Women and HIV

While most of the chapters in Managing your health provide information to assist both men and women in living with HIV disease, this chapter offers information specific to HIV-positive women’s needs. In this chapter you can find helpful information about how HIV and its treatments affect women differently than men. You can also learn about how HIV affects women throughout their life, including tips on dating and disclosure and how to plan or prevent pregnancy as well as manage menopause.

About the author

Shari Margolese has been involved as an active volunteer in the AIDS community since shortly after her own HIV diagnosis in 1993. As a mother of an HIV-positive child, her advocacy efforts have often focused on the needs of the HIV-positive family and the rights of women living with HIV to have children. Shari is currently co-principal investigator on several community-based research projects, including the development of a protocol for fertility and pregnancy care for people living with HIV in Ontario.

Currently, Shari’s volunteer commitments include working with Voices of Positive Women in Toronto, Blueprint for action on women & girls and HIV in Canada, and ATHENA.
HIV in women in Canada

If you are a woman living with HIV, you are not alone!

While few women were identified among the early cases of AIDS in Canada, as the years have passed, the epidemic among women has grown. The Public Health Agency of Canada reported that the proportion of women infected with HIV increased dramatically over the 10-year period from 1996 to 2006. The Public Health Agency of Canada has also estimated that almost half of women testing positive are between 15 and 29 years of age. The risk factors for the majority of new infections among women are heterosexual sex and injection drug use. More than 11,000 women are currently living with HIV in Canada.

How is HIV different for women and men?

Though many questions about how HIV disease affects women remain unanswered, some information exists about how HIV affects men and women differently.

Some HIV-related infections and diseases impact women differently than men. Some are specific to women, such as vaginal candidiasis and cervical cancer. Women with HIV are also more likely than men to develop bacterial pneumonia and recurrent herpes simplex infections. Women are less likely to develop Kaposi’s sarcoma, an HIV-related infection characterized by purplish lesions on the skin (see Chapter 12, HIV infections and related conditions). Fortunately, effective anti-HIV treatment has made these infections much less common for all people living with HIV.

Drug side effects can affect women with HIV differently than men. For example, women are more likely to experience side effects such as rash and severe allergic (hypersensitivity) reactions to the class of anti-HIV drugs called non-nukes (see Chapter 10, Treatments). Both men and women with HIV can have body shape changes called lipodystrophy and lipoatrophy. Women are most likely to see fat gain in the breasts and stomach (see Chapter 11, Side
effects and symptoms). Women are also more likely than men to develop anemia and bone loss. These gender-based differences may be due to interactions between the drugs and female hormones. Or, they may be because most drug dosing is standardized, based on research done predominantly in men. Women, who in general weigh less than men, may receive unnecessarily high amounts of the drugs.

Treatment advocates continue to demand greater inclusion of women with HIV in clinical trials for anti-HIV drugs, as well as for clinical trials that are specifically designed to answer questions about treatment for women with HIV.

---

**Psychosocial issues for women living with HIV**

Each woman experiences HIV differently. However, there are some important generalizations that can be made about women’s experience of HIV as a group. Many women are diagnosed with HIV late in the course of their disease. This may be because they and their doctors do not perceive women to be at risk for HIV infection. In addition, women can be adversely affected by the social environment they live in; they may lack stable housing, educational and employment opportunities and steady income. Factors such as these can greatly affect a woman’s ability to make use of HIV testing and other medical services.

Once a woman knows her HIV status, research has shown that she may postpone seeking medical care. The reasons for this include:

- limited access to health care;
- geographic location;
- immigration status;
- lack of power to determine her own health needs;
- other household responsibilities, such as childcare or looking after a sick partner;
- the stigma associated with HIV;
- unstable housing;
- lack of income;
partner violence;  
substance use;  
depression and other mental health issues.

These factors can affect women’s health and support services are important to address them. AIDS service organizations can provide services for women with HIV, and in some cities there are organizations specifically for women with HIV.

Your healthcare team

Women and men should receive the same quality and level of medical care. When women with HIV receive appropriate care and treatment for this disease, they experience similar benefits to those experienced by men.

Many women with HIV see different doctors for different needs. They may see an HIV specialist for HIV-related conditions and a family doctor for health matters unrelated to HIV. Women with HIV may also see a gynecologist (a doctor specializing in women’s reproductive health), and an obstetrician or fertility specialist for issues related to pregnancy. While not always possible, it is preferable if these doctors have experience with HIV. Your family doctor or infectious disease specialist should be able to make referrals to knowledgeable medical specialists (see Chapter 3, Your healthcare team).

Gynecological care of women with HIV

As a woman living with HIV, it is especially important to take care of your gynecological health. Having HIV can make certain gynecological conditions more common, more serious and more difficult to treat. These conditions include:

- some vaginal infections, including yeast infections and bacterial vaginosis (an infection that changes the normal balance of bacteria in the vagina);
- sexually transmitted infections such as gonorrhea, chlamydia, herpes and syphilis;
- pelvic inflammatory disease (a potentially serious bacterial infection of the reproductive system).
It is very important for women with HIV to schedule annual Pap tests with their doctor. A Pap test checks for changes in the cervix. An abnormal Pap test can indicate problems requiring closer observation or immediate treatment. Women with HIV are more likely than HIV-negative women to have abnormal Pap test results, especially if they have a lower CD4+ cell count.

During a Pap test your doctor will do an internal examination of the vagina and take a small sample of cells from your cervix. You may feel some discomfort. While doing the Pap test, the doctor should also perform an external examination of the vulva to check for such conditions as herpes and genital warts (see Chapter 7, Your sexual health, and Chapter 9, Monitoring your health).

Cervical dysplasia, an abnormal growth of cells of the cervix that can be detected by a Pap test, is more common in women with HIV, especially in women with advanced HIV disease. It is often more severe and difficult to treat than in HIV-negative women. Early detection and treatment can prevent the progression of dysplasia to cervical cancer, a life-threatening illness. Cervical dysplasia is caused by an infection with a virus called human papillomavirus (HPV). HPV is a sexually transmitted virus that can also cause genital warts (see Chapter 7, Your sexual health).

---

**Pregnancy and HIV**

Advances in HIV treatment and prenatal care for women with HIV have improved their health and greatly reduced the risk of transmitting HIV to their babies (see below). Now, many women are considering pregnancy and having healthy, HIV-negative children.

In spite of the fact that women with HIV can have healthy children, women who have told others about (disclosed) their positive HIV status may face stigma and discrimination if they choose to have a child. This is often because other people do not know the medical facts about HIV and pregnancy. On the other hand, among women who have not disclosed their HIV status to others, there may be family or cultural pressures to have children. These women may face stigma if they choose not to have children.
Some women with HIV become pregnant without planning it. Or, some women may find out they have HIV at the same time they find out they are pregnant. This can be a lot of news to deal with at once. You will face questions about how to proceed with your pregnancy. You may decide to keep your baby, you may consider having an abortion or you might think about putting your baby up for adoption. Talk with your doctor, a counsellor at your local AIDS service organization or someone you trust about how to get more information and support so that you can make the decision that is right for you.

**Stopping vertical transmission of HIV**

There are many names for how HIV is transmitted. When HIV passes to a fetus or baby from an HIV-positive mother, it is called vertical transmission. It is also sometimes called mother-to-child transmission or perinatal transmission. When HIV passes between sexual partners or people who share needles, this is called horizontal transmission.

In the absence of quality prenatal care that includes anti-HIV treatment, HIV may be transmitted from a woman to her child in the womb, during labour and delivery or through breastfeeding. Without proper treatment and care, the risk of mother-to-child transmission is approximately 25 to 30 per cent.

However, doctors now know that following certain treatment strategies can reduce the risk of vertical transmission to less than two per cent (two chances in one hundred). These strategies involve:

- diagnosing HIV in the mother through prenatal screening;
- providing good medical care for pregnant women with HIV;
- giving anti-HIV treatment to the woman during pregnancy, labour and delivery;
- considering delivery by Caesarean section;
- giving anti-HIV treatment to the newborn for a brief period after birth;
- not breastfeeding.

For more information about the details of these strategies, talk with your doctor.

**Having a healthy pregnancy**

Good health is very important while you are pregnant, and there are many
things you can do to help yourself have a healthy pregnancy. First, it is important
that you get good medical care. Try to find an obstetrician (a doctor who spe-
cializes in pregnancy and childbirth) who is familiar with HIV care. It is best to
do this before you get pregnant, or soon after. Your HIV doctor can help you.
You should receive the same level of care that is available to any woman who
is pregnant.

Research shows that pregnancy itself does not make your HIV disease
worse and HIV does not change how your pregnancy proceeds. Still, doctors
say a pregnancy is high risk if there is any illness or infection, including HIV.
This means that you may have more frequent visits to the doctor to monitor
your health and the health of your fetus.

Treating your HIV infection and reducing the amount of virus in your blood
(your viral load) during pregnancy is one of the most important ways to reduce
vertical transmission. Your doctor will talk with you about taking anti-HIV
treatment. When choosing your drugs, you should consider a combination
that is tailored to your health and needs and that will reduce the risk of
vertical transmission.

In addition to anti-HIV drugs, there are many things you can do to help
have a healthy pregnancy. These include:

• make sure that your doctor tests and treats you for sexually transmitted
  infections (see Chapter 7, Your sexual health);
• make sure that your doctor tests you for hepatitis B, group B
  streptococcus status and rubella immunity;
• eat a healthy diet;
• find healthy ways to deal with stress;
• take a daily prenatal multivitamin (prenatal vitamins are different from
  regular multivitamins—make sure you get the right one);
• stop or reduce smoking, drinking alcohol and using recreational and
  street drugs;
• put together a support network, including family members, friends and
  supportive staff at your local AIDS service organization or HIV clinic.

If you are pregnant and drinking alcohol or using drugs, cutting down or stop-
ing will increase your chances of a healthy pregnancy. Some women may not
be able to stop completely or stop without help. Speak to your doctor or someone you trust to help you find the resources you need to keep you and your baby as healthy as possible.

**How will I know if my baby is HIV-positive?**

If you receive good care during your pregnancy and delivery, chances are minimal that your child will be HIV-positive. Even so, your healthcare team will monitor your baby for the first few months after birth. Your baby may receive three or four HIV tests before getting a definitive result as to his or her HIV status.

Babies are tested for the presence of HIV with a test called a PCR test, which looks for the virus itself. Tests for adults usually look for the HIV antibodies, the body’s response to HIV. Adult tests do not work in babies because all babies born to women with HIV carry their mother’s antibodies for up to 18 months after birth. These antibodies disappear with time. Just having their mother’s antibodies in their blood, does not mean that a baby has HIV infection. The PCR test is the only way to see if the baby is infected or not.

HIV-positive babies are diagnosed between six weeks and four months after birth using PCR testing. However, with anti-HIV treatment, the chance that your baby will be HIV-positive is less than two per cent. Even if your baby is HIV-positive, it is possible for him or her to live a long and healthy life with HIV. Many children with HIV are now active teenagers and young adults. Some are even planning families of their own!

**Becoming pregnant**

For women with HIV, pregnancy raises particular issues. First, women are worried about transmission of HIV between partners while trying to conceive. As well, women with HIV may find it more difficult to conceive than HIV-negative women. It is not clear if it is HIV, its treatment or possibly co-infection with other sexually transmitted infections that contribute to infertility in women with HIV.

Fortunately, there are many ways that a woman living with HIV can attempt to conceive while not transmitting HIV to her partner or her baby. Many women with HIV who have HIV-negative or same-sex partners try alternative insemination. This is the process of collecting the sperm from their partner or sperm donor in
a condom or cup and inserting the sperm into the woman’s vagina using a syringe. This process is often done at home. If a woman is not able to conceive using this method, she may require intrauterine insemination with medical assistance. During intrauterine insemination, a small tube is inserted into the woman’s cervix and the sperm is injected with a syringe. There is no unprotected contact between partners, so there is no risk of HIV transmission.

When an HIV-positive woman’s male partner is also HIV-positive, his sperm can be chemically “washed” to remove the HIV. This sperm washing technique greatly reduces the risk of transmitting virus between HIV-positive partners, thereby avoiding re-infection with a different strain of HIV or with other infections. This technique can be used when a man with HIV wants to father a child with an HIV-negative woman.

Access to assisted reproduction techniques like these is very limited overall, and you may need to travel to another province in order to get the services you need. You can contact CATIE for more information about fertility clinics in your region.

Some partners decide to conceive using natural methods. That is, they have unprotected sex. This method can have a high risk of transmitting HIV between partners, especially if it is the male partner who is HIV-positive, and so doctors do not recommend this method to conceive.

People who do not use condoms often take other precautions to minimize the risk of passing HIV. Research has revealed that one of the most important precautions is reducing the viral load of the positive partner to undetectable levels. Sustained suppression of the virus in the blood generally (but not always) means a lower level of virus in the semen or vaginal fluids. Another precaution is to ensure that neither partner has a sexually transmitted infection, lesions and abrasions or a condition that causes inflammation of the reproductive organs, such as bacterial vaginosis. Lesions, abrasions and inflammation increase the chance of transmitting HIV.

As well, couples choosing to have unprotected sex to conceive often limit exposure to the few days around ovulation when the woman is most likely to become pregnant. Your healthcare provider can teach you how to recognize signs of ovulation so that you have the best chance of becoming pregnant.
Birth control

Many women with HIV choose to use birth control. Having HIV can make choosing a birth control method more complicated because women with HIV must consider other factors such as the need to stop HIV transmission and the potential for interactions between anti-HIV drugs and some hormonal contraceptives.

Male and female condoms are often used as birth control by women and men with HIV because they are the only birth control method that also effectively reduces HIV transmission. There are numerous benefits to using condoms:

- female and male condoms are the most effective ways to prevent the transmission of HIV and many other sexually transmitted infections;
- condoms are up to 98 per cent effective at preventing pregnancy if used correctly;
- the female condom is the only female-controlled method of birth control that also provides protection from HIV and sexually transmitted infections.
- the female condom can be inserted prior to a sexual encounter;
- you don’t need a prescription to buy condoms.

There are drawbacks to using condoms:

- condoms can break if not put on correctly;
- using a male condom requires full co-operation from your male partner;
- condoms are perceived by some to decrease sexual pleasure;
- female condoms are expensive and not available everywhere in Canada.

For more information about condoms, see Chapter 7, Your sexual health.

Additional birth control methods can also be used to further reduce the risk of becoming pregnant, although they have no effect on HIV transmission risk. Before deciding on a birth control method to use with condoms, an HIV-positive woman should consider some important questions.

- Will this birth control method interact with my anti-HIV drugs or other drugs I am taking?
- Will it increase the chance of transmitting HIV to my partner?
- How well can I incorporate it into my lifestyle?
- How effective is it at preventing pregnancy?
• How safe is it?
• How affordable is it?
• How will it impact my chances of getting pregnant in the future if I choose to?

Currently available contraceptive methods include:

• hormonal contraceptives;
• diaphragms and cervical caps;
• spermicides;
• permanent birth control;
• natural birth control, such as the rhythm method;
• emergency contraception or the “morning after” pill.

Hormonal contraceptives are available in many forms. Some (such as the birth control pill) are taken orally. Some are injected and others are inserted into the vagina (either at home, such as vaginal rings or sponges, or by a doctor in the case of an intrauterine device). There is also a patch available that provides birth control medication through the skin. Depending on which method you choose, you will need to use hormone methods daily, weekly, monthly or yearly.

Benefits of hormone-based birth control:

• they are very effective (97 to 99 per cent) in preventing pregnancy;
• they may reduce the risk of several medical conditions, including certain cancers of the reproductive organs, pelvic inflammatory disease, non-cancerous growths of the breasts and ovaries, and thinning of the bones (osteoporosis).

Drawbacks of hormone-based birth control:

• they are not effective against HIV and other sexually transmitted infections;
• they can have many possible side effects, including an increased risk of blood clots, heart attack and stroke, especially if you smoke.

Many hormone-based birth control methods can interact with anti-HIV drugs. These interactions can decrease the effectiveness of the hormones in preventing pregnancy. These interactions may also decrease the effectiveness of the anti-HIV drugs. If this happens, HIV may develop resistance and future treatment options may be reduced. In all cases, it is important to discuss drug interac-
tions with your doctor before choosing a hormone method. For more information about drug resistance and how it can develop see Chapter 10, Treatments.

Diaphragms and cervical caps are small devices that fit over the cervix at the end of the vagina. Both need to be fitted by a doctor and used with a spermicide cream or jelly. They are less effective than condoms at preventing pregnancy because they do not prevent the sperm from entering the vagina. Benefits to using diaphragms and cervical caps:

- they are very effective in preventing pregnancy if used correctly;
- there are usually few to no side effects;
- they cannot usually be felt by either partner.

Drawbacks to using diaphragms and cervical caps:

- they do not offer protection against HIV and other sexually transmitted infections;
- they may be difficult to insert.

Spermicides are available in foams, jellies, creams and suppositories (small capsules of medicine that are inserted into the vagina). They work by killing sperm before it has a chance to reach the cervix. Spermicides are only about 70 per cent effective in preventing pregnancy and offer no protection against HIV and other sexually transmitted infections.

Spermicides do not kill HIV and, in fact, may increase the risk of HIV transmission by irritating the skin in the vagina and rectum. They should not be used as a means of preventing HIV transmission.

Permanent birth control (sterilization) involves a surgical procedure that can be performed on a woman (tubal ligation) or a man (vasectomy). During a tubal ligation procedure, a doctor closes or blocks a woman’s fallopian tubes so that the egg cannot travel to the uterus and be fertilized. During a vasectomy, a doctor closes or blocks the tubes that carry sperm so that it cannot leave the body. These procedures are almost 100 per cent effective against pregnancy; however, they are not effective against HIV and other sexually transmitted infections, and condoms must still be used to prevent transmission.

Natural birth control methods include abstinence, sex without intercourse, withdrawal of the penis from the vagina before ejaculation, and fertility awareness-based methods, such as the rhythm method, that rely on closely monitor-
ing the woman's ovulation cycle and restricting intercourse to when she is least likely to become pregnant. Abstinence—not having intercourse at all—is 100 per cent effective. Other natural birth control methods are only partially effective in preventing pregnancy but offer no protection from HIV and other sexually transmitted infections. Withdrawing the penis before ejaculation does not decrease the risk of transmitting HIV because the virus is present in the pre-cum that leaks out prior to ejaculation.

Emergency contraception can be used to help prevent pregnancy after unprotected sex. The “morning-after” pill is sold over the counter from your pharmacist and is known as “Plan B.” It can be effective in reducing the risk of pregnancy if started within three days after unprotected sex. It offers no protection against HIV and other sexually transmitted infections.

You may be thinking about ending your pregnancy by having an abortion. You may feel you cannot care for a child at this time, or you may have other reasons. Having an abortion is a very personal choice, and only you can decide whether or not to continue your pregnancy. No one can force you to have a baby or force you to end your pregnancy. You may want to know more about abortion. You can discuss your options with your doctor or nurse. Some women worry that having an abortion will make it harder to get pregnant again. Most women go on to have normal healthy pregnancies after an abortion.

**Menstruation and menopause**

Throughout their reproductive lives, many women with HIV experience irregularities in their menstrual cycle such as spotting between periods, heavy bleeding or no bleeding at all. Studies have found that menstrual irregularities are more common in women who have low CD4+ cell counts, high viral loads, who are significantly below their ideal body weight or use intravenous drugs, such as heroin or methadone.

Menopause is the point in a woman's life when her menstrual periods have completely stopped. This usually happens roughly around the age of 50 in HIV-negative women. In women with HIV, it may occur earlier.
A woman can usually tell she is approaching menopause because her periods start changing—they may lengthen, shorten or grow irregular. This time is called perimenopause. During perimenopause and menopause—a period which can last several years—hormone levels fluctuate and you can expect to experience symptoms such as:

- increasingly irregular menstrual periods;
- hot flashes;
- night sweats;
- vaginal dryness;
- frequent urination;
- skin changes, including thinner skin, wrinkling and acne;
- trouble sleeping;
- fatigue;
- lack of sexual desire;
- forgetfulness;
- emotional changes;
- depression.

In addition, some women with HIV have lower CD4+ counts after menopause. Symptoms of menopause may be difficult to distinguish from symptoms of HIV. For example, women with HIV may experience irregularities in their menstrual cycles even if they’re not going through menopause. Similarly, women with HIV who experience hot flashes at night may be misdiagnosed as having night sweats that are common with untreated HIV. Vaginal dryness can be mistaken for a yeast infection. It is important to keep track of your menstrual cycles and discuss menopause with your doctor to avoid a misdiagnosis or unnecessary hormonal treatments. Whatever stage of your life, it can be helpful to have your hormone levels checked.

After menopause, all women are at increased risk of thinning bones and fractures, heart disease and other conditions related to aging. Women with HIV may face an even greater risk of these if they are taking anti-HIV drugs. See Chapter 11, Side effects and symptoms, and Chapter 18, HIV and aging, for more information on these issues.
Women with HIV can date, have active sex lives and build healthy relationships.

At the beginning of any relationship, getting to know someone new can be complicated. Adding HIV to the mix makes things even more so. If you are dating someone new, in a relationship or considering one, questions about safer sex and when to disclose your status may be on your mind.

Dating, sex and relationships

Women with HIV can date, have active sex lives and build healthy relationships. At the beginning of any relationship, getting to know someone new can be complicated. Adding HIV to the mix makes things even more so. If you are dating someone new, in a relationship or considering one, questions about safer sex and when to disclose your status may be on your mind.

Just as each HIV-positive woman is unique, so is her approach toward whom she tells about her HIV-positive status. Disclosure is often based on a woman’s own experience in relationships. Some women choose to disclose their status before the first date. The benefits to this approach include reducing the stress of keeping a secret. Alternatively, some women prefer to wait until they get to know the person better.

Tips to help stay healthy after menopause.

- Eat a healthy diet (see Chapter 4, Healthy living).
- Supplement your diet with calcium and vitamin D₃ daily to help prevent bone loss.
- Quit or cut down on smoking.
- Drink alcohol moderately.
- Perform exercise such as aerobics, swimming, running or brisk walking for 30 minutes three times a week and include weight-bearing exercises in your program.
- Talk to your healthcare provider about the following tests and exams:
  - mammogram;
  - gynecological exam and Pap test;
  - bone density scan;
  - blood tests for lipid levels;
  - colonoscopy. (See Chapter 9, Monitoring your health, for more information on tests.)
People with HIV do have a legal obligation to disclose their HIV status before they put another person at “significant risk” of exposure to HIV. The legal definition of significant risk is evolving, but definitely includes vaginal or anal sex without a condom. Women who share drug injection equipment with their partners are also obliged to disclose their HIV status before shooting. See Chapter 21, Legal issues for more details about the legal obligation to disclose your status.

It is best that you talk with any potential sexual partner about your HIV status before the relationship becomes sexual. A small number of women have been charged for transmitting or exposing a sexual partner to HIV when they had not disclosed their HIV status to them.

To protect yourself against people who might claim you never disclosed your status, it is a good idea to document your disclosure. You might consider making an appointment for your partner to visit your HIV doctor. Your doctor can then make sure that your partner understands the risks of infection, and can also record the discussion to confirm that disclosure took place.

If you are diagnosed with HIV while in a relationship, it is important that you tell your current partner about your status as soon as possible. This can be an especially difficult task if you rely on your partner for food, shelter, protection or drugs. You may fear losing the relationship and the benefits it provides when you disclose. While this can happen, your partner may also be very supportive. For assistance with the difficult task of telling your partner, a counsellor at your local HIV clinic or AIDS service organization or a public health nurse can help.

Some women are in abusive relationships and fear violence if they tell their partner that they are HIV-positive. If you are in this situation, it is important that the disclosure takes place in a safe environment and you have a plan in place for your safety. Again, a doctor, friend, counsellor or public health nurse may be able to help.
Resources

Websites for women living with HIV

- Voices of Positive Women (www.vopw.org)
- Positive Women’s Network (www.pwn.bc.ca)
- The Centre for AIDS Services of Montreal (www.netrover.com/~casm/)
- The Well Project (www.thewellproject.org)

Sisters are Doing it for Themselves

Special issue of the Positive Side magazine for women living with HIV

You can have a health pregnancy if you are HIV positive

Comprehensive information for women living with HIV who are pregnant or planning for pregnancy

The Positive Side

Health and wellness magazine contains articles about women and HIV, such as:

- 10 things you don’t know about HIV+ women
- The goddess flesh club
- From diapers to disclosure

Look in the e-zine index (www.positiveside.ca)

Plain and Simple Factsheets on health issues for women living with HIV

Available in multiple languages

In-Depth Factsheets on health issues for women with HIV

Comprehensive information for people living with HIV and their care providers

Pocket guide for women living with HIV

Booklet from the Positive Women’s Network in British Columbia (www.pwn.bc.ca)

Most of these and many other relevant resources can be accessed on CATIE’s website (www.catie.ca), through the CATIE Ordering Centre (www.orders.catie.ca) or by calling CATIE at 1-800-263-1638.