even more difficult for the virus to move from one person to another.[6] There is a protein in the mouth that attaches itself to the surface of blood cells and blocks infection by HIV that appears to be present in the mucous membrane in the mouth at a level sufficient enough to reduce the concentration of HIV in saliva to non-infectious levels. The only time saliva poses a risk for transmission it is when it is mixed with blood.[7]

Biting is not a common way of transmitting HIV. In fact, there are numerous reports of bites that did not result in HIV infection. (Center for Disease Control, HIV and its Transmission, July 1999, Exhibit B). The only reported incident by the Center for Disease Control that suggested that HIV can be transmitted through a human bite, occurred in 1997, in an incident involving an HIV-infected adult female sex worker who bit a man several times. A physical examination of the woman showed that she had bleeding gums associated with severe gingivitis. The epidemiologic and laboratory evidence supported blood-borne transmission due to severe tissue damage and the presence of blood in the mouth of the HIV infected biter. (*Blood-to-blood transmission of HIV via bite*; Liberti T, Lieb S, Scott R, Nolan J, Malecki J, Kalish M, Jaffe H;

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[5] Whole saliva and serum samples were collected from 75 HIV-infected homosexual or bisexual men. Thirty-eight percent of the cultured sera were positive for cell-free, infectious virus while only 1 percent of the 218 cultured whole salivas contained cell-free, infectious virus. These data support previous studies suggesting unlikely potential transmissibility of HIV infection by saliva. Frerichs, R.R. *Saliva and HIV Transmission.* SEA-AIDS Network, August 29, 1996.

[6] Barr, C.E. et al, *Recovery of Infectious HIV-1 from whole saliva,* Journal of American Dental Association 123(2)36-48, 1992)

[7] Minnesota AIDS Project, *HIV Transmission*, http://www.mnaidsprogject.org/learn.transmission.htm).

International Conference on AIDS. Int Conf AIDS, 1996 July 7-12; 11: 179 (abstract no. Mo. D. 1728).

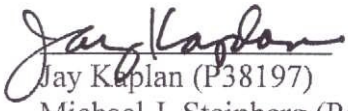
The prosecutor relies on *People v Odom*, 276 Mich App 407 (2007), to support its charge. However, *Odom* is easily distinguished from the present case. In *Odom*, an HIV positive prison inmate, whose mouth was bleeding, spat blood in a corrections officer's face twice. The court relied on medical evidence regarding HIV infected blood to uphold the trial court's enhanced sentencing. *Id.*, 276 Mich App at 411.

In stark contrast, Mr. A[redacted]s mouth was not bleeding at the time he allegedly bit Fernandis and there is certainly no evidence that Allen spat blood on his neighbor. There is no allegation in the police or medical reports that Defendant's blood was released or transmitted to Fernandis at any time during the alleged incident. Therefore, the prosecutor's office has failed to allege facts to support that Defendant released a harmful biological substance.

CONCLUSION

The Macomb County Prosecuting Attorney's Office has improperly brought charges under Michigan's bioterrorism law against Daniel A[redacted] an HIV positive man, for allegedly biting his neighbor. It was never the intent of Michigan's legislature for this law to be applied to HIV positive persons involved in the type of physical altercation at issue in this case. The charges brought by the Prosecutor promote myths and falsehoods regarding the transmission of HIV. HIV cannot be transmitted through biting unless the infected person doing the biting is bleeding. It has not been alleged that Mr. A[redacted] was bleeding when the biting occurred. Clearly Mr. A[redacted] and people living with HIV are not terrorists. There are already laws that the Prosecuting Attorney's office can and has used to charge him for the alleged incident, and for these reasons the bioterrorism charges under MCL 750.200i should be dismissed.

Respectfully submitted,



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DATED: March 31, 2010

Exhibit A

MT. CLEMENS REGIONAL MEDICAL CENTER
MT. CLEMENS, MICHIGAN
MEDICAL RECORD

REPORT COPIES TO:
Attending: [redacted]
Admitting: [redacted]
Referring:
Consulting:
Family:

FINAL DIAGNOSES
1. Alleged assault with a human bite to the left index finger.
2. Head contusion.
3. Lumbar strain.
4. Right knee abrasion.

HISTORY OF PRESENT ILLNESS
The patient is a 44-year-old male who states that he was assaulted in a hate crime yesterday where he was beaten and struck by several other males. He states he filed a police report with the Clinton Township Police Department. He presents for evaluation of headache, low-back pain, bite wound to his left index finger and abrasion over his knee.

PAST MEDICAL HISTORY
The patient's medical history is significant for HIV for which he is being medicated under the care of a physician. He denies alcohol or illicit substance abuse.

REVIEW OF SYSTEMS
CONSTITUTIONAL: Denies fever, chills, weakness, or dizziness.
HEAD, EYES, EARS, NOSE AND THROAT: Denies headache, visual loss or changes, ear pain, nasal drainage, difficulty swallowing, or neck pain.
CARDIOVASCULAR / RESPIRATORY: Denies chest pain, chest discomfort, palpitations, exertional dyspnea, shortness of breath, cough, or wheezing.
GASTROINTESTINAL: Denies abdominal pain or distress, nausea, vomiting, diarrhea, or blood in stool.
GENITOURINARY: Denies pain or burning with urination, blood in urine, or incontinence.
MUSCULOSKELETAL: Denies weakness, muscle pain, or swelling.
INTEGUMENTARY: Denies rash or pruritus.
NEUROLOGICAL: Denies weakness or numbness of extremities or face, gait problems, or speech difficulty.

PHYSICAL EXAMINATION
VITAL SIGNS: Stable.
CONSTITUTIONAL: The patient is awake, alert and oriented.
HEAD: Examination revealed no bleeding or ecchymosis around the head.
ENT: No hemotympanum. Face was symmetric. Tongue was midline.
EYES: Pupils are round and reactive.
RESPIRATORY / CHEST: The chest was clear.
MUSCULOSKELETAL / EXTREMITIES: There is tenderness to the low back midline and

lumbar spine region. There is no abrasion or contusion over the flanks. Pelvic rock was stable. Examination of the right knee reveals superficial abrasion. The patient had good range of motion. Examination of the left index finger revealed a bite mark at the tip of the finger that did not look infected. The neurocirculatory status remained intact.

EMERGENCY DEPARTMENT COURSE AND MEDICAL DECISION MAKING
The patient was given 1.5 grams of Unasyn IM. He had a CT scan of his brain. Cervical spine films were taken along with x-ray of the finger and these were negative.

The patient was eventually discharged home on Unasyn and Vicodin for pain control. He was referred for outpatient follow-up.

Job#: [redacted]
DD: 10/20/2009
DT: 10/20/2009 08:08

Authenticated by Joseph M. Flynn, D.O. On 10/23/2009 07:20:27 AM

MOUNT CLEMENS
REGIONAL MEDICAL CENTER
A McLAREN HEALTH SERVICE

1000 Harrington Blvd
Mount Clemens, MI 48043
Hospital Telephone: 586-493-8000

Patient Name: A[redacted] Procedure #: 8344

Med Rec #: [redacted]
Patient Location:
DOB: [redacted] Gender: M Age: [redacted]

Visit ID: 55008333
Patient Type: EMERGENCY ROOM
Phone: (313)980-1444

Exam Reason: Fracture
Order Phys: FLYNN, JOSEPH M.
Procedure: 10/19/09 19:12 Hand Left 3 view

Read By: PETERS MD, JAMES

REPORT COPIES TO:
Attending: [redacted]
Admitting: [redacted]
Referring:
Consulting:
Family:

LEFT HAND, CERVICAL SPINE AND LUMBAR SPINE

CLINICAL INDICATION
Trauma.

LEFT HAND, THREE VIEWS

FINDINGS
Three views of the left hand show a tiny 1 mm ossification along the interphalangeal joint of the thumb. The remainder of the left hand is unremarkable. No significant soft tissue swelling is identified.

CONCLUSION
Tiny ossification along the interphalangeal joint of the thumb. This may be old, however, correlation for acute pain in this region is suggested to exclude a tiny acute avulsion fracture.

CERVICAL SPINE

FINDINGS
Frontal, lateral and oblique x-rays of the cervical spine were supplemented with an open mouth odontoid view. Lateral films were obtained in the neutral, flexion and extension positions. No fracture, malalignment, disk space narrowing or prevertebral soft tissue swelling is identified. There is no abnormal motion on flexion or extension. The visualized neural foramen are patent bilaterally.

CONCLUSION

Transcribed: 10/19/2009 08:06 PM By: MedQuist Visit ID: [redacted]

RFC 10-24-09

Exhibit 15

HIV Prevention SAVES LIVES

HIV and Its Transmission

Research has revealed a great deal of valuable medical, scientific, and public health information about the human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS). The ways in which HIV can be transmitted have been clearly identified. Unfortunately, false information or statements that are not supported by scientific findings continue to be shared widely through the Internet or popular press. Therefore, the Centers for Disease Control and Prevention (CDC) has prepared this fact sheet to correct a few misperceptions about HIV.

How HIV is Transmitted

HIV is spread by sexual contact with an infected person, by sharing needles and/or syringes (primarily for drug injection) with someone who is infected, or, less commonly (and now very rarely in countries where blood is screened for HIV antibodies), through transfusions of infected blood or blood clotting factors. Babies born to HIV-infected women may become infected before or during birth or through breast-feeding after birth.

In the health care setting, workers have been infected with HIV after being stuck with needles containing HIV-infected blood or, less frequently, after infected blood gets into a worker's open cut or a mucous membrane (for example, the eyes or inside of the nose). There has been only one instance of patients being infected by a health care worker in the United States; this involved HIV transmission from one infected dentist to six patients. Investigations have been completed involving more than 22,000 patients of 63 HIV-infected physicians, surgeons, and dentists, and no other cases of this type of transmission have been identified in the United States.

Some people fear that HIV might be transmitted in other ways; however, no scientific evidence to support any of these fears has been found. If HIV were being transmitted through other routes (such as through air, water, or insects), the pattern of reported AIDS cases would be much different from what has been observed. For example, if mosquitoes could transmit HIV infection, many more young children and preadolescents would have been diagnosed with AIDS.

All reported cases suggesting new or potentially unknown routes of transmission are thoroughly investigated by state and local health departments with the assistance, guidance, and laboratory support from CDC. *No additional routes of transmission have been recorded,* despite a national sentinel system designed to detect just such an occurrence.

The following paragraphs specifically address some of the common misperceptions about HIV transmission.

HIV in the Environment

Scientists and medical authorities agree that HIV does not survive well in the environment, making the possibility of environmental transmission remote. HIV is found in varying concentrations or amounts in blood, semen, vaginal fluid, breast

CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

milk, saliva, and tears. (See page 3, *Saliva, Tears, and Sweat.*) To obtain data on the survival of HIV, laboratory studies have required the use of artificially high concentrations of laboratory-grown virus. Although these unnatural concentrations of HIV can be kept alive for days or even weeks under precisely controlled and limited laboratory conditions, CDC studies have shown that drying of even these high concentrations of HIV reduces the amount of infectious virus by 90 to 99 percent within several hours. Since the HIV concentrations used in laboratory studies are much higher than those actually found in blood or other specimens, drying of HIV-infected human blood or other body fluids reduces the theoretical risk of environmental transmission to that which has been observed—essentially zero. Incorrect interpretation of conclusions drawn from laboratory studies have unnecessarily alarmed some people.

Results from laboratory studies should not be used to assess specific personal risk of infection because (1) the amount of virus studied is not found in human specimens or elsewhere in nature, and (2) no one has been identified as infected with HIV due to contact with an environmental surface. Additionally, HIV is unable to reproduce outside its living host (unlike many bacteria or fungi, which may do so under suitable conditions), except under laboratory conditions, therefore, it does not spread or maintain infectiousness outside its host.

Households

Although HIV has been transmitted between family members in a household setting, this type of transmission is very rare. These transmissions are believed to have resulted from contact between skin or mucous membranes and infected blood. To prevent even such rare occurrences, precautions, as described in previously published guidelines, should be taken in all settings—including the home—to prevent exposures to the blood of persons who are HIV infected, at risk for HIV infection, or whose infection and risk status are unknown. For example,

- Gloves should be worn during contact with blood or other body fluids that could possibly contain visible blood, such as urine, feces, or vomit.
- Cuts, sores, or breaks on both the care giver's and patient's exposed skin should be covered with bandages.
- Hands and other parts of the body should be washed immediately after contact with blood or other body fluids, and surfaces soiled with blood should be disinfected appropriately.
- Practices that increase the likelihood of blood contact, such as sharing of razors and toothbrushes, should be avoided.
- Needles and other sharp instruments should be used only when medically necessary and handled according to recommendations for health-care settings. (Do not put caps back on needles by hand or remove needles from syringes. Dispose of needles in puncture-proof containers out of the reach of children and visitors.)

Businesses and Other Settings

There is no known risk of HIV transmission to co-workers, clients, or consumers from contact in industries such as food-service establishments (see information on survival of HIV in the environment). Food-service workers known to be infected with HIV need not be restricted from work unless they have other infections or illnesses (such as diarrhea or hepatitis A) for which any food-service worker, regardless of HIV infection status, should be restricted. CDC recommends that all food-service workers follow recommended standards and practices of good personal hygiene and food sanitation.

In 1985, CDC issued routine precautions that all personal-service workers (such as hairdressers, barbers, cosmetologists, and massage therapists) should follow, even though there is no evidence of transmission from a personal-service worker to a client or vice versa. Instruments that are intended to penetrate the skin (such as tattooing and acupuncture needles, ear piercing devices) should be used once and disposed of or thoroughly cleaned and sterilized. Instruments not intended to penetrate the skin but which may become contaminated with

blood (for example, razors) should be used for only one client and disposed of or thoroughly cleaned and disinfected after each use. Personal-service workers can use the same cleaning procedures that are recommended for health care institutions.

CDC knows of no instances of HIV transmission through tattooing or body piercing, although hepatitis B virus has been transmitted during some of these practices. One case of HIV transmission from acupuncture has been documented. Body piercing (other than ear piercing) is relatively new in the United States, and the medical complications for body piercing appear to be greater than for tattoos. Healing of piercings generally will take weeks, and sometimes even months, and the pierced tissue could conceivably be abraded (torn or cut) or inflamed even after healing. Therefore, a theoretical HIV transmission risk does exist if the unhealed or abraded tissues come into contact with an infected person's blood or other infectious body fluid. Additionally, HIV could be transmitted if instruments contaminated with blood are not sterilized or disinfected between clients.

Kissing

Casual contact through closed-mouth or "social" kissing is not a risk for transmission of HIV. Because of the potential for contact with blood during "French" or open-mouth kissing, CDC recommends against engaging in this activity with a person known to be infected. However, the risk of acquiring HIV during open-mouth kissing is believed to be very low. CDC has investigated only one case of HIV infection that may be attributed to contact with blood during open-mouth kissing.

Biting

In 1997, CDC published findings from a state health department investigation of an incident that suggested blood-to-blood transmission of HIV by a human bite. There have been other reports in the medical literature in which HIV appeared to have been transmitted by a bite. Severe trauma with extensive tissue tearing and damage and presence of blood were reported in each of these instances. Biting is not a common way of transmitting HIV. In fact, there are numerous reports of bites that did *not* result in HIV infection.

Saliva, Tears, and Sweat

HIV has been found in saliva and tears in very low quantities from some AIDS patients. It is important to understand that finding a small amount of HIV in a body fluid does not necessarily mean that HIV can be *transmitted* by that body fluid. HIV has *not* been recovered from the sweat of HIV-infected persons. Contact with saliva, tears, or sweat has never been shown to result in transmission of HIV.

Insects

From the onset of the HIV epidemic, there has been concern about transmission of the virus by biting and bloodsucking insects. However, studies conducted by researchers at CDC and elsewhere have shown no evidence of HIV transmission through insects—even in areas where there are many cases of AIDS and large populations of insects such as mosquitoes. Lack of such outbreaks, despite intense efforts to detect them, supports the conclusion that HIV is not transmitted by insects.

The results of experiments and observations of insect biting behavior indicate that when an insect bites a person, it does not inject its own or a previously bitten person's or animal's blood into the next person bitten. Rather, it injects saliva, which acts as a lubricant or anticoagulant so the insect can feed efficiently. Such diseases as yellow fever and malaria are transmitted through the saliva of specific species of mosquitoes. However, HIV lives for only a short time inside an insect and, unlike organisms that are transmitted via insect bites, HIV does not reproduce (and does not survive) in insects. Thus, even if the virus enters a mosquito or another sucking or biting insect, the insect does not become infected and cannot transmit HIV to the next human it feeds on or bites. HIV is not found in insect feces.

There is also no reason to fear that a biting or bloodsucking insect, such as a mosquito, could transmit HIV from one person to another through HIV-infected blood left on its mouth parts. Two factors serve to explain why this is so—first, infected people do not have constant, high levels of HIV in their bloodstreams and, second, insect mouth parts do not retain large amounts of blood on their surfaces. Further, scientists who study insects have determined that biting insects normally do not travel from one person to the next immediately after ingesting blood. Rather, they fly to a resting place to digest this blood meal.

Effectiveness of Condoms

Condoms are classified as medical devices and are regulated by the Food and Drug Administration (FDA). Condom manufacturers in the United States test each latex condom for defects, including holes, before it is packaged. The proper and consistent use of latex or polyurethane (a type of plastic) condoms when engaging in sexual intercourse—vaginal, anal, or oral—can greatly reduce a person's risk of acquiring or transmitting sexually transmitted diseases, including HIV infection.

There are many different types and brands of condoms available—however, only latex or polyurethane condoms provide a highly effective mechanical barrier to HIV. In laboratories, viruses occasionally have been shown to pass through natural membrane ("skin" or lambskin) condoms, which may contain natural pores and are therefore not recommended for disease prevention (they are documented to be effective for contraception). Women may wish to consider using the female condom when a male condom cannot be used.

For condoms to provide maximum protection, they must be used *consistently* (every time) and *correctly*. Several studies of correct and consistent condom use clearly show that latex condom breakage rates in this country are less than 2 percent. Even when condoms do break, one study showed that more than half of such breaks occurred prior to ejaculation.

When condoms are used reliably, they have been shown to prevent pregnancy up to 98 percent of the time among couples using them as their only method of contraception. Similarly, numerous studies among sexually active people have demonstrated that a properly used latex condom provides a high degree of protection against a variety of sexually transmitted diseases, including HIV infection.

For more detailed information about condoms, see the CDC publication *"Male Latex Condoms and Sexually Transmitted Diseases."*

CDC's Response

CDC is committed to providing the scientific community and the public with accurate and objective information about HIV infection and AIDS. It is vital that clear information on HIV infection and AIDS be readily available to help prevent further transmission of the virus and to allay fears and prejudices caused by misinformation. For a complete description of CDC's HIV/AIDS prevention programs, see *"Facts about CDC's Role in HIV and AIDS Prevention."*

For more information...

CDC National AIDS Hotline:
1-800-342-AIDS (2437)
Spanish: 1-800-344-SIDA (7432) (HIV and STDs)
Deaf: 1-800-243-7889

CDC National Prevention Information Network:
P.O. Box 6003
Rockville, Maryland 20849-6003
1-800-458-5231

Internet Resources:
DHAP: http://www.cdc.gov/hiv
NCHSTP: http://www.cdc.gov/nchstp/od/nchstp.html
NPIN: http://www.cdcnpin.org