

because you asked

Storing meds

Will my meds lose their effectiveness if they aren't in the fridge?

Pharmacist Suzanne Marcotte replies: As with food, medications break down more rapidly when they're exposed to humidity, heat or sun. That's why we don't recommend storing medications in places where the temperature varies significantly, such as the glove compartment in a car, or where humidity is high, like the bathroom. A cupboard or drawer in the bedroom or kitchen is fine. Unopened in their original container, medications can be kept until the expiry date printed on the bottle. Once the container has been opened or the medicine has been transferred into a pill dispenser, the pharmacist will provide an expiry date earlier than what's printed on the original bottle.

To help absorption, some medicines are made in an oil base contained in a soft gelatin capsule. This is true of Kaletra® (lopinavir-ritonavir), Norvir® (ritonavir) and Aptivus® (tipranavir). These medications don't last as long as tablets of compressed powder. From the factory to the wholesaler to the pharmacist, gel capsule medications are kept refrigerated (between 2° and 8°C) so that they'll keep until their expiry date. Once you get them, they can be kept at room temperature (20° to 25°C with an acceptable range of 15° to 30°C) for a certain amount of time: 30 days for Norvir®, 42 days for Kaletra®, 60 days for Aptivus®. This is true for both capsules and liquid formulations. A new tablet formulation of Kaletra® that doesn't need refrigeration at all was approved in Canada in September, 2006, and is now available.

Medications don't immediately stop working after the time periods listed above, but they can gradually start to lose their potency without any noticeable change in appearance. Medications that have been outside the fridge for long periods of time, or that have frozen (less than 0°C), shouldn't be used, and should be taken to your pharmacy for disposal.

The injectable medication Fuzeon® (enfuvirtide) is very sensitive to variations in temperature. It's recommended that the vials be kept in the box to keep them away from light, and stored at a temperature of less than 25°C. Once diluted, the vial must be stored in the fridge if it's not used within an hour. It keeps for less than 24 hours in the fridge, so only one dose can be prepared in advance.

Definition dilemma

What is AIDS?

Dr. Steven Shafran replies: In 1981, the United States Centers for Disease Control (CDC) reported the unexpected occurrence of cases of Pneumocystis carinii pneumonia (PCP) and Kaposi's sarcoma (KS) in gay men and in recipients of blood products. The CDC convened a task force to investigate this outbreak and, in 1982, the task force named this new syndrome the acquired immunodeficiency syndrome, or AIDS for short. The term "acquired" was used to distinguish this syndrome from "congenital" immunodeficiencies that are

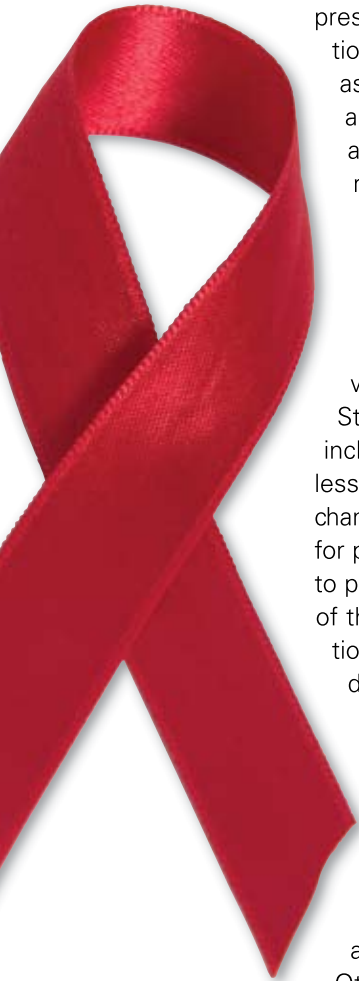
Suzanne Marcotte is a pharmacist at the HIV Clinic of the Centre Hospitalier de l'Université de Montréal.

Dr. Jason Brunetta is a primary care physician specializing in HIV care at the Maple Leaf Medical Clinic in Toronto.

Dr. Stephen D. Shafran is Professor in and Director of the Division of Infectious Diseases at the University of Alberta.



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present at birth and result in life-threatening infections in childhood. CDC defined a case of AIDS as “a disease, at least moderately predictive of a defect in cell-mediated immunity, occurring in a person with no known cause for diminished resistance to that disease. Such diseases include KS, PCP, and other serious opportunistic infections.”

In late 1983, Human Immunodeficiency virus (HIV), the virus that causes AIDS, was discovered, and HIV blood testing became widely available in 1985. In 1993, the United States case definition for AIDS was modified to include any HIV-infected adult with a CD4 count less than 200 or CD4 percent less than 14. This change in the US case definition was made largely for political reasons to allow more people access to publicly-funded programs. In Canada and most of the rest of the world, the AIDS case definition was not changed, meaning that AIDS was defined by the presence of certain opportunistic infections (not seen in people with healthy immune systems) and cancers, and not on the basis of abnormal lab tests alone.

Some experts feel that the distinction between “HIV infection” and “AIDS” is artificial and should be abandoned, particularly since antiretroviral therapy has radically altered the natural history of HIV infection.

Others feel that continuing to count AIDS cases allows for consistent tracking of the epidemic over time. In essence, HIV disease is a spectrum with AIDS being at the most severe end.

Persistent fatigue

I’m tired all the time. Is it because of HIV? Meds? Is there anything I can do about it?

Dr. Jason Brunetta replies: Fatigue and general weakness are common complaints from people living with HIV, and they may have a significant impact on day-to-day activities. The first step to



help determine the cause is a visit to your doctor. Describe your symptoms and try to quantify things that you are unable to do, such as work a full day or do your laundry. A medical history, examination, and screening blood tests will help rule out underlying problems such as a low thyroid hormone or testosterone level, coexisting infections (such as hepatitis C), or other conditions such as anemia and nutritional deficiencies. Be sure to report your mood symptoms, as depression is also a common cause of fatigue. If a specific cause is found, treatment is directed at correcting the problem.

Much of the time, however, no specific medical problem can be found and it may be that the HIV infection itself is the cause of fatigue. This happens in many chronic conditions. The best advice is to maintain a healthy diet, get regular exercise, keep stress at a minimum, and get lots of rest. **R**

