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BRITISH COLUMBIA
PERSONS WITH AIDS
SOCIETY

The British Columbia Persons With AIDS Society seeks to empower persons living with HIV disease and AIDS through mutual support and collective action. The Society has over 3,500 HIV+ members.

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think +
opinion and editorial

Can we talk?

by Carl Bognar

Nearly 200 HIV-positive people attended the BCPWA Society's Positive Gathering in October to participate in sessions on antiretrovirals, complementary medicines, co-infection, and methadone, among others. One of the surprises of the Gathering was that the most popular sessions dealt with depression and relationships, which provides a clue, I think, to the deepest concerns of PWAs.

At a workshop on prevention, people discussed the difficulties of maintaining safer behaviours to prevent HIV transmission. The discussion was lively and compelling, and people shared their experiences with remarkable openness. They spoke of love, rejection, trust, depression, desire, discrimination, passion, death, disclosure, loss, stigma, and the way these issues affect safer behaviours.

Just as compelling was the relief and gratitude that HIV-positive people expressed at having a safe venue in which to talk. PWAs have few opportunities to express their deepest concerns and the complex situations they must deal with. One focus of prevention strategies is to ensure PWAs keep talking, both among ourselves and with HIV-negative people. In this spirit, the tagline for the BCPWA Society's new prevention campaign is "We need to talk about it."

Despite the alarming numbers of new infections in British Columbia (440 in 2001 alone), the numbers show that things have already changed for the better. New HIV infections peaked at about 750 cases a year between 1990 and 1996. It is difficult to know whether the increase to 440 cases in 2001 from 427 in 1999 and 413 in 2000 is significant. Epidemiologists fear that the increase in 2001 may point to a resurgence in the epidemic. In any event, 440 cases a year is far too many. Each new infection will cost the BC healthcare system over $200,000. That's nearly $100 million for the new cases diagnosed last year alone. Yet it's still difficult to secure funding for prevention campaigns.

People with HIV/AIDS are living longer and healthier lives than ever, so there are more opportunities for HIV transmission. Despite the huge increase in the overall number of positive people, 300 fewer new cases of HIV are reported each year than were reported six years ago. One possible explanation for the reduction in new cases is that HIV-positive people are already dealing with many of the situations where HIV transmission can be avoided. Most likely, HIV transmission results from a mixed bag of complex situations that PWAs encounter.

After someone is diagnosed with HIV, a lot of time, effort, caring, and communication are needed to rebuild a healthy life. Effective prevention can only be built on the healthy sexuality and good mental health of HIV-positive people. This may be the biggest challenge for HIV prevention, but it just might be the key to slowing the spread of the virus. ⊕

Carl Bognar is the prevention coordinator for the BCPWA Society.

Living+ is published by the British Columbia Persons With AIDS Society. This publication may report on experimental and alternative therapies, but the Society does not recommend any particular therapy. Opinions expressed are those of the individual authors and not necessarily those of the Society.

REALITY BITES

New city council fast tracking SIFs

Larry Campbell, a former coroner and strong advocate for harm reduction services, was elected as the new mayor of Vancouver in the November 16 municipal election. He led his party, the Coalition of Progressive Electors campaign, to a landslide victory. All eight of the COPE candidates won seats on city council.

The campaign was dominated by Downtown Eastside issues. The new city council has promised to implement the Four Pillar Approach to drug use, including the controversial realization of safe injection facilities in the new year.

In related news, former mayor Philip Owen has been appointed as co-chair of the Task Force on the Implementation of the Four Pillar Approach.

Canada not tackling AIDS in prison

A recent report argues that HIV/AIDS and hepatitis C in federal and provincial prisons continue to increase and Canadian governments are failing to provide the resources and leadership necessary to prevent the spread of infectious diseases among prisoners.

Despite repeated studies and nearly ten years of recommendations for urgent and pragmatic action, government response remains inadequate, according to the report, published by the Canadian HIV/AIDS Legal Network.

"Some jurisdictions have totally and abysmally failed to wake up to the reality of HIV/AIDS, hepatitis C and injection drug use in prisons," says executive director Ralf Jürgens. "Known cases of HIV/AIDS increased by over 35 percent in four years. Prisoners are six to 70 times more likely to be living with HIV than the average Canadian." Hepatitis C prevalence rates are even higher.

The report shows that there is also a lack of coordination and harmonization of HIV/AIDS prison programs and services across the country.

Vatican stills says no to condoms

The Vatican repeated its opposition to condom use to fight AIDS, saying chastity was the best way to prevent the spread of HIV.

The Vatican has been criticized for its steadfast opposition to condom use, especially in poor regions like Africa that have been devastated by the epidemic. The Church has argued that condoms do not offer 100 percent protection and only contribute to what Monsignor Javier Lozano Barragan, president of the Pontifical Council for Health Workers, called a "pan-sexual" society in which sex has been separated into an act of pleasure or procreation.

Barragan's comments came ahead of a three-day Vatican symposium on health care in the world's Catholic hospitals and clinics.

Source: AP

Human rights in UN AIDS guidelines

The Office of the High Commissioner for Human Rights and the Joint United Nations Programme on HIV/AIDS (UNAIDS) have issued updated guidelines on HIV/AIDS and human rights to reflect significant political and legal developments relating to HIV/AIDS.

The key change pertains to an update on Guideline 6 on "Access to prevention, treatment, care and support." It says: access to HIV/AIDS-related treatment is fundamental to the realization of the right to health; prevention, treatment, care and support are a continuum; access to medication is one element of comprehensive treatment, care and support; and international cooperation is vital in realizing equitable access to care, treatment and support to all in need.

"The new guideline will help governments and civil society focus on the need to scale up access to prevention and treatment," said UNAIDS Executive Director Dr. Peter Piot. "Today's unequal and limited access to treatment is unacceptable, with less than 5 percent of people in the developing world who need HIV medicines having access to them."

The revised guideline breaks new ground by calling for specific actions on the part of governments.

Company backs out of drug study

The Chiron Corporation, manufacturer of the drug interleukin-2 (commonly called IL-2), has pulled out of a large study of the drug called SILCAAT.

The purpose of SILCAAT was to assess and compare the effects of a combination of IL-2 and highly active antiretroviral therapy (HAART) against that of HAART alone. Because HAART has already reduced death rates from AIDS, SILCAAT would have needed up to seven years and least 2,000 volunteers before enough data could have been collected to properly assess the impact of IL-2. The expense of such a large and lengthy trial was a major factor in Chiron's decision to

REALITY BITES

discontinue funding. The company also recently discontinued several other, non-HIV-related research projects.

The researchers are interested in keeping the study running.

Another international trial of IL-2 funded by the National Institutes of Health, called ESPRIT, will continue. *Source: CATIE News*

Websites of interest

The BC Centre for Disease Control recently launched a new website at <www.stdresource.com>. It offers a wealth of easy to read information on sexually transmitted diseases. In addition to explanations of different STDs, it also lists information according to signs and symptoms.

Also worth checking out is the interactive website hosted by Vancouver's Community-Based Research Centre (CBRC) at <www.hiv-cbr.com>. It's a place to read community-based research reports, post HIV news, contribute your own works and ideas to their library, rate posted studies, and add your comments.

FDA approves Pegasys

The U.S. Food and Drug Administration has approved Hoffmann-La Roche Inc.'s new hepatitis C drug, Pegasys. The treatment is for adults with chronic hepatitis C who have liver disease and have never been treated with interferon alpha, including patients with certain types of cirrhosis.

As part of the U.S. launch, Hoffmann-La Roche provided samples of Pegasys to doctors for the first 12 weeks of the recommended 48-week treatment. The samples were for the first 15,000 patients who were started on the therapy.

The 12-week period was selected "because at that point physicians can predict those patients who will not respond," the company said. The drug has been approved for use in 50 countries, including all countries in the European Union.

See related story on page 32. ⊕

BCPWA board of directors

photo John Kozachenko

The BCPWA Society elected the 2002-2003 board of directors at the Annual General Meeting on October 26, 2002. From left to right: Wayne Campbell (treasurer), Paul Lewand, Denise Becker, Joel Leung (secretary), Robert Nickerson, Mark O'Hara, Derek Bell, Jeff Anderson, Glen Bradford. Missing from photo are Glen Hillson (chair) and Malsah (vice chair).

Remembering our past

Founder of AIDS ACTION NOW! was a driving force in Canada

by Maggie Atkinson

Brian (front row middle) with his mother and siblings circa 1989

In many ways, Brian Farlinger set the agenda for treatment activists in Canada. Bright, dedicated, caring, and (by his own admission) a workaholic, he propelled us to keep working to benefit people with AIDS across Canada.

With a law degree from Osgoode Hall and an MBA from York University, Brian was chief of commercial affairs for the Canadian Bankers Association before joining AIDS ACTION NOW! (AAN!) in 1991. He led AAN! as its chair from 1992 to 1994 and continued to be a driving force until his death on July 3, 1995. In fact, the day before he died he attended Gay Pride Day celebrations in Toronto, helping AAN! to circulate a petition to increase funding for AIDS research and helping to distribute postcards to Abbott Laboratories demanding compassionate access to its protease inhibitor Norvir (ritonavir).

He was well respected in Canada for his leadership, treatment knowledge, and selfless hard work. From 1992 until his death, he represented the Canadian AIDS Society (CAS) on the Expert Advisory Committee on HIV Therapies. At his own expense, he participated as an observer at every meeting of the CAS Therapies Committee for a year until he became a member in 1993. The committee was the forerunner of the Canadian Treatment Action Council. Brian was co-chair from 1993 to 1994, then chair until his death. A firm believer in meaningful national representation, he strove to ensure that francophone members of the committee could fully participate in meetings.

Brian organized the first national treatment activists' meeting in Toronto in 1993. He doggedly presented his seminal report, "Confronting the HIV Research Crisis: Treatment Activists' Perceptions of the Canadian Research Effort," and tried to get its recommendations implemented by government, researchers, and pharmaceutical companies. This report became the blueprint for materials produced to lobby for the renewal of the National AIDS Strategy in 1995–1997.

Brian also initiated a campaign to resolve the insurance problems of PWAs. As a result, a working group established by the Ontario AIDS Bureau developed numerous recommendations, including guidelines for living benefits, which were adopted by the Canadian Life and Health Insurance Association.

He continually strived to obtain state-of-the-art treatments and diagnostic tests for PWAs. Long before anyone realized the importance of viral load tests, Brian returned from the 1993 International AIDS Conference in Berlin advocating for them.

Brian was responsible for getting compassionate access to protease inhibitors for PWAs in Canada. In 1994, drug manufacturer Roche argued that such access was impossible because of manufacturing problems. As a member of the University of Toronto Research Ethics Board, Brian insisted that phase III clinical trials were unethical without compassionate access. The company capitulated and so began the expectation of compassionate access programs in ethical drug development.

Despite the progression of his AIDS, Brian continued to work tirelessly. He attended the 1994 International AIDS Conference in Yokohama although he was undergoing IV treatment for CMV retinitis and had to take his equipment and bags of IV ganciclovir with him. He was literally tied to the IV pole for hours of treatment every day. Still, he toiled away on his computer writing letters and reports, even though the CMV was gradually stealing his vision.

Once, when I told Brian that I was keeping a log of my symptoms, he replied that he couldn't begin to keep track of all of his symptoms. I think one of the reasons he worked so hard was to keep his mind off how terrible he felt. He said he might as well feel awful at a meeting and accomplish something rather than feel awful lying around at home.

Brian pushed everyone around him to work harder. At the end of our regular Tuesday night AAN! meetings from 8–10pm, he would hand us a draft document and ask for comments by the next morning. When I told him that I wasn't going to the Yokohama AIDS conference because I had PCP, he told me that wasn't a good enough excuse.

Although demanding, he was also a caring and dedicated friend who visited ill people at their homes, the hospital, and Casey House Hospice. When I was very ill and allowing only my family to see me, he phoned and asked not if he could visit, but when.

Brian Farlinger was and continues to be an inspiration. ⊕

Maggie Atkinson is a former co-chair of AIDS ACTION NOW! and founding chair of Voices of Positive Women, both Toronto organizations.

Power to the people

Patient empowerment as a paradigm shift

by Paula Braitstein

Patient or consumer empowerment is a relatively new concept. Historically, the medical paradigm of the doctor-patient relationship has been that the allopathic doctor gives instructions based on his or her expertise and the patient follows those instructions. Over the past twenty years, that paradigm has started to change because of the informed advocacy movement led by people living with HIV/AIDS. Today, more and more non-HIV-infected people are starting to take control of how they interact with the medical establishment.

How did this happen? Why has the PWA movement been so instrumental? What exactly does it mean to be an empowered patient or healthcare consumer?

The early years of the epidemic

When AIDS first surfaced in North America in the 1980s, it predominantly affected gay men, who had been celebrating and advocating gay rights since the early 1970s. In those post-Stonewall years, the gay community "came out" socially and politically. When HIV struck this already organized and generally politicized community, gay men were able to respond quickly and efficiently.

For the first 15 years of the HIV/AIDS epidemic, no effective treatments for PWAs were available. People did whatever they could to survive. They tried anything to stop the virus, to preserve their immune systems, and to prevent and treat AIDS-defining opportunistic infections. They used herbal preparations of all kinds and in all combinations from all over the world, active and passive immune-based therapies, yoga and meditation, supplements coming out of the wazoo, and just about anything else. Many people experienced positive benefits from these therapies and treatments, even if those benefits were in health of mind only. But most eventually died of AIDS.

Today, antiretrovirals interfere with viral replication, allowing the immune system to either remain intact or to reconstitute itself, which has resulted in drastic—but not complete—reductions in AIDS-related disease and death.

Gay PWAs get organized

Despite the plague-like impact AIDS had on the gay community, gay people banded together and took action. They talked, shared experiences, swapped ideas, and started organizations such as the BC Persons With AIDS Society. Partly because many of the people infected were lawyers, doctors, scientists, and other empowered individuals, these patients asked a lot of questions, often very loudly, and with a distinct lack of patience.

PWAs began making demands. They insisted on access to any arena in which their lives were being discussed, and they were infuriated by the lack of attention devoted to finding a cure for AIDS. They learned what was happening to their bodies and their immune systems. That knowledge was translated into research agendas and collaborations with scientists and researchers. PWAs hounded pharmaceutical companies to provide compassionate access to experimental therapies and rapid access to drugs as soon as they reached the marketplace.

During this time, people were trying to manage their health as best as they could. One way they accomplished this was by developing treatment libraries, which contained files on all the latest HIV/AIDS research and all alternative treatments used by PWAs, so that the information could be easily accessed and shared. They poured through medical dictionaries and textbooks in order to interpret the information. They were in constant communication about which treatments were working and which weren't. They were empowering themselves.

Creating a legacy for other patients

When history tells the story of the AIDS epidemic, very few happy legacies will be evident. With an incomprehensible 40 million people infected worldwide—including 10,000 people in British Columbia—and treatment available to only 5% of them, the world has very little to be proud of. Yet, the idea of patient or consumer empowerment is a legacy that people with HIV/AIDS—and specifically the infected and affected gay community—will have left behind. PWAs have fundamentally altered how people who need healthcare interact with healthcare professionals. This seed has rapidly taken hold among women living with breast cancer and among the disabled. Gone are the days when everyone just does what his or her doctor says. With thousands of deaths every year resulting from the side effects of pharmaceutical products or medical error, many consumers have stopped metaphorically rolling over for the jab.

Many people infected with HIV were lawyers, doctors, and scientists, and they started asking a lot of questions, often very loudly.

Health Canada is increasingly recognizing the need for consumer empowerment. The Natural Health Products Directorate is

attempting to empower consumers by ensuring that minimum standards for natural health products exist to prove that they work and that they indeed contain the listed ingredients. While valid reasons remain to be skeptical of this legislation, it is time to end the monopoly that the medical establishment and the pharmaceutical industry have on our public healthcare dollars.

People with HIV/AIDS have been active in helping to develop these natural health product standards, in part because they are recognized as informed, empowered consumers of these products. However, information without access is virtually useless. The next step in empowering consumers is to have natural health products and practices paid for by our so-called universal healthcare system.

Learning to empower yourself

What does being an informed and empowered healthcare consumer mean?

- Pay attention to your body.
- Learn about what is happening to your body.
- Ask your doctor and pharmacist questions.
- Do your homework before and after your doctor appointments by surfing the Internet for information, talking to people, and going to the library.
- Don't sign anything unless you understand what you're signing.
- Don't take anything unless you understand what you're taking and why you're taking it—pharmaceutical, herbal, or otherwise.

As our public healthcare system in Canada and, in particular, British Columbia is dismantled, we cannot afford to sit back and hope that the system will look after us. With fewer and fewer choices available to us as consumers through the healthcare system, it becomes even more important that we make the right healthcare decisions for ourselves. People with HIV/AIDS have tilled the ground and planted the seeds of patient-determined and patient-centered care. We owe it to the thousands of HIV-infected people who died trying and to the millions more who still today have no options to make the most of what we've got and to empower ourselves by making the most informed decisions possible about our health and healthcare. ⊕

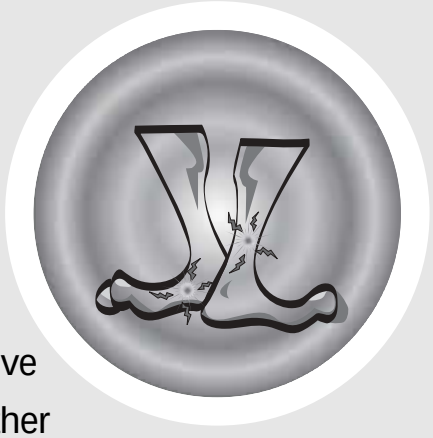
For information on consumer empowerment or HIV/AIDS treatment issues, call the BCPWA Treatment Information Program at 604.893.2239 or toll-free at 1.800.994.2437.
For information on HIV testing, please call the AIDS Vancouver Hotline at 604.893.2222 or toll free at 1.800.994.2437.

Paula Braitstein is the senior policy advisor on health promotion for the BCPWA Society.

Research Study

L-Acetylcarnitine for Antiretroviral–Induced Neuropathic Pain

The Study is being conducted at St.Paul's Hospital Ambulatory Pharmacy & Spectrum Health



You may be eligible to participate in this study if you have HIV disease and you are experiencing neuropathic pain. *Participation is entirely voluntary*. You may choose not to participate in this study or withdraw from the study at any time without negative consequences to the medical care, education, or other services you may receive from this clinic or hospital.

For further information please contact: Cara Hill (Pharmacist) **604.682.2344 ext.62071** or Jack da Silva (Pharmacist) **604.806.8074**

Sex and sensibility

Navigating the relationship between viral load and transmissibility

by Carl Bognar

Scientists still haven't determined how viral load, the amount of HIV measurable in blood, affects transmissibility of HIV through sexual activity. What they are uncovering is complex, and several scientific mysteries need to be resolved before they can make recommendations. This information is critical for HIV-positive people to make sensible decisions about how to behave in various situations. It's important, then, to understand the issues surrounding viral load and infectivity.

An undetectable level of virus doesn't mean that no virus is in the blood. It only means that the amount of virus is too small to be measured by existing tests. Because HIV is not spread evenly throughout the body, no clear picture is available of the relationship between viral load measured in blood and viral load measured in semen or other bodily fluids. For example, it is possible that viral load in a man's semen could be much higher or lower than the viral load in his blood. As well, it is difficult to know how much HIV exists in precum. To complicate matters, these differences may vary from individual to individual.

Viral load also varies considerably over time. An undetectable viral load a few weeks ago is no guarantee of an undetectable viral load today. In fact, viral load and CD4 counts can vary within a few hours, so doctors recommend having regular lab tests done at the same time of day. Measured viral load doesn't provide a solid basis for making a decision about viral transmission.

For serodivergent sexual partners, this variability means that safer sex is always the wisest decision. If both you and your partner are HIV-positive, the picture is a little different. HIV-positive sex partners need to consider viral load as well as drug resistance: What are the chances of transmitting a virus of a different type—particularly one that is already drug-resistant—to your sexual partner? And if a person does acquire a different strain, what effect will this have on his or her future health?

Scientists still can't provide clear answers to these two questions. However, it makes intuitive sense that re-infection with various strains of virus might not be a good thing. In unprotected sex, HIV-positive partners still need to be concerned about possible transmission of sexually transmitted infections, which may be more difficult to treat because of positive serostatus. Hepatitis C might increase the level of risk in unprotected positive-positive sex as well.

It's possible that viral load in a man's semen could be much higher or lower than the viral load in his blood.

Research suggests that some HIV-positive gay men prefer to have sex with other positive men in order to minimize the risks of transmitting HIV. Given the weakness of data on the dangers of unprotected sex between positive people and the risks of transmission in serodiscordant relationships, this practice can be considered a form of harm reduction. Two HIV-positive people could reasonably decide that intimacy and pleasure are more important than unproven risks. In the United Kingdom, recommendations are emerging for harm reduction in sexual activities that stop short of completely "outlawing" condomless sex between two positive partners.

Condoms are probably a good idea if your HIV isn't being treated or if your viral load is detectable. If you're both positive but don't want to use condoms, be sure to use lots of lube. Avoid toys and fisting before anal penetration because of the potential for cuts and tears in the skin that might facilitate viral transmission. Withdrawal before ejaculation is probably a good idea, too.

Currently, we don't know for sure how condomless sex will affect the health of HIV-positive partners. It's up to you to decide, armed with the facts and aware of the gaps in knowledge. ⊕

Carl Bognar is the prevention coordinator for the BCPWA Society.

GOING BEYOND OUR BORDERS

Canada and the UN come to the assistance of countries devastated by AIDS

by Reeta Bhatia

In 2002, the number of people living with HIV/AIDS worldwide reached 42 million. Five million new infections were reported in 2002. Even so, the United Nations Joint Programme on HIV/AIDS (UNAIDS) estimates that the epidemic is still at an early stage of development and that its long-term evolution is still uncertain. What is clear is that twenty years after the world first became aware of HIV/AIDS, humanity is continuing to face one of the most devastating global epidemics in history.

HIV/AIDS has affected some parts of the world more seriously than others. More than 90% of people with HIV/AIDS live in resource-poor countries. Sub-Saharan Africa remains the hardest-hit region, with more than 29 million PWAs and an estimated 11 million children orphaned by AIDS. In some African countries, up to one-third of all adults are infected with HIV, and 58% of them are women. Fewer than 2% of PWAs have access to HIV/AIDS treatments, and the vast majority of these people are in the developed world.

A worldwide epidemic

The Asia/Pacific region is the next hardest hit, with an estimated 7.2 million PWAs, most in China and India. In parts of the Caribbean, the infection rate among adults is almost as high as in sub-Saharan Africa. Overall, almost two million people are living with HIV/AIDS in Latin America and the Caribbean, of whom 50% are women.

Eastern Europe and Central Asia have the fastest-growing epidemic. The number of infections in these areas has risen to more than 1.2 million in less than a decade. In the newly independent states of the former Soviet Union, an epidemic of injection drug use is contributing to the spread of HIV infection.

The rate of infection and number of people living with HIV/AIDS is generally low in the Middle East and North Africa, yet some large and widespread epidemics exist in several countries of the region.

In the high-income countries of Western Europe and North America, the total number of infections stands at 1.5 million people. In Canada, 50,000 people live with HIV/AIDS. It continues to be a serious concern among specific segments of the population, including injection drug users, young adults, men who have sex with men, aboriginal populations, women, incarcerated persons, and Canadians whose origins lie in endemic countries (that is, countries where the epidemic is widespread). When they became available in 1996, antiretroviral drugs initially reduced the number of deaths related to AIDS, but this decline has since levelled off.

As many as two-thirds of the 45 million new HIV infections expected by 2010 could be prevented if prevention programs were immediately expanded.

In resource-poor countries, which are the countries most affected by HIV/AIDS, the epidemic creates a cascade of consequences: reduced life expectancy; an increasing number of orphans; overburdened health and social systems; loss of health, education, and social services personnel; and the general erosion of social and economic development gains. These factors in turn contribute to declines in social and political stability and human security.

Because of stigma and discrimination against people with HIV/AIDS, human rights are also compromised in resource-poor countries. Those countries that fail to bring the epidemic under control risk becoming trapped in a vicious circle as worsening socio-economic conditions render people and communities even more vulnerable to the epidemic. Most of these countries lack adequate resources to develop effective HIV/AIDS programs and services. A significant majority of their PWAs do not have access to healthcare, medicines, and other life basics, such as food and shelter.

The United Nations responds

In June 2001, the world community took an important step toward recognizing the seriousness of the HIV/AIDS epidemic and the urgency with which it must be dealt. For the first time, the United Nations General Assembly devoted a Special Session (known as UNGASS) to a specific health issue. Heads of states and governments and national ministers met for three days to consider the international community's response to HIV/AIDS. UNGASS grew out of debates in the UN Security Council in 2000 that reflected a palpable sense of crisis in the international community that HIV/AIDS is not just a health issue, that it threatens all parts of the world, and that it touches many diverse sectors, including government activity.

UNGASS drafted the Declaration of Commitment on HIV/AIDS, which was adopted unanimously by all 189 UN member states. The Declaration recognizes that HIV/AIDS is a global economic, social, and development issue of the highest priority and the single greatest threat to the well being of future generations in many parts of the world. It lays out specific commitments and targets in areas such as prevention, care, treatment, and support; human rights; and research and development. It also establishes timelines for achieving these targets. The Declaration and related documents can be found on the UNAIDS and ICASO Web sites.

The Global Fund

Good health is fundamental to economic growth and poverty reduction and vice versa. Today, one fifth of the world's population—1.2 billion people—survives on less than US$1.00 a day. This magnitude of poverty is accompanied by the spread of instability, conflict, population displacements, environmental degradation, and disease. The health crisis that faces the developing world was created by the unchecked spread of HIV/AIDS and other diseases such as tuberculosis and malaria. This crisis threatens to reverse the hard-won development gains of the last fifty years.

A key mechanism for responding to the current global health crisis and realizing the commitments made at

UNGASS is the Global Fund to Fight AIDS, Tuberculosis, and Malaria, established in 2002 in response to the UN Special Session. The Global Fund is an independent, public/private sector partnership that is working to attract significant new resources to fight AIDS, tuberculosis, and malaria. It will manage and disburse these funds to providers of effective prevention and treatment programs in countries with the greatest need. A board of directors with representatives from governments, the business sector, PWAs, and communities directly affected by the epidemic governs the Fund.

It is estimated that US$7–10 billion is required annually in countries likely to experience rapid expansion of HIV/AIDS. The Fund and UNAIDS estimate that as many as two-thirds of the 45 million new HIV infections expected by 2010 could be prevented if prevention programs were immediately expanded. Together, AIDS, tuberculosis, and malaria will cost nearly six million lives in 2002 and nearly US$120 billion in lost productive years of life.

Why Canadians should get involved

As a member of the world community, a responsible global citizen, and a supporter of international agreements and conventions on children's rights, human rights, and social and civil rights, Canada is committed to contributing to global efforts to address HIV/AIDS worldwide. Canada has a history of working with others to deal with global challenges and an international reputation as a nation committed to humanitarian concerns. When we act, other countries may be encouraged to take action as well. Continued leadership in humanitarian, medical research, and development issues means that we can help stimulate a broader, more comprehensive global response to HIV/AIDS.

Engaging in international HIV/AIDS work will help protect and preserve decades of investment in the developing world and contribute to the economic growth and stability on which an interdependent world economy depends to function effectively. Global action is also necessary because HIV/AIDS and other infectious diseases ignore geographic boundaries. Until the epidemic is halted globally, every country is at increased risk.

While Canada has made significant strides in responding to HIV/AIDS, our fight against this scourge is not over. Until HIV/AIDS is eradicated in Canada and elsewhere, the work needs to continue to evolve in order to address this issue. Meanwhile, Canadians have much experience to share in terms of our domestic response to HIV/AIDS. Many of our universities, community-based AIDS service organizations, PWAs, health workers, researchers, and government agencies have achieved considerable expertise and credibility in HIV/AIDS policy development, programming, research, capacity building, and clinical care.

The International Affairs Directorate (IAD) at Health Canada has produced a resource titled "The Case for Canadians to Act Globally," which provides information and ideas on how individuals and organizations can engage in the global response to HIV/AIDS. In addition, IAD supported the development of a resource guide called "Beyond our Borders: A Guide to Twinning for HIV/AIDS Organizations." This guide encourages AIDS service organizations in developed and developing countries to partner on programs and activities related to HIV/AIDS. Many Canadian organizations are involved in twinning projects.

In resource-poor countries, the epidemic creates a cascade of consequences, and the general erosion of social and economic development gains.

Conclusion

In recent years, a global AIDS movement has developed and continues to grow. Taken as a whole, this effort constitutes one of the largest international peacetime collaborations in history. Today, more people than ever before are engaged in the global response to HIV/AIDS, including community-based organizations, business and labour, religious leaders, youth organizations, women's groups, the entertainment industry, and a variety of government sectors. The strength of networking and effective organization among people living with HIV/AIDS continues to grow and to give an important voice to the epidemic.

The commitment of Canada and Canadians to respond to HIV/AIDS both at home and abroad sends a clear message that isolationism is impossible in an interconnected interdependent world, that we need international awareness and understanding, and that we need to recognize our common humanity and the issues that unite us. ⊕

Reeta Bhatia is senior policy advisor for the International Affairs Directorate of Health Canada.

Taboo Tattoos

Tattoos in prison can paint a risky picture

by Wayne Campbell

Tattooing is an integral part of prison arts culture, despite being prohibited in Canadian prisons. Inmates can face punishments ranging from loss of privileges to lockup. Nevertheless, tattooing thrives in Canadian prisons as an art of rebellion. Forty-five percent of federal inmates report getting a tattoo while incarcerated.

The practice of tattooing in prison can be dangerous. Not only can a tattoo gun can be used as a weapon, but certain tattoo designs can escalate hostilities among inmates and provoke conflicts. The tattooing process can also spread communicable diseases through infected needles.

Done safely by a skilled artist, tattooing won't endanger your health. However, if proper precautions are not taken, the risk of spreading hepatitis B, hepatitis C, and HIV is high.

A healthcare issue

Since 1996, neither federal nor provincial correctional systems have acted to address this issue. Although legislation and policies dictate that inmates are entitled to the same standard of healthcare as persons in the general community, inmates do not have the same tools and resources to protect their health when they are tattooing. Even the most basic community standards are not assured.

By not providing safeguards, the correctional system is exacerbating the health risks of tattooing. However, there are ways to reduce the hazards of tattooing in prison. The Canadian HIV/AIDS Legal Network's 1996 final report on HIV/AIDS in prisons recommends that "Tattooing and piercing equipment and supplies should be classified as hobby-craft equipment and be authorized for use in all federal and provincial institutions." This reclassification would allow for a safer, self-regulated tattooing environment.

Alternatively, the prison system could create a new type of peer education/career path program. Artistically gifted inmates would be formally trained as qualified tattoo artists. These inmates could then provide clean tattoos to other inmates. While this is a safer alternative, it would also cost more.

Legislation and policies dictate that inmates are entitled to the same standard of healthcare as the general community.

Safe tattooing practices

Help ensure that the process gives you a permanent piece of art and not an added life sentence. The following guidelines are from a pamphlet entitled "Tattooing and You: The Safeguards within Prison" published by the Prisoner's HIV/AIDS Support Action Network (PASAN).

- **Choose a reputable artist**
  Take your time. Before getting tattooed, especially if you have just arrived in prison, consider your choices. Know what design you want. Ask around about artists. Check out as much of your chosen artist's work as possible beforehand, and, if possible, observe the artist actually tattooing someone. These steps will help you make an empowered decision.
- **Know the equipment.**
  Everything the artist uses should be brand new. The artist you choose should be able to prepare the needle, shaft for the ink, and tip for the needle in front of you.
- **Ensure that the equipment is clean.**
  Boil the tattoo equipment—sometimes referred to as "works"—for at least 15 minutes, if necessary. Providing your own works is the best way to ensure your own safety. If you cannot, the tattoo artist needs to be adept at making the equipment fast. If the artist cannot make the new needle in front of you, tell him to take a hike.
  You can make the tip and shaft from a pen or a lighter. A pack of guitar strings makes inexpensive needles.
  Needles should be razor sharp. The shorter the point, the longer the needle will stay sharp. One way to sharpen needles is with a small piece of sandpaper attached to a fan.
  The tattoo artist should wear latex gloves and have a clean towel. If possible, make sure his work area is relatively clean and well lit. If your tattoo is not finished that day, keep the works, so you can be certain that no one else uses them.
  Wipe down the equipment with alcohol after you use it.
- **Know your ink.**
  Although waterproof black is the preferred ink, it's extremely expensive and hard to get. You can make black ink by burning paper and mixing it with water to make a thick paste. If you can't provide your own ink, your artist should mix up the ink in front of you so that you know it is disease-free. Do not reuse or share your ink: if you are HIV-positive and/or have hepatitis B or hepatitis C, you could potentially pass those diseases on to someone else.
- **Know what "safe work" means.**
  Since tattooing can be stressful on the body, have it done on a day that you are feeling healthy. To reduce the risk of any potential infection, ensure your artist holds the tattoo gun straight up, not tilted. In addition, the artist should not break through all the layers of skin, which could cause infection and/or heavy scarring. Some scarring will always occur, but the ink of the tattoo should cover it.
- **Ensure safe disposal.**
  After the tattoo is completed, all the equipment should be treated as medical waste. Throw away the needle and tube or shaft that the needle goes in, as well as the ink, the ink cap, the gloves, and the towel. Don't ever reuse any of the medical waste on another person. Cut off the point of the needle and bend it back before you throw it out or flush it to ensure you're not spreading any disease.
- **Aftercare.**
  Keep the tattoo area clean, but do not use alcohol or hydrogen peroxide on the tattoo itself. Don't pick at scabs because doing so can lead to scarring. For approximately one month or until the tattoo is healed, avoid prolonged exposure to the sun. If you have a reaction to the ink or become infected, visit someone in healthcare.

In the future, inmates may have other tattooing options available to them. In the meantime, neither federal nor provincial correctional systems provide Canadian inmates with even the most basic information on safer tattooing practices. It is time this situation was remedied. Immediate action is needed to address this ongoing health concern. ⊕

Wayne Campbell is the treasurer of the board of the BCPWA Society.

The Path of a Pandemic

How an isolated virus mushroomed into a global epidemic

by Paula Braitstein

Disease is the result of interactions between the person ("host"), the bug ("agent"), and the environment. We live daily with many bugs or organisms that don't harm us, or at least they don't harm us until something in the host-agent-environment triad goes wrong. Just how wrong things can go was demonstrated by how HIV emerged in North America, Haiti, and Africa at the same time and then spread so rapidly around the world.

We tend to read only about the first reported cases of HIV among gay men in San Francisco, Miami, and New York. However, reports show that the epidemic was simultaneously emerging in Haitians and Haitian immigrants in the US, as well as in central Africans who migrated to Europe. Moreover, while the majority of US cases were among gay men, half of New York's first HIV victims were injection heroin users. At the same time, an illness known as Juliana's Disease and then as Slim Disease was affecting central Africans.

In her book *The Coming Plague*, Laurie Garrett explains how HIV went from being a virus living in relative harmony with its human hosts to being a pandemic of catastrophic proportions.

We now know that HIV began as a virus in monkeys. That simian virus was most likely transmitted to humans through blood during hunting. Retrospectively tested blood samples show that in 1976, less than 1% of people from rural central Africa had HIV, and perhaps 0.1% of certain isolated populations in North America and Europe were infected. Phylogenetic and other kinds of evidence reveal that the epicenter of the pandemic was in central Africa.

How, then, did HIV spread throughout much of Central Africa, Haiti and the large cities of the US by the late 1970s?

Between 1970 and 1975, many parts of central and southern Africa were under assault by post-colonial guerilla warfare, civil war, tribal conflicts, mass refugee migrations, and dictatorial atrocities. These events led to huge social, economic, and personal upheaval. People congregated in the tens of thousands in search of safety, but they had no money, food, healthcare, or safety. Black markets thrived, especially in prostitution, along country borders where smugglers, truckers, and military men congregated. People from parts of Africa who had never encountered one another before came together, and HIV—which had already made the jump from animal to human—now grew from an isolated, self-contained virus within a handful of people into a wildfire of infection. Even then, over 30% of people with HIV/AIDS from sub-Saharan Africa were women.

HIV began as a virus in monkeys, which was most likely transmitted to humans through blood during hunting.

Between 1960 and 1975, Zaire (now the Republic of Congo) imported nearly 10,000 Haitians a year for short-term labour. When you consider the probable mixing of Haitian men with African women working in the sex trade, it's clear how HIV emerged in central Africa and Haiti at the same time. (Remember that HIV usually takes 5–10 years to cause life-threatening disease in people.)

In the mean time, gay men were revelling in the sexual freedom of the gay liberation movement. A preferred vacation spot among American gay men was Haiti, perhaps because they could buy sex there for less than $5. Sex tourism could easily have enabled the virus to infiltrate the gay male population.

People who had received blood or blood products, notably hemophiliacs and others with bleeding disorders, were also hard hit by HIV in the early 1980s. At that time, the US paid blood donors, so people in need of money, such as drug users, refugees, and immigrants—those at high risk for HIV, were supplying the blood banks.

It's easy to see how social and political circumstances were ripe in the 1970s for a virus such as HIV to spread around the world. Sadly, even though the chain of events was understood and clearly told, it didn't prevent another convergence of circumstances here in Vancouver's Downtown Eastside. But that's another story. ⊕

Paula Braitstein is the senior policy advisor on health promotion for the BCPWA Society.

Just say know

How to party safely if you're taking recreational drugs

by Carl Bognar

Harm reduction approaches are moving beyond injection drug use. The general philosophy of harm reduction is now being applied to sexual behaviour as a way of preventing HIV transmission and to recreational drugs, also known as street drugs, party drugs, and club drugs. Despite constant warnings about the dangers of these drugs, many people with HIV continue to take risks.

The popular club drugs are illegal, so research on their short-term and long-term effects isn't very clear. Because they aren't controlled, you can't always be sure what ingredients are in a powder or capsule. This uncertainty is problematic for researchers and drug consumers alike. Researchers can't effectively figure out the effects of street drugs because the chemical composition of street drugs may not match what they are studying in their labs. For consumers, the additives that are sometimes found in street drugs can be far more dangerous than the drugs themselves.

Creating safer party venues

Countries with progressive drug policies are extending harm reduction approaches to party drugs. Not all countries are convinced that just saying no is the best public health policy. In the Netherlands, you can have your drugs tested at the door of dance clubs. This service protects consumers and provides public health authorities with information about the real ingredients in party drugs.

In the United Kingdom, the Home Office has decided to take a tolerant attitude to party drugs, especially ecstasy, and is ignoring personal use of ecstasy in nightclubs. Enforcement is aimed at dealers and drugs with more addictive potential, such as heroin and cocaine. In 2002, the British government published a pamphlet called "Safer Clubbing," which is for club owners who have been instructed to take steps to reduce drug-related casualties if they want to obtain licences for their events. They advise club owners to have good ventilation and "chill-out" rooms at their venues and to provide water, free ice, and ice pops. This approach acknowledges that dehydration resulting from ecstasy use is more often the cause of ecstasy-related deaths than the ecstasy itself.

To ensure safer drug-taking, safer environments are a good start, but HIV-positive people also need information about how illicit drugs might interact with HIV and with antiretroviral med-

ications. Unfortunately, there are many unknowns. The prescription drug histories of HIV-positive people can be so complicated that it's often a struggle for researchers to set up research protocols to test new antiretrovirals, let alone for drugs that are not legal. Overall, the research on party drugs is a confusing mess, especially for people with HIV.

Inform yourself

Broadly speaking, party drugs can be divided into two classes: stimulants (such as ecstasy, speed, coke, and crack) and depressants (alcohol, GHB, ketamine, and heroin). These two classes of drugs tend to have different dangers. One of the big problems of stimulants is that they can cause a severe comedown. Depressants can be dangerous because they tend to have a narrow tolerance. In other words, there is little difference between a dose that gives a good high and one that results in coma. Given that dosage isn't controlled for street drugs, narrow tolerance can be a serious issue.

Not only the drugs cause problems. HIV-positive people need to consider the impact drug use can have on their lifestyle.

If you're on antiretrovirals and want to try a new drug, learn as much as you can about it before you try it. Ideally, you need a doctor you can talk to about your drug use, one who will provide you with good information. Be aware that if you're depressed or anxious or stressed out, drugs might exaggerate these feelings. Try your new party drug first with a few friends, in a place where you feel safe. Make sure you're with at least one person who knows all the drugs you've taken. The first time you take a new drug, start with a third or half dose, especially if you are on protease inhibitors.

Some precautions to take

You can avoid many problems if you don't mix drugs. Remember that alcohol is a drug too, so avoid using ecstasy, crystal meth, or cocaine at the same time as you're drinking. Mixing alcohol and ecstasy can be a particular problem because both seriously dehydrate the body.

If you're shooting crystal meth, be sure to follow all the precautions for safe injection: alcohol swabs, fresh cottons, new works, and a new clean needle every time. Poor hygiene even without sharing can cause problems such as abscesses and other types of infections, which may be more difficult to treat in people living with HIV/AIDS.

During your high, try to pay attention to your body. A headache might indicate that you are dehydrated. Lower back pain might be a sign that your kidneys aren't having as much fun as you are, so take a break and drink some water. Water isn't an antidote to any of the drugs—it's an antidote to dancing—but it will help you to avoid dehydration. A half-litre of water every hour is a good guide. A few fatalities have occurred from excessive water intake while on ecstasy, leading to the recommendation that other types of isotonic drinks such as Gatorade may be a better choice. If your friend passes out while on drugs, get medical help immediately. Under no circumstances should you let someone talk you out of this.

If you've taken stimulants, it's best to be prepared for the crash that will follow your high. Ease yourself through the comedown with hot baths, relaxing music, a nap, or meditation. Avoid taking Valium or sleeping pills to try to speed up the process.

When you're on antiretrovirals, your liver is already working overtime, so be kind to it. You might get used to the effects of these drugs, but your liver doesn't, so taking more usually means that you wind up spending more cash for a high that is doing more damage. Use less.

If you're planning to party all night long, be sure to take your HIV drugs with you, just in case you don't end up at your own place. As always, carry condoms and lube. Because drugs lower inhibitions, make a special effort to have protected sex if your partner is negative or not sure of his/her status. If you are having unprotected sex or taking other sexual risks that you feel uncomfortable with when you're partying, maybe it's time to talk to someone.

Some drugs, especially cocaine and crack, seem to have a special ability to destroy those CD4s you've been working so hard to create, so it's best to only use these drugs occasionally and in smaller quantities.

Neglecting your health

However, not only the drugs cause problems. HIV-positive people, even more than others, need to consider the impact drug use can have on their lifestyle. It's particularly important for PWAs to have good nutrition, good rest, and a bit of exercise, all of which might fall by the wayside if you're partying a lot. Be sure to get lots of rest and eat a healthy meal before and after partying. Vitamins are not a substitute for food, but if you're doing drugs and not eating as much as usual, vitamins can help to lessen the negative effects.

If you're going to take drugs, add a little harm reduction to your own life by setting a few guidelines for your drug use:

- limit the range of drugs you do;
- limit the amount of drugs you do;
- limit the times you will do them (for example, weekends only);
- plan to go home at a certain time.

The best harm reduction means being fully informed about what you're doing and making decisions accordingly.⊕

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TREATMENT INFORMATION PROGRAM MANDATE & DISCLAIMER

In accordance with our mandate to provide support activities and facilities for members for the purpose of self-help and self-care, the BCPWA Society operates a Treatment Information Program to make available to members up-to-date research and information on treatments, therapies, tests, clinical trials, and medical models associated with AIDS and HIV-related conditions. The intent of this project is to make available to members information they can access as they choose to become knowledgeable partners with their physicians and medical care team in making decisions to promote their health.

The Treatment Information Program endeavors to provide all research and information to members without judgement or prejudice. The program does not recommend, advocate, or endorse the use of any particular treatment or therapy provided as information. The Board, staff, and volunteers of the BCPWA Society do not accept the risk of, nor the responsibliity for, damages, costs, or consequences of any kind which may arise or result from the use of information disseminated through this program. Persons using the information provided do so by their own decisions and hold the Society's Board, staff, and volunteers harmless. Accepting information from this program is deemed to be accepting the terms of this disclaimer.

Desperately seeking CAM

by Ron Rosenes

AIDS 2002 Barcelona
XIV INTERNATIONAL AIDS CONFERENCE
JULY 7-12 2002

I went to beautiful Barcelona looking for CAM, but CAM was playing hard to get. CAM was not that special someone destined to make my visit memorable.

CAM is the acronym for complementary and alternative medicine. This giant tent of a term provides shelter for all of the traditional remedies (herbs, homeopathics, nutritional supplements) and practices (acupuncture, chiropractic, massage, Reiki) used for centuries by people the world over who are generally considered to sit outside the dominant medical paradigm of western biomedicine. One of the hallmarks of western or allopathic medicine is its belief, proven with microscopes in the 19th century, that germs cause disease and that killing germs—or, in the case of HIV, the virus—is the best way to restore health. CAM practices generally strive to promote healing by viewing the individual as part of a larger framework that includes body, mind, spirit, and environment.

Globally, CAM means different things to different people. Depending on where you live, your expectations may differ dramatically. If you are a person living with HIV/AIDS in Vancouver or anywhere else in the developed world, chances are CAM is a luxury item you pay for out of your pocket to control the side effects of antiretroviral medications, to boost your immune system, or to enhance your sense of control over HIV. If you live in the townships of South Africa, or in Asia or India, you are more likely to seek the care of a traditional healer for relief from the symptoms of opportunistic infections or for a cure.

A perusal of the abstracts for the 2002 International AIDS Conference in Barcelona quickly confirmed what I already knew: Very little research into CAM and alternate medical systems is being conducted and reported at the major scientific conferences.

A few clinical studies identified the need to monitor PWAs for deficiencies of vitamins, carnitine, amino acids, or glutathione, but few studies were presented proving the efficacy or confirming the dosing of nutritional supplements. Two posters were presented on the use of CAM by patients in clinics in Britain and Australia that indicated self-reported improvements in quality of life. One poster warned of the danger of interactions between herbs and drugs, while another suggested the need for more work to determine if people who use acupuncture adhere more strictly to their drug regimens. At every con-

ference, you hear the same thing: More studies are required.

Much of the information on display in the exhibitor halls was downright scary. One exhibitor was extolling the virtues of a nutritional supplement manufactured in Spain called VIUSID. The manufacturer touts it as a powerful antioxidant and immunomodulator for the treatment of HIV and hepatitis. The brochure suggests relief from symptoms based on a clinical trial of 30 participants. The results of quality of life assessments appear to be self-reported. Improvements to CD4:CD8 ratios and decline in viral load were not graphed. The purportedly active ingredients—honey blended with an odd mix of vitamins, minerals, amino acids, and "antivirals" (since when is glucosamine an antiviral?)—appear in miniscule amounts. All this and less for $150 a month. Caveat emptor: Let the buyer beware. More studies are required.

At another booth, I discovered HY99, a "natural immunity-building suppository" that sounded like fun. This mixture of Chinese herbs has undergone a clinical trial in Cambodia. Once again, the trial size of only 30 patients is very small. While the before and after pictures look impressive, the claims—enhanced function of CD4 and CD8 T-lymphocytes, B-lymphocytes, NK cells, and macrophages—sound too good to be true. One immediate concern is that the product contains ginseng, which (depending on the type) is not always advised for the treatment of HIV. In the Chinese view of the body, ginseng can increase "heat," which is not a good thing. The brilliance of Traditional Chinese Medicine (TCM) lies in the ability of the practitioner to tailor the treatment to the individual; however, the "one size fits all" format makes this Chinese pill look like a pale imitation of a western drug.

Very little research into CAM and alternate medical systems is being conducted and reported at major scientific conferences.

Drugs derived from plants are nothing new. However, small companies often lack the resources to conduct studies and clinical trials to bring them to market. One important exception is the work underway to begin human trials of a microbicide made from carrageenan, an active compound found in red seaweed.

At the conference, I also came across a Malaysian-American co-venture that is studying the antiviral properties of a chemical found in the bintangor tree. The active natural compound calanolide A has shown activity against non-nucleoside reverse transcriptase inhibitor (NNRTI) resistant strains of HIV. It is currently in phase I/II trials and appears to be a good example of rigorous research being applied to the discovery of active compounds found in nature.

Western or allopathic medicine has certainly prolonged life for people with HIV in countries where medication is accessible. But it has not yet brought a cure for AIDS. While ancient holistic systems such as TCM, Ayurveda, and Canadian aboriginal medicine have not fared any better at delivering a silver bullet, they have much to teach us about healing, which is very different from curing. It is not surprising that so many of us, dissatisfied with our western doctors, have pursued a more fulfilling relationship with a CAM practitioner. Others have been fortunate enough to find an enlightened western doctor who is open to other world views of what constitutes health.

I do not mean to discredit the benefits of CAM. However, we need solid evidence of the efficacy of products and practices many of us have been using for years. Nobody should be ripped off by hucksters. The challenge is to create rigorous methodologies for CAM research. ⊕

For more information on some of the products in the article, visit
VIUSID:<www.diamel.com>
HY99: <www.vigconic.com>
Calanolide A: <www.sarawak-medichem.com>.

Ron Rosenes is a board member on the Canadian Treatment Action Council.

New drugs in the pipeline

Tenofovir, atazanavir available through expanded access programs

by Zoran Stjepanovic

Tenofovir

Tenofovir (Viread) is a nucleotide reverse transcriptase inhibitor that acts within cells in the same manner as nucleoside analogs (for example, AZT, d4T, 3TC). The only difference is that nucleotide analogues are chemically pre-activated and require less biochemical processing in the body for them to become active.

This new drug was approved in the US a year ago. Currently, it is taken in a 300mg tablet once a day in combination with other drugs.

In Canada, tenofovir is available through an expanded access program.

Gilead Sciences has conducted three clinical trials of Viread. The first two studies (GS 902 and 907) tested Viread on individuals who had already developed drug resistance to other HIV meds. Both studies added tenofovir to a failing regimen. In the phase III clinical trial (GS 907), 552 volunteers were required to have baseline viral loads between 400 and 10,000 copies/mL, and the mean baseline CD4 count was 427 cells/mm^3 of blood. At 24 weeks, the mean viral load had decreased 0.61 log (75%). At 48 weeks, 41% of the volunteers had a viral load below 400 copies/mL and 18% had a viral load below 50 copies/mL.

The GS 902 study was a phase II clinical trial involving 189 HIV-positive individuals who were failing their most recent anti-HIV drug regimen. After 24 weeks, those volunteers receiving the highest dose of Viread had reduced their viral load by 75% (0.58 log), and after 48 weeks, viral load had been reduced by almost 80%.

A third study (GS 903), which is still being conducted, is testing Viread in people who are starting HIV medications for the first time.

Some of the most likely side effects include nausea, vomiting, diarrhea, and flatulence (intestinal gas). Individuals must be careful if they use Viread in combination with ddI because this combination can increase ddI levels in the blood by as much as 60%. This increase in ddI levels may, in turn, increase the risk of side effects that can be caused by ddI, such as life-threatening pancreatitis and peripheral neuropathy.

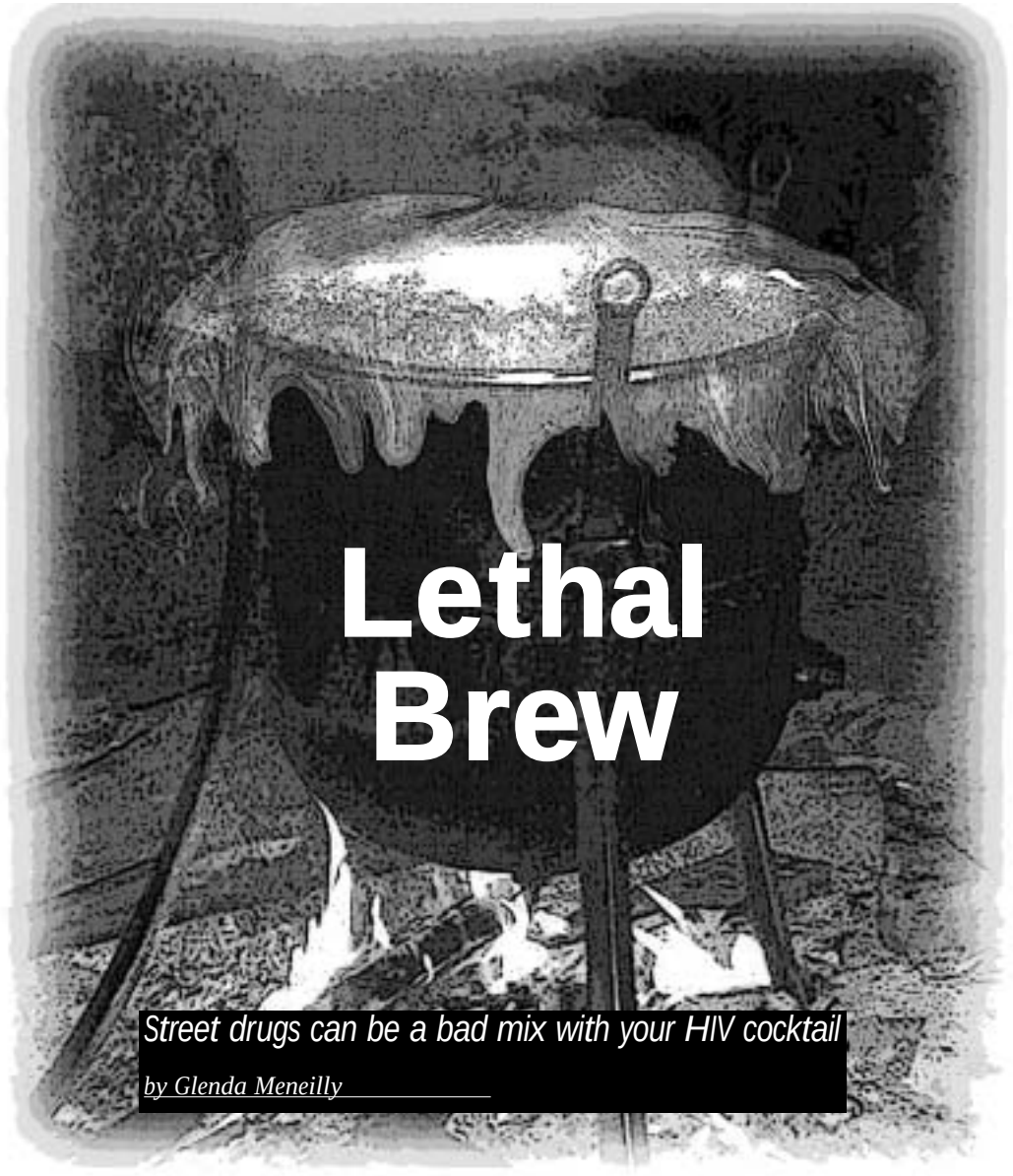
Atazanavir

Atazanavir (Taz for short) is a new protease inhibitor under development by Bristol-Myers Squibb. It has not been approved in Canada and is currently available only through an expanded access program. Atazanavir is the first protease inhibitor that is taken once daily in a 400mg dose.

Unlike other protease inhibitors, atazanavir does not appear to cause increases in lipid levels—cholesterol or triglycerides. However, it is not known whether individuals taking atazanavir for a long time will be able to maintain low levels of cholesterol and triglycerides. This drug can significantly increase levels of bilirubin, a pigment found in the liver. Increased bilirubin can be a sign of liver damage and can cause skin, nails, and whites of the eyes to appear yellowish-brown. Researchers still don't know if atazanavir can cause body shape changes (lipodystrophy).

Other noted side effects from atazanavir include diarrhea, headache, mild nausea, vomiting, abdominal pain, cold symptoms, cough, loss of appetite, and muscle spasms. ⊕

Zoran Stjepanovic is the treatment information coordinator for the BCPWA Society.



Lethal Brew

Street drugs can be a bad mix with your HIV cocktail

by Glenda Meneilly

An ever-increasing number of potent medications are used in the fight against HIV. When used together, a combination of three or more HIV drugs is called highly active antiretroviral therapy, or HAART. The greater the number of medications that you are taking, the greater the risk of a drug interaction occurring. Some interactions are minor, but others are potentially deadly. Generally, what goes into your body must come out at some point. Although your body has several ways to rid itself of the medications you take, the liver and kidneys do most of the work. The liver breaks down (metabolizes) your HIV drugs using a very complicated process involving enzyme systems.

How drug interactions occur

Two basic mechanisms can trigger drug interactions. A pharmacodynamic interaction can occur if you take two drugs that have similar effects, such as heroin and downers (for example, Valium), increasing the likelihood of an overdose.

The second and much more complicated way that drugs interact is through pharmacokinetics. The enzyme systems in the liver are called the cytochrome P450 (CYP) enzyme pathway. This family of enzymes is named using series of letters and numbers. The most common ones involved in metabolizing drugs are CYP3A4, CYP2B6, CYP2D6, and CYP2C19. Their job is to metabolize and clear drugs from the bloodstream. If you inhibit

(slow down) that system, some drugs will be broken down and cleared more slowly, which results in an increase in their levels in the blood. They may stick around too long and work too well.

The protease inhibitor (PI) ritonavir is a strong inhibitor of virtually all the CYP enzymes. We use this effect to our advantage to boost the levels of other PIs, so we can get the same drug benefit with lower dosages. Conversely, if you induce (speed up) the enzymes that metabolize some drugs, their blood levels will be lower, and they won't work as well.

The two classes of HAART medications primarily responsible for these pharmacokinetic drug interactions are the non-nucleoside reverse transcriptase inhibitors (NNRTIs)—delavirdine, efavirenz, and nevirapine—and the PIs—ritonavir, indinavir, saquinavir, nelfinavir, amprenavir, and lopinavir/ritonavir.

How street drugs metabolize

Little research has been conducted on the interactions between HAART and street drugs. Much of the information comes from case reports. One well-known case was a suspected fatal interaction between ritonavir and ecstasy. Many recreational drugs are metabolized at least in part by the CYP450 system, so it is to be expected that they will interact with HAART drugs to some degree. For example, combining an enzyme inhibitor such as ritonavir or delavirdine could increase the effect or toxicity of a recreational drug.

Conversely, combining an enzyme inducer such as nevirapine with a street drug metabolized by the CYP450 system could result in a decreased effect, or even withdrawal symptoms. The results of enzyme inhibition occur quite rapidly, usually within hours to a couple of days. Enzyme induction occurs a little more slowly, so it may take a few days for the results of the interaction to appear.

Some drugs are both inhibitors and inducers at the same time. The NNRTI efavirenz is both an inducer and inhibitor of CYP3A4. Sometimes the final outcome is just an educated guess.

Some specific interactions

Methadone. Methadone is metabolized by several of the CYP enzymes (3A4, 2D6, 2C19, and 2B6), which means that drug interactions with both NNRTIs and PIs are very likely. The most predictable interactions are those between efavirenz and nevirapine. If you start one of these drugs while stabilized on methadone, you may need to increase your methadone dose to prevent withdrawal symptoms, which usually start in four to seven days but have been seen in as early as two days. The rule of thumb is to increase methadone by 10mg every 2–3 days (20mg if symptoms are severe) starting at around day four. Be sure to let your methadone prescriber know what to expect before you start on your new regimen, so both of you can watch for signs of withdrawal.

The NNRTI delavirdine is an inhibitor that will actually increase methadone levels, so your dose may have to be adjusted down if delavirdine is added to your regimen.

Interactions between PIs and methadone are less predictable. Results from different studies conflict. When blood levels of methadone are measured, decreased levels do not always go along with withdrawal symptoms. No magic formula is available to prevent problems. In general, people stabilized on methadone may need a dosage increase when ritonavir or nelfinavir are added. No problems have been noted with indinavir, saquinavir, or lopinavir/ritonavir, but it is sometimes necessary to increase methadone doses.

Methadone also interacts with some of the NRTIs. It can increase AZT (zidovudine) levels by 40 percent, increasing the chance of AZT side effects. AZT dosage is not usually changed unless a patient experiences side effects. Delayed absorption of didanosine (ddI) tablets was once a concern, but the enteric-coated caps (Videx EC) appear to be fine.

Demerol/Codeine/Morphine/Oxycodone. The outcome of taking these drugs is not always predictable because more than one route of metabolism is involved. For example, codeine is metabolized by three different pathways. Since many HAART regimens include both inducers and inhibitors, end results can vary. Ritonavir has been shown to decrease levels of Demerol and increase levels of its metabolite normeperidine at the same time. This interaction could put frequent combiners of these two drugs at risk of seizures, especially if they have poor kidney function. To date, no significant drug interactions between HAART and morphine or oxycodone have been reported.

If you speed up the enzymes that metabolize some drugs, their blood levels will be lower, and they won't work as well.

Cocaine. Very little cocaine is metabolized by the CYP450 system, so the risk of interaction with HAART is low. The biggest problem with cocaine is that it is a binge drug. This is definitely not good for your immune system. One test-tube experiment showed that cocaine increased the rate of HIV replication.

Heroin. Heroin is metabolized to morphine quickly. Possible interactions with nelfinavir and ritonavir decrease morphine levels, making overdose less likely. The recommendation is to start with your normal dose and only increase as needed. Avoid mixing sedatives (downers) with heroin—that's a recipe for a deadly overdose.

Marijuana. Many PWAs use marijuana or THC capsules for therapeutic benefits such as treating nausea or stimulating appetite. Since few interactions have been reported, we can assume it is safe to some degree. Enzyme inhibitors such as ritonavir, delavirdine, and efavirenz could increase THC concentrations, especially when THC is taken orally. This increase could cause more pronounced and sometimes unpleasant effects such as paranoia, anxiety, hallucinations, or panic. Regular users of THC who are beginning HAART should start with a lower dose.

continued on next page

Club drug interactions

Ecstasy. Ecstasy (MDMA) is an amphetamine-like drug that has both stimulant and hallucinogenic effects. Predicting drug interactions is extremely difficult because when you buy ecstasy tablets you often get other unknown substances such as MDA, MDEA, caffeine, dextromethorphan (a cough suppressant), ephedrine, diphenhydramine, ketamine, cocaine, or diazepam. Moreover, MDMA concentrations in tablets can vary as much as 70-fold.

MDMA is metabolized primarily by CYP2D6, making it potentially deadly when combined with ritonavir. Be careful and avoid ecstasy completely. If you are on efavirenz or delavirdine, be extremely careful, use one-quarter of the usual amount, and be very aware of the signs of toxicity: fast heart rate, jaw-clenching, teeth-grinding, joint stiffness, agitation, high blood pressure, dilated pupils, sweating, and hyperthermia (a body temperature greater than 40C).

Make sure you drink plenty of water (even more if you are on indinavir), take plenty of breaks from dancing, and avoid alcohol. Also, do not take ecstasy if you are on the MAO inhibitors called Nardil or Parnate.

GHB. This colourless, odourless liquid (also known as gamma hydroxybutyric acid, grievous bodily harm, liquid ecstasy, liquid X, and liquid E) is absorbed rapidly and starts to work within 15 minutes. The effects are fairly short—approximately 30 minutes—but longer with higher doses. At low doses, effects are euphoria; at higher doses, they include amnesia and sleep, which is why GHB is used as a date rape drug.

Because GHB is produced in illegal labs, the amount required to cause serious effects can vary from just 1/4 teaspoon to several ounces. The route of metabolism of GHB is not precisely known, but it is possible that CYP450 inhibitors could predispose a user to toxicity. If you are taking GHB, start with a small dose (a teaspoon), even less if you are on ritonavir, delavirdine, or efavirenz. Give it at least one-half hour to take effect before taking more. Do not mix with alcohol or other drugs such as ecstasy or heroin.

Crystal meth. Crystal meth (amphetamines, Dexedrine, methamphetamines) use is increasing in the gay club scene. Metabolized by the CYP2D6 pathway, its levels will increase two to three times if combined with ritonavir, so avoid it if you're taking ritonavir. Otherwise, start with 1/4 to 1/2 of your usual amount and see how you feel. Drink plenty of water.

Special K. The main enzyme involved in the metabolism of special K, or ketamine, is CYP2B6, although others are involved. If you combine ketamine with 2B6 inhibitors such as ritonavir, nelfinavir, or efavirenz, you may increase your risk for toxicity and side effects such as respiratory depression, hallucinations, disorientation, or loss of consciousness. Again, use the less is more rule: start with 1/3 to 1/2 the usual dose and only "re'K if you feel OK." A couple of cases of ritonavir plus ketamine resulting in a "chemical hepatitis" have been reported.

PCP. Little is known about how PCP (angel dust, rocket fuel) is metabolized by humans, but the CYP450 system plays a role. To be safe, if you are on an inhibitor (any PI, delavirdine, or efavirenz), play it safe, start low, and go slow.

Combining Special K with ritonavir, nelfinavir, or efavirenz, could increase your risk of respiratory arrest, depression, hallucinations, disorientation, or passing out.

LSD. The role of the CYP450 system is not clear for this hallucinogen. As with other agents, be careful when combining it with inhibitors (PIs, delavirdine, efavirenz) and watch out for extreme agitation, psychotic reactions, and hallucinations.

Amyl nitrate. This inhaled drug relaxes and smooths muscles and enlarges blood vessels to heighten sexual experience. Combining it with Viagra can lead to dangerously low blood pressure, stroke, heart attack, or death. If you are on an inhibitor and find Viagra necessary, take the lowest possible dose of 25mg.

Alcohol. Alcohol can increase the risk of pancreatitis with the NRTI didanosine (ddI). If you are on ddI, avoid regular alcohol use. If you are hepatitis C-positive, you should avoid alcohol to protect your liver. Alcohol will increase blood levels of the NRTI abacavir, possibly increasing side effects. Occasional alcohol use is not a big problem with most other HIV medications.

Sedatives. The benzodiazepine sedatives Xanax, Halcion, Valium, Ambien, and Versed can be deadly if mixed with protease inhibitors, especially ritonavir. Safer options are Ativan, Serax, or Restoril. Indinavir has been shown to increase blood levels of Luminal and other barbiturates such as Nembutal, so doses of barbiturates should be lowered for safety.

Do not use recreational drugs during your first six to eight weeks on a new HAART regimen. Give your body a chance to adjust. Be careful out there.⊕

Glenda Meneilly is a clinical pharmacy specialist at the Oak Tree Clinic in Vancouver.

The scoop on club drugs

Those party drugs can wreak havoc on your health, especially if you're HIV-positive

by David Coop

People with HIV/AIDS who use recreational or street drugs sometimes do not consider the potential impacts these drugs can have on their HIV treatment or their overall health. Are you in the know about street drugs? Do you know how these drugs work, how they interact with your HIV medications, and how they might affect your long-term health? If knowledge is power, then you owe it to yourself to become informed about street drugs. It's part of taking control of your HIV, your health, and your life.

Apart from the interactions between recreational drugs and HIV medications, you also must consider the effects of these drugs on your immunological and psychological health. Some street drugs make you feel great for a brief period, but they can also make you very depressed or anxious long after you come down, sometimes permanently if they are drugs that cause cell damage in the brain. Other recreational drugs can depress your immune system. Therefore, if you're going to party, party safely and understand your potential drug use in advance so you can anticipate problems and minimize harm.

The following information is by no means complete. You should refer to a variety of sources and discuss your recreational drug use frankly with your medical doctor. Some recommendations about reducing harm are speculative and may not protect you from potential or actual harm. The only 100% guarantee against the harmful effects of recreational drugs is not to use them. If you choose to continue to use street drugs, think about practical strategies you can use to make the right choices when fixing or partying, so that you can minimize drug-related harm.

Alcohol

Alcohol includes beer, wine, and hard liquor, as well as products such as mouthwash that people may also drink to get high. Chronic alcohol use damages your liver, which is the central organ you use to process most of your HIV medications. If you damage your liver by drinking excessively, you will likely experience reduced effectiveness from your HIV medications.

Heavy drinking physically depresses your body and your immune system. If you are psychologically depressed, drinking can make your mental state even worse. Research has shown that even occasional drinking can seriously reduce the effectiveness of a prescribed antidepressant.

Cocaine

All forms of cocaine have the same basic effects, but shooting up will produce these effects more quickly and intensely than snorting. Smoking crack cocaine, or rock, causes the most intense and addictive high.

Using cocaine increases your breathing, heart rate, and blood pressure. It makes your pupils larger, decreases your appetite, and reduces your need to sleep. Large doses of cocaine can produce euphoria, severe agitation, anxiety, erratic and violent behaviour, twitching, hallucinations, blurred vision, headaches, chest pains, rapid shallow breathing, muscle spasms, nausea, and fever. A cocaine overdose can cause seizures, strokes, heart attacks, kidney failure, coma, and death. Cocaine use has been linked to many suicides, murders, and fatal accidents.

When you crash from a cocaine high, you typically feel very depressed, anxious, and irritable. Many people take repeated doses to maintain the high. Some people try to modify the effects or stop binges with drugs like alcohol, tranquilizers, or heroin, all of which have their own risks. When combined with alcohol, cocaine turns into an often deadly compound in the body called cocaethylene.

Heavy cocaine users can feel depressed, restless, agitated, and nervous.

Other side effects of cocaine include dramatic mood swings; sleeping, eating, and sexual problems; and delusions, hallucinations, and paranoia. High blood pressure and irregular heartbeats can occur. Repeated long-term use may cause irreversible problems with memory, attention, and behaviour. Weight loss and malnourishment can increase your risk of developing an HIV-related illness.

In one test tube study, cocaine made HIV reproduce 20 times faster than normal.

Chronic snorting causes stuffed, runny, chapped, or bleeding noses, and holes in the barrier separating the nostrils. If you inject cocaine unsafely (for example, sharing your works without proper cleaning), then you run the risk of getting co-infections such as hepatitis C, which in turn can cause irreparable damage to your liver. If you smoke crack, you can get severe throat and lung irritations. Hepatitis C is also spread through intra-nasal cocaine equipment.

Cocaine may adversely affect the immune systems of PWAs. In one test tube study, cocaine caused HIV to reproduce 20 times faster than normal, making cocaine one of the worst drugs that you could take if you're HIV-positive.

Ecstasy

Ecstasy is one of the most popular but misunderstood drugs in the club scene. When you buy a tab, it is often cut with ketamine, speed, ephedrine, caffeine, or a combination of some or all of these drugs.

Ecstasy can cause teeth-grinding, palpitations, joint stiffness, and dehydration. It can increase your heart and body temperature and can contribute to heart and kidney failure. The potential for cardiac and other complications can increase if you use Viagra with your ecstasy to counteract ecstasy-induced erectile problems. Mixing Viagra with ecstasy can boost the amount of Viagra in your system to a dangerous level, resulting in priapism, an erection that does not go down for hours. This condition can cause permanent damage to the blood vessels in your penis.

Ecstasy is known to increase your need for water while masking your sense of thirst. Deaths associated with both acute dehydration and heart or kidney complications have occurred as a result of consuming ecstasy.

Recent research suggests that ecstasy may cause long-lasting neurotoxic problems, including memory loss and depression. Some of these problems may be linked to damaged serotonin receptors in the brain, which are part of the system of chemicals that your own body produces in order to help you regulate mood. Once these receptors are impaired, your body may not be able to make use of its own antidepressant chemicals when you need them, and prescribed antidepressants may not work.

Crystal meth

The reality of chronic use of crystal meth is anything but a party. Crystal meth is, in fact, a highly addictive and potent stimulant sold as a powder that can be snorted, smoked, injected, or swallowed. It can increase your level of activity, make your speech excited, and decrease your appetite and sexual inhibition. It can cause you to feel increased anxiety, mania, shortness of breath, racing heartbeat, and dehydration.

Meth is a neurotoxin that can cause damage to the dopamine transporter system in the brain (meaning it has the potential to leave you permanently depressed after you stop using it). Other serious effects include making you behave aggressively, violently, or psychotically, loss of your memory, and damage to your heart. Brain damage from use of crystal meth has actually been visible to researchers on PET scan images of the brain.

Marijuana

The biggest medical concern about marijuana may be that most people smoke it. The amount of tar and carbon monoxide absorbed is probably about three to five times greater than with tobacco smoke. This difference is likely a result of the lack of filters and of inhaling more deeply to get the best high. Thus, it may cause immunosuppression and respiratory problems similar to those caused by cigarettes. For these reasons, if you are going to use pot, you may be better off eating it than smoking it, unless you have liver problems.

Marijuana has a number of neuro-psychological effects besides the pleasant ones usually noted by users. It can change the way sensory information is processed in the frontal lobe of your brain, affecting what experts call executive functions (the ability to make decisions and to break complex tasks down into small parts). With chronic use, you could develop amotivational syndrome, which causes you to have difficulty completing tasks systematically or at all. Impairment of short-term memory and information processing are likely with regular use. These effects may be more long-term in heavy chronic smokers.

Recent research suggests that heavy marijuana use can lead to the development of depression and other psychiatric problems later in life. If you are currently depressed, smoking pot may make your depression worse in the long run and may reduce the effectiveness of antidepressant medications that could be prescribed to treat your depression.

Other drugs

For information on the effects of other recreational drugs, such as Special K, GHB, LSD, heroin, and methadone, check out <www.hafci.org>, <www.projinf.org>, and <www.tthhiv-clinic.com>. The Canadian AIDS Treatment Information Exchange (CATIE) recently published a booklet on injection drug use called "Pre-fix" and will be publishing a comprehensive fact sheet on recreational drugs and HIV in 2003. Check out <www.catie.ca> for ordering information. ⊕

David Coop is the director of treatment information at the Canadian AIDS Treatment Information Exchange.

Deciphering your diagnostics,

part 3

Interpreting T-cell lab results

by R. Paul Kerston

The circulatory system—heart, lungs, veins, arteries, and capillaries—helps the body nourish and protect itself. In addition to carrying oxygenated blood throughout the body, the system also helps fight disease. Tests for an element of that system, T-cells, are considered invaluable in assessing and treating HIV and AIDS.

Blood cells are divided into red cells, which take the oxygen to all parts of our bodies, and white cells, which are a major part of our immune system's ability to fight disease.

One type of white blood cell is the lymphocyte, which includes B-cells and T-cells. Among the T-cells, two types are of most concern in HIV: CD4 cells (also known as T-helper cells) and CD8 cells (also known as killer T-cells). The CD4 cells detect and identify invaders and instruct the rest of the immune system in what to do. The CD8 cells and the B-cells attack cells infected by the intruder.

When HIV enters the body, it targets and replicates within CD4 cells in particular and destroys them. Therefore, measuring the number of CD4 cells and the percentage of lymphocytes they comprise is a major marker of disease progression in HIV and AIDS. One goal of treatment is maintaining T-cell counts. Without them, our defenses are down.

Physicians usually order T-cell counts and percentages with regular blood work, including complete blood counts and white blood cell subset counts. When a patient is diagnosed with HIV, doctors use a baseline of two or three tests to establish a starting point for future comparison. Rises and drops are expected, particularly if tests aren't conducted at the same time of day. T-cell counts can vary almost as widely as a pulse rate and are influenced by such factors as exercise and time of day. Therefore, physicians look for trends as opposed to results of isolated tests.

Depending upon the lab, CD4 cells normally number anywhere from 400–1,500 cells/mm3 (cubic millimeter) in healthy individuals. In HIV-positive people, these numbers usually drop and can go as low as zero. Specific treatments may be prescribed when CD4 cell counts drop to certain levels. Until recently, antiretroviral treatment often began when cell counts dropped below 500. Now, that marker has been lowered to 350. Viral load is also taken into consideration.

Generally, as the number of CD4 passes below 500, certain infections may occur, such as shingles or Kaposi's sarcoma. However, a CD4 count of 200 is considered more significant because this is the level at which serious infections tend to occur, including cryptosporidium, toxoplasmosis, and pneumocystis carinii pneumonia (PCP). PCP has a prophylaxis (a preventive measure) which is frequently prescribed when CD4 counts drop this low.

The percentage of lymphocytes that are CD4s is perhaps more accurate than cell counts in measuring health. Anything over 27% is considered good. Drops below certain percentages are monitored in tandem with actual CD4 counts and viral load tests when evaluating treatment options. A measurement below 12% may be cause for concern.

Physicians also monitor CD8 cell counts, though their importance is somewhat less understood. The usual ratio is approximately 2:1 of CD4 to CD8 cells, but this ratio traditionally reverses with HIV infection. A CD4:CD8 test was once considered an important and commonplace test. Newly trained physicians, however, are not watching this marker.

Always bear in mind that T-cell counts should be assessed in tandem with other results, and tests may need repeating to ensure accuracy. ⊕

R. Paul Kerston is a researcher with the BCPWA Society's Treatment Information Program.

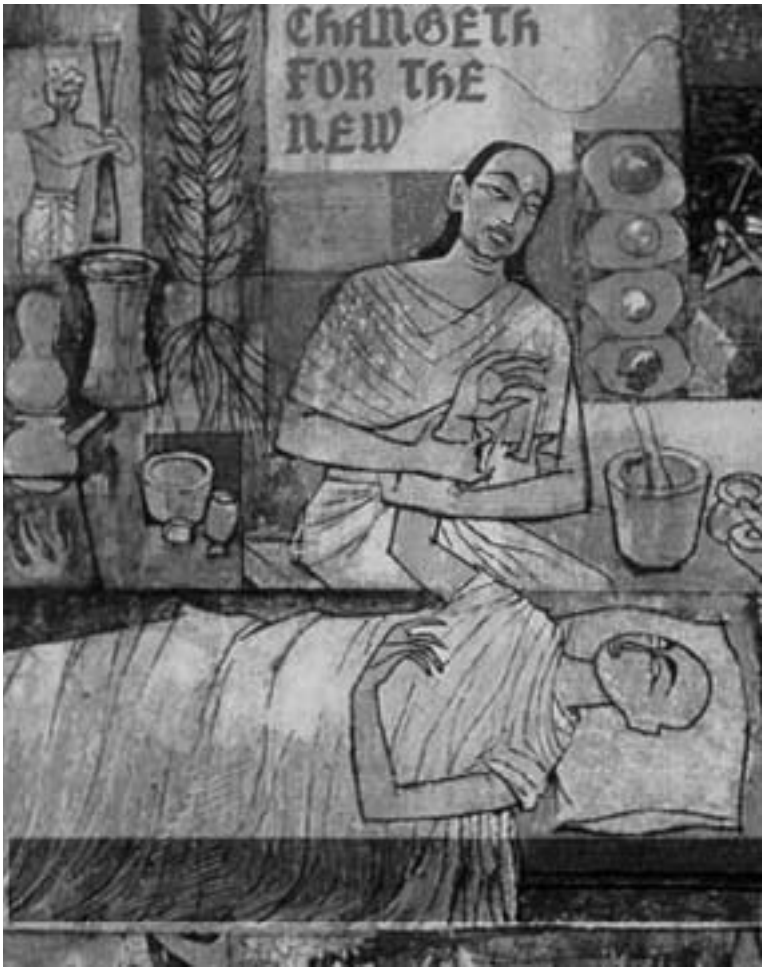
"Ghee" and tonic

Treating HIV with Ayurveda and Siddha medicines

by Devan Nambiar

Devan Nambiar first wrote about Ayurvedic and Siddha medicines in the May/June 2001 and July/August 2001 issues of Living +. Last year, Devan returned to India to gather more information about these ancient Indian practices.

In India, many HIV-positive individuals turn to traditional medicine such as Ayurveda and Siddha to maintain their health because of the inaccessibility of antiretroviral therapy and the high cost of even generic anti-HIV drugs. Ayurvedic and Siddha preparations have a myriad of immune-enhancing effects, and many of the tonics are used to treat specific symptoms of HIV/AIDS.



Ayurveda and Siddha are fluid systems that incorporate doshas (biological humors), metals and minerals medicine, herbs, external and internal cleansing, gem therapy, astrology, yoga, mantra, meditation, and prayers. Used throughout India, Ayurveda is gaining recognition in the western world. Siddha is more localized in southern India. Based largely on alchemy and using more metallic and mineral compounds than Ayurveda, Siddha is believed to be a more ancient practice.

The *Rishis* (ancient seers) recorded three forces, or *tridosha*, in the basic existence of human life. The *tridosha* influence the state of our health. They are a combination of the five elements—fire, earth, water, air, and ether—which make up all matter in the universe. All are energy in different forms. The human body is a microcosm of the macrocosm; a person can be comprised of one of these five elements or a combination of two or three, with one element predominant.

Old disease, new name

A *dosha* is an impurity, decay, or waste product that arises out of the process of metabolism. When *doshas* get out of balance, disease arises. Because of the complexity of Ayurveda and Siddha, neither has a single treatment for HIV/AIDS.

The first step in using Ayurveda or Siddha medicine is to determine your constitution so that you can balance the *doshas*. The *doshas* are not only the causes of disease but also the site of the disease. Excess dosha will migrate to another site once it has damaged its own site. As the disease becomes chronic, treatment becomes more complicated. The goal is to know the attributes of the *dosha*, rather than getting caught up with the disease of HIV/AIDS.

In Ayurveda and Siddha, new diseases do not occur, just different degrees of a disease or disease-causing factors. In that context, HIV/AIDS is not a new disease. In Siddha, AIDS is called *"Vettai Noi"* and is classified into 21 types. Medicines were prescribed for *Vettai Noi* as far back as 3,000 years ago in the prehistoric civilization of Southern India.

Immune potency

Immune weakness is aggravated by excess, whether that excess is in the form of indulgence in improper diet, taking in more nutrients than you digest, sex, alcohol, or recreational drugs. This excess fills the system with *ama* (toxins) and aggravates the *doshas*. This situation directly depletes *ojas* (*Prana*, or life

force). You can easily lose *ojas* through excessive sex. Therefore, in both Ayurveda and Siddha medicine, indulgences should be moderated during periods of illness in order to conserve *ojas*.

The Ayurvedic and Siddha approach involves whittling away at the strength of the disease while rebuilding the individual's immune power to enable nature to cure the person. Whatever the therapy, rejuvenation is essential to invigorate and revitalize the organism.

Alchemical ideas dominate Siddha medicine. Although alchemy was not the primary aim of Siddha medicine, practitioners wanted to develop drugs that could arrest the decay of the body. Unable to achieve this goal with drugs that decay, such as drugs of vegetable origin, they prepared medicines of metals and minerals that do not lose their potency over time. These medicines are available all year round, can be preserved, and can be administered in small doses.

A wide variety of tonics

Many common Ayurvedic or Siddha medicines are used to treat symptoms of HIV/AIDS. *Ghee* (clarified butter) is used as a binding agent in many preparations.

The household tonic *chayavanprash* is a jelly that is used to boost digestion, increase muscle mass, lower blood pressure and blood cholesterol, and enhance healing of tissue. It contains 49 herbs, but the main ingredient is the amla fruit (Indian gooseberry, Emblica *officinalis*). Each amla fruit contains 3000mg of vitamin C plus bioflavanoids, antioxidants, B complex, and carotenoids.

Other tonics and their properties are listed below.

- *Ashwangandha leyham* (Indian ginseng, Withania somnifera) helps weight gain and increases testosterone and energy.
- *Narasingha rasayana* is used for strength and weight gain.
- *Brahma rasayana* boosts immunity by increasing CD4 and CD8 cell counts. It is also used during chemotherapy for cancer patients.
- *Indoganda kasayam* increases weight and reduces fever.
- *Daimrasta churna* is prescribed for chronic diarrhea.
- *Tripla churna* (3 herbs) is the best all-round medicine to improve digestion of food and absorption of nutrients.
- *Jeevani* is a combination of five herbs used to fight fatigue and to enhance the immune system.
- *Serankottai nei* (herbal ghee), *Mahavallathy leyham*, and *Parangi rasayanam*.

I have found these tonics very useful when I go on a drug holiday.

Some of these tonics may be available at your South Asian grocery store or health food store, but in my opinion, tonics made in the west are not as good as those made in India, even if the same formulas and herbs are used.

All are taken at mealtime with honey and warm milk, Ovaltine, Milo, or Horlicks. When taking any Ayurvedic or Siddha medicine, you must make some dietary modifications, plus abstain from alcohol and caffeine. These tonics are made by combining 3–49 herbs to achieve a synergistic effect and are easily absorbed by the digestive system.

Drugs are also used for diseases such as candidiasis, PCP, mouth ulcers, and dementia.

Herbal preparations

The herbal mineral preparations are *Gandhak parpam* and *Gandhaka rasayanam*. *Idivallathy mezhugu* and *Poorna chandrodayam* are herbal mercuric preparations. (In Ayurveda and Siddha, mercury undergoes an 18-step process of oxidation. The end result is an ore or derivative of mercury.)

Thetrankottai ilagam is another immune booster, and it also improves digestion and increases muscle mass. *Thanga baspam* is a potent rejuvenative combination of herbal pills mixed with 22-karat gold powder. *Sivam* is prescribed to improve lung capacity after a bout of PCP or lung infection.

Purnavine is a recent effective Ayurvedic herbal preparation with strong anti-HIV and immune enhancing properties. It is a combination of eight herbs with antibacterial, antifungal, anti-parasitic, antioxidant, anti-inflammatory, and antiviral properties. *Purnavine* is used to treat metabolic disorders and Herpes simplex. It enhances humoral and cell-mediated immunity; increases glutathione, tissue strength, muscle mass, sex drive, and hemoglobin; improves sexual function; increases testosterone and interferon gamma; and promotes thymus activity. It is an anti-HIV reverse transcriptase enzyme and liver cleanser.

In Ayurveda and Siddha, new diseases do not occur, just different degrees of a disease or disease-causing factors.

Oil baths and massages

Oil baths and massages are a very strong component of Ayurveda and Siddha treatment. Sixteen different types of massage treatments are available with different herbs, botanicals, or poultices. For general health, sesame oil is warmed and/or mixed with herbs and massaged into the skin. This mixture is left on for at least one hour to ensure that the oil penetrates the skin and is followed by a hot bath.

Kaya kalpa chiksa is a 21-day extensive cleansing, diet, and massage treatment with rare herbs and minerals for HIV-positive patients. *Kalpa* is intended to prolong life. To undergo *kaya kalpa*, you must stay at a clinic and adhere to a specific diet while under the supervision of a physician. ⊕

For more information, check out www3.sympatico.ca/devan.nambiar.

Devan Nambiar is actively involved in HIV advocacy, research, and integrative health.

BODY, MIND AND SPIRIT

The holistic healing of Traditional Chinese Medicine

by Sunny Lee

Traditional Chinese Medicine (TCM) is an accumulation of hundreds, if not thousands, of years of knowledge of holistic medicine. Whether masters of TCM practised Chinese herbology, acupuncture, *tuina*, *qi gong*, bone-setting, or special dietary intervention, those health practitioners synthesized Chinese medicine into a complete practical knowledge based on Daoism. Traditional Daoist science encompasses yin/yang energies, *wuxing* (the five elements), *baqua* (the eight directional energies), and different *qi* exercises (the movement of human body essences and internal energies).

When Chinese medicine was introduced abroad, modern TCM practitioners tempered the naturalist philosophy with pragmatism and materialist explanations. Chinese medicine is based on the holistic view of the combination of energies in our body, mind, and spirit. What we eat, what we think, and how we act in daily life all factor into the balance of our energies. TCM emphasizes the corresponding relations between the mind (subjective feeling of the patient), anatomical structures, physiological functions, and pathological changes in the human body. It encompasses a variety of techniques that restore the balance of vital energies.

The TCM approach describes and diagnoses the patient in terms of an imbalance of yin and yang energies.

TCM describes and diagnoses HIV-positive people as having unbalanced yin and yang energies and deficiencies of energy in the stomach, spleen, liver, and kidneys. Acupuncture treatment and herbology can help to restore the fundamental energies (the yin energy) of the visceral organs so that physiological function (the yang energy) can resume. The balance of the yin and yang energies makes the internal energies (*qi*) run smoothly again in all of the channels in our body. This re-balancing helps people to regain their health.

By contrast, the western drug approach to HIV/AIDS aims to eliminate pathological factors in the body. Many of these drugs have side effects that prevent the body from functioning properly, not necessarily causing structural damage to the internal organs, but weakening their energies.

One of the main differences between Chinese medicine and conventional medicine is that the former takes a highly individualized approach to diagnosis based on symptom pattern (*bianzheng*) while the latter applies standardized diagnoses according to the disease (*bianbing*).

Lao Tse, founder of Daoism

To illustrate this difference, let's consider a person with a yin deficiency. A patient with HIV may complain about discomfort resulting from a slight fever. Because the body does not exhibit any pathological signs, the doctor might conclude that the complaint is idiopathic (that is, without any known cause) and nothing can be done to treat the discomfort. A TCM practitioner, however, may detect a deficiency of yin energy in the body, noting a rapid and forceless pulse and a slimy pale tongue with reddish sides. Administering acupuncture treatment or herbs will clear the heat and replenish the patient's yin energy.

TCM is not a panacea for all diseases, nor is it a denunciation of conventional medicine. Every healthcare modality has its limitations. ⊕

Sunny Lee, R.Ac. PhD, practices at the Can-Integrated Healing Centre in Vancouver. He is president of the BC Qualified Acupuncturists and TCM Practitioner Association and president of the STAUNCH Foundation (Society for Therapeutic Alternatives Using Complementary Healing).

How do you measure up?

BIA test determines all-important body cell mass

by Diana Johansen

Bioelectrical impedance analysis (BIA) is a way of measuring body composition—how much of the body is fluid, how much is fat, and how much is that all-important body cell mass. Electrodes (such as EEG electrodes) are attached to your hand and foot, and then the machine passes a very mild electrical current through your body. The current is so mild you won't feel a thing!

The electrical current shifts as it is conducted through the body and runs into cell membranes. The measurement of this shift is called the phase angle. It is higher when lots of healthy cells are present and lower during times of poor health. Phase angle has been linked to quality of life and survival.

The machine measures resistance and reactance, which are combined with height, weight, age, and gender to calculate body composition. (You need a good grasp of physics to really understand how this machine works.)

The three measurements are body cell mass, fat mass, and extracellular mass.

Body cell mass includes all the metabolically active cells in the body, including muscle (about 65% of body cell mass), liver, heart, brain, and immune cells. These cells do all the hard work of keeping you alive and healthy. It is critical to have a good supply of these cells. HIV infection can cause body cell mass to decline over time so that you could still weigh the same but actually be losing cell mass without knowing it.

In terms of fat mass, fat cells (adipose tissue) act as energy stores, holding calories in the form of fat until the body needs the energy. If your calorie intake is not adequate to meet your daily needs, you will burn up some of the fat to provide fuel for the active cells to do work.

Extracellular mass or tissue consists of fluid, bone, collagen, and other relatively inert (not active) substances that generally provide transport and structure to the body. Fluids go up and down depending on hydration status and infection, whereas bone and collagen tend to remain stable.

BIA technology has been used to measure body composition in HIV-positive people for several years. HIV nutrition experts recommend it as a good way to get important information about what's going on with your body. However, it has limitations in HIV disease. It can measure the amount of body fat, but it cannot tell you where it is. It won't be able to tell the difference between fat on the face or fat in the abdomen, so it can't measure lipodystrophy. Other measurements are required for that.

All persons with HIV/AIDS should have a BIA assessment if they are able, especially those who have had weight changes. Based on the BIA, you can develop nutrition goals that will promote optimal body composition and health.

Some fitness centres have these machines, but they are not set up for HIV disease. If you are healthy and have not been sick recently, they will probably give you a pretty good idea about your body composition.

The BCPWA Society is once again holding regular BIA clinics. Dietitian Michele Blanchet of Gilwest Clinic will measure your body composition and provide nutritional advice. See the advertisement on this page for information about upcoming clinics.⊕

The original version of this article appeared in the September/October 1999 issue of Living + magazine.

Diana Johansen, RD, is the dietitian at Oak Tree Clinic in Vancouver. She specializes in HIV.

BIA is back!!!

BIA (Bioelectric Impedance Analysis) is a way of measuring body composition, and has been accepted by HIV nutrition experts as a good way to get information about what's going on with your body.

Body weight and body cell mass are linked to survival. A 10% loss in body cell mass is associated with severe adverse outcomes. Scale weight is not an adequate means of monitoring your health status.

BIA is a simple, non-invasive test. Michele Blanchet, RDN, of Gilwest Clinic, will discuss the results with you.

When: Tuesday, January 21 & Tuesday, February 18

Time: 2:00 - 5:00 pm.

Where: Treatment and Advocacy area, 1107 Seymour Street, Vancouver

How: Call ahead to book an appointment at 604.893.2243, or drop by the Treatment Information Program office.

For more accurate results, please:

- don't drink any alcohol for 24 hours before the test
- don't exercise 12 hours before the test
- don't take food for 4 hours before the test
- don't empty your bladder 30 minutes before the test

Rough stuff

Eating fibre helps bowel problems and cholesterol

by Jennifer Genge

Nutrition plays an important role in the health of persons with HIV. Eating a well-balanced diet is one way to optimize health and nutrition and, in turn, to increase the body's ability to fight off opportunistic infections.

Fibre, which is found in plant-based, not animal-based foods, is just one component of a healthy diet. It is composed of indigestible polysaccharides and lignins found in the cell walls of plants. (Polysaccharides are long chains of sugar similar to starch, and lignins are woody material without a sugar base.) Because fibre is resistant to digestion by human digestive enzymes, it does not provide the body with calories unless bacteria in the large intestine ferment it.

Insoluble and soluble fibre

Fibre comprises many different components, which have different effects throughout the entire length of the digestive tract. The two main types of fibre are insoluble and soluble. Most types of plant-based foods actually contain a mixture of the different types.

Insoluble fibre, the roughage in foods, cannot dissolve in water. It is the tough, fibrous structures of fruits, vegetables, and grains. The three different sources of insoluble fibre are cellulose, lignin, and some hemicellulose. Bacteria cannot break it down in our large intestine so it is primarily excreted untouched in stools, which helps to increase their weight and bulk.

Soluble fibre can dissolve in water and has a high water-holding capacity. It often gives a gummy or gel-like characteristic to food. The four different sources of soluble fibre are pectin, gum, mucilage, and some hemicellulose. Bacteria are able to ferment this type of fibre, which provides a few calories from the by-products produced, such as short-chain fatty acids.

Benefits for bowel problems and cholesterol

Fibre plays a key role in many aspects of the digestive system. It also helps prevent and manage certain disease states. Each type of fibre affects human health differently.

Insoluble fibre speeds the transit of material through the intestine. Therefore, this type of fibre helps prevent or minimize constipation. Research also indicates that insoluble fibre may reduce the risk of colon cancer because of the decreased contact time between the intestinal wall and carcinogens. Insoluble fibre can help prevent diverticulosis, a weakening and bulging of the walls of the intestine caused by the formation of diverticula (dead-end tubes or sacs). Because fibre increases intestinal muscle tone and decreases intestinal pressure, less straining is necessary when having a bowel movement and the chance of diverticula forming is lower.

Many persons with HIV experience diarrhea caused by antiretroviral medications and by HIV itself. In this case, decreasing insoluble fibre in the diet can help to control the symptoms by slowing down the passage of food through the digestive tract.

Soluble fibre moves slowly and delays the transit time of food through the digestive tract. It binds with water and thickens the stool when diarrhea is a concern. Foods that are particularly helpful in decreasing diarrhea are applesauce, oatmeal, rice, bananas, and pasta.

Another major health benefit of soluble fibre is its tendency to reduce blood cholesterol levels. In the intestine, soluble fibre binds with bile salts, which are partly composed of cholesterol. When bound to fibre, bile salts are excreted in stool, instead of reabsorbed, forcing the body to make more bile. Blood cholesterol levels decrease as the body continually uses its cholesterol stores to make bile.

For people with high blood cholesterol, eating a diet rich in soluble fibre and modifying the fat in the diet can lower blood cholesterol levels and reduce the risk of heart disease. This benefit of soluble fibre is important because the introduction of highly active antiretroviral therapy has led to an increased rate of heart disease in the HIV-positive population.

Food sources of fibre

Canada's Food Guide lists two plant-based food groups, grain products and vegetables and fruit. In general, the more unrefined a plant-based food is, the more fibre it contains. In whole grains, the majority of the fibre is found in the bran, the outer layer, which is lost when the grain is processed. Similarly, most of the insoluble fibre in vegetables and fruit is found in the seeds and skin, which are often removed in the food preparation process.

The other group that includes some fibre-containing foods is the meat and alternatives food group. Meat alternatives that contain fibre include dried beans, lentils, nuts, seeds, and butters made from nuts or seeds.

Sources of insoluble fibre include the following foods:

- **Cellulose:** whole wheat flour, bran, legumes (dried peas, beans, lentils), peas, root vegetables, vegetables of cabbage family, apples
- **Lignin:** carrots, wheat, fruits with edible seeds (such as strawberries)
- **Hemicellulose**: bran, whole grains

Sources of soluble fibre include the following foods:

- **Pectin**: apples, strawberries, citrus fruits, carrots
- **Gum:** oatmeal, oat bran, barley, legumes
- **Mucilage:** guar
- **Hemicellulose:** bran, whole grains

The American Dietetic Association (ADA) and Dietitians of Canada recommends 20–35 grams of total fibre per day for adults. The US National Cholesterol Education Program's latest guidelines on heart disease recommend that adults eat 20–30 grams of total fibre per day; of that, 10–25 grams should be soluble fibre. In general, aim for about 30 grams of fibre every day. See Table 1 for sources of fibre and for information concerning the amount of fibre per serving.

Start slowly and drink water

Proceed with caution before loading your diet full of fibre. Increasing your fibre consumption too quickly can cause abdominal bloating, gas, and discomfort. Gradually add in higher fibre foods until you are following the ADA guidelines of 20–35 grams per day.

It's equally important to increase the amount of water you drink as you increase fibre in your diet. You need a minimum of 6–8 cups of water per day. Without sufficient water, fibre can actually cause rather than relieve constipation. Adequate water intake is especially important if you are taking pain medications that slow the bowels. If diarrhea is a concern, drink even more water to prevent dehydration.

The bottom line with fibre really depends on your symptoms. To ensure an adequate amount of both types of fibre, eat a wide variety of foods from all food groups. If you have any questions about the fibre in your diet or have high cholesterol or bowel problems, visit a dietitian.⊕

You can order a copy of Canada's Food Guide by writing to Publications Health Canada, Ottawa, Ontario, K1A 0K9; by phone 613.954.5995; or online at <www.hc-sc.gc.ca/hppb/nutrition/order.html>.

TABLE 1: FIBRE CONTENT OF FOODS

Food	Dietary fibre (grams)
Fruit and vegetables (1/2 cup or 1 medium)	
Dried figs	12
Artichoke	6.4
Baked potato with skin	4.8
Pear	3.9
Blackberries	3.8
Apple	3.7
Orange	3.1
Banana	2.8
Corn on the cob	2.4
Carrot	1.8
Applesauce	1.5
Cereal (1/2 cup)	
Bran buds with psyllium	15.7
100% bran	12.1
Grape Nuts	5.0
Oat bran	5.0
Post Bran Flakes	3.3
Shreddies	3.0
Red River	2.4
Oatmeal	2.0
Legumes and nuts (1 cup)	
Split peas	16.2
Lentils	15.6
Black beans	15.0
Baked beans	13.9
Peanuts	13.0
Peanut butter (2 tbsp)	1.8
Breads (1 slice); **Pasta and rice** (1/2 cup cooked)	
Whole wheat pita	4.7
High fibre bread	4–5
Barley (pearled)	3.0
Whole wheat pasta	2.4
Whole wheat bread	2.0
Brown rice	1.7
Pasta	0.7
White rice	0.3

Source: Nutritionist Five

Jennifer Genge, RDN, is a dietitian on the HIV and surgery wards at St. Paul's Hospital and a member of Vancouver Dietitians in AIDS Care. If you have any questions, call 604.682.2344 ext.62219 and ask for Jennifer.

A slower flow

New interferon on market for people with hepatitis C

by Zoran Stjepanovic

A new type of interferon is offering hope for many Canadians with hepatitis C. Clinical trials have demonstrated that pegylated interferon is an effective treatment for individuals with chronic hepatitis C, including those living with cirrhosis and liver disease.

Hepatitis C infection is common among HIV-positive individuals because of the similar routes of transmission of both diseases. It is transmitted through contact with blood or blood products of an infected person via unprotected sex, intranasal cocaine equipment, and re-used needles, including those used to create tattoos and, reportedly, those used in acupuncture. Last year, the BC Centre for Excellence recommended that all HIV-positive people get antibody tests for hepatitis C.

Approximately 85 percent of people exposed to hepatitis C become chronically infected. Yet most hepatitis C-infected people are unaware of it because they don't believe they have been at risk and it can take years for symptoms to develop. Symptoms can come and go, leading individuals to believe they are caused by other illnesses.

Clinical trials indicate that pegylated interferon is better tolerated and, at one injection per week, more convenient.

Until recently, treatment for hepatitis C in Canada included Rebetron (regular interferon alfa-2b plus ribavirin) and interferon-alfa monotherapy. Pegylated interferon, which is bound to a polyethylene glycol (PEG) molecule and is therefore released more slowly in the body, remains active in the bloodstream longer and at a more constant level than interferon alpha. Whereas interferon monotherapy requires three injections per week, pegylated interferon requires only one injection per week. Overall, clinical trials indicate that pegylated interferon is better tolerated, more convenient, and may have a role in therapy for those who cannot tolerate Rebetron.

The studies also show that 38% of patients treated with pegylated interferon reach undetectable serum hepatitis C levels after treatment. With interferon alfa-2a, only 19% of patients reach undetectable serum hepatitis C levels. These success rates increase when the treatments are taken with ribavirin.

As with all treatments, side effects can occur. Some of the most common adverse events observed in clinical studies of pegylated interferon are headaches, fatigue, rigors, nausea, neutropenia (low levels of white blood cells), insomnia, depression, anorexia, and irritability. Other more serious adverse events include bone marrow toxicity, cardiovascular disorders, hypersensitivity, endocrine disorders, pulmonary disorders, colitis, pancreatitis, and ophthalmologic disorders.

Clinical trials also reveal that physicians may determine at 12 weeks whether patients will completely respond to pegylated interferon. For people not responding to it, the decision to continue therapy must be considered on an individual basis. Discontinuation of the drug can save unresponsive patients from side effects and the costs of additional therapy.

In October 2002, the US Food and Drug Administration approved Pegasys (peginterferon alfa-2a), manufactured by Hoffman-LaRoche, as monotherapy for treating individuals with chronic hepatitis C. Hoffmann-LaRoche is still waiting for approval of Pegasys in Canada.

Schering Canada obtained a license in 2001 for Peg Intron, a pegylated interferon without ribavirin, and in 2002, obtained a license for Pegetron, which is Peg Intron bundled with ribavirin. Neither Peg Intron nor Pegetron are included on the BC Pharmacare formulary.⊕

Zoran Stjepanovic is the treatment information coordinator for the BCPWA Society.

Some light on the horizon

New hepatitis C drugs in development

by Paula Braitstein

Ribavirin, in combination with a long-acting (pegylated) interferon, is currently the recommended therapy for patients with chronic hepatitis C. Although ribavirin is an important part of treating hepatitis C, it is very toxic to cells, causing haemolytic anemia and a variety of other nasty side effects. Often, people must significantly reduce their ribavirin intake because of the side effects. However, doing so has important consequences on how effectively the drug can fight hepatitis C.

A recent study found that using epoetin alfa (Procrit) once weekly allowed people to stay on the higher dose of ribavirin without getting anemia. The study also found that people's quality of life was much higher if they were taking Procrit.

Biopharmaceutical company Ribapharm is developing two new types of ribavirin, levovirin and viramidine. These drugs are hard to develop because the mechanism of action for ribavirin is unknown. It is thought that ribavirin acts by switching the balance of the Th1/Th2 response, which is what levovirin does. The advantage of levovirin would be that it is not phosphorylated, so it would be more effective and less toxic than ribavirin. Phase I studies have confirmed the safety of levovirin in humans, and more studies are underway. Ribapharm has a development agreement for levovirin with Roche.

A recent study found that using Procrit once weekly allowed people to stay on the higher dose of ribavirin without getting anemia.

The second compound, viramidine, is a liver-targeting version of ribavirin and is based on the premise that not enough ribavirin is delivered to the liver and too much ribavirin is delivered to the erythrocytes. Clinical results from a phase I study in healthy volunteers based on similar doses of viramidine versus ribavirin have confirmed the improved safety profile of viramidine compared with similar doses of ribavirin.

Researchers recently presented the first data on BILN 2061, the first HCV protease inhibitor to reach clinical trials. Developed by Boehringer Ingelheim, BILN 2061 has been tested in a small number of HCV-positive people with genotype 1 (n=40) and varying degrees of liver disease. It appears relatively safe—the main side effect is mild gastrointestinal upset—and appears to significantly inhibit hepatitis C viral replication. Boehringer is developing it as a twice-daily pill that could be taken with or without food.

Other new HCV drugs for which some data are now available include ISIS 14803, an antisense oligonucleotide HCV inhibitor. Of the ten participants in the study of this drug, only two had a significant HCV RNA reduction, so it's unlikely this drug will move forward.

Albuferon is a new type of drug made from a recombinant human albumin-interferon fusion protein. Research into albuferon looked mainly at pharmacokinetics, safety, and tolerability. Patients received only one or two doses of drug, and limited efficacy data was reported. Six patients experienced transient 0.5 log reductions in hepatitis C viral load. A number of patients experienced improvements in their ALTs.

Another novel therapeutic strategy in development in Israel is using human monoclonal antibodies to treat HCV. For now, the drug is being referred to as HCV-AB68. A small study of HCV-infected people found significant reductions in hepatitis C viral RNA levels, ranging from 2- to 100-fold in 8 out of 15 patients.

While it can take years for new drugs to be developed, novel HCV drugs are clearly in the pipeline. We can only hope it won't be long before we're seeing expanded and compassionate access programs for people who need new options for treating hepatitis C. ⊕

Thanks to Jules Levin for providing comprehensive reports from the American Association for the Study of Liver Diseases Conference, which took place recently in Boston.

Paula Braitstein is senior policy advisor on health promotion for the BCPWA Society.

CD4 counts and viral load

by Evan Wood

The benefits of antiretroviral therapy have been directly attributed to the ability of the medications to stop or reduce the replication of HIV in a person's blood. Reducing plasma viral load, or the amount of HIV in the blood, in most cases leads to the recovery of the immune system, in particular the CD4 cell count. When viral load goes down, CD4 cell count goes up.

Unfortunately, it's not always that simple. The human body is not that predictable; this is true of the relationship between plasma viral load and CD4 cell count. Several years ago, researchers noticed that in a small proportion of patients, the CD4 cell count did not always behave as expected. In some cases, the plasma viral load went down, but the CD4 cell count didn't go up. More often, the CD4 cell count jumped up soon after therapy was started, even among people whose plasma viral load had not gone down all the way. Researchers became very interested in this phenomenon, hoping to better understand what was happening in order to uncover new ways of fighting HIV.

Researchers noticed that in some cases, the plasma viral load went down, but the CD4 cell count didn't go up.

The researchers began to ask several questions. They wondered if an additional benefit could be gained from taking protease inhibitors that was not related to the reduction of plasma viral load. In addition, they wanted to know if it is really necessary to reduce plasma viral load all the way down to undetectable levels so that almost no HIV is replicating in the blood.

Although consensus has not yet been achieved, experts widely agree that these questions have been answered. The benefit of taking antiretrovirals is now generally agreed to be directly linked to their ability to reduce HIV replication and, in turn, reduce plasma viral load. This benefit is true of protease inhibitors as well as other classes of drugs. It is also accepted that while it is not necessary to reduce plasma viral load all the way to undetectable levels to result in a short-lived CD4 cell count response, partial plasma viral load suppression resulting from less than full adherence can quickly lead to resistance and limit future treatment options.

Researchers also tend to agree that the reason CD4 cell counts appeared to rise in people with no or little plasma viral load reduction is because plasma viral load is not monitored on a daily basis. As such, the increases in CD4 cell counts were probably a result of short-lived reductions in plasma viral load among people who were incompletely adherent. The jury is still out on one additional explanation: that gains in CD4 cell counts in people with high viral loads might be a result of the virus becoming less aggressive because it had been mutated by the drugs.

While some confusion still remains about how resistant virus may work and how much plasma viral load needs to be reduced to have a short-term CD4 benefit, general agreement exists as to what patients and doctors should strive for to obtain long-term benefits from taking antiretroviral therapy.

To have a sustained CD4 cell count gain that will have a long-term impact on survival, plasma viral load must be reduced to as low a level as possible for as long as possible. The problem with partial suppression is that it will inevitably result in the development of a virus no longer susceptible to the medications. For this reason, literally all researchers and doctors agree that HIV-positive people should strive for full suppression of plasma viral load to undetectable levels for as long as possible and that the best way to reach undetectable levels is to be 100 percent adherent. Talk to your doctor or local community AIDS group to learn what you can do if you are having trouble with adherence. ⊕

Evan Wood is a research associate at the BC Centre for Excellence in HIV/AIDS.

Trials zero in on reducing cholesterol and drug toxicity

by Jim Boothroyd

Could nevirapine be used to reduce cholesterol levels in people with HIV on combination anti-HIV therapies? Could an anti-HIV drug combination that does not include a nucleoside analogue reverse transcriptase inhibitor (NRTI) reduce drug toxicity in people who have never previously used antiretrovirals? These are two urgent questions to be answered by a pair of innovative HIV clinical trials now recruiting in British Columbia.

The first study is titled "A Pilot Protocol to Evaluate the Effect of Nevirapine on Biochemical Markers of Cardiovascular Risk in HIV-infected Individuals Receiving a Protease-Inhibitor Based Regimen" (CTN 175), but it is known among investigators as the SCHMALTZ trial (serum cholesterol HDL measured after lipid treatment zeroing in on nevirapine).

The purpose of the study is to determine whether nevirapine helps to normalize cholesterol levels in patients who have abnormal cholesterol levels because of the protease inhibitors they are taking as part of their anti-HIV treatments. Participants must be on a stable HIV treatment with suppressed viral load. Among other entry criteria, they must also have had prior treatment with non-nucleoside reverse transcriptase inhibitors (NNRTIs) and documented resistance to this class of drugs.

Participants will be randomly assigned to one of three study groups. Those in the first group will stay on their current protease inhibitor combination. The second group will stay on their protease inhibitor combination and take one nevirapine pill each morning. The third group will stay on their protease inhibitor combination and take one nevirapine pill in the morning for 14 days, then one nevirapine pill twice daily.

The principal investigators are Drs. Julio Montaner and Natasha Press at Providence-St. Paul's Hospital in Vancouver.

The second study is titled "A Pilot Study of an Nucleoside Analogue Reverse Transcriptase Inhibitor Sparing Regimen in Antiretroviral-Naive, HIV-Infected Patients" (CTN 177). Participants will be randomly assigned one of three treatments: AZT/3TC and nevirapine twice a day; lopinavir/ritonavir and nevirapine twice a day; or AZT/3TC and lopinavir/ritonavir twice a day.

The purpose of the study is to determine which combination provides the least amount of toxicity and undesirable effects, such as muscle pains, neuropathy, and lipodystrophy.

The principal investigator is Dr. Julio Montaner. ⊕

Jim Boothroyd is communications manager at the Canadian HIV Trials Network.

CTN trials enrolling in BC:

CTN 110 — ESPRIT: Subcutaneous Interleukin-2
BC site: Cool Aid Community Health Centre, Victoria

CTN 161 — SPRINT: Simplified Protease Inhibitor Trial
BC sites: Cool Aid Community Health Centre, Victoria; St. Paul's Hospital and Viron, Vancouver

CTN 164 — STI (Structured Treatment Interruption) Trial
BC sites: Downtown Infectious Disease Clinic (IDC), Vancouver, and Cool Aid Community Health Centre, Victoria

CTN 167 — OPTIMA: Options with Antiretrovirals
BC sites: Viron, Downtown IDC, and St. Paul's Hospital, Vancouver, and Cool Aid Community Health Centre, Victoria

CTN 169 — DAVE: D4T or Abacavir plus Vitamin Enhancement
BC site: St. Paul's Hospital, Vancouver

CTN 175 — Nevirapine to Lower Cholesterol (SCHMALTZ) Trial
BC site: St. Paul's Hospital, Vancouver

CTN 177 — Nucleoside Sparing Trial
BC site: St. Paul's Hospital, Vancouver

For more information about CTN trials, please visit the CTN website: www.hivnet.ubc.ca/ctn.html or call 1.800.661.4664.

México corta el acceso a las medecinas contra el VIH

por Sergio Plata

Actualmente el cúmulo de conocimientos acerca del VIH/sida ha avanzado a lo largo de los últimos años, literalmente han surgido diversos grupos de apoyo, manifestaciones heroicas y pacientes que han decidido romper el silencio, pero lamentablemente en México continuan los actos de rechazo y discriminación.

Recientemente el Instituto Mexicano del Seguro Social (IMSS) condenó a muerte a 1,119 personas que viven con el VIH/sida al retirarles el acceso de medicamentos y atención médica, argumentando que el VIH/sida es una enfermedad incurable y cuesta mucho dinero mantener con vida a los pacientes, aun con la conciencia y entendimiento de las autoridades de que la enfermedad puede ser controlada con tratamiento. Si esta realidad está sucediendo en México que alternativas de vida se les esta ofreciendo a pacientes con cáncer, trasplantes, diálisis, males cardiovasculares y cerebrovasculares, lesiones graves, rehabilitación a largo plazo y terapia neonatal?

Por encima de la vida están los intereses presupuestales de un gobierno que no ha demostrado voluntad para proteger los derechos de las minorías y crear una verdadera acción política de prevención y control del sida.

Es una verguenza que a más de 20 años de la pandemia del sida continuen los atropellos a la dignidad, las demostraciones de intolerancia y cerrazón. Ha diestra y siniestra el conservadurismo moral y la derecha política han cometido desaciertos y miopías provocando que el sida en México continúe avanzando.

A este panorama de evidente discriminacion, se suman actos de barbarie, de persecución, de hostigamiento sexual, tortura y abuso verbal, en condiciones denigrantes e inhumanas.

La estigmatización, la intolerancia y el problema de la impunidad en diversas instituciones permiten que autoridades y servidores públicos cometan actos de absoluta violación a los derechos humanos y civiles, argumentando "la homosexualidad como un acto de ofensas a la moral y buenas costumbres."

La Iglesia también es un factor importante que nutre y promueve conductas de odio y violencia "rechazando la homosexualidad como un error de la naturaleza y una aberración, condenándola como una perversión: que enajena, degrada y transgrede la percepción cristiana."

En México la discriminación por orientación sexual se castiga dos veces, por ser homosexual y portador del VIH/sida.

En México un homosexual es asesinado cada tres días por razones homofobicas, recientemente en el estado de Colima fueron asesinados estrangulados y con huellas de tortura 4 homosexuales, a la fecha existen impunes 631 crímenes homofobicos de homosexuales y lesbianas.

El VIH/sida ha causado la muerte de más de 22 millones de personas y actualmente hay 40 millones infectadas por el virus, un tercio de las cuales son jovenes de 15 a 24 años. El 95 por ciento de los seropositivos vive en paises en vías de desarrollo, las tres cuartas partes de ellos son del Africa subsahariana.

La discriminacion por orientacion sexual y el VIH/sida conlleva al sufrimiento, la violencia y una doble muerte: la muerte en vida y la muerte física.

En el nombre del principio de igualdad y tolerancia que prevalece en el lenguaje contemporáneo, no es posible tolerar a los intolerantes. La idea de solidaridad es un quehacer humano. Dejemos que las palabras jueguen con los sentidos y éstas se conviertan en imágenes; es decir, la idea de solidaridad como una forma de creación del pensamiento, en relación con el mundo desde el propio mundo. ⊕

Información en Español

BCPWA Treatment Information Program (TIP)

Ofrecemos información en español sobre terapias y tratamientos para la infección de VIH y SIDA.

Consejeria individual es disponsible todos los Miercoles 10:00AM a 5:00PM.

Visitenos a nuestra dirección:

BCPWA Programa de Información sobre los Tratamientos

1107 Seymour Street, Vancouver, BC V6G 5S8

A la entrada, a un lado de la libreria "PARC"

O llamenos a nuestra linea directa: Tel: 604.893.2243

Información sobre tratemientos anti VIH via correo electronico.Nuestro email es treatment@parc.org

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To make a contribution to BCPWA, please contact one of our Co–Directors of the Fund Development Department:
Melissa Davis; *e* melissad@bcpwa.org *t* 604.893.2260 or
James Ong; *e* jameso@bcpwa.org *t* 604.893.2264

* Denotes monthly donors (reflects the total contribution for the year)

where to find help

If you're looking for help or information on HIV/AIDS, the following list is a starting point.

BC Persons With AIDS Society
1107 Seymour St, Vancouver BC V6B 5S8
(604).893.2200 or 1.800.994.2437
info@bcpwa.org
www.bcpwa.org

A Loving Spoonful Location
Suite 100 – 1300 Richards St,
Vancouver, BC V6B 3G6
604.682.6325
clients@alovingspoonful.org
www.alovingspoonful.org

AIDS Memorial Vancouver
205 – 636 West Broadway,
Vancouver BC V5Z 1G2
604.216.7031 or 1.866.626.3700
info@aidsmemorial.ca
www.aidsmemorial.ca

AIDS Prince George
1– 1563 2nd Ave,
Prince George, BC V2L 3B8
250.562.1172
ogodwin@bcgroup.net

AIDS Prince Rupert
Box 848 Prince Rupert, BC V8J 3Y1
250.627.8823
aidspr@rapidnet.net

AIDS Resource Centre – Okanagan and Region
202 – 1626 Richter Ave,
Kelowna, BC V1Y 2M3
250.862.2437 or 1.800.616.2437
arc@arcok.com
www.arcok.com

AIDS Society of Kamloops
P.O. Box 1064, 437 Lansdowne St,
Kamloops, BC V2C 6H2
250.372.7585 or 1.800.661.7541
ask@telus.net

AIDS Vancouver
1107 Seymour St, Vancouver BC V6B 5S8
604.893.2201
av@aidsvancouver.org
www.aidsvancouver.bc.ca

AIDS Vancouver Island (Nanaimo)
201 – 55 Victoria Rd, Nanaimo, BC V9R 5N9

AIDS Vancouver Island (Victoria)
1601 Blanshard St, Victoria, BC V8W 2J5
info@avi.org
www.avi.org

ANKORS (Nelson)
101 Baker St, Nelson, BC V1L 4H1
250.505.5506 or 1.800.421.AIDS
info@ankors.bc.ca
http://kics.bc.ca/~ankors/

ANKORS (Cranbrook)
205 – 14th Ave N Cranbrook,
BC V1C 3W3
250.426.3383 or 1.800.421.AIDS
gary@ankors.bc.ca
http://kics.bc.ca/~ankors/

Asian Society for the Intervention of AIDS (ASIA)
210 – 119 West Pender St,
Vancouver, BC V6B 1S5
604.669.5567
asia@asia.bc.ca
www.asia.bc.ca

Dr Peter Centre
2nd Floor, 1056 Comox St,
Vancouver, BC V5E 4A7
604.608.1874
info@drpeter.org
www.drpeter.org

Friends for Life Society
1459 Barclay St, Vancouver, BC V6G 1J6
604.682.5992
ffl@radiant.net
www.friendsforlife.ca

Healing Our Spirit
Suite 100 – 2425 Quebec St,
Vancouver, BC V5T 4L6
604.879.8884 or 1.800.336.9726
info@healingourspirit.org
healingourspirit.org

McLaren Housing Society
200 – 649 Helmcken St,
Vancouver, BC V6B 5R1
604.669.4090
mclarenhousing@telus.net

North Island AIDS Coalition (Campbell River)
684B Island Hwy,
Campbell River, BC V9W 2C3
250.830.0787 or 1.877.650.8787

North Island AIDS Coalition (Courtney)
355 6th St, Courtney, BC V9N 1M2
250.338.7400 or 1.877.311.7400

North Island AIDS Coalition (Port Hardy)
8635 Granville St, Ground Floor,
Port Hardy, BC V0N 2P0
250.902.2238
niac@island.net
www.island.net/~niac

Okanagan Aboriginal AIDS Society
202 – 1626 Richter Street,
Kelowna, BC V1Y 2M3
250.862.2481 or 1.800.616.2437
oaas@arcok.com
www.oaas.ca

Pacific AIDS Network c/o AIDS Vancouver Island (Victoria)
250.881.5663
erikages@pan.ca
www.pan.ca

Positive Women's Network
614 – 1033 Davie St, Vancouver, BC V6E 1M7
604.692.3000 or 1.866.692.3001
pwn@pwn.bc.ca

Red Road HIV/AIDS Network Society
Suite 100 – 2425 Quebec St,
Vancouver, BC V5T 4L6
604.879.8884 or 1.800.336.9726
info@red-road.org
www.red-road.org

Vancouver Native Health Society
441 East Hastings St, Vancouver, BC V6G 1B4
604.254.9949
vnhs@shaw.ca

Victoria AIDS Respite Care Society
2002 Fernwood Rd, Victoria, BC V8T 2Y9
250.388.6620
varcs@islandnet.com
www.islandnet.com/~varcs/

Victoria Persons With AIDS Society
541 Herald St., Victoria BC V8W 1S5
250.382.7927
support@vpwas.com
www.vpwas.com

Wings Housing Society
12 – 1041 Comox St, Vancouver, BC V6E 1K1
604.899.5405
info@wingshousing.bc.ca
www.wingshousing.bc.ca

YouthCO AIDS Society
203 – 319 Pender Street,
Vancouver BC V6B 1T4
604.688.1441
info@youthco.org
www.youthco.org

For more comprehensive listings of groups, societies, programs and institutions in British Columbia serving people touched by HIV disease and AIDS, please visit the Positively Happening section of the BCPWA Society website at www.bcpwa.org.

Upcoming BCPWA Society Board Meetings

Date	Time	Location	Reports to be presented
January 8, 2003	1:00	Training Room	Standing Committee / Written Executive Director Report
January 22, 2003	1:00	Training Room	Director of Treatment Infomation & Advocacy/December Financial Statements
February 5, 2003	1:00	Training Room	Quarterly Department PHSA Report / Written Executive Director Report/ Executive Committee
February 19, 2003	1:00	Training Room	Standing Committee
March 5, 2003	1:00	Training Room	Written Executive Director Report / January & February Financial Statements / Director of Support Services
March 19, 2003	1:00	Training Room	Executive Committee

The BCPWA Society is located at 1107 Seymour St., Vancouver.
For more information, contact:
Katharine McEachern, Manager, Executive Operations
Direct: 604-893-2292
Email: katharin@bcpwa.org

An immaculate conception

Eerie similarities between liver disease and pregnancy

by Glen Hillson

As my liver mounts one mighty last stand against the forces of darkness, I am experiencing a rare male insight into the many tortures of pregnancy. Although one condition is the ultimate affirmation of life and the other spells imminent demise, pregnancy and liver disease are surprisingly similar in some respects.

Ballooning stomachs are a case in point. A full-term baby stretches its mother's abdomen like an overinflated beach ball ready to explode. Expectant mom looks like she could bounce her way to wherever she wants to go. With liver disease, a condition known as ascites develops when your liver is going south. It causes fluid to accumulate in your gut to the point where it feels like someone has plugged a garden hose into your navel. You can't roll over in bed at night without waking up and thinking you may have to call out the army reserves to help with the job. You need assistance to tie your shoes or stand up. Trousers are a major challenge.

If you also have AIDS, chances are your butt flesh has disappeared, leaving only small knobs of pelvic bone draped with a pleated skin sheath. You avoid the ultra-baggy boarder dude look in favour of something less accentuating. The problem arises when a few inches higher you are packing around several extra inches of liquid girth. A nice muumuu seems like a practical solution, though frowned upon by the fashion police. And just as pregnant woman must contend with swollen feet and ankles, these are favourite targets for fluid accumulation. Those once finely turned ankles become thick, shapeless stumps that render your Carrie Bradshaw shoe wardrobe useless.

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Digestive misfires are also common to both conditions. Many women observe that morning sickness is more like an all-day affair. Similarly, people with end-stage liver disease experience nausea, vomiting, and uncontrollable farting. When your liver resembles a car tire that was discarded decades ago, the sensation of hunger can be corrected with only a couple of bites. Even then, it is wise to have a toilet, pail, or bowl handy. I was recently in a shopping mall food court at lunchtime. My tiny repast decided less than a minute after consumption to reverse course. As I anxiously sped off in my power wheelchair in search of the nearest elevator to find a bathroom, I clenched my teeth and prayed feverishly. There would be no mercy. 'Nuff said.

Both conditions are characterized by radical hormonal changes. Liver disease throws your whole hormone system into chaos. My testosterone is too low to register. The very idea of sex these days repulses me, when for decades it represented pure sustenance. Suffice it to say that there was no sex involved in this pregnancy.

Nevertheless, the outcomes of pregnancy and liver disease couldn't be more different. If you have carried a baby around in your belly for eight months, they call it "late stage" pregnancy; when your liver is about to break down, they refer to it as "end stage" liver disease. After nine months of pregnancy, a baby is emancipated for its first exposure to air and sunlight. Sometimes, childbirth requires surgery. They slice you wide open, pop out the beach ball, and stitch you up. But the best you can hope for with liver failure is to get a replacement. In that situation, they slice you open, remove the worn out tire, replace it with one in working order, and hope for the best. ⊕

No HIV-positive person in British Columbia has ever received an organ transplant. With luck, Glen Hillson hopes to change that..