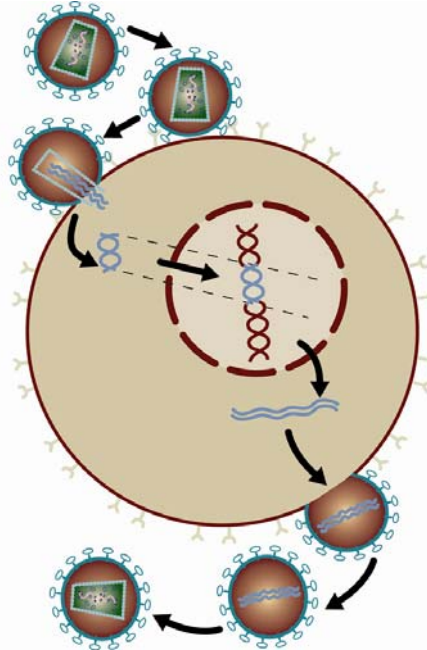


Treatment Topic of the Month **October 2007**

Take Action on Drug Resistance! **A Holistic Treatment Guide**



Disclaimer

The Treatment Resources Program at the Toronto People With AIDS Foundation provides information and resources to empower people living with HIV/AIDS to be proactive around their health by working in partnership with their health providers. We do not recommend or promote any treatment in particular. We strongly urge those interested in any specific treatment to consult a wide range of resources including a qualified medical and/or complementary therapy practitioner who has experience working with HIV+ patients.

For treatment information and resources,
Contact Rebecca at 416-506-1400 x627 or by e-mail at
rgower@pwatoronto.org

Take Action on Drug Resistance!

Why is Drug Resistance so Important?

HIV drug resistance is the reduced ability of Highly Active Anti-Retroviral Therapy (HAART) to block the reproduction of HIV in the body. Although the HIV virus attacks your immune system by taking over your CD4 cells and replicating at a fast pace, it does not always make perfect copies of itself. These imperfect copies are called **mutations**. If an HIV virus manages to change or mutate in the right way, it can make HAART ineffective. Some mutations will cause resistance to just one drug but other mutations can cause resistance to several drugs or a class of drugs. Drug resistance to a whole class of drugs is called **cross-resistance**. This means if you are on the NNRTI Sustiva (efavirenz) and you develop a specific type of mutation, you could become resistant to the other NNRTI's. In other cases, it may take more than one mutation before you become resistant. This is especially true for Protease Inhibitors.

What is Resistance Testing?

Your doctor can find out if your virus has any mutations that will impact the ability of your medications to keep your viral load low and CD4 counts high. There are currently three types of resistance tests. A **genotype test** uses a blood sample containing your HIV that is examined to pinpoint where any mutations occur and is compared to a database that contains a list of known mutations. A **phenotypic test** measures the ability of your HIV to replicate in the presence of HIV medications through blood samples that are divided into many test tubes. A **Virtual Phenotype Test** is a combination of the genotype and phenotype tests. It tests the likelihood that each mutation will be resistant to HIV medications.

Am I At Risk?

While there is not a guaranteed way to avoid developing resistance, we know that there are situations that can increase the chances of developing mutations. You are at greater risk in the following circumstances;

- If your viral load is above 50 copies/ml
- If you do not consistently take your HIV medications according to instructions.
- Side effects of HAART including nausea, vomiting and diarrhea, can reduce the amount of HAART in your body by limiting the amount of medication that is absorbed into your body.
- You can get a drug resistant strain of the virus if you are newly diagnosed or you don't practice safe sex with all of your sexual partners even if you are already positive.

Signs & Symptoms?

A sharp increase in your viral load or a decrease of your CD4 cells while taking HAART may be caused by a few factors. Your doctor will first want to determine if you are experiencing an Opportunistic Infection or another illness caused by HIV itself. The other main cause of a rising viral load is drug resistance. When HAART stops being able to effectively keep down your viral load, this is called **treatment failure**.

Take Action on Drug Resistance!

There are no guarantees that you will never develop drug resistance. The good news is that there are some concrete things you can do to slow down or minimize the development of drug resistance. Here are some useful tips;

1. Be Your Own Health Advocate!

The more you can learn about treatment options for HIV/AIDS, the more informed you will be about making treatment choices. Arming yourself with as much information as possible about HIV medications will allow you to make treatment choices that will help to avoid drug resistance. Reading information on AIDS-related web sites is a good place to start. Some useful websites include;

The Body	www.thebody.com
CATIE	www.catie.ca
AIDSinfo	www.aidsinfonet.org
AIDSmap	www.aidsmap.com

2. Start Treatment with a Powerful Anti-HIV Regimen

When you decide to begin HAART, it is important to begin with a combination of medicines that will be powerful enough to suppress the virus. The chances of developing drug resistance are reduced with an effective treatment plan that includes a combination of medicines.

3. Follow Instructions

It is really important to take HIV Medications exactly as prescribed. This is commonly known as **treatment adherence**. This simply means taking the correct amount of pills every day and following any dietary requirements. You need to follow the instructions that the pharmacist or your doctor provides you. This includes instructions such as taking the right number of pills, taking your medications with food or on an empty stomach as directed and avoiding missing any doses. If you do not take your meds properly, you are training your mutated, drug resistant virus to survive better.

4. Have Open Communication with your Doctor!

Your relationship with your doctor is an important part of your health and well-being. Choose a doctor with whom you can openly and honestly express yourself, who will be able to listen to your complaints and will explain why they are recommending specific treatment plans. It is especially important that you discuss your lifestyle when starting treatment. This can include eating, sleeping, work and travel schedule; possible side effects; other medications that may interact with HIV medications and your level of commitment to treatment.

5. Frequent Monitoring

Make a commitment to regularly monitor your health. This is important in terms of possible short-term and long-term side effects of HIV medications, as well as to lessen the chance of drug resistance by keeping track of your viral load.

6. Practice Safer Sex

You can still have a fulfilling sex life when you are HIV-positive. It is important to practice safer sex with all of your sexual partners including those who are also HIV-positive. There are so many different strains of HIV such as those ones that are resistant to many combinations of HAART. You can acquire a drug resistant strain of HIV, as well as other sexually transmitted infections such as syphilis, gonorrhea, Hepatitis C and the Human Papilloma Virus (HPV) if you don't use a condom when you have sex. It is also a good idea to become familiar with the risk levels of different sexual activities. Check out CATIE's safer sex menu at <http://pubs.cpha.ca/PDF/P7/19667.pdf> for more information.

Take Action on Drug Resistance: Managing Side Effects with Nutrition

Common side effects of HAART can lead to the development of drug resistant HIV by lowering the amounts of medication your body needs in order to keep your down your viral load. Many of the drugs commonly used in the treatment of HIV can cause nausea, vomiting and diarrhea especially in the first six weeks of starting HAART. These side effects may lead to the development of drug resistance because they prevent the body from fully absorbing the medications needed to keep down your viral load.

It is important to contact a doctor if you experience repeated episodes of vomiting or diarrhea over a period of 24-hours or longer, if there is blood in any vomit or diarrhea. You should also be on the lookout for symptoms such as dizziness, thirst, persistent fever, abdominal pain, jaundice or severe headaches. Even though it can be embarrassing to talk about these symptoms, it is important to tell your doctor about these symptoms because they need to figure out the underlying cause. For example, diarrhea can be caused by HAART, but it can also be the result of the HIV virus damaging the colon, parasites living in the gut, bacterial or viral infections or as a result of side effects of other medications.

How Can Nutrition Alleviate Side-Effects of HAART?

The good news is that there are some simple steps you can take by using nutrition that can help to improve diarrhea, and vomiting/nausea that can occur as a side-effect of HAART.

Diarrhea:

- Drink lots of fluids and drink sports drinks such as Gatorade to replace electrolytes so as to avoid dehydration.
- Eat small meals every two to three hours.
- Try to avoid high fat, greasy and fried foods.
- Stay away from caffeine, spicy foods or very sweet foods
- Eat more soluble fiber such as oatmeal, potatoes, white rice and apples and eat less insoluble fibre such as lettuce, green vegetables, bran, seeds, whole grain breads and corn
- Make sure you wash fruits and vegetables thoroughly. Avoid eating raw or undercooked foods and unpasteurized dairy foods.
- Try to eliminate dairy products
- Sometimes the **BRATT** diet can help. This means eating **B**ananas, **R**ice (white), **A**pples (without peels), **T**oast (white) and **T**ea (herbal).

Vomiting/Nausea:

- Eat smaller meals and snack more frequently
- Leave dry and salty crackers by your bed and eat a few when you get up in the morning
- Avoid spicy, greasy or strong-smelling foods
- Eat meals sitting up and don't lie down immediately after eating
- Eat ginger- in ginger ale or ginger beer, ginger tea or ginger root
- Drink herbal teas especially ginger, peppermint or chamomile.
- Eat foods high in fibre
- If you can't eat regular meals, take liquid meal supplements such as Ensure or other nutritional shakes

Take Action on Drug Resistance: Managing Side Effects with Homeopathy

It is important to consult a qualified and trained Homeopathic Physician in the treatment of acute and chronic conditions. Please do not attempt to treat yourself.

Common side effects of HAART, such as diarrhea, vomiting and nausea, can increase your chances of developing drug resistance. Homeopathy can be very helpful in dealing with these side effects to ensure that you can take your medications on schedule. The most effective homeopathic treatment is always based on assessing each patient as a whole person. This means that in most cases, there are no specific remedies for diarrhea. Homeopathy has a very successful record in treating symptoms of diarrhea, nausea and vomiting. The following are **some remedies** useful in the treatment of diarrhea, nausea and vomiting;

Arsenicum Album- *Burning pains with fear; anxiety and restlessness; violent, watery, burning and offensive diarrhea, violent and incessant vomiting which is worse from eating and drinking; long-lasting nausea; pains worse at night especially 12-1 a.m.; desires small sips of water, better for heat.*

Colocynthis- *Diarrhea with cutting and cramping pains in the lower abdomen; may be aggravated by emotions especially indignation or anger; patient needs to bend double, lie down or press on the abdomen; pain is worse just before diarrhea and after eating fruit or drinking water; nausea that comes from the stomach; vomiting of yellow fluid.*

Pulsatilla- *No two stools alike; diarrhea from eating too many rich or fatty foods; diarrhea with queasiness and indigestion; constipation may alternate with diarrhea; diarrhea is worse from being warm, drinking warm liquids and at night; nausea from eating and drinking; morning nausea especially from menses and/or pregnancy; thirstless with dry mouth; better for company, gentle motion and fresh air.*

Podophyllum- *Profuse and offensive diarrhea; large quantities passed with great frequency; stool may be liquid or yellow-green; cramping pains before and during diarrhea; forceful or noisy diarrhea; cramping pains better for warmth and bending double; regurgitation of food tastes sour; nausea and vomiting.*

Sulphur- *Wakes with sudden urge for diarrhea (typically at 5 a.m.); can be an offensive and putrid smell of stool; oozing around the rectum with burning, itching; red and irritated skin around the rectum; nausea in the mornings; vomiting in the mornings, evenings or after meals; can feel worse at 11 a.m. and from standing.*

Veratrum Album- *Sweating with diarrhea, copious and colourless diarrhea; sudden onset; weakness with cold and clammy sensation; bluish-white skin tone; intense desire for cold drinks, feels better lying down.*

Wellness Resource Guide

Health Promotion Services at PWA:

Contact Rebecca, Treatment Resources Coordinator for;

- Student Massage Clinic
- Holistic Treatment Counselling
- Community Naturopathic Clinic for People with HIV
- Harm Reduction

Contact Kevin, Programs Coordinator for;

- Volunteer Massage Program
- Reiki
- Therapeutic Touch

Contact Greg, Speakers Bureau Coordinator for;

- The Energy Healing Circle

Contact Llewellyn, Treatment Access Coordinator for;

- Trillium
- Compassion Access to Medications (H-MAP)

Treatment Websites:

CATIE

www.catie.ca

The Body

www.thebody.com

AIDSInfonet (New Mexico AIDS Project)

www.aidsinfonet.org

AIDS Map

www.aidsmap.org

AIDS Treatment News

www.aidsnews.org

HIV/AIDS Medications

www.aidsmeds.com

Multilingual HIV Treatment Information

www.treathivglobally.ca

The Well Project (geared towards women)

www.thewellproject.org

Project Inform

www.projectinform.org

Nutrition:

Jon Kaiser [Immune Power: The Comprehensive Healing Program for HIV](#)

Jon Kaiser www.jonkaiser.com

Lark Lands www.larklands.net

CATIE [A Practical Guide to Nutrition for People Living with HIV](#)

Complementary Therapies:

CATIE

[Practical Guide to Complementary Therapies](#)

Complementary Therapists List

www.actoronto.org

Homeopathy

http://www.csoh.ca/Homeopathy_Introduction.htm

Traditional Chinese Medicine

www.docmisha.com

Nutrition Services:

www.stmichaelshospital.com/programs/nutrition

Community Naturopathic Clinic

416-324-4187 (to book an appointment)

Community Resources:

Toronto People With AIDS Foundation

www.pwatoronto.org

VOICES of Positive Women

www.vopw.org

Black Coalition for AIDS Prevention

www.black-cap.com

Asian Community AIDS Services

www.acas.org

Alliance for South Asian AIDS Prevention

www.asaap.ca