

WOMEN, HIV AND OLDER AGE



special concerns that
women living with hiv may face
beyond 50 years of age

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As you age your body undergoes many changes. Some are related to genetics—if your father or grandfather had cardiovascular disease, then you're at more risk for developing this condition. Other changes are a natural and normal result of your body merely getting older and slowing down. Also, you're more at risk for developing a variety of conditions, like diabetes.

Some of the health changes we experience as we age are similar to some symptoms of HIV infection. The process of aging varies for everyone, but it's not unusual for people to experience fatigue, sup-

pressed immunity, skin conditions and nutritional problems. Some HIV side effects, like loss of fat in the face and arms, also occur naturally in some people as they age. For someone who is aging with HIV, these changes make knowing the cause and treating these conditions more difficult.

For women over 50 living with HIV, there are many unique questions and concerns. Whether you're a woman over 50 who recently found out you were HIV-positive or you've been living with HIV for many years, these years can be very challenging.

What does the research show?

Very little research has been done on HIV and older age; however, there are some answers. A large study to assess HIV, immunology and aging is ongoing and more information will likely be available in the coming years. Even less research and information is available for older women living with HIV. This too is beginning to change as larger studies of women begin to yield information.

Some data suggest that older and younger people do equally well when responding to anti-HIV medications and experiencing side effects or risk of HIV disease progression. However, older people on therapy were less likely to see as large an increase in CD4+ cell counts. For women, questions around HIV and menopause, or taking hormone replacement therapy (HRT), have not been well studied.

One study suggests that women over 40 are at a higher risk for developing changes in body composition, called lipodystrophy. It is unclear whether this is related to gender, age or a combination.

Another study looked at 40 pre- and post-menopausal women, 19 HIV-positive women and 21 HIV-negative women. The study looked at how often reduced bone mineral density occurred in older pre- and post-menopausal HIV-positive women. Bone density on the lower spine, hip and total body was measured. This study showed that women living with HIV who had used a protease inhibitor had reduced bone density compared both to HIV-negative and HIV-positive women who had never taken protease inhibitors. Several observations have been made about bone problems associated with using various anti-HIV therapies. Whether this impacts women more

than men is unknown, but even older women without HIV are at increased risk for bone mineral loss. This information is important especially for older women who have other known risks for bone mineral loss. For more information, read *Lipodystrophy* and *Bone Problems*.

There are conflicting data around older age and HIV disease progression. One study found that older and younger people had similar rates of viral suppression. However, older people on similar therapies had weaker CD4+ cell count responses. Another study found that people older than 60 at the time of HIV diagnosis have a shorter survival time than younger people at their time of HIV diagnosis. Finally, another study found that older age might be associated with a higher rate of disease progression. This study observed that an older person with HIV is likely to progress to AIDS at a faster rate than younger people at the same CD4+ cell count. Many of these studies are small, however, and many factors besides age could have influenced these observations.

On a positive note, a retrospective study looking at 84 older women with HIV found that women on HRT had a higher survival rate. In addition, researchers found lower rates of cervical dysplasia (abnormal cell changes associated with pre-cancerous conditions) and chlamydia in the older women than the younger women.

The lack of research and information on aging and HIV can be discouraging. However, it is important that we continue to advocate for research, to include older people living with HIV, especially women, and make our voices heard!



Doctors may not talk with their older patients about HIV/AIDS because they do not think they are at risk or they presume symptoms to be age-related. As a result, many older people are diagnosed at a later stage in their infection, and many have an AIDS diagnosis the first time they become aware of their HIV infection. Older people are more likely to be diagnosed with HIV at a generally higher viral load and lower CD4+ cell count, making them more susceptible to opportunistic infections. More aggressive therapy may be required to successfully suppress the virus.

Women who are at an increased risk for bone complications, regardless of HIV status, include Caucasian and Asian women, women with a family history of bone complications, early menopause and/or women who have a small body frame.

The immune system and aging

HIV affects each of us differently. Some people progress to symptoms very quickly; others live for 20-plus years without any signs of immune suppression or symptoms. Each of us age differently as well. How we age and how the aging of our bodies impacts our health is unique to each of us. The immune system is greatly affected by aging. Therefore, HIV infection—coupled with aging—creates added challenges for maintaining good health.

Our immune system's ability to perform declines with age. These changes happen at all levels, from chemical changes in how our cells communicate with one another to changes in immune organs altogether. A study is currently underway on the effects of HIV, aging and the immune system. However, it will likely be some time before information is available. In the meantime, here's some information to ponder.

The skin

The skin is the first line of defense against many infections. For many people, visible signs of skin aging begins at about 25 years—fine lines and wrinkles start to reveal the natural process of the skin breaking down. Then, as women enter menopause, the fatty underlayer of skin thins from hormonal changes. The skin also becomes more vulnerable to cuts and abrasions, and it loses some of its resilience and elasticity.

Most skin conditions associated with aging are relatively harmless and to some degree unavoidable. Others can be painful, itchy or even life-threatening, like cancer. Some include wrinkles, shingles, drying of the skin, skin lesions (from warts to liver spots), dermatitis, varicose veins and leg ulcers. HIV affects the skin as well. Often, skin conditions are among the first signs of immune dysfunction associated with HIV.

The thymus

This organ is located beneath the breastbone and above the heart. When we're born, the thymus is large, nearly covering the whole chest like a bib. The organ is important for developing new T-cells (also called naïve T-cells), including CD4+ and CD8+ cells.

In children this organ is very active, making many new T-cells and building the immune defenses that will help protect us late into our lives. In our early teens, the thymus has done most of its job. We're then generally considered to be immunologically adult. By the time we're in our early twenties, the thymus shrinks in size,

becomes fatty and is believed to contribute little to new T-cells for the rest of our lives. Thus, a healthy, HIV-negative 40-year-old is not likely to have much functioning thymus tissue.

One study has shown that people living with HIV are more likely to have a functioning thymus than HIV-negative people. This might be because the immune system is weakened and the thymus needs to re-grow in response to immune suppression. Even still, a 40-year-old with HIV is less likely to have robust thymus activity compared to a 20-year-old with HIV. Because this organ is so important for new T-cell development, how aging impacts the potential for immune reconstitution in HIV disease might be quite profound.

The new or naïve T-cell

Naïve T-cells are cells that can create an immune response and deal with new infections. Generally speaking, once a naïve T-cell encounters and creates an immune response to an infection, it then becomes a memory T-cell. The elderly have virtually no naïve T-cells. This is for two reasons: (1) over time naïve cells eventually become memory cells, and (2) there is little-to-no functioning thymus left to replenish the body's stores.

As you age, your immune system finds it difficult and sometimes impossible to respond to new infections like a young person would. Your immune system may take much longer to tackle an infection or it may simply not respond at all.

The immune system and aging

Interleukin-2 (IL-2)

As we age, calcium gets depleted from our bodies. Calcium is important for strong bones. It also helps cells produce chemicals called cytokines—what your immune system uses to communicate. IL-2 is one cytokine that is very important for T-cell reproduction and their long-term growth.

As T-cells age, they lose the ability to function properly and produce IL-2. As a person ages, there are changes in their T-cell function and, as individual cells age, there are changes in those cells' function as well. HIV infection also decreases IL-2 production and T-cell dysfunction is well documented in HIV disease.

Telomere length

With new technology, scientists can measure a telomere (end of a chromosome) and estimate the replicative history of a cell. In 100-year-old people, the telomere length inside their cells is very short. Some studies show that

the telomere length in cells from people with HIV is almost identical to those of a 100-year-old. This suggests that HIV hastens the aging of the immune system.

Other Cells

Aging impacts other cells as well, including B-cells, which are important for making antibodies. Antibodies help battle infections outside of cells. Studies suggest that antibodies in elderly people are limited, not able to deal with a broad range of infections. Auto-antibodies, or antibodies against the “self,” have been correlated with aging. They are more prevalent in elderly people and are associated with auto-immune diseases, like arthritis or skin conditions. Increased rates of auto-immune diseases are also associated with HIV infection. Moreover, the development of antibodies in response to vaccinations is markedly reduced in both HIV-positive people and the elderly.

These are just some of the ways of how aging impacts the immune system, and how they might interact with HIV infection. While both aging and HIV can profoundly affect the immune system, the take-home message mustn't be of despair, but rather a red flag to take action and support your immune system so that you can lead a healthy and long life.

In the face of aging and HIV infection, there are many ways to enhance and strengthen your immune system. One way to strengthen your body and its ability to fight disease is to work closely with a healthcare professional to find out what's best for you. Other ways include basic skin care, improving nutrition, getting age-appropriate health screening, promptly treating conditions when they occur and developing comprehensive preventive strategies.

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Menopause and HIV

Often called the change of life, menopause is a natural event that happens to every woman, but affects each woman uniquely. Menopause can happen “naturally” or be induced through surgery or therapy. At menopause, several changes happen to the female reproductive system: 1] the ovaries stop producing the female sex hormone, estrogen; 2] a woman stops menstruating (her period stops); and 3] a woman can no longer bear children.

Menopause can begin anywhere between 40 and 55. It is a slow and gradual process, occurring over 3–5 years. During this time you may have infrequent and/or inconsistent periods. Pre-menstrual symptoms (PMS) may intensify or change. Menopause is complete when you have not menstruated for 12 months in a row. Women living with HIV may experience irregularities in their cycles, even if they’re not going through menopause. It’s important you discuss this with your doctor, so you can tell if the changes are related to HIV, menopause or some combination.

The body changes that occur and the decrease in estrogen during menopause express themselves in many ways. For some women the physical signs are mild and they are able to cope with them. For others, menopausal symptoms are very severe and difficult to cope with. The decision to take treatment is yours. It may or may not be the right choice for you. Discuss your concerns and questions with your doctor. He or she can help you weigh the risks and the benefits.

Any type change in life can be difficult on you and those around you. For women with HIV, many of these life changes from aging are similar to the impact that HIV can have on your physical and emotional health. Take time to make yourself aware of these possible changes and encourage others to do the same.

The following chart can help you understand menopause symptoms, how they’re similar to HIV, the treatments and how to relieve symptoms.

Insomnia

Insomnia and night sweats can be very uncomfortable, making it difficult to sleep at night.

HIV CONNECTION

- Insomnia is very common with HIV for many reasons. Receiving an HIV diagnosis can be overwhelming, making it difficult to sleep well.
- Insomnia has also been associated with anti-HIV meds, like d4T (Zerit) and saquinavir (Fortovase).

OTHER THINGS YOU CAN DO

- Wear clothes that are made with breathable fabric (cotton, linen) and are cooler to sleep in.
- Avoid flannel sheets.
- Keep the window slightly open or keep a fan the room.
- Drink at least eight cups of water a day and keep a glass by the bed.

Skin and hair changes

The skin becomes less firm and drier. Hair becomes thinner and more brittle.

HIV CONNECTION

- Sudden or abnormal hair loss can result from taking anti-HIV meds, for example, indinavir (Crixivan).
- Other medications to treat cancers, circulatory disorders, ulcers and arthritis can also cause hair loss.

OTHER THINGS YOU CAN DO

- Avoid excessive hair dyeing, perming, straightening, braiding, and using hair dryers.
- Stress can also affect your hair growth and the health of your hair. Take steps to reduce stress and anxiety.
- B-complex vitamins can help relieve dry skin and hair.

Urinary Tract Infections

The walls of the urethra become thin which increases the chance of urinary tract infections. As the muscles, which support the bladder and the urethra weaken, urine leakage is more common.

TREATMENT

- ERT vaginal ring (see Hot Flashes).

HIV CONNECTION

- None.

Fatigue

Fatigue is a feeling of being constantly tired or having low energy even with enough rest. Activities like climbing stairs may be difficult. Fatigue can also be psychological, like having a hard time concentrating.

HIV CONNECTION

- A common symptom of HIV.
- A side affect of anti-HIV meds.
- Associated with anemia, also side effect of anti-HIV meds.

OTHER THINGS YOU CAN DO

- Try going to sleep at night and waking in the morning at the same time.
- A little exercise can ease stress and make you feel stronger and more energetic.
- Keep easy-to-prepare foods on hand for times when you’re too tired to cook.

Menopause and HIV

Hot Flashes

A hot flash is a sensation of heat in the face or moving across the upper half of the body. They last 30 seconds to several minutes and often times are accompanied by a rapid heart beat. Your skin may have a tingly sensation and you may experience chills, sweats or be unable to breathe well.

TREATMENT

- Hormone Replacement Therapy (HRT) is the combination of estrogen and progestin (a synthetic form of progesterone). Progesterone can protect against developing endometrial cancer (cancer of the uterine lining). HRT relieves hot flashes and night sweats.
- There are different schedules for taking HRT in pill form. You could take estrogen every day for a set number of days, add progestin for 10–14 days, and then stop taking one or both for a specific period of time. You would repeat the same pattern monthly. This cyclic schedule can cause light menstrual bleeding.
- You can take estrogen and progestin together every day of the month without any break. This continuous pattern can stop monthly bleeding after about six months of treatment. However, problem spotting may continue for longer. Talk with your doctor about the schedule that is best for you.
- Estrogen Replacement Therapy (ERT) is estrogen alone. Take as pill or tablet, vaginal creams, vaginal ring inserts, implants, shots or patches that stick to the skin and the body absorbs estrogen.
- Depending on your symptoms your doctor will suggest a certain form.

THINGS TO KNOW

- Women who have NOT had a hysterectomy (removal of uterus, including ovaries) can take HRT.
- HRT is known to worsen liver disease in some cases. Depending on the severity of liver damage, HRT may or may not be an option for you if you have liver disease. Discuss this with your doctor.
- Women with these conditions can talk with their doctors about the risks and benefits of HRT/ERT: high levels of triglycerides (fat in the blood), a personal or family history of blood clots and/or breast cancer and abnormal uterine bleeding.
- Side effects for both HRT/ERT include: vaginal bleeding, breast tenderness (this will go away after several months), nausea, bloating, headaches, dizziness and depression.
- Depending on the form, HRT/ERT can be stopped and started again. If you stop, their protective effects will stop and the side effects may continue.
- Your decision about hormone therapy should be reviewed each year with your doctor at your annual checkup.

HIV CONNECTION

- Night sweats are associated with HIV and HIV-related conditions.
- Side effects caused by HRT/ERT are also side effects caused by anti-HIV medications particularly nausea, bloating, headaches, dizziness and depression.
- Lipodystrophy affects many people living with HIV. Lipodystrophy refers to changes in fat distribution in the body and irregularities in certain blood tests (increase in triglycerides, “bad” cholesterol levels, risk of diabetes and elevated blood pressure). Discuss the risks and benefits of HRT and ERT with your doctor if you are experiencing lipodystrophy.

OTHER THINGS YOU CAN DO

- Avoid small spaces, caffeine, alcohol, spicy foods and hot humid weather.
- Vitamin E helps to relieve hot flashes.
- Drink plenty of water (at least eight cups a day).
- Women living with HIV often experience abnormal uterine bleeding. Talk with your doctor if you are having uterine bleeding and find out what the cause may be. It could be an infection that needs to be treated immediately.
- Read Project Inform’s publications, *Dealing with Drug Side Effects*, *Lipodystrophy* and *GYN Conditions*, available at 1-800-822-7422 and www.projectinform.org.

Phytoestrogens come from plants, herbs and seeds that have a similar structure to estrogen and can ease symptoms like hot flashes and vaginal dryness. Making phytoestrogens a part of your diet may help ease some symptoms. It is unknown how much and how often these should be taken. Examples: tofu, tempeh, soymilk and roasted soy nuts.

Vaginal dryness

The vagina becomes dry and the vaginal walls become thin causing pain. Intercourse may be painful.

TREATMENT

- ERT vaginal cream (see Hot Flashes).

HIV CONNECTION

- None.

OTHER THINGS YOU CAN DO

- Use water-based lubricant during intercourse. While not proven, vaginal gels containing wild yams have been used to relieve vaginal dryness. What ERT and these gels will do to HIV levels in the vagina is unknown.

Menopause and HIV

Memory loss or lack of concentration

You may have trouble remembering things like what you just did, or what you said to someone. It may be difficult for you to concentrate on one thing for long periods of time.

HIV CONNECTION

- Dementia is a brain disorder that affects a person's ability to think clearly and can impact his or her daily activities. AIDS dementia complex (ADC)—dementia caused by HIV infection—is a complicated syndrome made up of different nervous system and mental symptoms. These symptoms are somewhat common in people with HIV disease. Studies show that older HIV-positive people experience AIDS dementia more frequently than younger people.
- Some symptoms resembling forms of dementia can also be side effects of certain anti-HIV drugs.

OTHER THINGS YOU CAN DO

- Make lists of things to do and cross them out as you complete them.
- Ask a friend, family member or someone you trust to remind you about appointments, meds, etc.
- Do things that you do everyday at the same time.
- Talk with your doctor about getting tested for ADC.
- Read Project Inform's publication, *AIDS Dementia Complex*, available at 1-800-822-7422 and www.projectinform.org.

Osteoporosis

Osteoporosis is a disorder where a significant amount of bone mineral decreases, causing a loss of bone mass and strength. This loss is referred to as low bone mineral density. The bones become thinner and more likely to break from a fall or minor stress. Post-menopausal osteoporosis is very common in women. Estrogen protects your bones; so with the decrease in estrogen production, there is less protection of your bones. This puts you at risk for having weak bones.

TREATMENT

- HRT/ERT can reduce the risk of osteoporosis. Treatments for osteoporosis include: Alendronate Sodium (Fosamax), Risendronate (Actonel), Raloxifene (Evista), and Calcitonin (Miacalcin). Calcitonin is available as a nasal spray or injection.

THINGS TO KNOW

- Side effects for osteoporosis meds can include: Fosamax can cause abdominal or musculoskeletal pain, nausea, heartburn, irritation of the esophagus; Actonel can cause stomach upset, constipation, diarrhea, bloating, gas and headaches; and Miacalcin can cause an allergic reaction, skin rash and runny nose.

HIV CONNECTION

- Recent studies have found that people living with HIV have low bone mineral density. However, the causes and significance of lower bone mineral density

for HIV-positive people remains unclear. The data are conflicting as to whether this is related to specific anti-HIV treatments or all of them.

- Similar side effects are caused by anti-HIV meds.

OTHER THINGS YOU CAN DO

- Get a Bone Mineral Density test to measure the density of your bones (bone mass). It can determine whether you need medication to help maintain your bone mass, prevent further loss and reduce fracture risk. The test is painless and non-invasive.
- Weight-bearing exercises.
- Read Project Inform's publication, *Bone Problems*, available at 1-800-822-7422 and www.projectinform.org.

Heart palpitations

Heart palpitations occur when the heart beats irregularly or misses one or two beats.

HIV CONNECTION

- None.

OTHER THINGS YOU CAN DO

- Discuss this with your doctor; to be sure, be screened for heart disease.
- Entering menopause, women are at higher risk for heart disease. This symptom may be related to menopause or another cause.

Emotional changes and/or mild depression

You may experience highs and lows in your moods: one minute you're happy and the next you're irritable or feeling anxious.

TREATMENT

- HRT/ERT may improve mood and psychological well-being.

HIV CONNECTION

- Depression is associated with HIV and some specific anti-HIV meds and anti-hepatitis therapy. Women living with HIV experience more depression than men.

OTHER THINGS YOU CAN DO

- Let your family and friends know that you may not always feel good.
- Exercise can help ease and improve your mood swings.
- Meditation can also help.

Screening tests for women 50 and older

Screening tests are good preventive measures. Periodic health screenings can help you and your doctor identify health problems early, when treatment may be most successful. Women 50 and older are encouraged to have a yearly general physical exam, including a variety of routine tests. These tests are detailed below. They are only guidelines; your doctor may suggest different or additional tests or specific timing for the tests, depending on a variety of factors.

Test	What does it tell you?	How often?	Special Notes
Blood Pressure	Hypertension (high blood pressure) increases the risk of heart failure, heart attack, stroke and kidney failure.	Every 1–2 years.	Many people living with HIV have blood pressure measured as a routine part of doctor visits, every 3 or 6 months.
Fasting blood glucose test	Screening for diabetes.	Every 3 years.	Some people with HIV, especially those taking anti-HIV meds that include a protease inhibitor, may be having blood sugar levels checked regularly.
Bone mineral test	This test helps to identify low bone mass, which can lead to fractures and osteoporosis.	Discuss with your provider.	Some anti-HIV meds are believed to cause bone mineral loss and other bone problems, like osteoporosis. Even younger women who take anti-HIV meds may want to consider screening.
Breast self exam	Helps you to be aware of what feels normal and what doesn't. Talk with your provider about anything unusual.	Monthly. For the months with a scheduled mammography, do a breast self-exam close to the time of the appointment.	Some anti-HIV therapy relate to changes in body shape and composition (<i>lipodystrophy</i>). This includes breast enlargement. Thus, changes in your breasts might be due to drug side effects, making changes associated with other problems less noticeable.
Clinical breast exam, given by a doctor or health-care provider, and mammogram	This helps identify cysts, calcifications and tumors and is the most effective way to detect early breast cancer. A doctor exam will help to identify unusual breast symptoms like swelling, nipple discharge.	Annually.	Same as above.
Lipid protein profile	Total cholesterol: LDL (bad) cholesterol—main source of buildup and blockage in the arteries. HDL (good) cholesterol—helps keep cholesterol from building up in arteries. Triglycerides—another form of blood fat.	Every 5 years.	HIV has been shown to lower cholesterol levels, and some anti-HIV meds are known to raise cholesterol levels. Many people with HIV have cholesterol tests done regularly as part of routine lab work during regular doctor visits.
Eye and ear exam	Eye and ear health.	Every 2–4 years.	
Pap smear and pelvic exam	Cervical cancer and STDs.	Every 1–3 years after 3 consecutive normal tests.	Women living with HIV are at higher risk of developing cervical cancer, symptoms of STDs and other GYN conditions. For more information, read Project Inform's publication, <i>Gynecological Conditions</i> .

