

3. A.I.D.S.

And I looked, and behold a pale horse, and his name that sat on him was Death, and Hell followed with him Revelation 6:8

3.1 PRELUDE

Death came infrequently at first....



Death Valley, California Fancy Cancel 10-7-1929

1969

A 15 year old black U.S. boy died of Kaposi's sarcoma and opportunistic infections.



1976

A young Norwegian family died after a slow 7-10 year deterioration of health.



1977

A Rwandan mother, 27 years of age, died from a variety of immune-deficiency symptoms.



1980 - A sudden increase in frequently fatal and, until now, very rare diseases is noted among gay men ...

...in San Francisco...



...in New York City.



These and other outbreaks suggested a new, mysterious, terrifying, and fatal disease.

3.2 AIDS - WHAT IS IT ?

Death received a new name - AIDS !

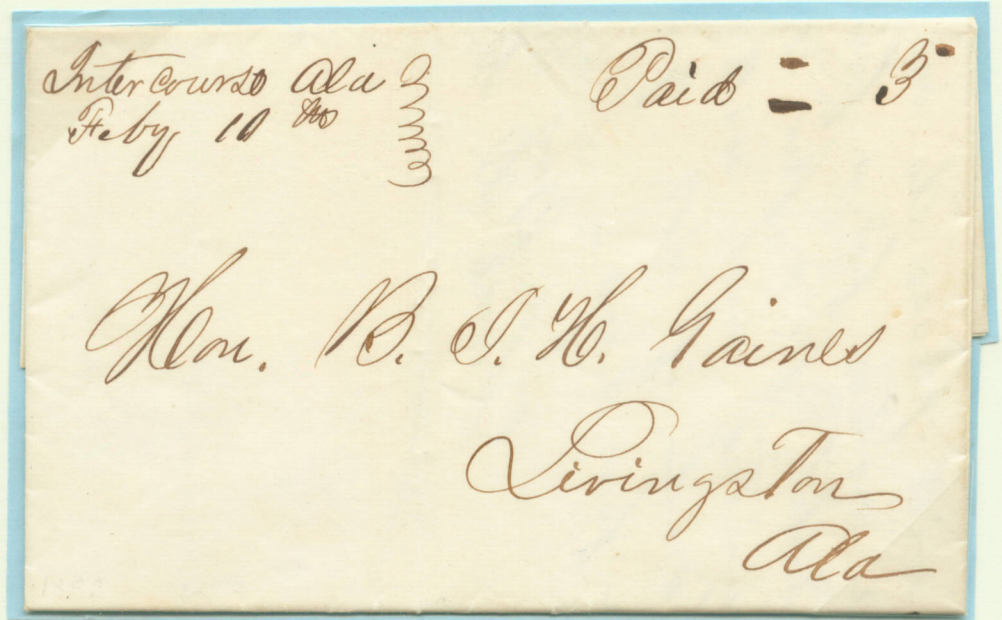


ACQUIRED - vice infectious or contagious
 IMMUNE - affects the body's immune system
 DEFICIENCY - which is missing something
 SYNDROME - which leads to a variety of opportunistic infections and highly unusual malignancies.



3.2.1 HOW ACQUIRED

Through sexual intercourse with an exchange of bodily fluids ...



Intercourse, Ala. Feb 10, 1852 Paid 3 cents per ½ oz. under 3000 miles



Intercourse, Pa. May 8, 1883 3 cent letter rate + 10 cent registry fee



3.2.1 HOW ACQUIRED

Intravenous (IV) drug abuse through shared contaminated needles is a major factor in the spread of AIDS.



Accidental needle sticks among medical personnel account for an increasing number of cases of HIV/AIDS infection.



But for injection drug abusers, a contaminated needle kills as surely as a bullet.

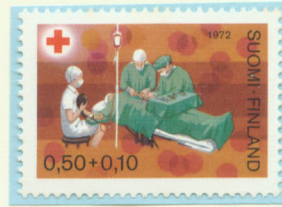
TZN = Companions Fighting Drug Abuse



DRUGS KILL

3.2.1 HOW ACQUIRED

From infected blood used in transfusions during surgery ...



... or in treating hemophilia (which uses the blood of many donors).



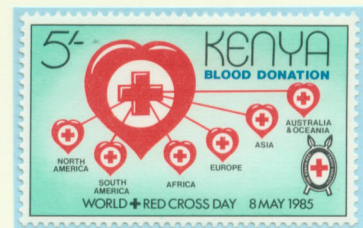
Inauguration of Hemophiliac Hospital



Third Congress World Federation of Hemophiliacs

The Red Cross and most governments were anything but ready in recognizing the threat of contaminated blood.

International commerce in blood and its products aided the rapid spread of AIDS worldwide.



Some blood banks in the U.S. and several government officials in France were found criminally liable for neglecting to protect blood supplies.

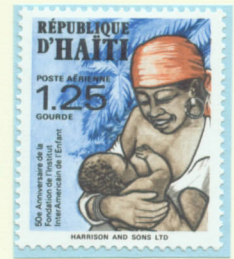


3.2.1 HOW ACQUIRED

From an infected mother directly to the fetus...



... and also from breast-feeding.



Both mother and child are doomed to an early death...

... despite the recent appearance of specialized agencies like the Starfish Foundation for Children with AIDS.




BABY IN COFFIN CANCEL
HARRISBURG, PA Ca 1875


**The Starfish Foundation
For Children With AIDS**

**ASDA Station
New York, NY
10001-1188**

November 2, 1995



USA 29
AIDS AWARENESS



USA
The "G" Rate make-up stamp

SUMMARY - The four main methods of acquiring AIDS.

Sexual intercourse

Blood transfusions



IV Drug Use

Mother to Fetus

3.2.2 IMMUNE DEFICIENCY

The body's immune system is deteriorating. The CD4 helper cell count decreases from 1000 to less than 200 cells/cubic mm of blood - an AIDS defining condition.



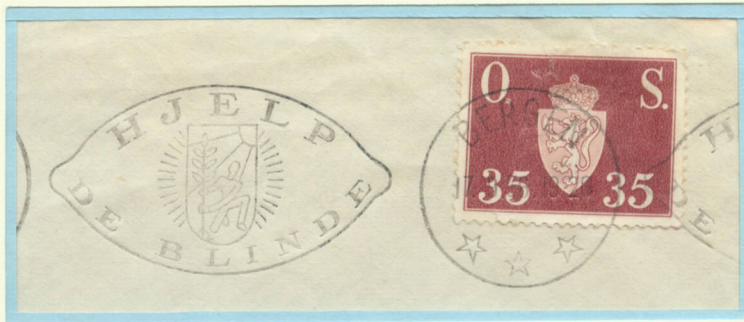
3.2.3 SYNDROME

A variety of symptoms leading to rare malignancies and unusual opportunistic infections such as:

Kaposi's Sarcoma is now a common indicator of AIDS.



Cytomegalovirus (CMV) - an AIDS defining condition. CMV retinitis, common in AIDS patients, results in blindness.



Tuberculosis has returned in newer, deadlier, more drug resistant strains.



Protozoa infections like *Pneumocystis carinii* are found in most AIDS patients



Virus Protozoa



The U.S. Centers for Disease Control provides new and revised definitions of AIDS, and is also the world leader in funding, co-ordinating, and directing AIDS research.

The Nation's Prevention Agency

CDC 50

Centers for Disease Control and Prevention

CDC Station 30333

July 1, 1996

3.3 MEDICAL RESEARCH

Modern virology and retro-virology is founded on the pioneering work of ...



Stylized Generic Viruses

The Russian biologist Ivanovsky who identified the very first virus in 1892 - the tobacco mosaic virus and Friedrich Loeffler who in 1898 identified the first virus in mammals - foot and mouth disease.



12TH INTERAMERICAN CONF.
ON FOOT & MOUTH DISEASE

... and especially Walter Reed who in 1900 discovered first viral disease in humans - yellow fever.



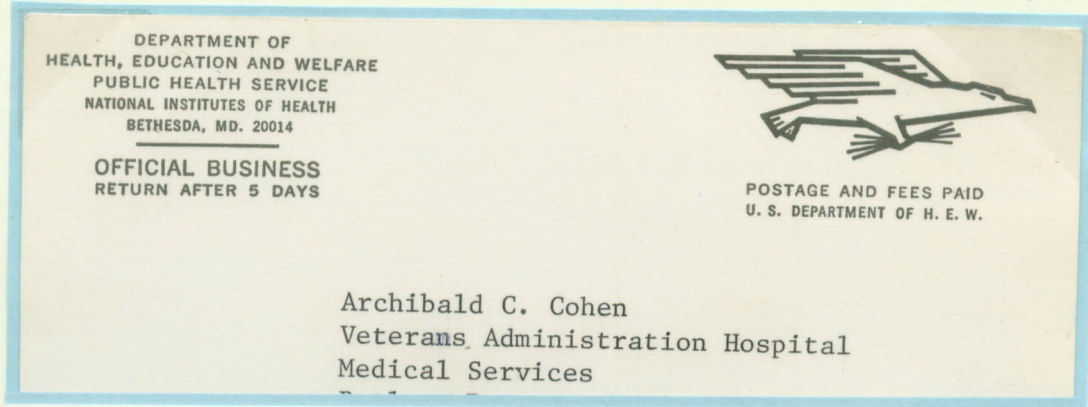
Cancelled: 14 Nov 1940 Boston, Mass. 5 cent U.P.U. Rate
 Backstamped: 28 Dec 1940 Lagos, Nigeria + British Civil Censorship
 Due to fall of France to Nazis, routing via Katsina, Nigeria changed to:
 12 Jan 1942 Cotonou, Dahomey + French civil & military censorship
 16 Jan 1942 Dosso, Niger
 Arrived: 25 Jan 1942 Maradi, Niger - 435 days in transit

3.3 MEDICAL RESEARCH

The causative agent, the human immuno virus (HIV), was isolated and identified by Dr. Luc Montagnier working at the Pasteur Institute in Paris during late 1983 ...



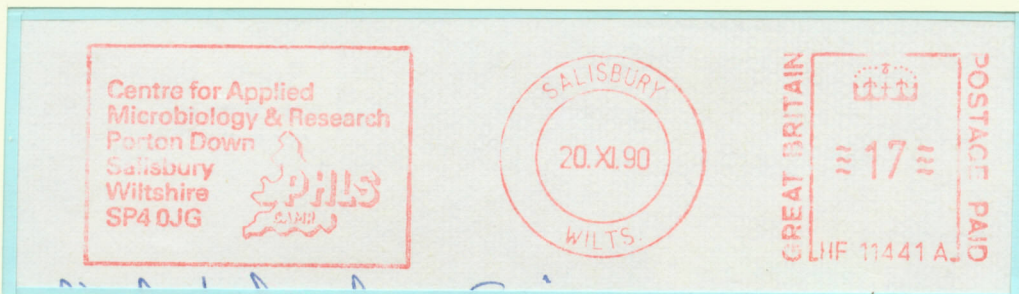
.... and was confirmed by Dr. Robert Gallo at the National Institute of Health in Bethesda, MD.



Research on HIV continues throughout the world, from the Fundação Oswaldo Cruz in Brasil...

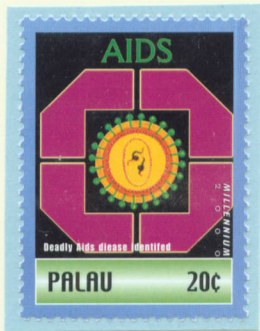


to Britain's Public Health Laboratory Services,



3.3 MEDICAL RESEARCH

The human immunodeficiency virus (HIV), shown below in stylized forms, is (more correctly) a retro-virus



... since it reproduces not through the normal double-strand DNA molecule ...



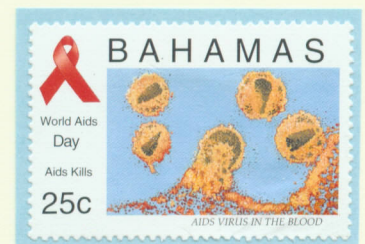
... but through the single-strand RNA molecule with the reverse transcriptase enzyme.
(Please note the incorrect left-hand twist on the DNA in the center and left stamps.)

Retrovirology, which hardly existed 20 years ago, is now a highly specialized medical discipline ...

... as exemplified by the work of Severo Ochoa and of Aaron Klug who discovered the structure of transfer RNA and whose pioneering work in electron microscopy of viruses ...

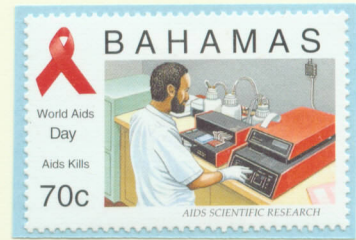


... has given us these images of HIV.



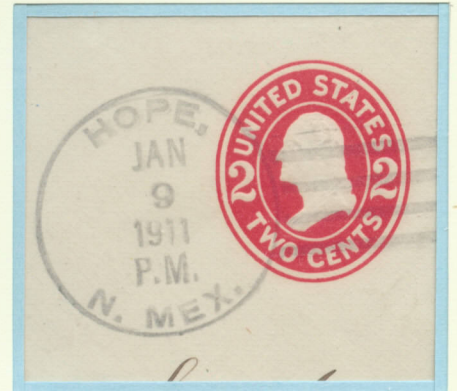
3.3 MEDICAL RESEARCH

Although initial research funding was low, in 1998 the U.S. Federal budget for AIDS research is over \$100,000,000. Charities and private foundations add to this total.



MONEY, MISS. April 22, 1930 2¢ Letter Rate + 15¢ Registry Fee

Despite the vast amounts spent, all AIDS therapy is palliative. No cure exists; only the hope for onebut more than hope is needed.



But until a cure is found, Zimbabwe reminds us that- PRESENTLY THERE IS NO CURE FOR AIDS PREVENTION IS THE ONLY WEAPON

3.3 MEDICAL RESEARCH

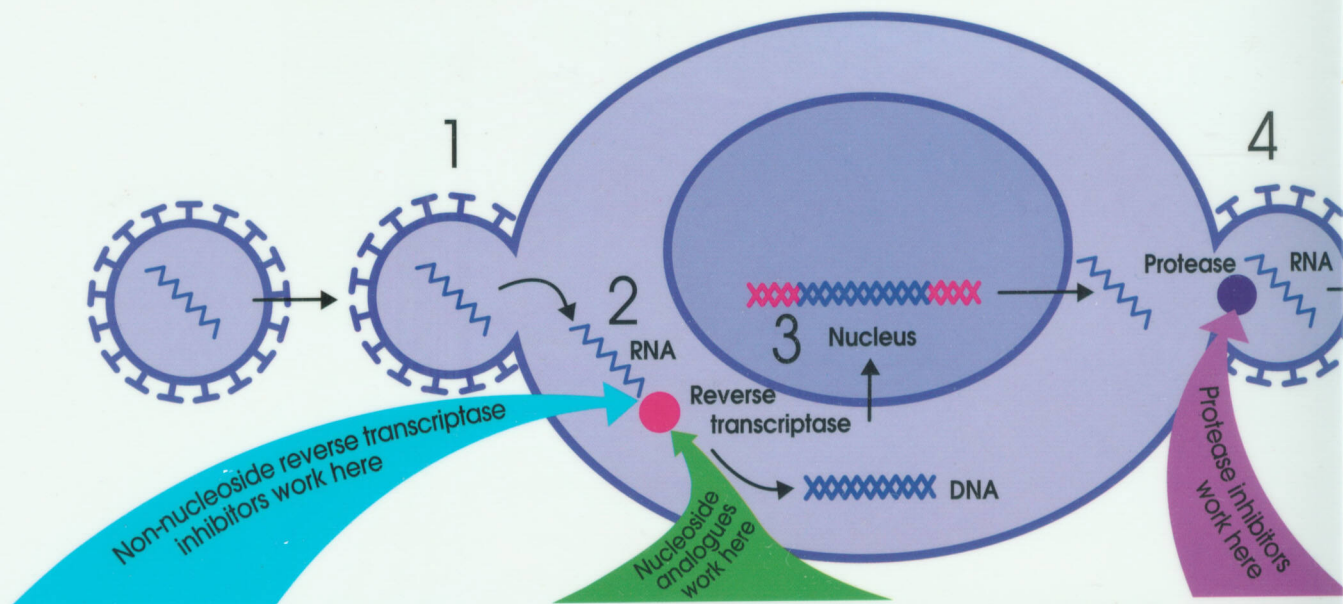
Millions of dollars in research have yielded a variety of treatments but no cure and no vaccine.

This chart explains how the different classes of currently available anti-retroviral drugs work.

ANTIRETROVIRAL AGENTS FOR

Stages of HIV reproduction

- 1 HIV enters a CD4+ cell.
- 2 HIV is a retrovirus, meaning that its genetic information is stored on single-stranded RNA instead of the double-stranded DNA found in most organisms. To replicate, HIV uses an enzyme known as reverse transcriptase to convert its RNA into DNA.
- 3 HIV DNA enters the nucleus of the CD4+ cell and inserts itself into the cell's DNA. HIV DNA then instructs the cell to make many copies of the original virus.
- 4 New virus particles are assembled and leave the cell, ready to infect other CD4+ cells.



Non-nucleoside reverse transcriptase inhibitors

The newest class of antiretroviral agents, non-nucleoside reverse transcriptase inhibitors (NNRTIs) stop HIV production by binding directly onto reverse transcriptase and preventing the conversion of RNA to DNA. These drugs are called "non-nucleoside" inhibitors because even though they work at the same stage as nucleoside analogues, they act in a completely different way.

VIRAMUNE® (nevirapine)

Rescriptor® (delavirdine mesylate)

Nucleoside analogues

The first effective class of antiretroviral drugs was the nucleoside analogues. They act by incorporating themselves into the DNA of the virus, thereby stopping the building process. The resulting DNA is incomplete and cannot create new virus.

Retrovir® (zidovudine - also known as ZDV or AZT)

Epivir® (lamivudine - also known as 3TC)

Videx® (didanosine - also known as ddI)

Hivid® (zalcitabine - also known as ddC)

Zerit® (stavudine - also known as d4T)

Protease inhibitors

Protease inhibitors stop HIV reproduction by blocking the action of the enzyme protease, which is needed for the virus to successfully create new virus particles. These drugs are called "protease inhibitors" because they block the action of the enzyme protease.

Invirase™ (saquinavir)

Crixivan® (indinavir)

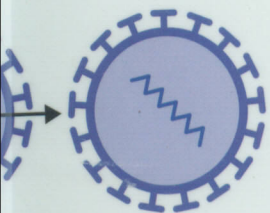
Norvir™ (ritonavir)

Viracept® (nelfinavir)

Note: This information is for informational purposes only and does not constitute a recommendation.

HIV

acts



e
s

inhibitors work at the last stage of the virus
in cycle. They prevent HIV from being
assembled and released from the
CD4+ cell.

(zidovudine)

(didanosine)

(zalcitabine)

(didanosine mesylate)

Information is provided for background only.

This booklet, produced by Bristol-Myers Squibb in the late 1990s, provides additional information on the drugs and their often gruesome side effects.

How our knowledge helps
us combat a deadly virus.

The WAR
on HIV

The graphic features the title 'The WAR on HIV' in large, bold, red letters. The word 'WAR' is significantly larger than 'The' and 'on'. The 'H' in 'HIV' is replaced by a blue and red DNA double helix. The background is a collage of colorful, abstract shapes in shades of blue, pink, and yellow, suggesting a scientific or medical theme.

d and affected by HIV and AIDS. The bulk mailing system was extensively used in fundraising and lobbying efforts.



here's only one thing worse
than fighting for your life against AIDS,
one...



59

led Down



3.4 SOCIAL EFFECTS

Political action and lobbying groups were formed to obtain more research funding and care for those infected and affected by

300 EYE STREET, NE, SUITE 400
WASHINGTON, DC 20002-4389



NATIONAL
MINORITY
AIDS
COUNCIL

Senator William S.
SH-322 Hart Senate
Washington, D. C. 2

There's
than fig
alone...

AIDS Action

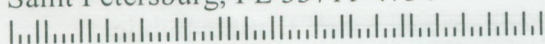
1875 Connecticut Ave NW
Suite 700
Washington, DC 20009

NONPROFIT
ORG.

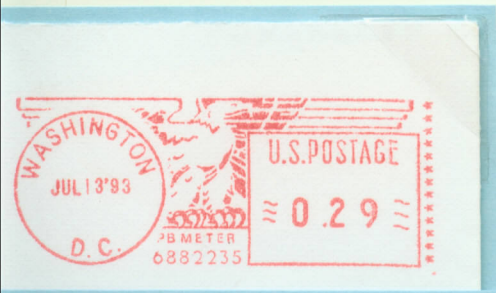
AIDS ACTION

Supreme Court HIV Discrimination Verdict Handed Down

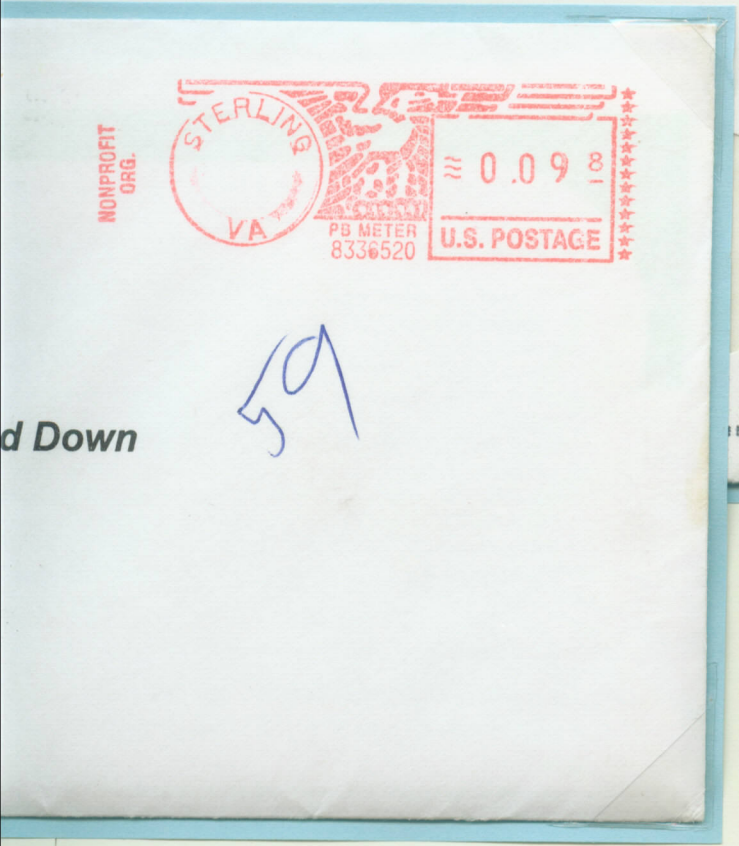
Phillip Stager
4184 51st Ave S
Saint Petersburg, FL 33711-4734



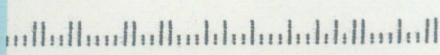
and affected by HIV and AIDS. The bulk mailing system was extensively used in fundraising and lobbying efforts.



There's only one thing worse
than fighting for your life against AIDS,
none...













Down



MY MEDICATION SCHEDULE*

NAME: _____


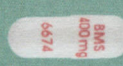




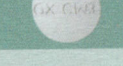


PROTEASE INHIBITORS (PIs)

BRAND/GENERIC NAME	FOOD AND LIQUID CONSIDERATIONS	AVAILABLE STRENGTHS	†	MORNING	NOON	COMMENTS	NIGHT
<input checked="" type="checkbox"/> Kaletra™ (lopinavir/ritonavir) Abbott Laboratories	<i>With food</i>	133.3/33.3-mg capsule (shown) [‡]					
<input type="checkbox"/> Norvir® (ritonavir) Abbott Laboratories	<i>With food, if possible</i>	100-mg capsule (shown) [‡]					
<input type="checkbox"/> Viracept® (nelfinavir mesylate) Agouron Pharmaceuticals	<i>With a meal or light snack</i>	250-mg tablet (shown) [‡]					
<input type="checkbox"/> Agenerase® (amprenavir) GlaxoSmithKline	<i>No food restrictions</i>	150-mg capsule (shown), 50-mg capsule [§]					
<input type="checkbox"/> Crixivan® (indinavir sulfate) Merck & Co.	<i>One hour before or 2 hours after meal with water; 1½ liters water a day for adequate hydration</i>	400-mg capsule (shown), 200-mg capsule, 333-mg capsule					
<input type="checkbox"/> Fortovase® (saquinavir) Roche Laboratories	<i>With meal or up to 2 hours after meal</i>	200-mg capsule (shown)					
<input type="checkbox"/> Invirase® (saquinavir mesylate) Roche Laboratories	<i>Within 2 hours after a full meal</i>	200-mg capsule (shown)					

3.3 MEDICAL RESEARCH

Medication schedules or pill charts like this one are used since strict adherence to an anti-retroviral regimen is essential for success in reducing viral load.

NUCLEOSIDE REVERSE TRANSCRIPTASE INHIBITORS (NRTIs)

<input type="checkbox"/> Videx® (didanosine) [ddl] chewable tablets Bristol-Myers Squibb	<i>Empty stomach, at least 30 minutes before or 2 hours after eating</i>	100-mg tablet (shown), 25-mg tablet, 50-mg tablet, 150-mg tablet, 200-mg tablet [‡]					
<input type="checkbox"/> Videx® EC (didanosine) [ddl] Bristol-Myers Squibb	<i>Empty stomach</i>	400-mg capsule (shown), 125-mg capsule, 200-mg capsule, 250-mg capsule					
<input type="checkbox"/> Zerit® (stavudine) [d4T] Bristol-Myers Squibb	<i>No food restrictions</i>	40-mg capsule (shown), 15-mg capsule, 20-mg capsule, 30-mg capsule [‡]					
<input type="checkbox"/> Combivir® (lamivudine 150 mg/zidovudine 300 mg) GlaxoSmithKline	<i>No food restrictions</i>	150/300-mg tablet, (shown)					
<input type="checkbox"/> Epivir® (lamivudine) [3TC] GlaxoSmithKline	<i>No food restrictions</i>	150-mg tablet (shown) [‡]					
<input type="checkbox"/> Retrovir® (zidovudine) [AZT] GlaxoSmithKline	<i>No food restrictions</i>	300-mg tablet (shown), 100-mg capsule [‡]					
<input type="checkbox"/> Trizivir™ (abacavir sulfate 300 mg/lamivudine 150 mg/zidovudine 300 mg) GlaxoSmithKline	<i>No food restrictions</i>	300/150/ 300-mg tablet (shown)					
<input type="checkbox"/> Ziagen® (abacavir sulfate) GlaxoSmithKline	<i>No food restrictions</i>	300-mg tablet (shown) [‡]					
<input type="checkbox"/> Hivid® (zalcitabine) [ddC] Roche Laboratories	<i>No food restrictions</i>	0.750-mg tablet (shown), 0.375-mg tablet					

NON-NUCLEOSIDE REVERSE TRANSCRIPTASE INHIBITORS (NNRTIs)

<input type="checkbox"/> Rescriptor® (delavirdine mesylate) Agouron Pharmaceuticals	<i>One hour apart from antacids</i>	200-mg tablet (shown), 100-mg tablet					
<input type="checkbox"/> Sustiva™ (efavirenz) DuPont Pharma	<i>Avoid taking with a high-fat meal</i>	200-mg capsule (shown), 50-mg capsule, 100-mg capsule					
<input type="checkbox"/> Viramune® (nevirapine) Roxane Laboratories	<i>No food restrictions</i>	200-mg tablet (shown) [‡]					

*Please refer to the full Prescribing Information for each medication for complete indication, efficacy, safety and dosing considerations.

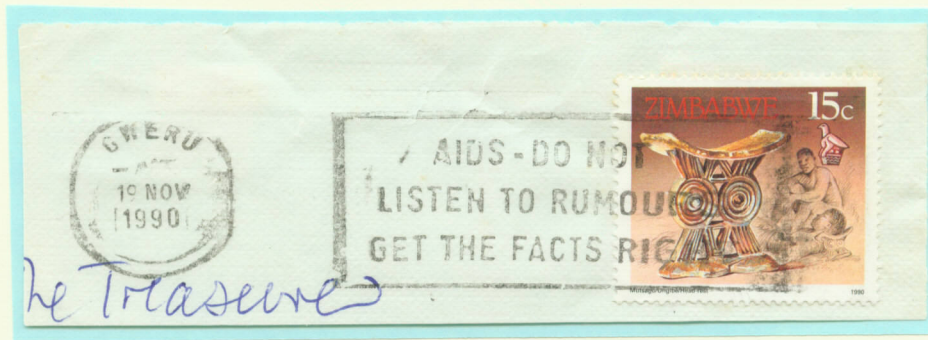
† Actual color and shape, not actual size.
‡ Liquid formulation also available.

§ Capsules and solution are not interchangeable on a mg per mg basis.

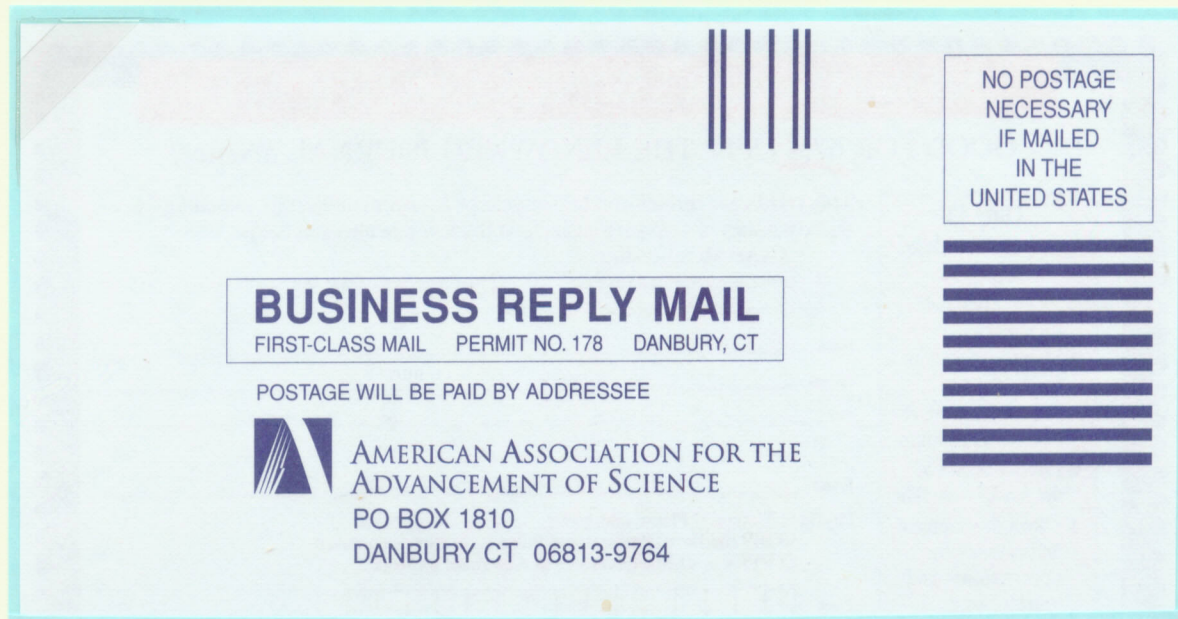
The brands listed are trademarks of their respective owners and are not trademarks of Abbott Laboratories.

3.3 MEDICAL RESEARCH

ORIGINS The origins of HIV/AIDS have been the subject of rumor, speculation, and bad science until recently.



A definitive article in SCIENCE Magazine , Vol 288, 9 June 2000 indicates that human immunodeficiency viruses (HIV-1 and HIV-2) entered the human population through multiple zoonotic infections from simian immunodeficiency virus (SIV)-infected non-human primates. HIV-1 probably entered the human population between 1910 and 1945 and remained undetected until the beginning of the global pandemic in the 1970s.

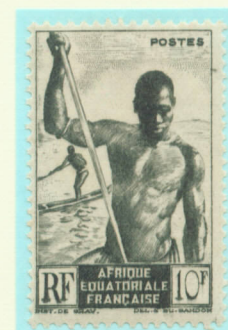


(Use this postage paid Business Reply Card to get your own copy of SCIENCE Magazine .)

HIV-1 is most closely related to SIVcpz isolated from the chimpanzee sub-species *Pan troglodytes troglodytes*.

HIV-2 is most closely related to SIVsm from the sooty manglebeys of west Africa.

The transmissions most likely occurred in west equatorial Africa.



The onset of the AIDS pandemic resulted in this booklet in October, 1986. It was the single largest mass mailing in U.S. history. Unfortunately, many Americans failed to read or understand the life-saving information in it.

Understanding AIDS

A Message From The Surgeon General

This brochure has been sent to you by the Government of the United States. In preparing it, we have consulted with the top health experts in the country.

I feel it is important that you have the best information now available for fighting the AIDS virus, a health problem that the President has called "Public Enemy Number One."

Stopping AIDS is up to you, your family and your loved ones.

Some of the issues involved in this brochure may not be things you are used to discussing openly. I can easily understand that. But now you must discuss them. We all must know about AIDS. Read this brochure and talk about it with those you love. Get involved. Many schools, churches, synagogues, and community groups offer AIDS education activities.

I encourage you to practice responsible behavior based on understanding and strong personal values. This is what you can do to stop AIDS.



A handwritten signature in black ink that reads "C. Everett Koop".

C. Everett Koop, M.D., Sc.D.
Surgeon General

Este folleto sobre el SIDA se publica en Español.
Para solicitar una copia, llame al 1-800-344-SIDA.

U.S. Department of Health
& Human Services
Public Health Service
Centers for Disease Control
P.O. Box 6003
Rockville, MD 20850

Official Business

BULK RATE
CARRIER ROUTE PRESORT
POSTAGE & FEES PAID
PHS/CDC
Permit No. G-284

POSTAL CUSTOMER

... and the inevitable Hideaki Nakano parody !

Surgeon General sent out pamphlets on AIDS

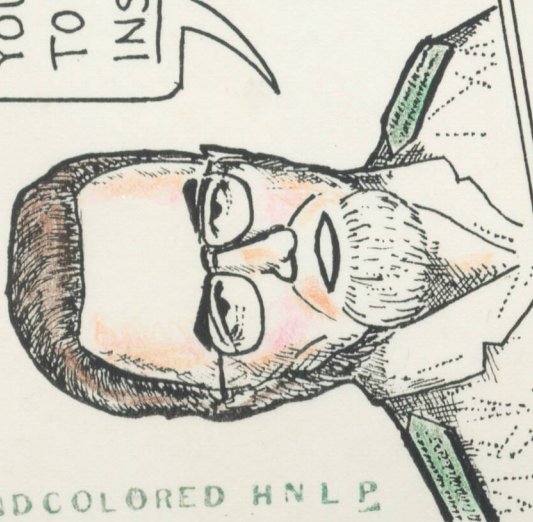
H.N. Local Post



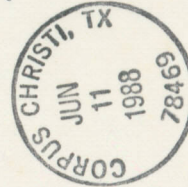
MISS LIGHTHINGED,
YOU ARE SUPPOSED
TO PUT THE SAMPLE
INSIDE THE ENVELOPE.

U. S. POSTAL SERVICE
Washington, DC 20265
OFFICIAL BUSINESS

HANDCOLORED HNL P



U.S. Department of Health
& Human Services
Public Health Service
Centers for Disease Control
P.O. Box 6003
Rockville, MD 20850
Official Business



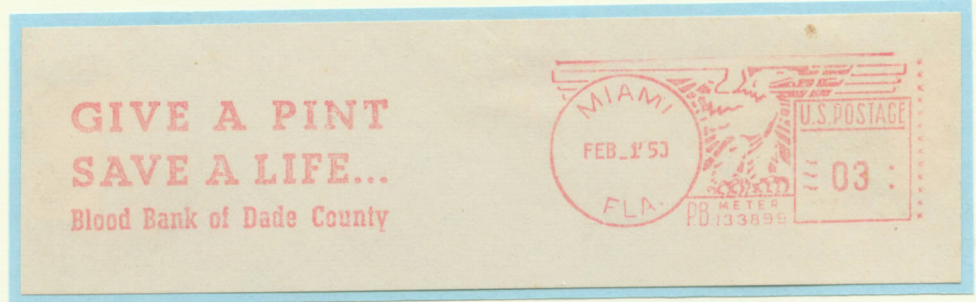
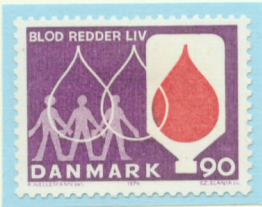
Hideaki Nakano
630 Merrick Ave., 630
Detroit, MI 48202

No. 565 #7

3.4 SOCIAL EFFECTS

A worried public, primarily those who did not read the Surgeon General's pamphlet, thought that HIV could be transmitted in any of the following ways (which it cannot).

By donating blood.



By touching or holding hands with someone infected...



... even when that someone is in the hospital.



In the workplace -

Agricultural



Industrial



Office



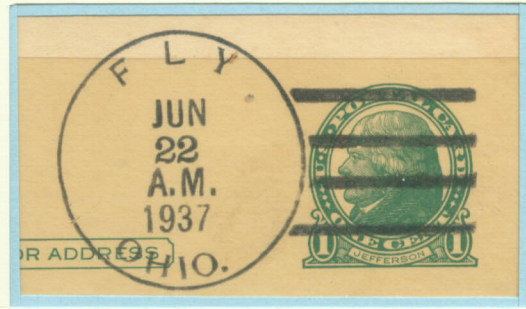
3.4 SOCIAL EFFECTS

Nor is HIV transmitted ...

From insects.



Unlisted Fly
Fancy Cancel ->



From common objects like ...
household appliances



or toilet seats



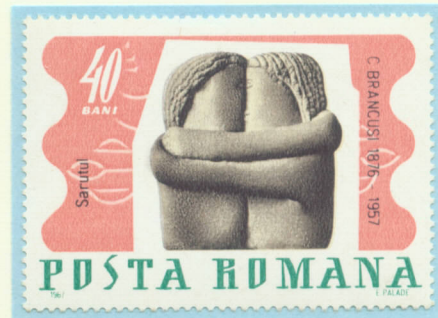
From kissing,
(no bleeding gums or
mouth sores please)



dancing,



or hugging,



However, this couple may
need to be reminded that sexual intercourse is **the** primary
means of transmission.



The stamp to the left
reminds us how the
virus is transmitted.

This is not an easy
disease to acquire.

MEANS OF TRANSMISSION

Sex

IV Drug Use

More Sex

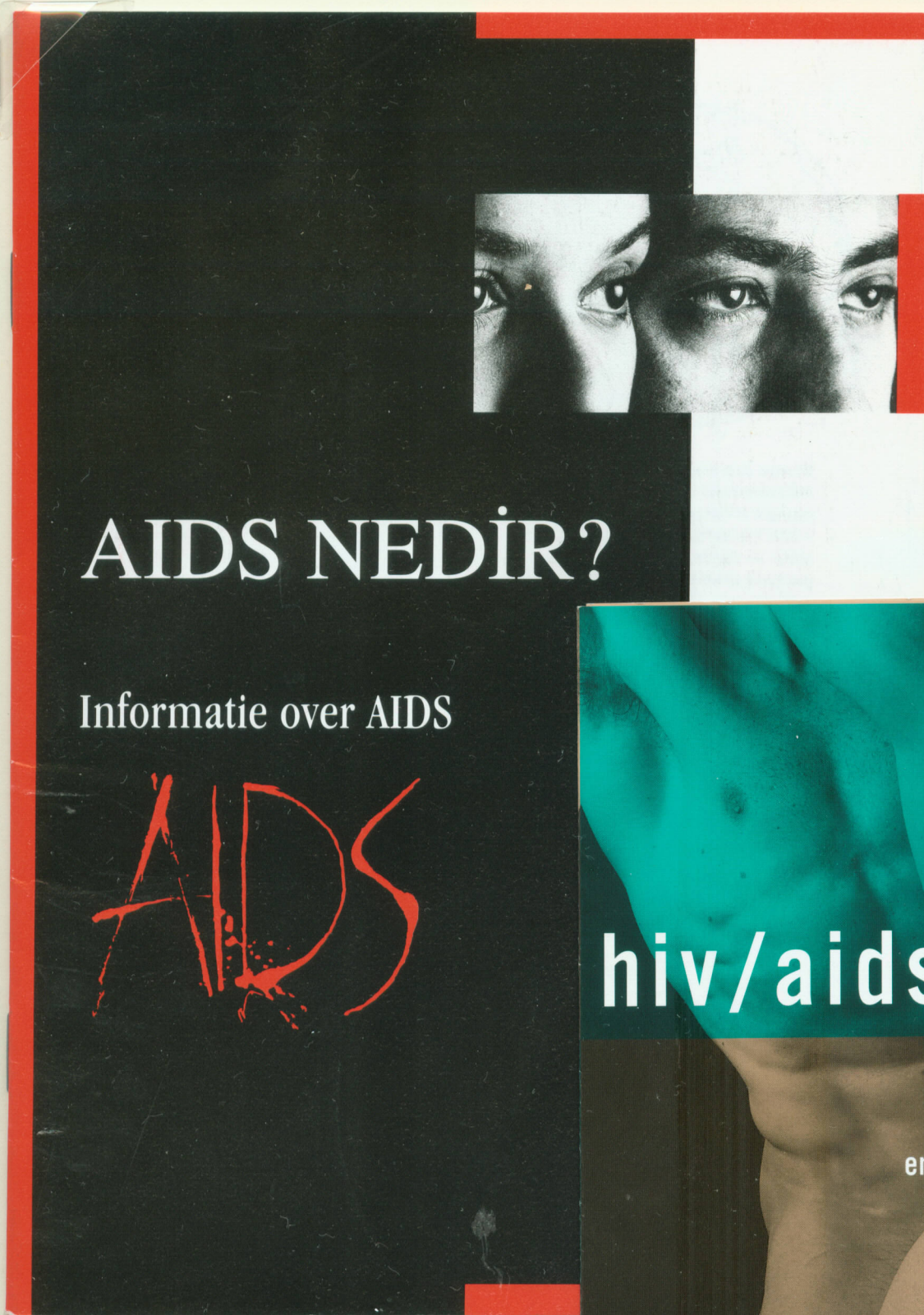


Blood

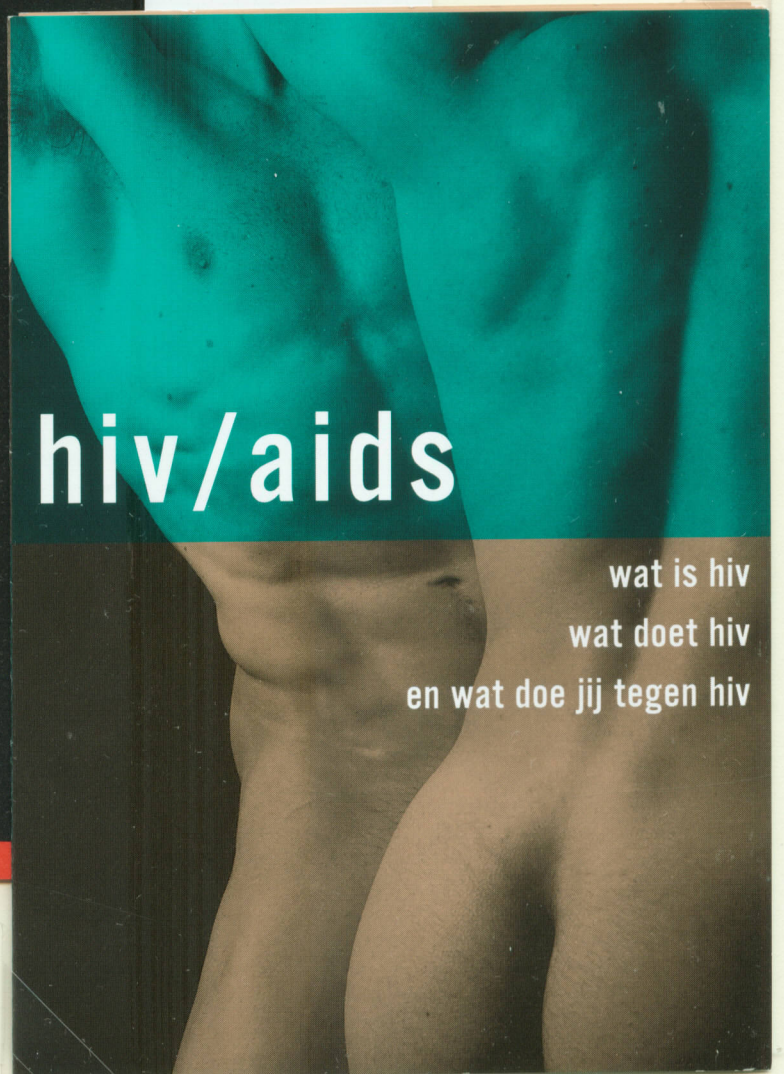
Mother
to
Infant

3.4 SOCIAL EFFECTS

More accurate and graphic information can also be found in these Dutch pamphlets.



Pamphlet in Turkish for small resident Turkish population and large number of Turkish guest workers in Holland.



3.4 SOCIAL EFFECTS

Fear and ignorance caused people with AIDS (PWAs) to experience prejudice & discrimination in such areas as:

Education

...from grade through graduate school...



Jobs, job training...



Housing



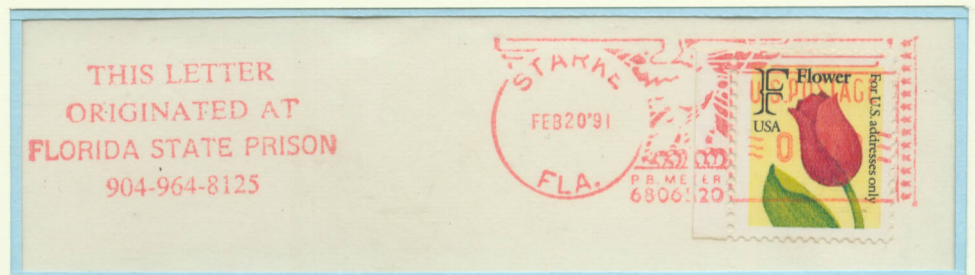
Double Paper Variety

Jails and Prisons

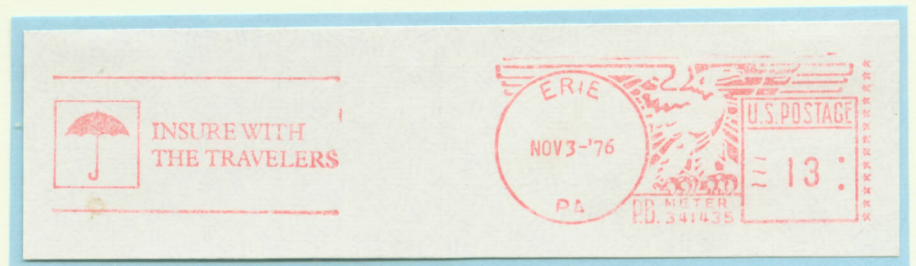
Hospital Care



Horizontally Imperforate Error



Insurance



... and even embalming and funerals.

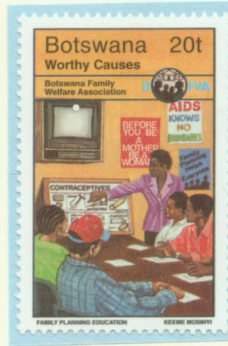
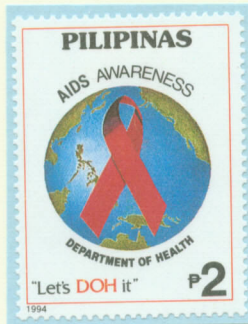
...the final insult!

3.4 SOCIAL EFFECTS

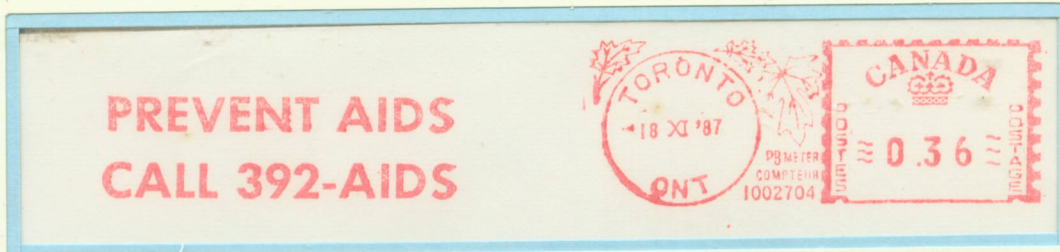
Until a cure for AIDS is found, education and prevention are the only alternatives.

The Red Ribbon raises awareness.

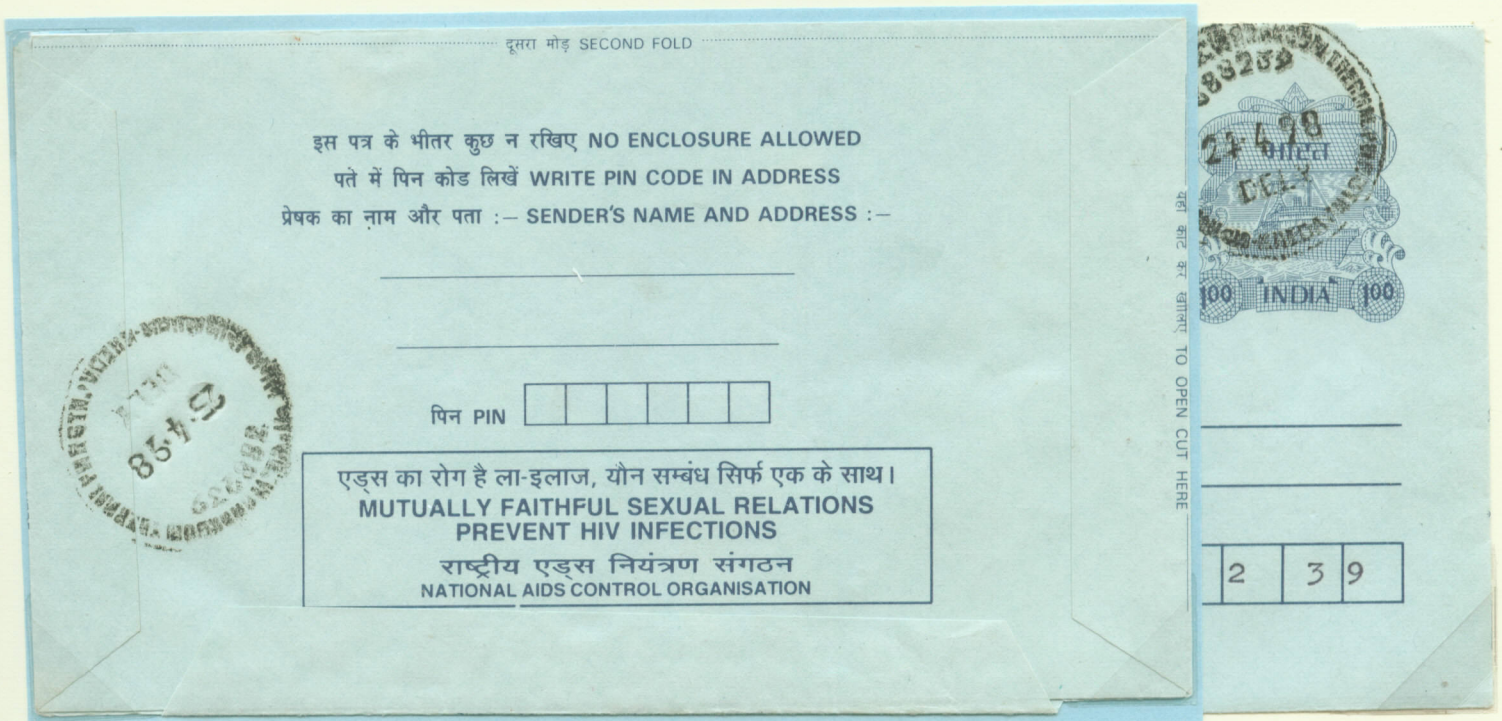
Education offers hope in Africa ...



... and in North America ...



... while India recommends monogamy to prevent HIV.

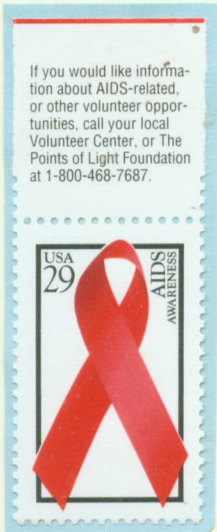


3.4 SOCIAL EFFECTS

As a result of the AIDS pandemic, volunteer groups, primarily in the gay community, were formed in major cities in Europe and in North America to educate the public and to care for the sick.



D.A.H. - Deutsche AIDS-Hilfe
The German national AIDS help group founded in 1983.



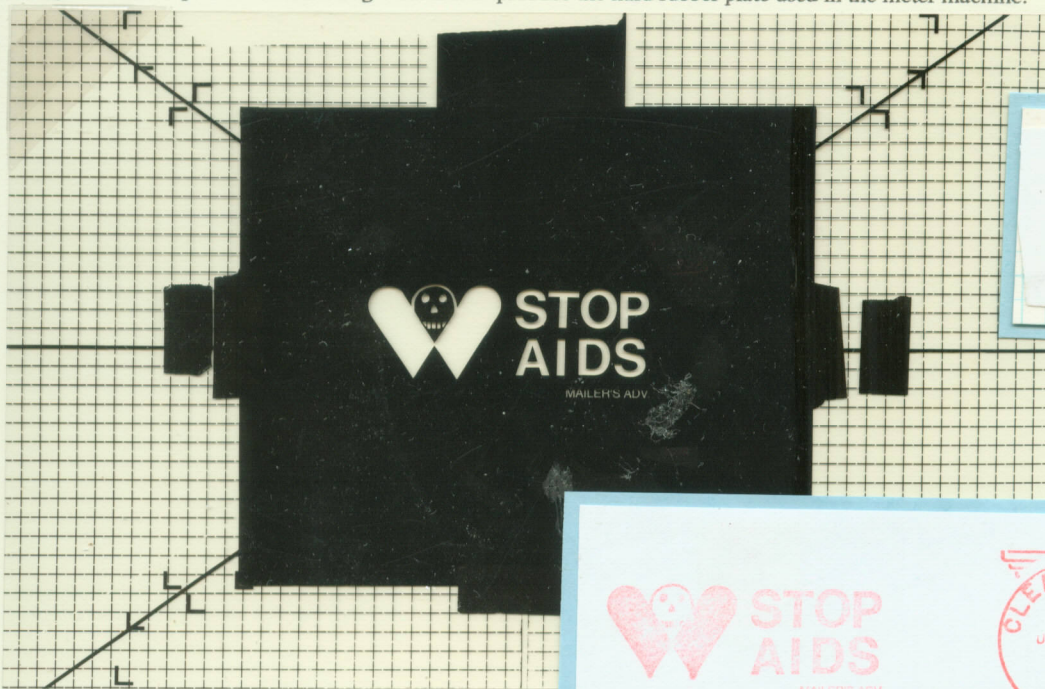
If you would like information about AIDS-related, or other volunteer opportunities, call your local Volunteer Center, or The Points of Light Foundation at 1-800-468-7687.

Health Issues Task Force of Cleveland, OH used this meter.



Meter advertisements are an effective method of using the mails to carry a message - especially in countries like the U.S.A. which were slow to issue an AIDS stamp.

Artwork is electronically scanned, digitized and reduced to the appropriate size to produce a photographic negative used to produce a metal slug then used to produce the hard rubber plate used in the meter machine.



Photographic Negative



Photographic Proof

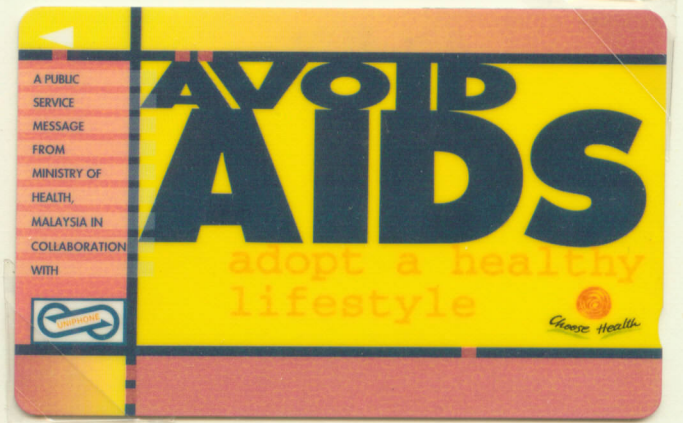


Final Product

3.4 SOCIAL EFFECTS

Telephone cards were used in many countries to raise awareness and educate the public.

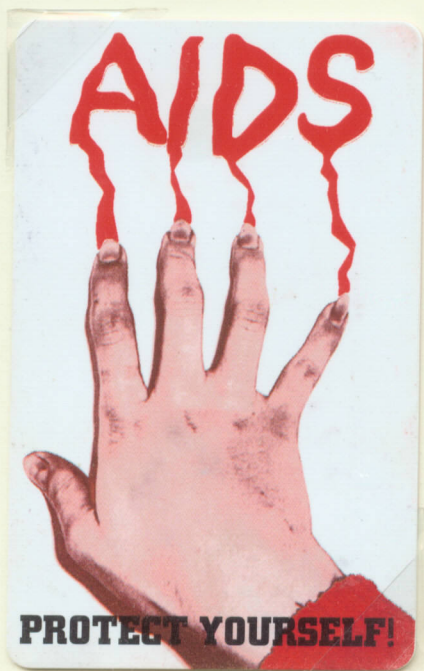
Malaysia



France



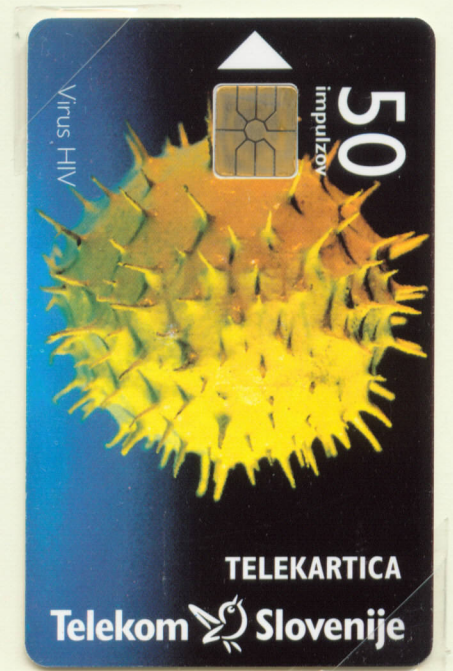
Namibia



Greece



Slovakia



3.4 SOCIAL EFFECTS

Beer coasters carry the prevention message here. Since ethyl alcohol, the great social lubricant, reduces inhibitions and is still the favorite date-rape drug.



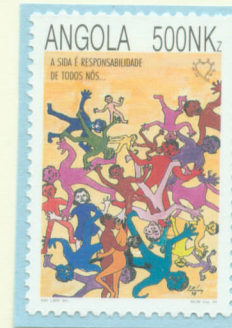
3.4 SOCIAL EFFECTS

Almost all countries have been slow in recognizing the impact of AIDS.

The disease is now a major epidemic in sub-Saharan Africa; infection rates approach 20% of the population.



Primitive medical facilities are flooded with AIDS patients; an entire generation is being lost to AIDS.



South America has not been spared the ravages of AIDS.

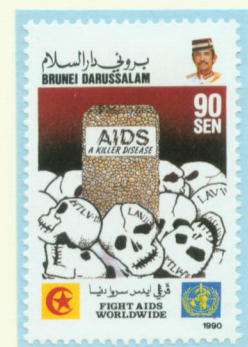
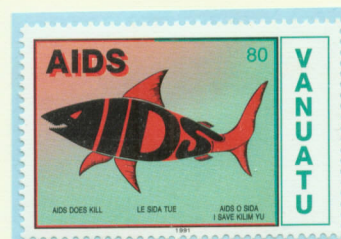


Peru offers little hope with this message ...



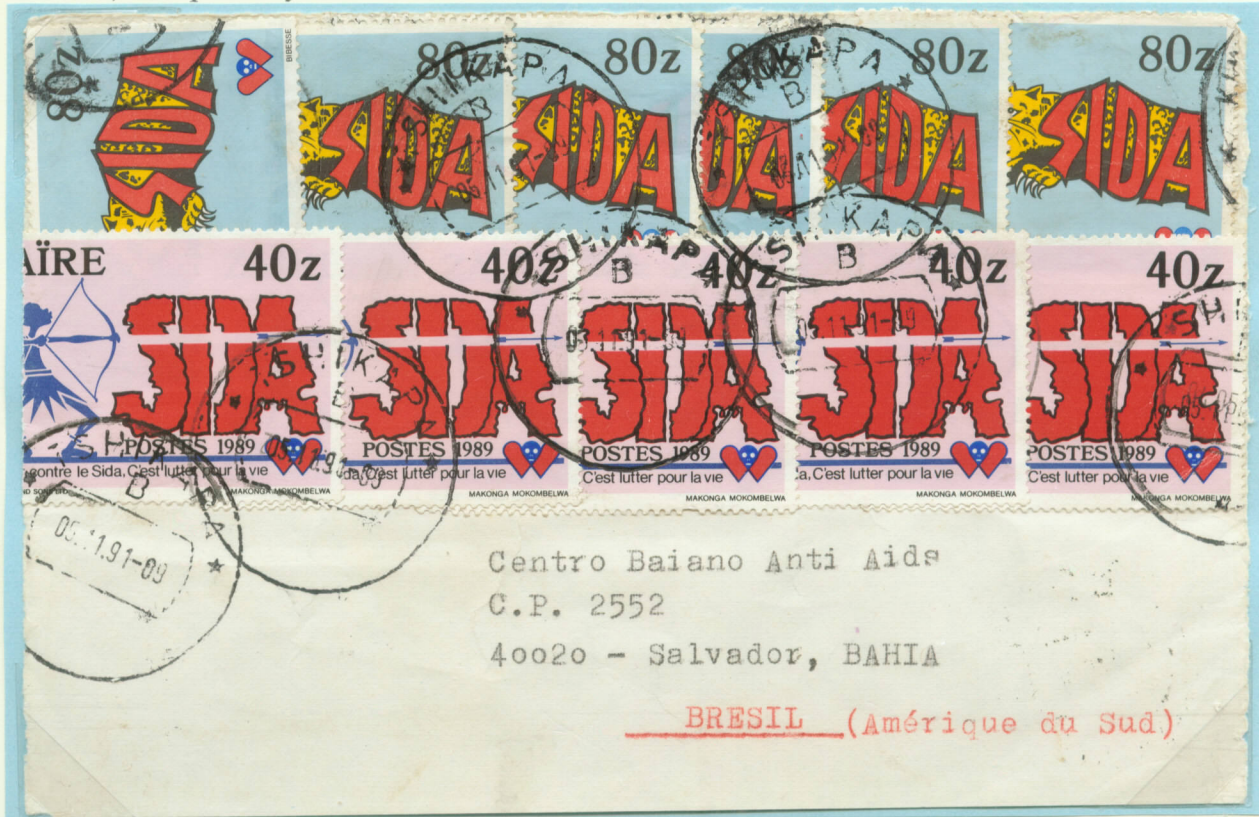
The full impact of AIDS is beginning to be felt in Asia and the Pacific.

The grim reaper is patient.



3.4 SOCIAL EFFECTS

Despite these colorful AIDS prevention stamps, a corrupt government and grinding poverty coupled with rampant inflation, exemplified by these two covers, has left Zaire with one of the highest HIV infection rates in Africa.



400z Total postage - Shikapa, 5-November 1991 (Front only)



2100z Total postage - Kinshasa - Date Unknown - but the stamps weigh more than the envelope!