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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.

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 almost 4000 HIV+ members.

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think+

opinion and editorial

The truth about crystal meth

by Glen Bradford

I have no experience with crystal meth. Why would an HIV-positive person smoke, snort, or inject such a toxic powder? As I was reflecting on our cover story for this issue of *Living* +, I received an email from a friend. Here is an excerpt:

"From someone who just experienced the coming down and crashing of crystal meth, I have to say, the way I'm feeling today, it's not worth it. I took some on Wednesday afternoon at the tubs then again Wednesday night; I must say the sex is great. Ended up staying till Thursday morning, no sleep and continued on my day, lots of energy. Hadn't eaten since Tuesday. Had a late dinner Thursday night. Then it hit me.

Sleeping was like pouring a bucket of water over my head, my pillows were soaked with sweat. Lying there, I could feel my stomach gurgling. Suddenly, I was up running to the toilet, threw up several times, diarrhea running down my legs. It's all about peer pressure, to fit in, to feel good like everyone else. I'm depressed, off work, and thought this would have been a good escape from reality. I can't afford to feed myself, but that didn't stop me from buying crystal."

In reading my friend's email, I realized that I too want a quick fix. I am tired of being HIV-positive and being rejected for it. I don't want to think about safer sex or medication schedules. It's a seductive notion to mix party drugs with sex and, for a couple of days, to feel valued again and not like damaged goods.

Crystal users report that the drug increases their self-esteem and confidence, decreases their inhibitions, and makes them more exuberant. When mixed with Viagra it heightens their sexual abilities. Crystal is about overcoming social anxiety, feeling hot and desirable, and finding a mental place where lipodystrophy, wasting, and, even more to the point, HIV do not exist. Who wouldn't want that?

Safer sex educators and healthcare providers believe party drugs hinder safer sex practices and contribute to the increasing rates of gonorrhea, syphilis, hepatitis A, and HIV. Party drugs are a serious health concern.

Meth routinely results in skipped meds and skipped meals, vitamin depletion, weight loss, diarrhea, and poor sleep, reducing the effectiveness of antiretrovirals. HIV disease progression can result. Is it worth it?

If we need party drugs to socialize, that's a problem. Instead of glorifying crystal meth, more HIV-positive people should be like my friend and tell the truth about not feeling connected and how, in the long run, they feel trashed by party drugs. Maybe then crystal use would diminish.

Loving ourselves and allowing someone else to love us takes work. Crystal meth, or any other party drug, is not going to make love happen any faster. The same problems that drive us to party drugs in the first place are waiting, still unsolved, when we come down. Are we going to silently watch each other die, or are we going to speak the truth? A practical and brave step is to start talking openly and honestly to each other about sex, drugs, and HIV. ⊕

Glen Bradford is the chair of the BCPWA Society.

REALITY BITES

Bill C-9 victory

Canadian AIDS activists won a major victory in April when the federal government announced amendments to Bill C-9, which allowed Canadian generic drug manufacturers to make cheap copies of patented HIV/AIDS drugs for sale in poor countries.

Richard Elliott, from the Canadian HIV/AIDS Legal Network, led a huge lobbying effort that eventually included everyone from Medecins sans frontiers, the Interagency Coalition on AIDS and Development, and OXFAM to the BCPWA Society, the Canadian Labour Congress, U2's Bono, and UNAIDS ambassador Stephen Lewis.

The goal was to change the original bill's many harmful provisions, including the infamous "right of first refusal," which gave the major drug companies the right to squeeze generic producers out of any drug supply deals they negotiated, thus maintaining their markets and their high prices.

While the new law has many serious problems, the government removed the "right of first refusal" and decided to allow NGOs to distribute the generic drugs. However, a last-minute amendment by a Liberal backbencher made it much harder for NGOs to do so in practice.

Long-time BCPWA volunteer "retires"

Quita Longmore is "retiring" from her BCPWA Society volunteer work in June. Quita first helped with AIDS Walk in 1990, and eventually became a team captain. She has also volunteered as a support counsellor and processing Complementary Health Fund claims.

Quita has worked tirelessly in the Prison Outreach Program, visiting and helping inmates in correctional institutions. (Read her story on page 5 of this issue.)

Quita plans to sell her Vancouver home and return to her roots on Vancouver Island. We will miss her at the BCPWA Society, but we're certain that wherever she settles, she will continue to be an indispensable member of the community.

Tenofovir + 3TC + ddI = bad idea

Three studies were presented at the 11th Conference on Retroviruses and Opportunistic Infections regarding bad interactions between tenofovir, 3TC and ddI.

Late last year, a "Dear Doctor" letter was widely circulated to physicians regarding poor virologic responses in a small pilot study of once-daily ddI, 3TC and tenofovir. Two subsequent studies confirmed these data. All three studies were stopped early due to poor virologic response.

In one of the studies, the average viral load change at 24 weeks was 0.49 log and apparently, no patients achieved <50 copies/ml while on this combination. In another study, over 30 percent of participants never suppressed their virus by week 24 (after 6 months).

It seems that adherence was not the issue. Moreover, people with viral loads over 100,000 copies faired the worst.
Source: Jules Levin, NATAP

Treatment videos online

The BCPWA Treatment Information Program recently produced two treatment-related videos on mental health and side effects as they relate to HIV/AIDS. You can watch them on the BCPWA web page, <www.bcpwa.org>. It's an innovative way to provide treatment information on the web.

Green tea holds promise as HIV therapy

A research team based at the Baylor College of Medicine in Houston has found that one of the active ingredients in green tea binds to the CD4 receptor, making it a potential therapy for HIV infection.

Epigallocatechin gallate (EGCG), the most active catechin in green tea and one that has been shown to have anti-inflammatory, antioxidant, anti-tumour, and antiviral properties, was reported last year to inhibit HIV reverse transcriptase with lowered p24 antigenemia in vitro. The researchers found that this happens because EGCG binds tightly to the CD4 receptor.

Researchers cautioned that a great deal more basic work is required and that in vivo studies may be some time off.

Even if they get to that point, there will be several practical hurdles to overcome, including bioavailability. For example, a person can consume two cups of green tea and a lot of the EGCG component is eliminated before it even gets into the system.

Source: The Medical Post

Bad news for daily pot smokers with hepatitis C

Cannabis sativa, also known as marijuana, contains a predominant psychoactive cannabinoid, tetrahydrocannabinal (THC) and over 60 other cannabinoid compounds.

Two types of receptors, CB1 and CB2, mediate the biological effects of THC and other cannabinoids. Researchers recently discovered that CB1 receptors are highly upregulated in the livers of people with cirrhosis. The researchers then examined the impact of marijuana smoking on the risk of fibrosis progression in 211 people with hepatitis C. (Nobody co-infected with HIV was included.)

Unfortunately, they found that people

REALITY BITES

who smoked pot daily were four times more likely to have a faster fibrosis progression rate, after taking into account the impact of alcohol use on fibrosis progression.
Source: Jules Levin, NATAP

Promising lipodystrophy treatment

A Canadian company, Theratechnologies, believes it may have developed a treatment that can reduce the abdominal fat accumulation seen in HIV-positive people who develop lipodystrophy.

Results of a randomized phase II clinical trial showed that its recombinant human growth hormone releasing factor (ThGRF) was associated with a significant reduction in visceral fat without the negative effects on glucose control seen with human growth hormone treatment.

The study used a product which stimulates the body's own production of human growth hormone, in the hope that this would not disrupt the mechanism by which growth hormone levels regulate blood glucose levels.

Theratechnologies now plans to proceed with a larger phase III study in order to seek registration for lipodystrophy treatment.
Source: www.aidsmap.com

HAART restores some anti-HBV immunity in coinfected

Specific immune responses against hepatitis B virus (HBV) can be partially restored in patients coinfected with HIV and HBV with highly active antiretroviral therapy (HAART), even if their HAART regimen doesn't include drugs with a specific anti-HBV effect, according to a small study published in the *Journal of Infectious Diseases.*

Researchers studied five HIV/HBV coinfected patients for 24 weeks after either starting HAART or adding an antiretroviral drug, which was also active against HBV to the regimen.

After 24 weeks of HAART, two patients saw a return of HBV-specific CD8 cell response. A third patient, who was initially taking dual nucleoside analogue therapy, experienced a return of HBV specific CD8 cell response after the addition of the nucleotide analogue adefovir.

The researchers caution that they need to confirm these preliminary findings in larger studies. They add that HAART alone may be insufficient for reconstitution of HBV-specific responses.
Source: www.aidsmap.com ⊕

Have you had border problems?

Have you ever been turned back at the US border because you are HIV-positive?

BCPWA Society is gathering materials with which to oppose the BC government's decision to privatize Medicare and PharmaCare operations by contracting them out to an American corporation, Maximus. One of the main arguments is that, under American laws, health records held by Maximus are subject to secret search and seizure by American authorities. See <www.bcpwa.org/pdf/privacy_guarantee.pdf>.

If you have been turned away at the US border because of your HIV status, your case could be a compelling example of what BCPWA Society fears from this privatization move. If you are willing to tell your story, please contact Lisa Gallo, BCPWA director of communications and education, at 604.893.2209, email: lisag@bcpwa.org.

BCPWA Board member Wayne Campbell presenting the Above and Beyond award to May McQueen at the AccolAIDS banquet in April.

Volunteers at the BCPWA Society's 2004 Volunteer Appreciation Event, "Tacky Bingo" in May.

A supportive hug

A volunteer talks about her work with HIV-positive inmates

by Quita Longmore

My day begins when the alarm goes off at 5:30am. After feeding my cat and getting my act together, I go to pick up May. We are on our way to North Fraser Pre-Trial Centre for our bi-weekly visit with inmates living with HIV/AIDS and others who wish to chat with us. We arrive at 9:00AM.

Upon arrival, we lock up our belongings — no cell phones, purses, or other contraband allowed. Someone from Programs comes to escort us to Control where we pick up a visitor's tag and a personal alarm device with a big red button to push if we feel we are in danger. Armed with our list, we go to the Programs Office to find out where we will be going this day.

The institution fans out into three pods, each with a central control. Each pod has four units and each unit has three tiers to house 35 to 40 inmates with one supervising officer. Our escort leads us to the first pod.

A disembodied voice calls down from above us in the pod control to ask who we are and where we are going. Doors open and we are in the unit. We go to an interview room and wait for our first inmate to arrive. Today we have six people to see between 9:00AM and 11:15AM. We can give each one 20 minutes to allow for travel time between units and pods.

The men in the unit stare at us, wondering who we are and why certain people are singled out to visit us. Others get on with their daily routines. We visit with our clients and discuss medications, health conditions, BCPWA Society's Complementary Health Fund (CHF), upcoming hearings, and whatever else comes to mind. Then we move to the next unit. We leave the guys in the work unit until the end.

At 11:15AM, we head off to lunch. We have less than two hours to eat and get to Fraser Regional Correctional Centre.

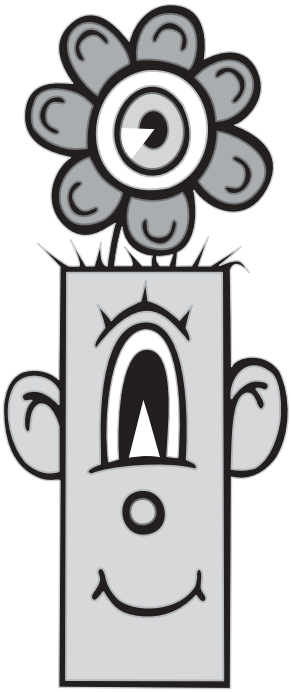
At Fraser, we sign in and again lock up our belongings before we are escorted to a programs room for our afternoon visitors. Here, inmates come down to us from their units, and we have roughly half an hour to visit with each of them. Some may come down alone, while others are escorted, sometimes in handcuffs that are removed while they visit with us.

We are allowed to bring in vitamins and protein powder to North Fraser for the men who have accessed them through the CHF program. We are also allowed to give our guys a supportive hug. We believe that sometimes helps.

It is a long day for us. We get home between five and six in the evening. The ride home gives us a good chance to unwind and debrief each other. Confidentiality is one of the most important aspects of our work in the prisons from the HIV-positive inmates' point of view. We are the link between them and the outside world. We also answer the Prison Outreach Program phone line. We hear back from inmates we have visited, and we hear from other inmates we get to know only by voice.

In most cases, inmates have lost touch with their families and friends. They know they are unwanted and unloved. Most of our members are co-infected with hepatitis C, which is rampant inside the prisons. May says that the inmates view us as mother and grandmother. Drained as we often are, we feel we are doing something constructive in the fight against HIV ⊕.

Quita Longmore has been a long-standing volunteer with the BCPWA Society.



Real-life superheroes

AccolAIDS banquet honours community achievements

On April 25, the BCPWA Society, in partnership with Granville Island and Granville Island Public Market, held the third annual AccolAIDS event, to pay tribute to the extraordinary dedication of individuals and organizations in BC's HIV/AIDS community.

HEALTH PROMOTION AND HARM REDUCTION

Dr. Susan Burgess

Dr. Sue Burgess is a fearless advocate for the needs of the most marginalized individuals of Vancouver's Downtown Eastside (DTES). She volunteers on the Oak Tree Advisory Committee and A Loving Spoonful board of directors, teaches at UBC's Department of Family Medicine, is a home hospice consultant, and the outreach physician to various programs and clinics in the DTES. In fact, Sue has been called "the hub of HIV/AIDS healthcare delivery in the area."

Sue visits shelters, back alleys, and hotel rooms to reach patients living on the street and those too ill to get to a clinic. She works to find ways to extend the services of clinics and hospitals, delivering both palliative and active care to chronically and terminally ill patients with chaotic lives, challenging personalities, and complex treatment and service needs.

PHILANTHROPY (TIE)

Capers Community Markets

Capers Community Markets is Canada's leading natural and organic foods retailer with three locations in Greater Vancouver. It is an active participant in its local communities through financial and personal involvement. Capers chooses non-profit partners that do hands-on grassroots work. Capers pays its staff up to 52 hours per year for volunteer service, to encourage them to take part.

Capers has long-standing partnerships with non-profits involved in HIV/ AIDS, such as A Loving Spoonful, Positive Women's Network, BCPWA, and the Western Canadian Pediatric AIDS Society's (WCPAS). This year, Capers' 5% Day raised over $5000 for Camp Moomba, WCPAS's summer kids camp. Camp Moomba was also profiled in Capers newspaper ads and as a feature article on the back page of their biweekly Fresh Start flyer—advertising that non-profits can rarely afford.

John Pedersen and Famous Players

Since his first personal donation in 1996 to the BCPWA's AIDS Walk, John Pedersen seemed to set a personal goal to increase his giving to the society each year. Now he engages the entire Famous Players workplace to organize corporate employee teams, each developing and organizing their own AIDS WALK fundraising activities, such as organizing Karaoke nights and making red ribbons to give out for donations at special movie nights.

In 2000, his first year as a corporate team, John met his goal of $10,000. Last year, John and his Famous Players teams raised $25,794 for AIDS WALK, 43 percent more than his 2002 donation of $18,000, for which he won the prize for "Top Walker." John inspires the spirit of giving in others. He demonstrates how the power of one person can inspire others to take up the cause.

ABOVE AND BEYOND

May McQueen

After raising a family and a career as a school counsellor aide, May McQueen "retired" to a life of volunteering for AIDS organizations, including AIDS Vancouver and BCPWA. She has touched thousands of lives, and her touch knows no bounds. She has been a stalwart administrative help to the Complementary Health Fund program, a counsellor, and a support person. When she's not on the phone or visiting PWAs in hospitals or their homes, she visits correctional facilities to educate, provide support, and connect incarcerated PWAs with outside help.

May will gather donated pajamas and robes, launder them,

and give them to people in need in hospital wards. On home visits, she's been known to pick up and deliver vitamins. She always offers love, hope, support, and encouragement to everyone, and no matter what their circumstances.

SOCIAL, POLITICAL AND COMMUNITY ACTION

Phillip Haines (posthumous)

After volunteering at AIDS Vancouver, the Pacific AIDS Network, and BCPWA, Phillip Haines founded an HIV/AIDS resource centre for the North Island AIDS Society in Courtenay. As executive director, he helped expand the Society into Port Hardy and Campbell River. Phillip assisted people in defending their right to Schedule C supplemental health-benefits and helped AIDS patients obtain permission to administer their IV drugs at home.

Occasionally, he was asked to advocate for people in the community, fighting against stigma and discrimination from landlords, employers, and even the municipal bureaucrats. The North Island AIDS Society has become a multi-service AIDS service agency, offering counseling, treatment information, nutritional support, help in finding a knowledgeable physician, and a needle exchange. Haines died suddenly in February this year.

SCIENCE, RESEARCH AND TECHNOLOGY

Dr. Evan Wood

As an epidemiologist, Evan has made significant advances in HIV prevention and treatment. In 2003, he contributed to the publication of 20 peer-reviewed research studies. His work with BC's HIV/AIDS treatment program has helped inform international HIV treatment guidelines, and drawn significant attention to the pressing need for strategies to improve HIV care delivery to populations who are often unreached by the healthcare system.

Evan's research with the Vancouver Injection Drug Users Study (VIDUS) has shed light on the urgent need for an evidence-based illicit drug strategy to prevent new HIV infections and overdoses among injection drug users. He has also shared research findings with policy-makers and the community, working with the Vancouver Area Network of Drug Users (VANDU) to help sway both public policy and public opinion.

INNOVATIVE PROGRAMS

Dr. Peter Centre

The Dr. Peter Centre, named after local pioneer Dr. Peter Jepson Young, established Canada's, and indeed North America's, first supervised injection service. This remarkable step was taken after registered nurses at the Centre confirmed with their regulatory body that this intervention was within the scope of nursing practice. In spring 2002, the Centre's interdisciplinary team proceeded to include supervised injection by a registered nurse into its already established range of harm reduction services.

The Centre's model demonstrates the effectiveness of including supervised injection in a clinic setting with art, recreation, and music therapy, counselling, hot meals, and showers. It also confirms that the service can be effectively integrated into a clinic setting serving diverse people, including non-injection drug users

SERVICE DELIVERY

Kathy Churchill

Kathy Churchill has pioneered the kind of street nursing at the Vancouver Native Health's HIV Outreach that effectively reaches the PWAs who are hardest to find and treat. As a nurse in the DTES in the early 1990s, she walked the streets to introduce herself to PWAs whom she had met while working at the Pender Detox Centre. Soon, she had a small, upstairs kitchen and living room filled with people.

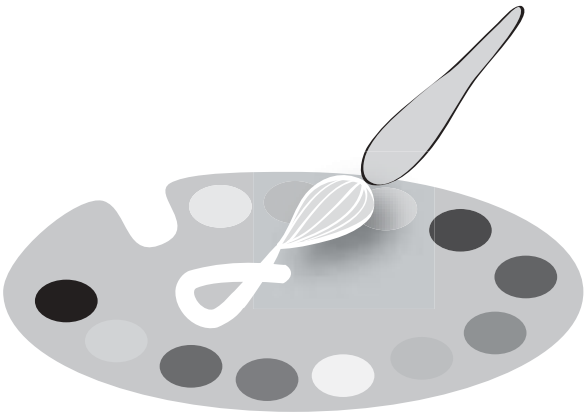
For many of the most marginalized people affected by HIV/AIDS, Kathy offered hope, warmth, a relationship, and education. She formed links with other services, brought people to the medical care they required, and tied individuals' support systems together by connecting family, caregivers, and resources. Kathy continues to walk the streets with VIDUS, bringing medical care, food, housing, and friendship to disorganized and sick people.

KEVIN BROWN PWA HERO AWARD

Glen Hillson (posthumous)

Glen Hillson remains one of the BCPWA's most influential figures. Under his guidance, vision, and insistence as chair of the Society, he helped advocate successfully for a provincial benefits program so thousands of PWAs can afford nutritional supplements and specialized healthcare costs. He helped make this publication a reality. As an educator and speaker, he rallied for greater dignity and rights for all people living with HIV/AIDS.

In addition to volunteering often more than 40 hours a week at BCPWA, he participated on numerous local, provincial, and national committees, advocating for the rights of PWAs to have access to decent and long lives. One of his last fights was for the right for PWAs to have equal access to organ transplantations. Glen died on June 12, 2003 due to HIV/HCV co-infection. ⊕



Portrait of an epidemic

Web-based galleries showcase PWA artists

by Melissa Davis

Since the earliest days of the AIDS epidemic in North America, the impact of HIV on the arts community has been profound.

Over the past ten years, the emergence and growth of Internet technology has provided an opportunity to exhibit, promote, honour, and preserve the varied artistic contributions of PWAs, both living and deceased. Numerous Web-based arts initiatives have been established by arts organizations, often in collaboration with AIDS service organizations.

One of the first initiatives to document the impact of HIV on the arts community was Visual AIDS. Established in New York in 1988, Visual AIDS developed several internationally recognized fundraising events, including Day With(out) Art and the Ribbon Project. Their Archive Project, launched in 1994, is a detailed photo-documentation of the works of artists with HIV/AIDS. It includes over 6,000 slides, in addition to catalogues, videos, artist biographical information, and an extensive library. An essential resource for curators, art historians, and researchers, this archive will soon be moved to the New York Public Library.

Another New York-based organization, the Alliance for the Arts, launched the Estate Project in 1991. They also developed the Virtual Collection, a collaborative venture with Visual AIDS, in 1999. A digital database of over 3,000 artistic images by PWAs based on collections acquired from Visual AIDS chapters from major US cities, the Virtual Collection is a Web-based exhibit of paintings, sculptures, drawings, collages, textiles, installations, and photographs. The images are diverse in style, complexity, media, and theme.

In 2003, the Estate Project also launched its National Registry of Artists with AIDS, containing the names of hundreds of PWAs. The site is considered a work-in-progress and over time will be expanded to include detailed biographical information, sample works, and Web links.

Although most of the Web-based initiatives honouring the artistic contributions of PWAs appear to be based in the US, one notable Canadian example deserves attention. The Art Talks Artists' Collective, Computer Assisted Network (ATAC–CAN) is a grassroots group of artists committed to supporting people living with HIV/AIDS and eradicating AIDS-related discrimination. Established in 2000 in Victoria by a group of four artists, the Collective has since grown to almost 30 participants from around the world, many of whom are HIV-positive.

For several years, the Collective has coordinated a fundraising exhibit and auction to raise funds for non-profit agencies that support PWAs. In 2004, the Collective underwent a structural change that eliminated weekly meetings and focused operations exclusively through a computer assisted network, thereby increasing the participation of contributing artists from the rest of Canada, the US, Germany, Italy, and other countries. ⊕

Melissa Davis is a Vancouver-based freelance writer and editor.

Web Galleries

USA

Visual AIDS, Web Gallery: ***www.thebody.com/visualaids/web_gallery/index.html***

The Estate Project, The Virtual Collection: ***www.artistswithaids.org/collection/index.html***

Survivors Art Foundation, Virtual Gallery Shows: ***www.survivorsartfoundation.org***

Living in 3D, Exhibit by Artist Melanie Hickerson: ***http://etaoin.com/mhht01.htm***

Canada

Art Talks Artists' Collective, Computer Assisted Network: ***www.geocities.com/art_talks/ATAC.html***

ATAC, Red Ribbon Project 2002: ***www.geocities.com/art_talks/red_ribbon_art.html***

ATAC, Red Ribbon Project 2003: ***www.geocities.com/red_ribbon_2/***

Dominic Fetherston, Virtual Gallery: ***www.geocities.com/caution_studio***

Joe Average, Virtual Gallery: ***www.joeaverageart.com***

Other resources

The Estate Project, National Registry of Artists with AIDS: ***www.artistswithaids.org/national/index.html***

Playing with "fire"

Crystal meth use is heating up—and robbing lives

by Glyn Townson

The use of crystal methamphetamine in Vancouver is an epidemic that few want to talk about or even acknowledge. Recent studies suggest that close to 85 percent of street-affected youth have tried it. Its popularity in the gay male community has grown over the last five years. Because ecstasy is often laced with crystal meth, it has also gained a foothold in rave culture. Other problem areas in BC include Prince George, Victoria, Kamloops, and Kelowna.

No data collection and reporting system is yet in place in BC that would enable us to accurately estimate patterns of crystal meth use, treatment, and production, so it is impossible to provide a comprehensive overview of the drug's prevalence. Testing for crystal meth is no longer included in routine drug screens.

continued on next page

Crystal meth is a stimulant that looks and acts like a neurotransmitter. When neurons in the brain absorb the drug, the natural neurotransmitters are pushed out and replaced. When these chemicals (primarily dopamine, serotonin, and norepinephrine) are released into the bloodstream, they start "talking" to the rest of the body. Crystal cranks the volume of the conversation from a whisper to a scream, and increases the heart rate, blood pressure, body temperature, and rate of breathing. It is like turning up your body's thermostat to its highest setting. For people taking protease inhibitors, the effect of crystal meth can be two to three times greater.

Crystal methamphetamine has clinically accepted applications in the treatment of narcolepsy, weight control, and attention deficit disorder. As a prescription drug, methamphetamine is sold under the name Desoxyn, but it is not covered by MSP anymore. Common street names are ice, Tina, glass, chalk, krank (crank), tweak, fire, speed, and hillbilly heroin.

Worldwide, the World Health Organization (WHO) estimates that over 34,000,000 people use crystal methamphetamine daily, more than crack cocaine and heroin users combined.

A cheap and easily accessible high

Crystal is cheap, easily available, and easy to find. It can be ingested, injected, snorted, smoked, or booty bumped (inserted anally). The street cost of a "point" (one tenth of a gram) is about $10.

Its allure can be overwhelming. Imagine dealing with the daily effects of HIV—energy levels ebbing, low self-esteem, tiredness, and depression. A bit of crystal can seem like the perfect solution. Within a few minutes, you feel euphoric and part of the big picture. You can clean your apartment again. Unfortunately, without continued use the feeling goes away.

Unlike the high from crack cocaine, which lasts for 15 to 20 minutes, crystal can last for 12 to 18 hours and even as long as 36 hours.

I have watched several people succumb to its charms, people who you would not usually classify as drug addicts—professionals in stable relationships with good incomes and homes in nice neighbourhoods.

While not everyone becomes hooked on crystal, it is highly addictive, and quite often users have crossed the line long before they identify it as a problem.

A friend of mine started using it during weekend visits to San Francisco. Within a few months, he was using it at home as well. Soon after, he was using it on a daily basis. Work became secondary. Isolation and psychosis set in as his use increased. He lost a lot of weight and began to believe people were following him. His high-paying government job was in jeopardy because of his poor performance.

Fortunately, this friend was able to access treatment through his employer. He entered a drug rehabilitation program. A year later, he's still drug free. He says the recovery process has left him socially isolated because he had to leave behind friends who still use crystal.

A downward spiral

Others have not been so lucky. After being clean of drugs and alcohol for over seven years, an ex-partner of mine started using crystal meth again. Within a few months, he hit a new all-time low. He started hearing voices and was sure that people were spying on him. One evening, he accidentally called his mother instead of the suicide hotline. Fortunately, she had the savvy to call emergency services and send an ambulance to his home.

Soon after, one of his friends came to town to do an intervention. I was asked to assist. He had lost over 40 pounds, and his skin was grey. Even at this point, he believed no one knew of his drug habit, including at his workplace, because he had shown up for work every day. The level of denial exhibited by some crystal addicts is unbelievable.

He later acknowledged that his binges could last as long as nine days without sleep. He was severely depressed and remorseful for the things he had done while he was high, including having unprotected sex and losing track of taking his HIV medications and antidepressants. With increased use, he started to experience "crystal dick" (loss of erections and inability to reach orgasm) and became a bottom. He said I would be shocked to find out how many men in the gay community were involved, and how easy it was to find other players.

Worldwide, WHO estimates over 34,000,000 people use crystal meth daily, more than crack cocaine and heroin users combined.

I took him to a few recovery meetings, but he refused to seek treatment as an inpatient, even on the recommendation of his doctors. Without support, he was soon using crystal again. As things heated up, the last of his friends withdrew, he lost his job, left town, and disappeared off the map.

A third person in my circle of acquaintances had been in a long relationship. I received an instant message on my computer late one night asking if I knew my ex-partner and if I was still part of the recovery community. He had started using crystal with friends during sex parties, and his drug use careened out of control. His relationship with his partner of 10 years ended, and he found himself lonely, isolated, and unsure what to do. I offered him my ear and several contact numbers for other supports in the community. Because of his sexual behaviour while high on crystal meth, he waited in fear for the results of an HIV test.

Higher risk of HIV infection

Sex under the influence of meth quickly leads to a strong association that can be very difficult to break. One without the other becomes inconceivable. The duration and severity of the sex acts also increase the risk of injury to sensitive tissues, increasing the risk of HIV and other sexually transmitted infections.

HIV is not the only risk. One of the most popular ways to take crystal is to smoke it from a pipe. Extreme heat vaporizes

the crystal. This vapor can burn the lips, mouth lining, throat, and lungs. Sharing pipes can also increase the risk of hepatitis C, hepatitis B, and herpes.

Crystal is out of control in three hotspots in Vancouver: Bute and Davie in the West End; Seymour and Helmcken in the downtown area, and Cambie and Hastings, close to the Gastown area. Crystal has not been a huge problem at Main and Hastings (probably because of turf wars), where crack and heroin are far more prevalent, although indications of change are present.

Most people trying to recover from prolonged crystal meth use are not aware of how much damage can occur to their brains.

It is also readily available through bicycle couriers. A resident in a seniors' apartment complex on Seymour Street told me that from his balcony he can see drugs being transferred from a van in the parking lot across the street to bicycle couriers who distribute drugs in the West End. The couriers use pay phones and cell phones to deliver their product all over the downtown core within minutes.

Breaking the addiction

Crystal addiction is very hard to break. Best practices would indicate that normal detox used in other drug or alcohol situations (two weeks to 28 days) is woefully inadequate. Former crystal users often report post-treatment depression and difficulty reconnecting with society.

According to a report by the Addictive Drug Information Council of BC, crystal meth requires a longer withdrawal period and a longer period in treatment than other drugs. No medications specifically for the treatment of crystal meth addiction are available. Despite limited supportive evidence, anti-psychotics and antidepressants are often used to reduce symptoms associated with withdrawal. Medications to consider for further treatment studies may be those with the propensities to increase dopamine, norepinephrine, or serotonin activities of the brain.

Most people trying to recover from prolonged crystal meth use are not aware of how much damage can occur to their brains. In extreme cases, tremors, psychosis, and Parkinson's disease-like symptoms may occur. Depression is also a huge factor in recovery from crystal meth addiction. Without adequate supports and proper follow up, former users easily slip back into reliance on the drug.

An environmental hazard

Recipes for making crystal meth are easy to obtain on the Internet, and almost anyone could build his or her own laboratory. The ingredients for crystal meth can be bought at a drug store and hardware store.

The production of crystal meth is also a huge environmental problem. Producing one kilogram of crystal meth results in five to seven kilograms of toxic waste. This waste is often discarded into septic systems or sewers or seeps into ground water. Often, houses and buildings must be demolished because of the build-up of volatile substances from the production process. Critical stages in the brewing cycle are highly volatile and capable of causing large explosions.

If you know someone who is having trouble with crystal meth, or would like more information in the province of BC, call the Alcohol and Drug Information Referral Service at 1-800-663-1441. In Vancouver, call 604-660-9382 (24 hours a day). ⊕

Useful Links:

‹www.buzzcode.org›
Vancouver Gay Men's Harm Reduction Initiative
‹www.crystalneon.org›
sponsored by the Seattle Counseling Services

Glyn Townson is a board member with the BCPWA Society.

Six safety tips for approaching a tweaker*

- ***Keep 7-10 feet away. Getting too close can be threatening.***
- ***Don't shine bright lights. The tweaker is already paranoid, and, if blinded by a bright light, he is likely to run or become violent.***
- ***Slow your speech and lower the pitch of your voice. A tweaker already hears sounds at a fast pace and in a high pitch.***
- ***Slow your movements. This will decrease the odds that the tweaker will misinterpret your physical actions.***
- ***Keep your hands visible. If you place your hands where the tweaker cannot see them, he might feel threatened and could become violent.***
- ***Keep the tweaker talking. A tweaker who falls silent can be extremely dangerous. Silence often means that his paranoid thoughts have taken over reality, and anyone present could become part of his paranoid delusions.***

* *Tweaking: to pick at your face, arms, or other body parts until they bruise, bleed, or scab. To talk incessantly, to clean incessantly, to fix your hair, make-up, or just stare at yourself in a mirror for hours. Any repetitive behaviour performed for hours or even days while high on crystal meth.*

Source: www.crystalrecovery.com

Shop 'til @ccess drops

Everyone is up in arms about Canadian Internet pharmacies

by Louise Binder

Remember the good old days when cross-border shopping meant taking the bus to the US to buy cheap clothes? These days it refers to Americans purchasing cheaper Canadian drugs via the Internet, a practice that has led to the recent sabre-rattling by the international pharmaceutical industry and the American government. They claim that Canadian Internet pharmacy sales to Americans are leading to unsafe Canadian drugs entering the US. In response to this perceived threat, they have imposed limits on drugs shipped for sale in Canada. Canadians (other than those in the Internet pharmacy business) are concerned that this punitive action will create drug shortages and cause drug prices to rise, thereby putting even greater pressure on already overburdened government drug budgets. It may also affect access to pharmacists and doctors.

Internet pharmacies are neither all good nor all bad. They serve some Canadians very well. The concern is almost exclusively about Americans purchasing drugs from Canadian Internet pharmacies. But is the concern valid?

Flawed legislation is part of the problem

It is true that some unapproved drugs may be entering the US through Internet pharmacies, but these drugs are not manufactured in Canada. The Canadian Food and Drugs Act states that drugs entering Canada for sale or use elsewhere are exempt from Canada's drug review process. Canada imports drugs from over 36 countries but has agreements with only 18 of them, plus the US, to recognize one another's manufacturing practices. Canada cannot ensure the safety, efficacy and quality of the drugs from the other 18 countries. In two recent searches, US customs found that drugs coming into the US from other countries, including Canada, were not approved for sale there. Conceivably, some of these drugs could get into Canadian hands as well, if they enter the Canadian supply chain illegally. In any case, the source of this problem has more to do with flawed legislation that with the current controversy about Internet pharmacies.

It is also true that Internet pharmacy sales to Americans may well lead to limits for shipments of drugs for Canadians. GlaxoSmithKline, Eli Lilly, Pfizer, and AstraZeneca have all begun to limit the quantity of drugs being sent to Canada. The growing demand for Canadian drugs in the US is bound to lead to shortages for Canadians. Internet pharmacies insist that shortages will not occur, but recently a woman in New Brunswick was unable to get insulin from her pharmacy because the pharmacist had sold his last six vials to an American. The Winnipeg Health Sciences Centre has also reported shortages of cancer drugs for outpatient use. Drug companies have been limiting or cutting off shipments to wholesalers that supply Internet pharmacies, thereby further punishing Canadian customers. The problem is not just with brand name companies but also with Canadian generic companies, where allocation is not the issue.

Although no reports have been made of AIDS drug shortages in Canada because of cross-border Internet shopping, there is cause for concern. In the US, Abbott Laboratories recently hiked the price of its protease inhibitor ritonavir (Norvir) by 400 percent for some payors. If these people start shopping for those drugs in Canada, we may find ourselves in short supply.

Not enough pharmacists for rural pharmacies

Internet pharmacies have also led to pharmacist shortages in Manitoba, particularly in rural communities, because pharmacists can make up to four times as much working for an Internet pharmacy as they can for a community pharmacy. One pharmacy in rural Manitoba that serves the community, a hospital, and a nursing home had to shut down because of a shortage of pharmacists.

What are the ethical issues involved in the business of Canadian Internet pharmacies? Pharmacists fill prescriptions for people they never see face-to-face, which limits counselling about particular drugs and potential drug interactions. Doctors are writing prescriptions in the thousands for people they have never seen or diagnosed, based solely on an American doctor's prescription. The Canadian doctors may well not be prescribing the same formulation as that prescribed by a person's US doctor. And, in a system with a growing doctor shortage, who is seeing their Canadian patients while they are writing prescriptions for Americans?

These professionals are breaching guidelines in their provinces, generally with impunity, although professional associations are speaking out against these unethical practices. Recently, however, a more serious enforcement initiative has begun in Manitoba, with doctors receiving fines for co-signing US prescriptions.

It is also true that in the era of Internet pharmacies, drug prices in Canada are rising. Fortunately, the Canadian drug regulator limits increases of previously price-approved drugs. This year the increase limit is 4.2 percent and it is reported that in general, companies are implementing that increase. New drugs are being priced higher by companies than comparable drugs in the same class, although pharmaceutical companies

The concern is almost exclusively about Americans purchasing drugs from Canadian Internet pharmacies. But is the concern valid?

deny it has anything to do with Internet pharmacy sales. A notable exception is Gilead Sciences for its nucleotide drug tenofovir (Viread). Its CEO reported a year ago at a meeting in the US that drug pricing in Canada was responsible for the company's decision not to launch here, fearing an erosion of its US market, although the company later denied this. Fortunately, it has recently reversed its decision and is launching the drug this spring.

The irony of the situation is that the solution lies in the United States, not here in Canada, because the problem is that country's lack of drug price controls, public healthcare, and drug reimbursement systems, not the existence of such systems in Canada. Even though drugs in Canada may be as much as 50 percent cheaper than in the US, many Americans still cannot afford them.

No giving in to bullying

All Canadians have an interest in this issue. We must not be bullied by the American government and corporations into giving up safeguards that ensure Canadians have affordable healthcare and drug coverage.

US business interests would like nothing better than the dismantling of our pricing regulator, the Patented Medicine Prices Review Board. We must make the protection of this system an issue in the forthcoming federal election and in other political processes ahead.

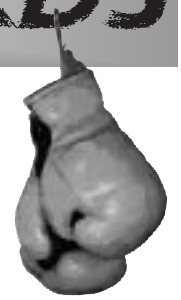
We must let our politicians know that they must not barter away public healthcare, drug reimbursement plans, or drug pricing regulations as part of international trade agreements.

Professional disciplinary bodies must receive complaints that require them to enforce their ethical codes.

Canadian healthcare advocates must educate US healthcare advocates about the reality of Internet pharmacies and the Canadian healthcare system. We must work with them to move forward their agenda, which in turn will take the pressure off our system. The US needs its own homegrown, long-term solution in this area.

Lend your voice and your support in this crucial issue to ensure that people with HIV/AIDS in Canada do not face yet another barrier to treatment. ⊕

Louise Binder is chair of the Canadian Treatment Action Council.



Advocacy department fights for PWA rights

by Glen Bradford

In 1987, the BC Persons With AIDS Society formed the Advocacy Committee to examine political strategies to implement the Society's mission to improve the quality of life for PWAs. This committee had a long list of goals: develop the Society's public image; liaise with media; publish a newsletter; maintain a speaker's bureau; facilitate drug studies and treatment investigations; engage in community relations; network with other AIDS organizations; lobby governments; and help members resolve problems with guaranteed incomes.

The committee eventually evolved into the Collective Advocacy Standing Committee, which has had many victories for PWA and disability rights, including the Schedule C Allowance and the reinstatement of the Dietary Allowance Supplement.

Advocacy on behalf of PWAs is continually necessary, especially when legislative changes are introduced by a new provincial government. One of the greatest challenges to program and service delivery for community-based AIDS service organizations in BC is the regionalization of provincial AIDS funding.

Currently, the purpose of the Collective Advocacy Standing Committee is to gather and organize information concerning the systemic issues confronting HIV-positive British Columbians and to present that information in forums where public policy can be affected.

Here are some of the issues:

- BC Centre for Excellence in HIV/AIDS (BCCfE) funding. BCCfE budget concerns arise from increasing numbers of patients being treated for HIV/AIDS, increasing costs of antiretroviral drugs, and insufficient PharmaCare allocations. The province has not committed itself to long-term funding for the BCCfE.
- Patent Act. The World Trade Organization loosened international rules on pharmaceutical patents to allow for compulsory licensing of drugs for export to countries in need of more affordable medicines and other pharmaceutical products. Canada is the only country to respond to these changes. However, flaws in Bill C-56 as it is currently drafted will undermine its objectives.
- Legislative renewal. Health Canada is attempting to have several laws governing programs as diverse as food inspection, new drug approvals, and drug pricing changed to facilitate business innovation and growth.
- Better, faster, and easier access to pharmaceuticals; fair drug pricing; tracking adverse drug reactions; and listing HIV medications on PharmaNet.
- Consumer input into the direction of the Canadian health-care system, including opposition to drug-company direct-to-consumer advertising.
- House of Commons Standing Committee on Health's study on prescription drugs.
- Marijuana medical access regulations.
- Hepatitis C co-infection. More initiatives are needed in this area.
- Lack of coverage for treatment of lipodystrophy.
- BC Transplant Society guidelines and restrictions for PWAs.
- Palliative care strategies.
- Prison inmate human rights issues.
- Legalities of HIV disclosure before sex.
- US border restrictions.
- Lack of a provincial AIDS strategy.
- The pending Canadian HIV/AIDS strategy.

Each of us can contribute unique life experiences and perspectives to better the lives of PWAs. Which barriers prevent you from improving your quality of life and that of your fellow PWAs? How could you participate in our collective endeavours? Making your voice heard will effect change that will benefit us all. The Collective Advocacy Standing Committee is always open to HIV-positive members engaging in this committee in different ways. You can contact us by email at <collectiveadvocacy@bcpwa.org> or by phone at 604.646.5338. ⊕

Glen Bradford is the chair of the BC Persons With AIDS Society.

Girl talk

HIV-positive women and healthy sexuality

by Melissa Davis

For women living with HIV, the emotional impact of diagnosis, disclosure, and illness can complicate attempts to create and maintain healthy sexual relationships. HIV can further limit women's personal and sexual self-confidence, already often eroded by social realities such as sexism and relationship violence. Nevertheless, learning to navigate these complexities in pursuit of satisfying intimate relationships can be an enriching experience.

According to Sangam, a support worker with the Positive Women's Network in Vancouver, shame, self-blame, and fear of rejection are quite common among newly diagnosed women. "I've heard many women express the fear: 'No one is ever going to want me again,'" she says. HIV-positive women who view the prospect of disclosing their status or negotiating safer sex as too daunting sometimes avoid relationships at first. Alternatively, "a woman might settle for a partner that she otherwise might not choose, out of fear of being alone," says Sangam.

Addressing low self-esteem

Countering negative sexual self-perceptions sometimes requires that HIV-positive women dig deeply into their past to examine and heal self-esteem issues that pre-date the diagnosis. The shame and guilt often associated with having HIV can be aggravated by earlier incidents, such as childhood sexual abuse, sexual assault, or domestic violence. In other cases, when partners distance themselves sexually from their HIV-positive female partners in fear of becoming infected, a woman's negative self-perceptions can be heightened. Individual counselling, support groups, and even a network of supportive friends or family can contribute significantly to restoring self-esteem.

Although many HIV-positive women experience a range of complex feelings during the period immediately following their diagnosis, most ultimately achieve self-acceptance and enjoy healthy, satisfying sexual relationships.

Allison speaks confidently of her experience. As a woman in her mid-30s who has been living with HIV for more than fifteen years, she says she came to terms with her diagnosis years ago. Having been in a long-term serodivergent relationship, she says that her sexual confidence has grown over time. "I was confident sexually before HIV," she says. "I've always considered myself attractive, and I've known that I have a lot to give in a relationship and sexually." She also feels that being involved with someone who is not HIV-positive has been beneficial for her. It has allowed her to focus her life outside of AIDS-related issues and eliminated her most pressing worry about which one of them would become sick first if they were both HIV-positive.

Although Allison is always concerned about accidentally infecting her partner, this anxiety has subsided over time, particularly as they expand their repertoire of safer sexual practices while remaining vigilant about preventive measures. Creating and maintaining a healthy sexual relationship when one partner is HIV-positive requires a positive attitude and a sense of adventure. "Having an open-mind and a willingness to try new and different activities is so important. It means being creative. It also means that both people have to be willing to communicate."

Navigating the dating scene

For Melody, 51, the situation is different, but her approach and attitude are similarly optimistic. Diagnosed with HIV eight years ago, she supported her husband, also a PWA, until his death in 2002. Recently, she began to explore dating again. "Being older," she says, "has made me more conscious and careful about the dating scene."

Although she is generally public about her status, Melody approaches disclosure more cautiously in dating situations. "Many people, especially my age, still have very limited knowledge about HIV," she says. The issue of disclosure is, therefore, a sensitive one. "If you tell someone immediately, you risk rejection. Also, you don't know a person and are entrusting them with very personal information about you."

"I've heard many women express the fear: 'No one is ever going to want me again,'" says a worker at the Positive Women's Network.

However, waiting to disclose one's status until the relationship develops can present other problems. "People do feel that they have the right to know," she says. "If you wait, does the person think that you've kept something from them? They could see that as a violation of trust and that could harm the relationship."

At this point in her life, Melody prefers to date HIV-positive men because of the shared experience and understanding and because disclosure is not an issue. Indeed, Internet chat sites geared towards HIV-positive men and women are increasingly popular. "Of course, dating positive men provides no guarantee of compatibility or sexual chemistry," she says. In addition, other issues require negotiation, such as whether or not to maintain safer sexual practices to prevent HIV re-infection and the transmission of other diseases.

Physiological effects of HIV on sexuality

Both Allison and Melody agree that several physiological factors related to HIV directly affect sexual interest for women. HIV disease, symptomatic gynaecological infections, and medications can decrease physical and sexual energy. Proper nutrition, regular exercise, and rest are essential to maintain physical energy and interest in sex.

Over the past twenty years, we have learned a lot from the varied prevention initiatives within the AIDS movement. During the first decade, campaigns directed towards gay men focused on preserving, without judgement or compromise, the spirit of a community that embraced their sexuality with pride, confidence, and adventurousness. Prevention initiatives were sexually explicit, and the goal was to eroticize safer sex. Outreach initiatives in bars, bathhouses, and parks were intended to acknowledge and honour the community's sexual freedom by introducing safer practices aimed at reducing the risk of transmission.

This sense of entitlement to pleasure and desire, even in the face of shame and fear, has been conspicuously absent for women. For most women, asserting this sense of entitlement will remain a challenge, particularly in light of the social realities of sexism and women's physical vulnerability. Transcending these pervasive cultural messages as well as painful or traumatizing life experiences is not easy. But it can be done, as many HIV-positive women have demonstrated, with determination and conviction. ⊕

Melissa Davis is a Vancouver-based freelance writer and editor.

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.

Mighty mitochondria

by Ron Rosenes

A new nutritional supplement may be good news for our mitochondria.

Among the many toxicities that people on long-term antiretroviral therapy (ART) face is damage to mitochondria, or energy factories, within our cells. Researchers have known for a long time that the nucleoside reverse transcriptase inhibitor (NRTI) class of drugs causes damage to mitochondria. Mitochondrial toxicity causes fatigue. It rarely becomes extreme, but when it does it can be life threatening.

For example, lactic acidosis can result from the build up of lactate, a byproduct of mitochondrial activity. Researchers continue to question the role that damage to mitochondria might play in the development of lipodystrophy, the disregulation of sugar metabolism (insulin resistance), and the elevation of lipid levels in the blood. People on long-term ART are more frequently developing diabetes and cardiovascular disease.

Nukes may be toxic to mitochondria

Dr. Ulrich Walker of the University of Freiburg is studying a nutritional supplement containing uridine, a substance found naturally in the body. Uridine is a nucleoside used by our bodies to produce DNA, but this process can only happen if the mitochondria are intact. Dr. Walker's research supports the theory that the current NRTIs are, in fact, "bad nukes," nucleosides that are toxic to mitochondria because they inhibit gamma polymerase, an enzyme that is essential for the replication of mitochondrial DNA.

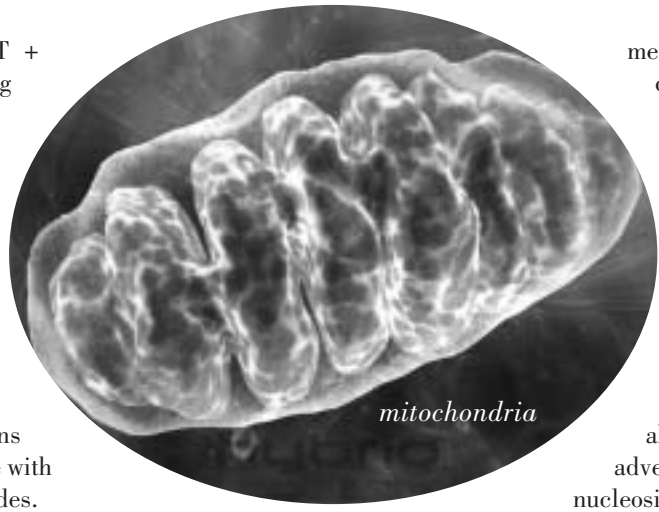
According to this theory, mitochondrial DNA is necessary for cells to be able to "breathe internally," that is, to produce energy and dispose of waste byproducts like lactate. When this respiratory chain malfunctions, the body cannot produce other natural nucleosides such as uridine (the "good nukes"). Although no simple lab test is currently available to determine the extent of mitochondrial damage in people on long-term ART, your doctor can order a test for elevated levels of lactate in the blood.

Uridine shows promise

Dr. Walker and his team have conducted studies of uridine in vitro (in the test tube) and in liver cells of mice that have been exposed to stavudine (Zerit; also known as d4T), zalcitabine (Hivid; also known as ddC), and lamivudine plus zidovudine

continued on next page

(Combivir; also known as AZT + 3TC). These studies had promising results in reversing damage to mitochondrial DNA. One study showed the ability of uridine to prevent zidovudine-induced anemia and leucopoenia (low levels of white blood cells). The studies used uridine in the form of Nucleomaxx, a nutritional supplement that you dissolve in milk, juice, or water. Nucleomaxx contains Mitocnol, an extract of sugar cane with high amounts of "good" nucleosides.


mitochondria

Studies of uridine had promising results in reversing damage to mitochondrial DNA.

Nucleomaxx is currently available through the Internet, but the price is high. Wait for results of further research on this supplement before ordering it. Research protocols have been submitted to study the effects of uridine in humans and on specific types of cells, including fat, muscle, and nerve cells. One US study will look at lipodystrophy in people taking stavudine.

Pyrimidines versus purines

Not all nukes are equal in causing mitochondrial damage, and only the nukes in the chemical class known as "pyrimidines" mentioned above (stavudine, zalcitabine, and lamivudine plus zidovudine) responded to uridine. Drugs in the "purines" class, such as didanosine (Videx; also known as ddI), did not respond. Purine drugs do not respond, as far as we know, because uridine itself is in the pyrimidine group.

More research is needed to allay concerns that uridine may adversely affect the blood levels of nucleoside drugs. In early studies using intravenous uridine at high concentrations, a few mice developed mild diarrhea that stopped as soon as the uridine was discontinued. So far, this side effect has not been observed in people taking Nucleomaxx at the recommended dose. One does feel sympathy for the mice, though!

On a happier note, a novel nucleoside drug is in the pipeline that may not inhibit the formation of healthy mitochondrial DNA. ⊕

For more information about Nucleomaxx, go to <www.nucleomaxx.com>.

Ron Rosenes is vice-chair of the Sherbourne Health Centre in Toronto, a member of the boards of the Canadian Treatment Action Council and AIDS ACTION NOW!, and an honorary director of the AIDS Committee of Toronto.

Breathe easy

Herbal remedies for seasonal allergies

by Katolen Yardley

Spring and summer, the seasons of congestion, sneezing and watery, itchy eyes, do not have to be a miserable time of coping with allergies. You can enjoy the changing seasons by bringing allergy and hay fever symptoms under control. Often considered a flaw in immune system activity, allergies may be intensified in individuals with an impaired immune system. Allergens can produce excess histamine, which can provoke severe reactions and irritation in your nose, eyes, and throat, redness and inflammation of mucous membranes, sinus congestion, and even rashes and fatigue. Prevention is the best medicine: strengthening and supporting the immune system is the key to minimizing allergy symptoms.

Bioflavinoids, found in berries, buckwheat, kale, garlic, green tea, onions, and the white peel under the rind of citrus fruits, can aid allergy suffers in controlling symptoms. One common bioflavinoid is quercetin.

Quercetin offers dramatic protection from the body's allergic response. Known as *the* allergy supplement, quercetin inhibits both the manufacture and release of histamine. Because bioflavinoids support immune system function, they are an excellent supplement for individuals with HIV and AIDS-related illnesses. For allergy suffers, the therapeutic adult dose is between 750-1500mg taken throughout the day. To enhance absorption of this well-tolerated supplement, combine it with bromelain, a digestive enzyme from pineapple. Bromelain also contains anti-inflammatory properties that enhance the activity of quercetin.

Known as *the* allergy supplement, quercetin inhibits both the manufacture and release of histamine.

Among herbal remedies for allergies, the anti-inflammatory properties of elderflower (*Sambucus nigra*) make it an ideal remedy for nasal congestion and throat inflammation. It can also provide relief for upper respiratory and bronchial conditions. Elderflower can be prepared as a tea, or it can be gargled for a sore throat. High in vitamin C and flavinoids, it is used for the common cold and winter chills.

The dried leaves and flowers of goldenrod (*Solidago virgaurea*) are anti-inflammatory and anti-catarrhal and contain antiseptic properties beneficial to the mucous membranes and upper respiratory tract. Elderflower and goldenrod can be combined together in equal parts and prepared as a medicinal tea. For allergy relief, consume three to four cups of tea daily. Add peppermint to enhance the taste.

You can also try steaming with essential oils to relieve allergy symptoms. When in contact with foreign pathogens, our sinuses increase production of mucous. Essential oils such as eucalyptus, pine, niaouli, and lavender contain antibacterial and anti-inflammatory properties, and they contain volatile oils that are antiseptic to mucous membranes lining the nasal and sinus passages. Never take them internally. Instead, place a few drops in a humidifier or in a basin of hot water, then cover your head and inhale the fragrant vapors. Take care not to burn yourself with the water or hot steam. An almost forgotten home remedy, steaming is one of the best ways to treat upper respiratory infections and sinus congestion.

Finally, avoid dairy products, which can increase the amount of the body's mucous production. Consume hot lemon drinks with a dash of cayenne pepper to help decrease excess mucous production. Garlic, onions, and horseradish are also useful medicinal foods for clearing up sinus congestion. ⊕

Katolen Yardley, MNIMH, is a medical herbalist in private practice at Gaia Garden Herbal Dispensary in Vancouver and the Tri-City Natural Health Clinic in Coquitlam. <www.katolenyardley.com>

11th Conference on Retroviruses & Opportunistic Infections, San Francisco

The future of HIV therapies: entry and attachment inhibitors

by Enrico Mandarino

Despite many advances in antiretroviral therapy, researchers are always looking for new agents to treat HIV infection. Drug resistance, compliance, toxicity, and uncertainty about long-term outcomes are challenges that need to be met head on.

At the 11th Conference on Retroviruses and Opportunistic Infections in San Francisco earlier this year, more promising data were presented on the new class of anti-HIV drugs called entry and attachment inhibitors, which block HIV from entering CD4 immune cells.

HIV enters CD4 cells in three steps: attachment, co-receptor binding, and fusion. HIV uses its gp120 molecule to attach to the CD4 receptor and then binds to another co-receptor such as CCR5 or CXCR4 in order to get into the CD4 cell. CCR5 and CXCR4 are chemokine receptors on the surface of the CD4 cells and are known to play a critical role in virus infection and transmission.

Entry inhibitors are designed to bind to the CD4 surface receptors, blocking HIV from attaching and fusing into the cell. Unlike existing HIV drugs that work inside the CD4 cells and target viral enzymes involved in the replication of the virus, entry inhibitors work by blocking HIV before it enters the CD4 cells and begins its replication process.

The receptor blocking agents closest to entering larger clinical studies are TNX-355, which targets the CD4 receptors, and GW 873140 and SCH-D, which target the CCR5 receptors. These agents all have favourable safety and efficacy data.

Researchers are concerned that over time, the use of CCR5 receptor (R5 viruses) blocking agents will cause the emergence of more lethal viruses that use the CXCR4 receptor (X4 viruses) to get into the CD4 cell.

Data providing proof-of-concept for a novel experimental oral attachment inhibitor, a potential new class of antiretrovirals, was also unveiled at the conference. BMS-4888043 is a small molecule that binds to the HIV viral envelope protein gp120, preventing it from attaching to the CD4 receptor, thereby stopping infection of the CD4 cells.

With investigations underway on a variety of new drug approaches that prevent HIV from attaching itself and fusing into CD4 cells, optimism is growing that new, effective, non-toxic drugs will change the way HIV is treated:

▼ TNX-355 (Abstract 536)

TNX- 355 is a monoclonal antibody designed to coat CD4 receptors on CD4 cells and is the closest to large-scale studies.

The phase Ib study tested various intravenous doses in treatment-naïve and treatment-experienced individuals to evaluate its safety and efficacy. TNX-355 is administered by subcutaneous injection once weekly or every two weeks. Sixty-four percent of patients experienced reductions >1 log10 copies/ml. Virologic control decreased as the study continued, suggesting that effective monotherapy with TNX-355 quickly results in drug resistance. This drug will most likely be of use to patients with extensive HIV drug resistance. Plans are underway for a phase II study of TNX-355 in combination with optimized antiretroviral therapy.

▼ GW 873140 (Abstract 139)

GW 873140 from GlaxoSmithKline is a novel CCR5 receptor antagonist that binds specifically to human CCR5. It demonstrates potent in-vitro anti-HIV activity.

Preliminary data indicated that GW 873140 caused no serious

adverse events. Mild to moderate side effects included abdominal cramping, nausea, and diarrhea. No specific trends in laboratory parameters and no clinically significant ECG changes were noted. Unfortunately, this agent appears to have minimal central nervous system penetration, but researchers are continuing with the development process because of favourable safety and viral load decline data.

The authors conclude that "GW 873140 was safe and well tolerated following single doses and multiple doses administered twice daily. The prolonged CCR5 occupancy in vivo suggests a long half-life for GW 873140 binding to the receptor. These data support further evaluation of GW 873140 in HIV-infected individuals."

▼ SCH-D (Abstract 140 LB)

Schering-Plough presented a phase I clinical study on its second-generation orally active CCR5 receptor antagonist SCH-D. SCH-D appears to be more potent and less toxic in vitro than its predecessor SCH-C. SCD-D also has a longer half-life and better pharmacokinetics and metabolism in animal studies.

A dose-escalated study in 48 patients showed SCH-D was safe and well tolerated at all dosing levels. Forty-five percent of patients achieved a >1.5 log 10 reduction in viral load in the 50mg twice-daily dose after 14 days.

The authors conclude that these results continue to support the effectiveness of SCH-D in blocking entry of a wide range of primary HIV-1 isolates that use the CCR5 receptor for infection. Schering-Plough expects to advance SCH-D to phase II clinical studies this year.

▼ BMS-488043 (Abstract 141)

Bristol-Myers Squibb presented exciting data about BMS-488043, an experimental oral small-molecule attachment inhibitor of HIV-1. The earliest step in the process of HIV getting into the host cell is the attachment of its gp120 molecule to the CD4 receptor on the cell surface. This molecule blocks entry of HIV into CD4 cells by binding to the viral envelope protein gp120 on HIV and preventing it from attaching to the cellular CD4 receptors.

The phase IIa study investigated the antiviral activity, safety, and tolerability of BMS-488043. In vitro and animal studies indicate that it appears to be non-toxic, with no cross-resistance to currently available agents. Early data showed that most patients treated with BMS-488043 experienced at least a 1.0 log10 copies/mL decline in viral load, with no serious adverse side effects. ⊕

Pot alleviates nerve pain

by Enrico Mandarino

Thousands of years of anecdotal information attests to the medicinal benefits of marijuana, but we still lack clinical trials to prove these benefits. The federal government and the Canadian Medical Association continue to cite lack of clinical research in their reasons for not accepting marijuana as a treatment.

An open-label pilot study presented at the 11th Conference on Retroviruses and Opportunistic Infections suggested that smoking marijuana acts as an analgesic, relieving pain associated with HIV neuropathy.

Many people with HIV experience nerve damage and pain (neuropathy) from both HIV disease and from highly active antiretroviral therapy (HAART). Treatment options in these people are limited, ineffective, and can interact with HAART. New HAART-compatible treatments for painful neuropathy are needed.

Pre-clinical trials at the University of California, San Francisco, headed by Dr. Cheryl Jay, indicate that cannabis compounds are beneficial in relieving neuropathic pain and that marijuana does not have untoward interactions with antiretrovirals. The trial enrolled 16 HIV-infected patients, including 14 men, with an average age of 43 and an average of six years duration of neuropathy.

Pain was measured on a visual analog scale (VAS) from 1–100. The mean baseline pain was 40/100 on VAS. The aim of the study was to achieve a 30 percent reduction in pain, which is considered clinically meaningful in most studies on pain. In the nine-day in-patient study (2 days lead-in plus 7 days treatment), patients were given marijuana cigarettes with 3.56 percent THC three times a day. All patients previously smoked marijuana, but none had done so for thirty days prior to the trial.

Average pain scores dropped from 47 at the start of the study to 20 at the end of the seven-day period. Marijuana smoking caused 10 of the patients to experience at least a 30 percent reduction in average daily pain.

The VAS results are a subjective measure, but the results correlate well with a heat/capsaicin model, which experimentally induces pain using a standardized, non-injurious method to quantify areas of secondary hyperalgesia. Fourteen of the patients experienced at least a 30 percent reduction in secondary hyperalgesia after smoking marijuana.

The open-label design of this study limits the weight of the findings. A randomized, double-blind, placebo-controlled study with 50 patients is now in progress to confirm these preliminary results. ⊕

Enrico Mandarino is the secretary of the board of the Canadian AIDS Society and a member of the board of the Canadian Treatment Action Council. He is also a member of the Scientific Committee Track A: Basic Science for the XV International AIDS Conference.

continued on next page

Complications and illnesses in HIV-positive people

by Louise Binder

Diabetes

With the advent of highly active antiretroviral therapy (HAART), HIV-positive people are increasingly developing glucose (sugar) abnormalities. Two large-scale studies (one among men and one among women) presented at the Retroviruses Conference analyzed the risk of pre-diabetes (that is, hyperglycemia, or abnormally high sugar in the blood), diabetes, and their relationship to antiretroviral drugs.

HIV-positive men on HAART were nearly twice as likely to have pre-diabetes and three times more likely to have diabetes than HIV-negative-men. HIV-positive women on HAART were twice as likely to have diabetes than HIV-negative women. A HAART regimen containing the protease inhibitor (PI) efavirenz was associated with a higher risk of pre-diabetes. One factor that increases the risk is whether people's CD4 count had ever dropped below 100.

To help regulate blood sugar, avoid these drugs if possible, watch your diet, and exercise. The nutritional supplement chromium picolinate may also help.

Hypertension, lipids, and cardiovascular disease

A large-scale study found that HAART did not create a greater risk of hypertension (elevated blood pressure) after accounting for traditional risk factors, including being male, older, and overweight. However, one large women's cohort suggests that while just being HIV-positive isn't associated with an increased risk, the risk of hypertension does increase with HAART use by about 20 percent. Other factors associated with hypertension among these women were being older, African American, poorly educated, overweight, and a smoker.

Lipids—that is, fats in the blood including LDL (bad cholesterol) and triglycerides—are generally associated with risk for heart disease. HAART drugs, especially PIs, are associated with increased LDL cholesterol and triglyceride levels.

Lipid irregularities are often associated with body fat redistribution, or lipodystrophy. Fat accumulates around the waist and at the back of the neck and disappears from the legs, arms, and face (also called lipoatrophy). In addition to potentially increasing cardiovascular disease risk, this condition can be painful and stigmatizing. Protease inhibitors and nucleoside analog classes of HAART drugs are associated with lipodystrophy.

Promising drugs and some disappointments

New strategies to deal with the problem were presented at the conference. One approach is to regulate lipids with medication. Rosiglitazone is a drug taken by diabetics to promote subcutaneous fat and improve vascular function. Unfortunately, in a study of HIV-positive participants, it did not improve lipoatrophy after 48 weeks.

A report on a polylactic acid called New-Fill also dimmed hopes for a treatment for facial wasting. Facial injections of New-Fill did not generally reverse the condition enough to improve quality of life.

Studies presented at the conference supported the strategy of switching people from HAART drugs that are strongly associated with lipid abnormalities. One study compared the nucleosides stavudine (d4T), didanosine (ddI), and indinavir versus the non-nucleoside nevirapine versus the nucleoside lamivudine (3TC). While there were no differences in lipid profiles between the groups, HDL (good) cholesterol increased in the nevirapine group. People treated with indinavir had more visceral fat and all those on stavudine and didanosine lost fat.

A large women's cohort suggests that the risk of hypertension does increase with HAART use by about 20 percent.

Another study switched people on a suppressive PI-based regimen to the nucleoside abacavir or nevirapine or another non-nucleoside, efavirenz. The non-nucleosides performed about the same, with no change in total cholesterol, though HDL rose and LDL dropped. Switching to abacavir resulted in a decrease of both total and LDL cholesterol. Unfortunately, switching off the PI did not impact body shape changes, regardless of which drug was substituted.

Another potential switch is to the new once-daily PI, atazanavir. In treatment-naïve people, it has had little impact on lipids at 48 weeks compared to either efavirenz or lopinavir/ritonavir, both of which raised lipids considerably. In fact, in one study it reduced the lipid increases related to the PI drug nelfinavir, although not back to pre-drug levels. In treatment-experienced people, atazanavir boosted with 100mg of ritonavir compared favourably to lopinavir /ritonavir. Only time will tell whether these results can be sustained. ⊕

Louise Binder is chair of the Canadian Treatment Action Council.

Hepatitis C co-infection update

by Paula Braitstein

Some of the biggest news at this year's Retroviruses Conference was the hepatitis C treatment for PWAs.

Three presentations remind us that we should never jump to conclusions based on any one study. That said, none of the three was particularly encouraging, especially for people with genotype 1.

The first study, ACTG 5071, studied 133 co-infected people who were randomized to receive pegylated interferon plus dose-escalated ribavirin, or regular interferon plus dose-escalated interferon, for 48 weeks. The end of treatment response (that is, undetectable HCV RNA) overall was 41 percent for the pegylated group and 12 percent for the regular interferon group.

For people with genotype 1, the end of treatment response (EOT) was 29 percent with a sustained virologic response (SVR) of 14 percent. For people with genotypes 2 or 3, the EOT response was 80 percent with an SVR of 73 percent. Predictors of achieving an SVR were: using pegylated interferon; being genotype non-1; not being an injection drug user; and having a detectable HIV RNA (possibly related to not being on antiretrovirals, which makes HCV treatment somewhat easier to tolerate). Among those who had biopsies, 52 percent of the virologic responders and 36 percent of non-responders reported an improvement in liver histology. There were similar rates of side effects in each group, and approximately the same number of people discontinued because of toxicities (12 percent).

The second trial, AIDS Pegasys Ribavirin International Co-infection Trial (APRICOT), was the largest and tightest study, and had the best results. It randomized 860 people to receive either regular interferon plus 800mg/day of ribavirin, or pegylated interferon plus 800 mg/day of ribavirin, or pegylated interferon alone, all for 48 weeks. The combination of pegylated interferon plus ribavirin was by far the best treatment, which is the reason this combination is the standard of HCV treatment today. Twenty-five percent of the pegylated combination group discontinued therapy due to adverse reactions, although the investigators reported that only 15 percent experienced adverse effects—the same proportion as in the other study groups.

The studies suggest that HIV positive people can and do have a sustained virologic response to HCV treatment.

Thirdly, a French study, Ribavic, randomized 412 people to receive pegylated interferon plus weight-adjusted dosing of ribavirin or regular interferon plus ribavirin plus weight-adjusted dosing. A high rate of 42 percent discontinued the study, with 31 percent of people reporting serious adverse events. The EOT was 54 percent in the pegylated group and 41 percent in the regular interferon group. The SVR was 35 percent for the pegylated interferon group, 26 percent in the regular interferon group, 11 percent for people with genotypes 1 or 4, and 43 percent for those with genotypes 2 or 3.

It's not entirely clear why the virologic response rates were so different between the studies. One possibility is the different dosing methods of ribavirin. The probability of having an SVR is maximized if people take the full dose of ribavirin right from the beginning of treatment and stay on it throughout—a physical impossibility for many because the drug is so toxic. Also, the French study had a much higher proportion of people with cirrhosis and bridging fibrosis, which could affect treatment efficacy.

In summary, these studies suggest:

- HIV positive people can and do have a sustained virologic response to HCV treatment, though the rates are lower than in the non-HIV population.
- People with genotypes 2 and 3 generally do much better in terms of treatment response than those with genotypes 1 and 4.
- Adverse effects are a major problem.
- There may be a benefit to the liver even if the virus doesn't respond as the bureaucrats say it should.

More studies are needed. Talk to your doctors about getting treatment for hepatitis C. Believe it or not, you can actually rid yourself of it. ⊕

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

Snooze blues

Insomnia can be an ongoing nightmare for many PWAs

by Kath Webster

Those of you who fall asleep within minutes of hitting the pillow and then sleep like a log for eight hours straight are the great envy of many people with HIV/AIDS. According to a 1998 US study involving 115 HIV-positive people, an overwhelming 73 percent had some sort of continuous sleep problem. The most common problem is insomnia, the inability to get enough sleep. Insomnia can be temporary or chronic and can include problems falling asleep, staying asleep, or waking early.

In the general population, nearly everyone has had occasional episodes of insomnia. Stress, worry, excitement, and anxiety can all cause insomnia. Excessive exercise or caffeine late in the day can also affect the duration or quality of sleep. These types of insomnia are usually temporary, diminishing after a few nights or weeks. However, for PWAs, insomnia is often a constant, long-term problem that can stem from a variety of causes. When ignored, both overall health and quality of life can suffer. Insomnia needs to be addressed by identifying the cause and developing a strategy to manage the problem.

Immune boosting effect of sleep

Adequate deep sleep is a physiological need. Sleep gives the body's cells a chance to recover and repair. It replenishes us with energy for the next day and has a direct impact on our physical, mental, and emotional functions. We need seven to eight hours of quality sleep nightly. Children, the elderly, and people with chronic illnesses may require even more sleep to rejuvenate the body.

We need good quality sleep, which involves a regular cycle of stages. We need both rapid eye movement (REM) and non-REM stages. Failure to reach the deepest stages of sleep can leave a person feeling tired, even after spending a sufficient number of hours in bed. Chronic insomnia—lasting more than two to three weeks—can greatly affect quality of life. Memory, concentration, and judgment can become impaired. Insomnia can also cause fatigue, irritability, and depression. Coping with day-to-day frustrations can become very challenging. For people with jobs, lack of sleep can affect productivity and effectiveness. Left unaddressed, insomina can ultimately lead to the loss of a job.

Studies have shown that sleep is connected to immune function. In fact, sleep is an effective natural immune booster and the good news is that it's free! During deep sleep, the production of growth hormone is at its peak. Growth hormone speeds the absorption of nutrients and amino acids into our cells and assists the healing of tissues throughout the body. Growth hormone also stimulates bone marrow, where immune system cells are born.

Researchers at the University of Toronto have shown a link between sleep deprivation and the activity of natural killer cells,

the part of the immune system that attacks bacteria, viruses, and tumors. In their study, 23 participants slept eight hours for four nights and on the fifth night, they were allowed only four hours of sleep. This one disruption to their sleep patterns caused the activity of natural killer cells to decrease by more than 25 percent on average when blood was drawn the next day.

Insomnia as a side effect of HIV/AIDS

A decline in immune function because of lack of sleep can lead to illness, especially for those already immune compromised. For PWAs, sleep disturbance can occur for many reasons. It's possible that HIV itself, when advanced, can cause neurological changes that could affect sleep.

In addition, insomnia is a potential side effect of some HIV medications. The worst culprits are efavirenz (Sustiva) and stavudine (Zerit; also known as d4T), which caused insomnia in over 15 percent of people during drug trials. Drugs that cause insomnia in 5 to 15 percent of people include soft-gel saquinavir (Fortovase), abacavir (Ziagen), zidovudine (Retrovir; also known as AZT), lamivudine (Epivir; also known as 3TC), and sulfonamide plus trimethoprim (Septra), a drug used for preventing or treating pneumonia (PCP). Other symptoms or side effects, such as peripheral neuropathy (pain and tingling in the hands and feet), night sweats, headaches, fever, and diarrhea, can also affect sleep quality.

However, the most common causes of insomnia for PWAs are stress, anxiety, and depression. These feelings are most likely heightened upon initial diagnosis, but they can also be long-term issues. The constant stress of living with a life-threatening illness can contribute to insomnia and even more so when a person is experiencing symptoms, side effects, or illness. Starting or changing medication can provoke anxiety, as can coping with issues such as disclosing (or not disclosing) your HIV status.

If a person is also suffering from depression, the depression could be causing insomnia or vice versa. In any case, you should consult a healthcare provider to address depression and other mental health issues.

Strategies to deal with insomnia

To address insomnia, determine the cause of your sleeping problems. Talk to your doctor in order to rule out side effects or other medical problems. If the cause is unknown, don't despair. You can still manage insomnia.

Establish a routine. Go to bed and wake up at the same time every day. Create a relaxing evening ritual, such as taking an aromatherapy bath, to calm your mind and body in preparation for sleep. If you need to take a daytime nap, keep it short and do not take it too late in the day.

Work out! Regular daytime exercise can vastly improve sleep quality. However, strenuous exercise three to four hours before bedtime is not recommended because it can increase the heart rate, which can affect your ability to sleep.

Manage stress. Try relaxation techniques such as meditation, visualization, yoga, or Tai Chi. Deal with the cause of your stress. Get support from friends or through groups at your local AIDS service organization. If necessary, speak with a counsellor or therapist. Try not to get into a vicious cycle by letting insomnia cause you even more stress.

Breathe deeply and slowly. It has been said that breath is the pulse of the mind. When you slow your breathing, your whole central nervous system slows down, which prepares your body physically and mentally for sleep.

Beware of that late night espresso! Avoid caffeine at least four to six hours before bedtime. Coffee, tea, chocolate, and many types of pop are all sources of caffeine. Note that many decaffeinated products still contain some caffeine.

Limit other stimulants. Nicotine is also a stimulant and should be avoided especially late at night. Alcohol, which may initially make you feel relaxed and drowsy, can actually disturb sleep patterns and prevent deep sleep. Many street drugs, such as cocaine, ecstasy, and amphetamines, also cause sleeplessness.

Sleep in peace. Make sure you have a quiet room and use earplugs if necessary. Keep your room fairly dark. A comfortable bed can make all the difference. Use your bedroom for sleep and sex only, so you don't associate it with work or other stressful activities.

Don't toss and turn. If you still can't sleep after counting sheep for 30 minutes, get up and do something relaxing, such as bathing or reading. Go back to bed when you are ready to sleep.

Drink warm milk. Heating milk releases the amino acid tryptophan, which is a natural sedative (also found in turkey). The calcium in milk can also cause drowsiness.

Consider herbal remedies. Valerian root and camomile have a calming effect. Consult with an herbalist or naturopath. Before taking any herbal medicine, be sure to discuss taking natural remedies with your doctor in order to avoid any harmful drug-herb interactions. Melatonin, often called the "sleep hormone," regulates sleep rhythms. In the US, many people use the supplement form as a sleep aid. It is not approved for use in Canada.

Consider the last resort. If all else fails, talk to your doctor about prescription sleeping pills. They can help break the cycle of sleeplessness, especially during a crisis when deep breathing and warm milk just won't cut it. However, be aware that they can result in dependence and may have side effects, such as morning drowsiness and confusion.

Quality sleep is a crucial part of health and well-being. There's a reason why we spend close to a third of our lives sleeping. It replenishes us both physically and mentally and strengthens the immune system.

Maybe this article has helped you fall asleep. That wouldn't be such a bad thing now, would it?

Wishing you pleasant dreams. ⊕

Kath Webster is a researcher and treatment information counsellor for the Treatment Information Program at the BCPWA Society.

Boning up on bone health

by Sean Hosein

Although highly active antiretroviral therapy (HAART) has been welcomed for its life-prolonging impact, many people with HIV/AIDS who use it are concerned about long-term side effects. Thinning bones and dying hip joints have been noted more frequently in PWAs in the past few years, fuelling concerns that these conditions may somehow be linked to the use of HAART.

Bones may be stiff and stationary, but they are quite alive. If you could look inside the body and see individual bone cells, you would see that they are very busy. That should come as no surprise: imagine the strain you would feel if you had to carry your own weight all day long. Bone tissue is dynamic, constantly wearing down, rebuilding, and repairing itself using calcium, magnesium, phosphorus, and other nutrients found in the foods we eat. Other tissues also need these nutrients. When we don't eat enough calcium, our body plunders the bones for it. This calcium scavenging is fine in a pinch, but over the long term, it leads to thinning bones. Having thin bones can increase your risk of fractures.

The commonly used medical term to describe the thickness of bones is bone mineral density. The way doctors find out about a person's bone mineral density is to have their patients undergo a special X-ray scan called DEXA (dual-energy X-ray absorptiometry). Thinning bones is called osteopenia, but the more severe form is called osteoporosis.

Before HAART was available, several studies in PWAs found mild abnormalities in bone health with small decreases in bone density. One of the first large studies after the advent of HAART found that one class of HIV meds, protease inhibitors, may have been linked to reduced bone mineral density in men. However, when researchers monitored changes in bone density over time, they found that protease inhibitors were not linked to osteopenia or osteoporosis. In at least one study, researchers found that men who were thin before starting HAART were more likely to have osteopenia than were men of normal weight.

In a recent study, American doctors noted a relatively high rate of osteonecrosis of the hip in a study of 334 HIV-positive males.

In the same study, of the HIV-positive men who had never used HAART, 32% had osteopenia and 14% had osteoporosis. This study and others suggest that some PWAs have thinning bones and that HAART doesn't necessarily play a role in this problem. Other factors that can affect bone mineral density include the use of tobacco and alcohol, malnutrition, not enough physical activity, liver disease, and less than normal levels of estrogen (in women) and testosterone (in men).

In one clinical trial, some HIV-positive people who used the drug tenofovir (Viread) developed slightly thinner bones than people who didn't use it. Why this happened isn't clear and further research is needed.

The other bone problem that has been reported in HIV-positive people is the gradual death of bone cells in joints. This condition is called osteonecrosis or avascular necrosis. Usually it occurs in the hip, but it can also happen to joints in the ankle, knee, and shoulder. In one recent study, American doctors noted a relatively high rate (about 4%) of osteonecrosis of the hip in a cohort of 334 HIV-positive males. Two other studies investigating risk factors for osteonecrosis suggest that prior use of corticosteroids may have played a role. These drugs are used to suppress inflammation that can occur in some AIDS-related infections. Traditional risk factors for osteonecrosis include alcoholism, high levels of cholesterol and triglycerides in the blood, radiation therapy, and use of corticosteroids.

What you can do:

- If you've never had a bone scan, talk to your doctor.
- If the scan suggests that your bones are thin, you may need to make sure that you're eating enough bone-building nutrients.
- Get expert advice from a dietitian who has experience with PWAs.
- Exercise regularly. Going for walks is a good start.
- If you have pain in any of your joints or bones, talk to your doctor. ⊕

Sean Hosein is the science and medicine editor at the Canadian AIDS Treatment Information Exchange (CATIE) in Toronto. <www.catie.ca>

Still a distant reality

An update on HIV vaccine development

by Rob Gair

More than 40 million people around the world currently live with HIV/AIDS, and approximately 14,000 new infections occur every day. Failure of prevention programs to reduce the spread of HIV means that development of a viable vaccine is the best hope for decreasing infection rates. Creating a vaccine is a difficult challenge exacerbated by the complex biology of the virus.

Traditional vaccines, such as those used to prevent polio or measles, use inactivated or altered viruses, which trigger the production of antibodies. These antibodies are then stored in immune system memory banks for ready access in case of a real infection. Antibody production accelerates the humoral branch of the immune response (which is normally slow) and essentially stops the virus from causing disease.

Unfortunately, traditional vaccines fail to protect against HIV. Because HIV constantly changes its structure as it reproduces, today's vaccine quickly becomes ineffective against tomorrow's virus. A workable vaccine for HIV will also need to boost the cellular branch of the immune system by increasing the activity of specific immune cells, especially CD8 cells.

Currently, the so-called gp120 vaccines are the furthest along in clinical development. These vaccines attempt to produce neutralizing antibodies to gp120 proteins located on the surface of HIV. Theoretically, neutralizing gp120 proteins will prevent HIV from binding to the CD4 cell, thus reducing HIV replication and immune system damage. However, two recent studies showed that inoculation of more than 7,500 people in North America, Europe, and Asia failed to significantly reduce infection rates or alter disease progression. Given these disappointing results, further development of gp120 as a single-entity vaccine seems unlikely.

The prime-boost vaccines (ALVAC plus gp120) combine a live replicating canary pox vaccine (ALVAC) as a prime with gp120 vaccine as a boost. The ALVAC component has HIV genes inserted into its DNA. It does not cause disease in humans, but when it replicates it produces proteins that are specific to HIV, which, in turn, are supposed to stimulate immune CD8 cells to kill cells infected with HIV. With an antibody boost from the gp120 component, researchers hope the combination will produce better results than either vaccine alone.

Because HIV constantly changes its structure as it reproduces, today's vaccine quickly becomes ineffective against tomorrow's virus.

However, in early 2002, the US National Institutes of Health (NIH) announced that it would not proceed with a North American efficacy trial for this vaccine because of poor results from earlier smaller trials. At the same time, the NIH announced it would go ahead with a planned efficacy trial for a similar vaccine in Thailand. Critics complain that this trial is a waste of resources given disappointing results from gp120 and ALVAC vaccines when used on their own. They point to a lack of evidence suggesting that the combination would be any more effective than either vaccine alone. Defenders argue that because so little is known about the combination, the study, regardless of outcome, will improve knowledge about immune response to HIV vaccines in general.

Numerous studies around the world are examining the effectiveness of vaccines using epitopes and DNA to induce an immune response. All of these studies are in the early stages. Results on their effectiveness in humans are not expected until at least 2007.

New strategies for vaccine development include creative ways to penetrate the HIV "glycan shield," which is very effective at hiding the virus from the immune system. Others are focusing attention on the so-called V3 loop of gp120. This section of gp120 has a relatively non-variable structure within different viral isolates, making it a possible target for antibody production. ⊕

A complete review of vaccines for HIV was published in the March/April 2001 issue of Living +.

Rob Gair is a pharmacist at the BC Drug & Poison Information Centre.

Loving your liver

Canada develops nutrition guidelines for hepatitis C

by Diana Johansen

In 2003, Health Canada commissioned Dietitians of Canada, a national organization, to develop national nutrition guidelines for the management of hepatitis C (HCV). About 240,000 Canadians have hepatitis C, which accounts for most cases of chronic liver disease in this country. The liver is intimately related to and interdependent with nutrition. It is involved in digestion, absorption, storage, and metabolism of the nutrients in food. The nutrients provided by our diet in turn nourish the liver. The principle goal of nutritional therapy in HCV is to protect the liver and slow the progression of liver damage.

People only infected with hepatitis C can go for many years without showing any symptoms of liver disease. No specific dietary restrictions are required during this period, but general guidelines aim to preserve optimal nutritional health. As liver disease progresses to cirrhosis or liver failure, nutritional needs become more specific to address individual problems. The following summary of the national nutrition guidelines is not meant to replace individualized counselling for people with more advanced liver disease.

These general goals of nutrition intervention in liver disease vary in importance according to an individual's stage of liver disease:

- To provide adequate energy and protein to facilitate hepatocyte regeneration, which will improve liver metabolism and overall nutritional status
- To promote and maintain nitrogen balance, avoiding excess production of ammonia from endogenous or exogenous protein catabolism
- To avoid complications related to the role of the liver in intermediary metabolism of carbohydrates, lipids, and proteins
- To provide adequate vitamins and minerals
- To avoid fluid and electrolyte imbalance
- To use appropriate supplementation when needed
- To treat or reduce symptoms or treatment side effects
- To prevent increased morbidity or death related to nutritional factors

Interpreting the guidelines

Energy requirements are the number of calories a person needs to achieve certain weight goals—meaning to lose, gain, or maintain weight—in healthy individuals. These requirements are modified to address any complications imposed by a disease like HCV or HIV. Requirements vary for individuals with HCV, depending on weight goals and the stage of liver disease. The hepatocytes (liver cells) need energy to make new cells and regenerate liver tissue.

People with chronic HCV have higher calorie needs than normal because of the hepatitis viral load. If liver disease progresses to cirrhosis or decompensated cirrhosis, the calorie requirements increase even more to prevent undesired weight loss and malnutrition.

Protein provides the building blocks for liver, immune, and muscle cells. Individuals with HCV need more protein than does the healthy population. The recommended dietary allowance (RDA) for healthy individuals is 0.8 grams of protein per kilogram of body weight (0.4 grams/pound). People with HCV need at least 1.0-1.2 grams/kg and those with cirrhosis need up to 1.5 grams/kg.

The problem with protein is that one of the products of metabolism is ammonia, which the liver must then break down. A sick liver does not keep up with the demand, so ammonia builds up and gets into the brain, causing hepatic encephalopathy (brain fog). Contrary to popular belief, protein is never restricted unless severe encephalopathy that can't be treated any other way is present.

Spread protein intake throughout the day in smaller portions, so the liver can handle it. More protein choices should come from vegetarian sources such as eggs, beans, lentils, tofu, and soymilk. Some people with chronic encephalopathy benefit from supplements that contain branched-chain

amino acids that are metabolized more by muscle than liver. Your liver specialist and dietitian can advise you if you need to cut back on protein intake or try the specialized amino acid formulas.

Carbohydrate metabolism can become impaired, which sometimes results in glucose intolerance (high or low blood sugar levels). Insulin builds up because a cirrhotic liver does not degrade it well. High insulin levels increase the breakdown of muscle proteins and cause low blood sugar levels. Producing glycogen, the storage form of glucose, can also be a problem. Blood sugar levels can thus become quite prone to shifting too high or too low. People with cirrhosis are more susceptible to glucose intolerance, insulin resistance, and hyperinsulinemia; sometimes they develop diabetes. Blood sugar levels should be checked regularly.

Carbohydrates come from starches, grains, fruits, vegetables, and sugars. It is not necessary to limit grains, fruits, and vegetables, but choose more whole grains. Sugar and sweet drinks such as juice, pop, and even pure fruit juice, may exacerbate blood sugar problems and high triglyceride levels.

Fat metabolism is generally not affected by chronic liver disease. Most people with HCV can continue to follow general guidelines to eat a moderate amount of fat and limit saturated and trans fats. In some cases, the cirrhotic liver does not produce enough bile acids to digest and absorb dietary fats, which results in fat malabsorption and diarrhea. A dietitian or doctor can prescribe specialized fats—medium-chain triglycerides—to supplement the diet.

As liver disease progresses to cirrhosis or liver failure, nutritional needs become more specific to address individual problems.

Fluid requirements are generally the same for people with HIV as they are for the general population. Most people need 35mL of fluid for every kilogram of body weight (for example, a 60kg person needs 2100mL fluid). However, people with fluid retention in the abdomen (ascites) or legs (peripheral edema) may need to restrict the fluid and sodium they consume.

Vitamins and minerals as antioxidants

Like HIV, HCV is a disease that causes high levels of oxidative stress, which contributes to liver injury. Studies examining the potential benefit of antioxidant supplementation have shown promising results. Although the guidelines acknowledge the potential therapeutic role of antioxidant supplementation, they suggest that vitamin and mineral supplementation should be restricted to the research environment.

People living with HCV should at least be sure to meet the recommended daily intake and keep supplements to below the upper tolerable limit. The goal of supplementation is to support liver health without damaging an already fragile liver with toxic doses of vitamins and minerals.

Here are some key points about vitamins and minerals:

- Fat-soluble vitamins (A, D, E, and K) may not be absorbed properly in patients with fat malabsorption.
- Vitamin D is activated in the liver and can become compromised in cirrhosis.
- Vitamin A deficiency may increase the risk of developing liver cancer. However, vitamin A can also be toxic to the liver.
- Vitamin C offers antioxidant protection, but high doses can increase iron levels in the liver.
- Vitamin E has been shown to decrease oxidative stress, lower liver enzyme levels, and delay anemia associated with ribavirin treatment.
- Thiamine has antiviral properties in test tube studies and may slow liver injury by reducing the iron load.
- Niacin can be toxic to the liver in doses of 1000mg per day.
- Iron is stored in the liver. Cirrhotic livers sometimes store dangerously high amounts of iron.
- Selenium levels may be low in persons co-infected with HIV and HCV.
- Zinc deficiency is common in cirrhosis and may be involved in the development of encephalopathy.
- Calcium deficiency may develop because of poor nutrition, malabsorption, or vitamin D deficiency.
- Magnesium deficiency may occur, especially in persons taking diuretics.

The overall recommendation is to take a multivitamin mineral, without iron if cirrhosis or iron overload are a problem. Take all other vitamins, minerals, and antioxidants under the supervision of a physician or as part of a study.

Ultimately, the best approach is to eat a nutritious diet with enough calories to maintain a healthy weight and enough protein to heal the liver and maintain lean body mass. Eat plenty of fruits and vegetables for their vitamin content and antioxidant properties. Limit high-sugar foods. Get some exercise. Avoid alcohol to protect the liver. If you have complications that affect your nutritional well-being, see a dietitian. ⊕

This article summarizes a small portion of a very comprehensive document. To read the complete Canadian Guidelines, go to <www.dietitians.ca/resources/HepatitisC_Guidelines.htm>. These guidelines are suitable for anyone with chronic liver disease.

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

Ask the dietitian

Ask the Dietitian is a new Living+ feature. If you have a diet or nutrition question, email it to ***dietitian@bcpwa.org*** or mail it to *Living* +, BCPWA Society, 1107 Seymour Street, 2nd Floor, Vancouver, BC V6B 5S8.

The skinny on low carb diets

by Kristen Yarker

What's up with all these low carb diets? Will they make me lose weight? Are they healthy?
K.B., in Vancouver

Low carb diets are everywhere you look these days, from news articles to new products on store shelves. Also known as high protein diets or high fat diets, low carb diets are not new, but they are gaining popularity despite the warnings of many health organizations. Proponents of low carb diets promise fast, permanent weight loss and improved health. Health organizations warn that low carb diets will increase cholesterol, increase the risks of cancer, heart disease, and osteoporosis, and ruin your kidneys. With such conflicting information, it is difficult to know what to believe.

The truth is that we don't know yet. Investigations are underway into the safety and effectiveness of low carb diets. Currently, results are available only from people following the diets for relatively short periods of time, typically less than six months. Very few studies are investigating people eating very low carb diets (about 20 grams per day). None of the studies involves PWAs.

What we do know is that people lose weight on low carb diets. Whether people lose weight faster on low carb diets than on low fat diets is uncertain. People who lose the most weight tend to follow the diet longest and are the most overweight before starting the diet. We do not know yet whether low carb or low fat diets are best for maintaining weight loss.

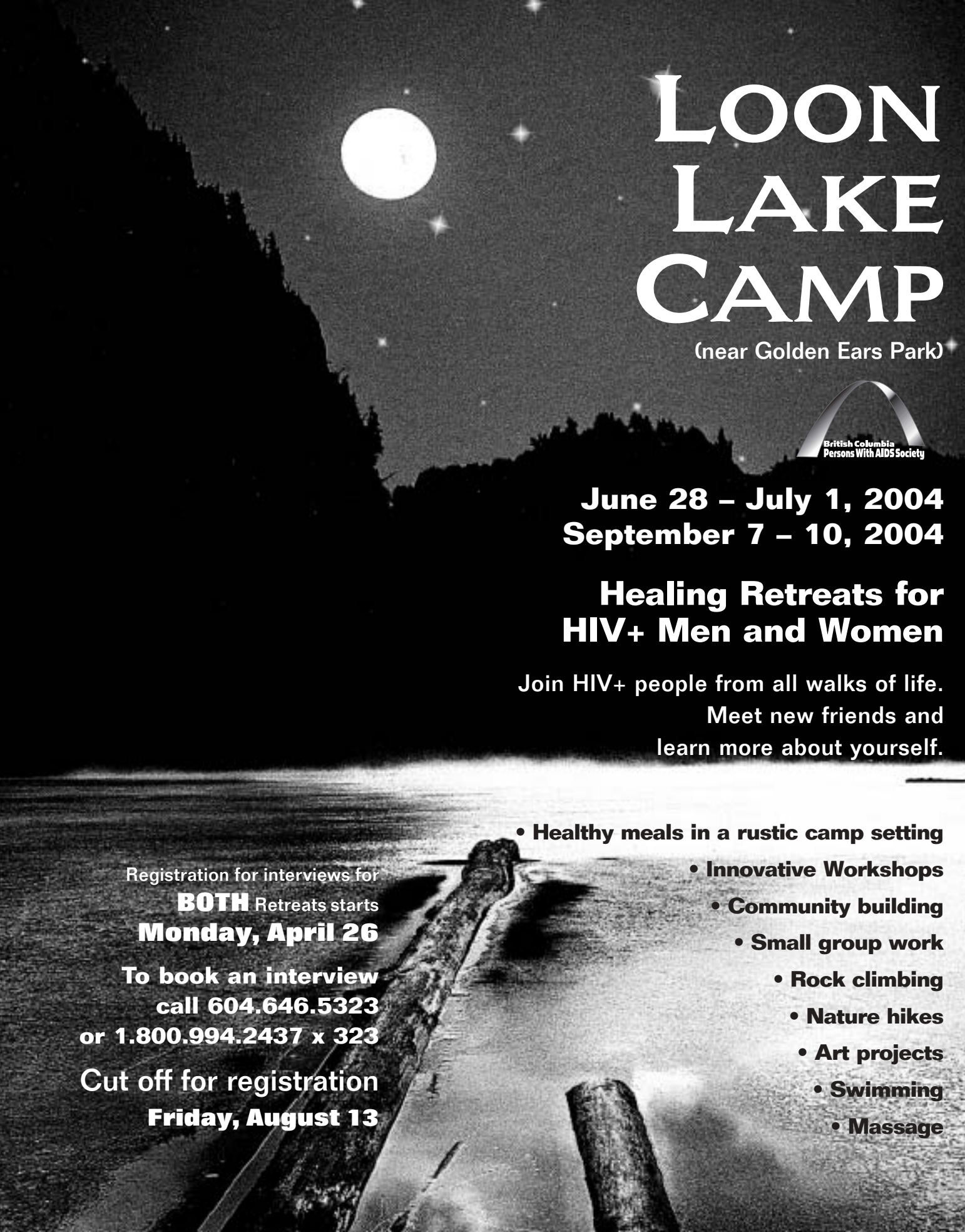
So far, health organizations' worst fears have not materialized. Individuals following low carb diets for three to six months are not experiencing higher cholesterol, faster bone loss, or signs of kidney damage. Again, I emphasize that we do not know the long-term effects, especially for PWAs. This lack of knowledge is concerning because most of the potential ill effects of diets happen gradually over the long term.

So, what is someone to do while waiting for the evidence to come in? Here is my advice based on my research and understanding of three of the most popular diets, Atkins, South Beach, and The Zone:

- Eat your veggies. Aim for five or more fist-sized servings each day. Ten servings are even better! I know that you've heard this before, but most of us don't eat enough. Everyone agrees, from low carb dieters to the Canadian Cancer Society, that eating plenty of veggies is the foundation of health.
- Limit, decrease, or eliminate junk foods. Yes, they taste great, but they provide little or no nutrition. Junk foods can play a small part in our eating habits, but don't let them have a leading role.
- Choose whole grains. These foods have more fibre and a lower glycemic index than their refined counterparts. Choose brown bread and brown rice instead of white. Try the wide variety of other grains available such as quinoa and bulgur.
- Be active! Physical exercise is essential to healthy living for everyone.

Food is more than just fuel for our bodies. Food plays a part in our emotional and spiritual wellness. Everyone must find her or his own unique balance of mind, body, and soul. Obsessing about food is not healthy, nor is feeling deprived. Dieting sometimes leads people down the path to eating disorders. So please, enjoy eating healthily! ⊕

Kristen Yarker, BASc, MSc, RDN is a nutritionist/dietitian working with the ADAPT (Aboriginal Diabetes Awareness, Prevention, and Teaching) Program at Vancouver Native Health Society.



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(near Golden Ears Park)

British Columbia Persons With AIDS Society

June 28 – July 1, 2004
September 7 – 10, 2004

Healing Retreats for HIV+ Men and Women

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- **Art projects**
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Registration for interviews for
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Monday, April 26

To book an interview
call 604.646.5323
or 1.800.994.2437 x 323

Cut off for registration
Friday, August 13

Crossing that bridge now

Part 2 of a report on end-of-life decision making

by Mary Petty and Irene Goldstone

Part I of this report dealt with the issues PWAs face when discussing end-of-life planning with their caregivers. Part II explores resource needs and some of the ways in which healthcare providers and advocates can support PWAs in the final process of dying.

Most PWAs wish to die at home, but the majority will die in a hospital. Hospice and palliative care movements have worked to enable the provision of quality end-of-life care because more people would use and benefit from palliative care services than advanced life-saving technologies. Unfortunately, the policies that determine resource allocation do not support comprehensive funding of palliative care services. As a result, few people die in their chosen settings.

The role of healthcare providers and advocates

Advocates and healthcare providers play an important role in the end-of-life decision-making process. They can help the dying articulate their fears, such as leaving loved ones behind, and thereby help them strengthen relationships with family and friends. Sometimes helping with a basic task such as writing a living will can lead to further discussions of the emotional, social, and spiritual aspects of dying. Discussing these issues can help the dying live more fully in the present.

Providers, advocates, and loved ones must understand each PWA's perception of the dying process and the realities each person faces. Individual life experiences, relationships, values, beliefs, and specific medical needs shape everyone's distinct decisions about end-of-life care. Individuals die in their own ways, and although acceptance of death may be a goal for many individuals, other PWAs may feel that it is important to fight to the very end.

Although providers and advocates can provide opportunities for individual PWAs to talk about death, they must also be aware of opportunities for community or group interaction. In many cultures, practices related to death occur within social networks. The contemporary, middle-class European model tends to individualize death, making it awkward or even taboo to publicly acknowledge death and dying. Providers and advocates can contribute simultaneously to a PWA's dying process and to her or his network by identifying opportunities for confronting unhelpful taboos.

Healthcare providers and advocates must remain open to fully supporting each individual's wishes and the myriad ways of experiencing the dying process. An individual may choose processes that do not conform to conventional perceptions of a good death. Their way of dying may seem chaotic and unacknowledged, whereas we seek to support a peaceful and pain-free death. Learning to respect each PWA enables everyone in the HIV/AIDS movement to get a better glimpse of the unique perspective of each person living with HIV/AIDS.

Marginalized groups, limited access

Some PWAs live in comfortable, stable settings, but many live in single room occupancy hotels and shelters. Many struggle with addictions and mental illness or are co-infected with hepatitis C. Increasingly large numbers of PWAs live in rural and remote parts of BC with limited access to HIV care, including hospice palliative care. Even among those PWAs who live in stable housing and have adequate income and access to care, many live alone and do not even have an informal network of caregivers.

Susan Giles and Evanna Brennan, home care nurses and members of the home hospice team, visit PWAs who live in Vancouver's Downtown Eastside hotels and shelters. Working with Dr. Susan Burgess, they provide a range of HIV care options, including palliative care. "With such a large portion of folks living chaotic lives it is essential that care be brought to them," they explain. "Because our folks do not have the support of friends, family, and often the medical profession, they walk their road alone. Our job is to find those who are falling through the cracks of the system and gently draw them in to care so they do not die alone and unsupported."

The policies that determine resource allocation do not support comprehensive funding of palliative care services.

Some of their clients go to May's Place Hospice, but these people are often in crisis and close to death by the time of admission. Some residents use one of the four designated palliative care beds available in the Downtown Eastside. Vancouver's AIDS service organization network, including A Loving Spoonful and Positive Outlook, have programs to connect Downtown Eastside PWAs with palliative care services.

Giles and Brennan note that PWAs who are struggling with addictions seldom have the time that others do to reflect on their future or their death. Most do not want to acknowledge they are dying and do not discuss end-of-life care until very close to death. Since many do not have stable relationships with care providers who might help them talk about dying, most "die with their boots on," in the words of Giles and Brennan.

Cuts to palliative care

Doreen Littlejohn, coordinator of Positive Outlook at Vancouver Native Health Society, notes that as HIV-related deaths in the Downtown Eastside increase, the need for more palliative care beds in hospitals and more options for community care becomes increasingly urgent. However, last year cuts to healthcare included the respite care beds in the palliative care unit of St. Paul's Hospital. "Not only do direct hits like those to hospice and palliative care services affect PWAs' options for end-of-life care," she says, "but broader cuts to social welfare—food programs, support programs, home care—have a serious impact on how disenfranchised PWAs experience the end of their lives."

The HIV/AIDS movement has repeatedly shown that collective action calls attention to social justice issues such as the lack of adequate care for many PWAs at the end of their lives. Collective action can also empower individuals who engage in campaigns for change. Darryl Carter, a PWA and long-term survivor, spent the last six months of his life fighting for the restoration of those respite care beds on the palliative care unit of St. Paul's. His actions and a couple of recent advances offer hope and help to the dying and their caregivers.

Two important legislative changes were made recently in response to years of lobbying. The 2003 federal budget provides a six-week EI compassionate family care leave benefit for individuals who meet special eligibility requirements so that they can care for a gravely ill or dying child, parent, or spouse. To provide flexibility and address the specific needs of individual families, eligible family members will be able to share the benefit.

As well, BC PharmaCare now covers the cost of commonly used palliative drugs (but not vitamins, herbals, nutritional supplements, or medical marijuana), medical supplies, and equipment when used at home during the last six months of life.

In recent years, it seems as if the AIDS community has put so much energy into advocacy for effective treatments that they have neglected end-of-life issues. Indeed, a December 2003 draft of the HIV/AIDS strategy prepared for Health Canada made no mention of palliative care. We anticipate that it will be included in the next draft.

Despite these initiatives, no obvious organizational collaboration is taking place between AIDS organizations and palliative hospice organizations at the provincial and local levels. Cooperation is essential if we are to make any progress in responding to the need for hospice and palliative care, especially in rural BC. ⊕

Mary Petty (r) is a social worker with the AIDS Program at St. Paul's Hospital in Vancouver.

Irene Goldstone (l) is director of professional education at the BC Centre for Excellence in HIV/AIDS in Vancouver.

Switching drugs to counter lipodystrophy

by Dr. Marianne Harris

Fat loss or fat gain in specific areas of the body are the most visible aspects of HIV-associated lipodystrophy syndrome. The cause of these body-fat changes is probably multifactorial—in other words, we are not sure of the cause. However, antiretroviral drugs are clearly a factor, as are HIV itself and patient characteristics such as gender.

Various antiretroviral drugs may cause fat loss or fat gain. We initially lumped them all together as lipodystrophy and blamed the protease inhibitors (PIs); however, it is now fairly clear that PIs are mainly responsible for fat gains, which can occur in the abdomen, breasts, and around the neck. Fat loss in the face, arms, legs, and buttocks seem to be mainly related to the nucleosides (NRTIs), particularly stavudine (Zerit; also known as d4T). Some people have fat loss in some areas and fat gain in others because they are taking both PIs and NRTIs.

Fat changes have been treated with only limited success. Regular exercise may partially reduce fat deposits caused by antiretroviral fat gain, especially in the abdomen. Growth hormone has also been shown to reduce fat deposits in some studies. However, growth hormone is expensive, must be injected, and has several unpleasant side effects. Fat tends to return after stopping growth hormone injections. For localized fat deposits in the neck or other areas, liposuction may be the only option. Again, fat deposits may come back after the procedure.

Similarly, treatment prospects are not promising for fat loss or lipoatrophy. Researchers thought that rosiglitazone (Avandia), an antidiabetic agent which makes the body more sensitive to insulin, held some promise, but a recent study showed that 48 weeks of treatment with rosiglitazone did not alleviate lipoatrophy. Plastic surgery can benefit some people with fat loss in the face, but it tends to be expensive and most healthcare plans do not cover it.

Changing antiviral drugs is another option. In the case of fat gain, switching from a PI to a non-nucleoside (NNRTI) such as nevirapine or efavirenz may help. Study results are not consistent. Studies of lipodystrophy are complicated by the difficulty in obtaining precise measurements. Although some studies have shown no measurable changes in fat deposits up to a year after stopping PIs, close to half of study participants felt that the fat gain had lessened. Perhaps changes occur very slowly, and so it may take over a year to see a significant change. In most cases, switching from a PI to nevirapine or efavirenz was safe and kept the HIV under control at least as well as continuing the PI would have.

For lipoatrophy, discontinuing stavudine and replacing it with another NRTI may result in partial improvement, but, again, this improvement is likely to be slow. A recent study using DEXA and CT scans showed fat gain within 48 weeks after replacing stavudine with abacavir or lamivudine plus zidovudine (Combivir). However, less than 30 percent of patients noticed an improvement. Another study showed noticeable increases in limb fat six months after replacing stavudine or zidovudine (Retrovir; also known as AZT) with abacavir. Tenofovir may be another option for switching because it does not seem to cause lipoatrophy (although long-term studies have not been conducted). Generally, regaining fat after changing treatment is likely to be very gradual, if it occurs at all, and it depends on the severity of the initial fat loss.

Consult your doctor before changing treatments to ensure that the new treatment will be safe for you and that it will keep your viral load under control. Even with successful manipulation of the regimen, reversal of fat loss or gain is likely to be partial or incomplete. If possible, prevent these body-fat changes by avoiding the likely offenders, although it is not always clear which drugs are most at fault. Future research may help clarify which drugs cause these problems and how, which people are most at risk, and whether new drugs may be designed that are less likely to cause lipodystrophy or lipoatrophy. ⊕

Dr. Marianne Harris is a clinical research advisor at St. Paul's Hospital in Vancouver.

3TC or no 3TC

by Jim Boothroyd

When a person develops resistance to an HIV drug, she or he no longer benefits from it, right?

In the case of lamivudine (Epivir), better known as 3TC, HIV doctors aren't so sure.

That's why investigators at the Canadian HIV Trials Network have launched a trial called "3TC or No 3TC for HIV with 3TC Resistance."

Many HIV physicians continue to prescribe lamivudine, or 3TC, after their patients have developed a resistance to this nucleoside reverse transcriptase inhibitor (NRTI) because some patients seem to benefit from it. Keeping 3TC-resistant virus around might be a good thing because the mutations in the virus that make it resistant to 3TC may also make it less able to multiply, or they might make some other HIV drugs work better.

Led by Dr. Julio Montaner at St. Paul's Hospital in Vancouver, this study aims to compare the effects of continuing or discontinuing 3TC treatment in the presence of HIV with 3TC resistance for persons who are on a regimen including at least three other anti-HIV drugs.

The overall aim is to determine whether continuing 3TC benefits HIV-positive persons who have already shown resistance to this drug. To compare the effects of continuing or discontinuing 3TC, the study will monitor HIV viral load, CD4 cell counts, and side effects that occur as a result of changes in treatment over time. All participants will be monitored on a monthly basis for the duration of the seven-month study.

This study will enroll 152 volunteers. Because 3TC also has an effect against hepatitis B, people who have chronic hepatitis B infection will not be included in the study because, for them, stopping 3TC might cause their liver disease to get worse.

Participants will be randomly assigned to one of two groups. Those in the first group will continue 3TC (150mg twice daily or 300mg once daily) as part of their current therapy. Those in the second group will discontinue 3TC while remaining on the rest of their current therapy.

"3TC is easy to take and rarely causes side effects, so people usually don't mind keeping it in their treatment," says Dr. Marianne Harris, co-investigator for the study at St. Paul's Hospital. "On the other hand, if the 3TC is not helping, stopping it could reduce the cost of treatment and also decrease the number of pills that have to be taken every day." ⊕

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

Trials enrolling in BC

CTN 147 — Early Versus Delayed Pneumococcal Vaccination
BC sites: St. Paul's Hospital and Downtown Infectious Disease Clinic (IDC), Vancouver

CTN 157 — Fenofibrate & L-Carnitine for Elevated Triglycerides
BC sites: St. Paul's Hospital and Downtown IDC, Vancouver

CTN 164 — STI (Structured Treatment Interruption)
BC sites: Downtown 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 171— CellCept (Mycophenolate Among Patients with HIV Receiving Abacavir)
BC site: St. Paul's Hospital, Vancouver

CTN 178 — Rosiglitazone Maleate (Avandia)
BC site: St. Paul's Hospital, Vancouver

CTN 183 — Continuous Treatment versus Intermittent Treatment
BC site: St. Paul's Hospital, Vancouver

CTN 189 — 3TC or No 3TC for HIV with 3TC resistance
BC site: St. Paul's Hospital, Vancouver

To find out more about these and other trials, check out our trials database at <www.hivnet.ubc.ca/ctn.html> or call Sophie at the CTN (1.800.661.4664).

Resultando positivo en la prueba de VHI

por Alejandro De Vivar

El conocer que el resultado de nuestro análisis para detectar el Virus de Inmunodeficiencia Humana (VIH) es positivo, causa un gran impacto emocional. Es importante por lo tanto, informarse ampliamente para tomar las decisiones correctas. Entre estas decisiones es fundamental preguntar a tu doctor general o al especialista en VIH todas tus dudas. Tres preguntas generales son fundamentales; ¿como actúa el virus?, ¿cómo se trata?, ¿necesito mejorar mi estilo de vida? Puedes pedir ayuda en las organizaciones de personas que viven con VIH también. Estar informado es sumamente importante, pues nos ayudara a toma las decisiones correctas.

El VIH es el virus que causa el Síndrome de Inmunodeficiencia Adquirida (SIDA) y se transmite de persona a persona por medio del intercambio de fluidos del cuerpo. Esta transmisión se lleva a cabo en diferentes formas. Las conocidas son; transfusiones de productos sanguíneos no analizados que contienen el virus, sexo, drogadicción (compartir jeringas), y de la madre al hijo al nacer o ser amamantado.

La infección tiene tres etapas. La primera etapa ocurre cuando el virus entra al sistema inmunitario y se reproduce rápidamente pues el cuerpo no reacciona debido a que desconoce la nueva infección (3 a 9 meses). La segunda etapa ocurre cuando el organismo combate la infección inicial pero no la elimina completamente. En esta segunda etapa el organismo se recupera y el infectado goza de buena salud (estado positivo). La tercera etapa ocurre cuando, en un cierto período (3 a 10 años) el organismo se debilita y se va deteriorando gradualmente hasta que el sistema inmunitario se incapacita, dando oportunidad a que se desarrolle el SIDA.

Si la infección es reciente o sea en la primera etapa, es recomendable iniciar la terapia de inmediato. Los nuevos estudios demuestran que el virus puede ser controlado rápidamente. El tiempo es un factor importante, porque los virus dañan en forma más grave el organismo con el tiempo si la infección no se controla.

Al iniciar por primera vez una terapia antirretroviral es bueno estar informado acerca de los cócteles (combinación de 3 o más medicamentos) disponibles. Primero consulta con tu doctor y en segundo consulta a personas que por experiencia propia han estado tomando los medicamentos. Existen en British Columbia organizaciones como VCPWA y AIDS Vancouver que brindan información actualizada. En países de América latina, existen diferentes organizaciones. Consulta tu organización local. Entre las consideraciones importantes sobre los cócteles son por ejemplo: la toxicidad, comodidad (tomarlos 1 o 2 veces al día), lipodistrofia; por mencionar algunos.Todos los medicamentos generan efectos secundarios pero es bueno valorar cuáles podemos soportar mejor.

Viviendo y entendiendo el VIH. Debemos ser responsables de mantener una buena salud. La alimentación juega un papel importante pues suministra los nutrientes al organismo para combatir la infección. El ejercicio es bueno pero nunca en exceso, ya que no debemos sobre utilizar la energía del organismo, debido a que también se necesita para el trabajo del sistema inmunitario. El descanso es importante también. Por lo general, se debe descansar lo más posible para permitir al organismo recuperarse rápidamente. Es importante también mantenerse ocupado, ya sea en un trabajo y/o en actividades que nos motiven.

El virus actualmente es controlable. Las defunciones por SIDA se han reducido dramáticamente con los nuevos medicamentos y el cuidado de la salud. Es muy bueno estar informado y estar actualizado en la información para tener la oportunidad de tomar decisiones acertadas. Valorar la vida día a día y seguir adelante. ⊕

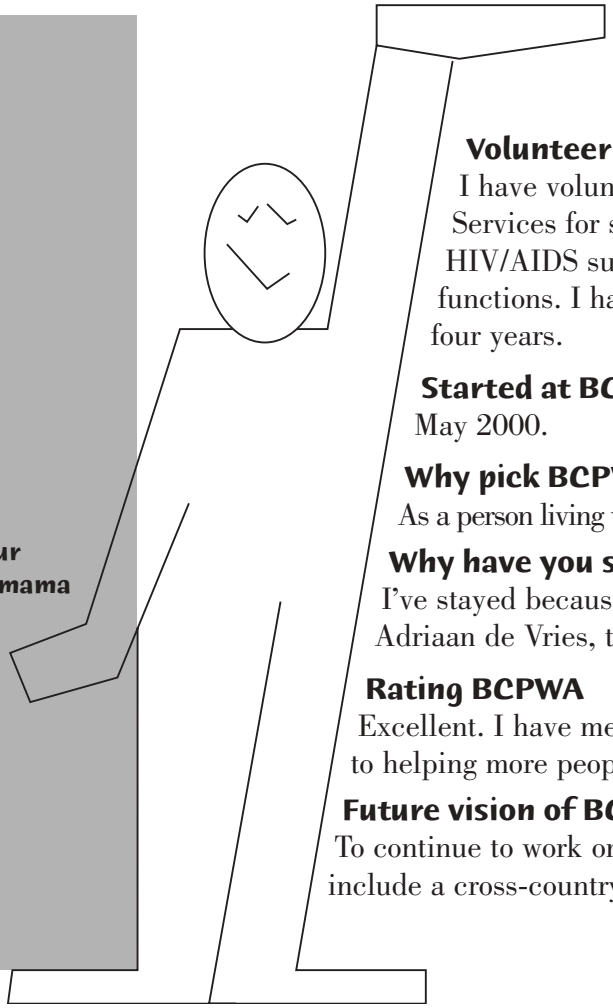
Alejandro De Vivar is a volunteer with the Treatment Information Program at the BCPWA Society.

BCPWA Treatment Information Program (TIP)
Ofrece información sobre tratamientos del VIH/SIDA.
Todos los miercoles 1:00PM a 5:00PM.
1107 Seymour Street, 2nd Floor, Vancouver, BC V6G 5S8
Llame a la línea directa: 604.893.2243
email: treatment@bcpwa.org

Volunteering at BCPWA

Profile of a volunteer: Russ Wade

Wonderful laugh, generous heart, great hugs, edgy humour and he bakes like your mama never could.
Jackie Haywood
Director, Support Services



Volunteer History
I have volunteered with Peace Arch Community Services for six years, for their information referral, HIV/AIDS support group, and for all the special functions. I have also volunteered for BCPWA for four years.

Started at BCPWA
May 2000.

Why pick BCPWA?
As a person living with HIV, I wanted to help my community.

Why have you stayed?
I've stayed because of the people—Jackie Haywood and Adriaan de Vries, to name a few.

Rating BCPWA
Excellent. I have met great friends here and look forward to helping more people.

Future vision of BCPWA
To continue to work on the retreat teams and expand to include a cross-country retreat at Loon Lake in the future.

Interested in writing?

We need articles on HIV-related prevention, advocacy and treatment. Volunteer for living+ magazine...

Volunteers should possess the following skill sets:
— Ability to analyze and distill information
— Excellent research and writing skills
— Ability to work independently

Here's what one of our writer's had to say: "I find the whole process challenging and rewarding, not to mention the "feel good" feeling after finishing a piece."Volunteering for living+ provides the flexibility to work from home.

If you are interested in becoming a volunteer writer and/or to obtain a volunteer application form, please email volunteer@bcpwa.org, call 604.893.2298 or visit www.bcpwa.org.

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
e info@bcpwa.org www.bcpwa.org

A Loving Spoonful Location
Suite 100 – 1300 Richards St,
Vancouver, BC V6B 3G6
604.682.6325
e 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
e info@aidsmemorial.ca www.aidsmemorial.ca

AIDS Prince George
1–1563 2nd Ave,
Prince George, BC V2L 3B8
t 250.562.1172 **f** 250.562.3317
e ogodwin@bcgroup.net; www.AIDSPG.ca

Living Positive Resource Centre Okanagan
101–266 Lawrence Ave.,
Kelowna, BC V1Y 6L3
t 250.862.2437 or 1.800.616.2437
e lprc@lprc.ca; www.livingpositive.ca

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
t 250.753.2437 **f** 250.753.4595

AIDS Vancouver Island (Victoria)
1601 Blanshard St, Victoria, BC V8W 2J5
250.384.2366
info@avi.org; www.avi.org

ANKORS (Nelson)
101 Baker St, Nelson, BC V1L 4H1
t 250.505.5506 or 1.800.421.AIDS
f 250.505.5507 **e** 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
f 250.426.3221 **e** gary@ankors.bc.ca
http://kics.bc.ca/~ankors/

AIDS Vancouver Island (Cowichan Valley)
1 Kenneth Place, Duncan, BC V9L 2Y9
t 250.701.3667 **f** 748.3509

Asian Society for the Intervention of AIDS (ASIA)
210 – 119 West Pender St,
Vancouver, BC V6B 1S5
t 604.669.5567 **f** 604.669.7756
e asia@asia.bc.ca; www.asia.bc.ca

Dr Peter Centre
1100 Comox St,
Vancouver, BC V6E 1K5
t 604.608.1874 **f** 604.608.4259
e info@drpeter.org; www.drpeter.org

Friends for Life Society
1459 Barclay St, Vancouver, BC V6G 1J6
t 604.682.5992 **f** 604.682.3592
e ffl@radiant.net www.friendsforlife.ca

Healing Our Spirit
3144 Dollarton Highway,
North Vancouver, BC V7H 1B3
t 604.879.8884 or 1.800.336.9726
e info@healingourspirit.org
www.healingourspirit.org

McLaren Housing Society
200 – 649 Helmcken St,
Vancouver, BC V6B 5R1
t 604.669.4090 **f** 604.669.4092
e mclarenhousing@telus.net
www.MCLARENHOUSING.com

North Island AIDS (Campbell River) Society
684B Island Hwy,
Campbell River, BC V9W 2C3
t 250.286.9757 or 1.877.650.8787
f 250.830.0784

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

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

Okanagan Aboriginal AIDS Society
101 – 266 Lawrence Ave.,
Kelowna, BC V1Y 6L3
250.862.2481 or 1.800.616.2437
oaas@arcok.com; www.oaas.ca

Outreach Prince Rupert
300 3rd Ave. West
Prince Rupert, BC V8J 1L4
t 250.627.8823
f 250.624.7591
aidspr@rapidnet.net

Pacific AIDS Network c/o AIDS Vancouver Island (Victoria)
1601 Blanchard St.,
Victoria V8W 2J5
t 250.881.5663 **f** 250.920.4221
erikages@pan.ca; www.pan.ca

Positive Living North West
Box 4368 Smithers, BC V0J 2N0
3862 F Broadway, Smithers BC
250.877.0042 or 1.886.877.0042
plnw@bulkley.net

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

Red Road HIV/AIDS Network Society
804 – 100 Park Royal South,
W. Vancouver, BC V7T 1A2
604.913.3332 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 Resource & Community Service Society
1284 F Gladstone Ave, Victoria, BC V8T 1G6
t 250.388.6620 **f** 250.388.7011
varcs@islandnet.com
www.varcs.org/varcs./varcs.nsf

Victoria Persons With AIDS Society
#330-1105 Pandora St., Victoria BC V8V 3P9
t 250.382.7927 **f** 250.382.3232
support@vpwas.com; www.vpwas.com

Wings Housing Society
12 – 1041 Comox St, Vancouver, BC V6E 1K1
t 604.899.5405 **f** 604.899.5410
info@wingshousing.bc.ca
www.wingshousing.bc.ca

YouthCO AIDS Society
205 – 1104 Hornby St. ,
Vancouver BC V6Z 1V8
604.688.1441 1.877.968.8426
information@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 Resources section of the BCPWA Society website at www.bcpwa.org.

Upcoming BCPWA Society Board Meetings:

Date	Time	Location	Reports to be presented
May 26, 2004	1:00	Board Room	Director of Prevention
June 9, 2004	1:00	Board Room	Written Executive Director Report — Executive Committee — Financial Statements / April
June 23, 2004	1:00	Board Room	Standing Committee — Director of Communications & Education
July 7, 2004	1:00	Board Room	Written Executive Director Report — Financial Statements / May Director of Treatment Information and Advocacy
July 21, 2004	1:00	Board Room	Executive Committee — Director of Support Services

The BCPWA Society is located at 1107 Seymour St., 2nd Floor, Vancouver.

For more information, contact: Alexandra Regier, Office Manager Direct: 604.893.2292 Email: alexr@bcpwa.org

BCPWA Standing Committees and Subcommittees

If you are a member of the BC Persons With AIDS Society, you can get involved and help make crucial decisions by joining a committee. To become a voting member on a committee, please attend three consecutive meetings. For more information on meeting dates and times, please see the contact information on the right column for the respective committee that you are interested in.

Board & Volunteer Development
Contact: Adriaan de Vries
t 604.893.2298 e adriaand@bcpwa.org

Collective Advocacy
Contact: Lisa Gallo
t 604.983.2298 e lisag@bcpwa.org

Education & Communications
Contact: Lisa Gallo
t 604.983.2298 e lisag@bcpwa.org

Fund Development
Contact: Alasdair Hooper
t 604.893.2264 e alasdairh@bcpwa.org

IT Committee
Contact: Ruth Marzetti
t 604.646.5328 e ruthm@bcpwa.org

Living + Magazine Subcommittee
Contact: Jeff Rotin
t 604.893.2206 e jeffr@bcpwa.org

Prevention
Contact: Peter Hall
t 604.893.2225 e peterh@bcpwa.org

Support Services
Contact: Jackie Haywood
t 604.893.2259 e jackieh@bcpwa.org

Treatment Information & Advocacy
Contact: Tarel Quandt
t 604.893.2284 e tarelq@bcpwa.org

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A paint stroke of genius

.....Tapping into your inner Picasso

by Denise Becker

When I was in the tenth grade, I had to choose majors for my final two years at school. I loved to draw and had long since copied every species from the Automobile Association's Standard Book of British Birds. I often went to our local pond and happily painted the toads sitting in the reeds, croaking to their lady loves nearby. The earth moved; the hand of God came down, and I knew I ***had*** to be an artist.

My parents were greatly alarmed by my pronouncement. Thus, they looked a little too happy when they returned home from a parent-teacher night with the "sad" news that my teacher thought I "just didn't have the gift." And so I resorted to history and English and pursued a teaching career (another sad story for another Last Blast). However, two or three days later, my art tutor sent a message to my parents saying that she had reviewed my portfolio and, yes, yes, I *was* good enough to take the course! Alas, my parents had been so elated with my choice of a "solid career," that they had already booked my majors. All was lost. Well, not quite all.

Almost twenty years later, I received my HIV diagnosis and went to an art therapy workshop. The image I created in that workshop said so much about my feelings at the time. One half of the painting depicted a happy family with a new home and baby. The other half had a dark train tunnel with virus and death lurking in the shadows. The family happily sauntered with their baby buggy towards the tunnel, where HIV secretly awaited them. It was certainly no great masterpiece—Lowry would have been proud of my stick men—but it said what I needed to say. The amazing thing is that the tunnel had a very small speck of light at the end. I don't know why I added it, but there it was. I remembered that glimmer of light for years: it was something to hold onto. It feels like I've travelled a long way down the tunnel since then, and the light is burning much, much brighter.

I began painting again in earnest in 1996 and felt almost a compulsion to do it. I stopped feeling embarrassed about my work, bearing in mind that Picasso's legacy was his abstracts, not his true-to-life work. His abstracts were his legacy. I quickly realized that if I died, my spirit would live on through my art. I started giving all my friends one of my paintings; it was like giving away a piece of me. A few years later, though, I figured I might be around a little longer than I had at first thought, and wasn't quite so generous.

My parents were a little too happy when they returned home with the "sad" news that my teacher thought I "just didn't have the gift."

After my Van Gogh period, I decided to try my hand at some Michelangelo. My first sculpture had three heads, depicting the people around me during my diagnosis: my mother, totally oblivious since I had not confided in her; my tearful husband; and my sister putting on a happy face. I still proudly display the sculpture, though a few years ago the dog got hold of it and bit the necks in half, so now it doesn't stand on the shelf very well.

Those minor setbacks notwithstanding, art has always been a part of me and a great source of healing. I am so glad I got a second chance at it. Some day, when you feel as if things are bottled up inside, give it a shot—you just may be the next Leonardo Da Vinci. ⊕

Denise Becker is a former board member of the BCPWA Society.