

Condoms for the prevention of HIV transmission

FACT SHEET

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Summary

Condoms are physical barriers that can reduce the risk of a sexual exposure to HIV because they are made of materials that do not allow HIV to pass through them. The consistent and correct use of external (sometimes referred to as male) or internal (sometimes referred to as female) condoms is a highly effective strategy to help prevent the sexual transmission of HIV. When this highly effective strategy is used consistently and correctly the risk for HIV transmission is very low. Condoms are also highly effective at preventing other sexually transmitted infections (STIs).

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What types of condoms are available to prevent HIV transmission?

Two types of condoms are available to prevent the sexual transmission of HIV:

The **external condom**, also known as the male condom, is a sheath made from polyurethane, latex or polyisoprene, which covers the penis during sexual intercourse. There are many types and brands of external condoms available.

The **internal condom**, also known as the insertive or female condom, is a pouch made of polyurethane or nitrile. The internal condom was designed for vaginal sex but can also be used for anal sex. The pouch is open at one end and closed at the other, with a flexible ring at both ends. The ring at the closed end is inserted into the vagina or anus to hold the condom in place. The ring at the open end of the pouch remains outside of the vagina or anus.

How do condoms help prevent the sexual transmission of HIV?

Condoms help prevent HIV transmission by reducing the risk of an exposure to HIV during sex.

Laboratory studies show that the materials used to make most condoms (such as latex, nitrile, polyurethane and polyisoprene) do not let HIV pass through them. Condoms act as a barrier to HIV infection by preventing the vagina, penis, rectum and mouth from being exposed to bodily fluids (such as semen, vaginal fluid and rectal fluid) that can contain HIV.

Some condoms are made from a thin membrane of sheep intestine. These natural membrane condoms are also known as lambskin condoms. They can be used to help prevent pregnancy, but *they should not be used as an HIV prevention strategy* because HIV can pass through them.

How effective are condoms at preventing the sexual transmission of HIV?

Condoms are a highly effective strategy to help prevent the sexual transmission of HIV when they are used consistently and correctly. They have been well studied in laboratory tests. It has been determined that condoms made of latex, polyurethane, nitrile and polyisoprene are impermeable to HIV, meaning that HIV cannot pass through them.

Condoms can fail to prevent an exposure to HIV if they break, slip or leak during sex. These types of mechanical condom failures are relatively rare, with studies estimating that external condoms fail between 0.4% and 6.5% of the time and that internal condoms fail between 0.1% and 5.6% of the time.

In studies of condom breakage, slippage and leakage, it was not possible to know how many participants were using condoms correctly. However, research suggests that rates of condom failure decrease with more frequent condom use and more experiences of previous failure. This evidence all points to the conclusion that over time people learn to use condoms correctly and this reduces failure rates. However, a risk of failure is always possible, even for experienced condom users who use condoms consistently and correctly.

The effectiveness of condoms in reducing HIV transmission risk has not been evaluated in randomized controlled trials, which are generally considered to produce the highest quality evidence. However, observational studies of external condoms have been conducted among mixed-status couples (in which one partner is HIV positive and the other is HIV negative). Meta-analyses have also been conducted, in which researchers have combined and analyzed the results of many observational studies. Meta-analyses of studies in heterosexual couples have estimated that the effectiveness of consistent condom use ranges between 69% and 94%. Similar results (70% to 91% effectiveness) have been observed in studies of gay, bisexual and other men who have sex with men (gbMSM). This wide range of estimates may have to do with the limitations of observational research and the different ways in which researchers have conducted the analyses. Observational studies and the meta-analyses of these studies have inherent problems that don't allow us to know how effective condoms are when used consistently and correctly. These observational studies have three key limitations:

- The researchers did not ask people about whether they were using condoms correctly. We know that incorrect use can cause condoms to break, slip or leak, allowing HIV to enter the body.
- To determine whether condoms were being used consistently, these studies relied on what participants told the researchers about their condom use. Self-reports can be an unreliable way of measuring behaviours that may be considered socially undesirable, such as sex without a condom. Couples may not have used a condom for every sex act, even though they reported using them consistently.
- In these studies, couples were not randomly assigned to use condoms or not. Without randomization, the two groups (the group that said they used condoms consistently and the group that said they did not) may have been different in other ways that may have contributed to a lower level of effectiveness.

How can service providers improve the uptake and correct use of condoms?

1. Improve awareness of condoms as a highly effective HIV prevention strategy and knowledge of how to use them correctly.

Education and counselling activities related to sexual health and HIV prevention should include information on the HIV prevention benefits of condoms. External or internal condoms can be used for both vaginal and anal sex. Service providers can promote condoms as one of several highly effective ways to prevent the sexual transmission of HIV, along with pre-exposure prophylaxis (PrEP), post-exposure prophylaxis (PEP) and the use of antiretroviral treatment (ART) to maintain an undetectable viral load. Encourage clients to choose the combination of strategies that will work most effectively for them.

It is also important to provide education on how to use condoms correctly, to prevent breakage, slippage and leakage during sex and to maximize condom effectiveness. The correct use of condoms means:

- finding an external condom with the right fit and feel (not too small or large)
- storing condoms at room temperature and regularly replacing condoms that are kept in a wallet, purse or pocket
- checking the expiry date and making sure the packaging isn't damaged
- using a new condom for every act of vaginal or anal sex and considering using a condom for oral sex
- using a new condom with every sex partner or when sharing sex toys
- putting the condom on and taking it off correctly

- applying sufficient and appropriate lubrication (only water- or silicone-based lubricants should be used with latex condoms; saliva should not be used as lubrication)
- using a condom for the entire act of sex (no delayed application or early removal)

The correct way to put on and take off an **external condom** is to:

- carefully open the packaging so the condom does not tear
- ensure the condom is put on the right way round
- if the condom is going on an uncircumcised penis, pull back the foreskin
- squeeze the tip of the condom and roll it over the erect penis (to remove air and leave space for semen to collect) and ensure it is unrolled to the base of the penis
- if the condom is going on a sex toy, simply squeeze the tip and roll it over the sex toy (to remove air) and ensure it is unrolled to the base of the sex toy
- immediately after sex, hold on to the condom while pulling the penis or sex toy out of the vagina or anus
- carefully pull the condom from the penis only when there is no contact with the partner's body and take care that no semen spills out
- safely dispose of the condom

The correct way to put on and remove an **internal condom** is to:

- carefully open the packaging so the condom does not tear
- squeeze together the sides of the inner ring at the closed end of the condom and insert into the vagina or anus
- push the closed end of the condom and inner ring into the vagina or anus as far as it will go, with the open-ended outer ring lying outside the vagina or anus

- if the outer ring is pushed inside the vagina or anus, stop and put it back in the right place
- apply lubricant to the penis or sex toy before insertion
- make sure the penis or sex toy enters the condom and does not go between the condom and the wall of the vagina or rectum
- immediately after sex, hold on to the open end of the condom as the penis or sex toy is withdrawn.
- slightly twist the open end of the condom and pull it out to remove it, taking care not to spill any semen in the vagina or rectum
- safely dispose of the condom

Unlike most other HIV prevention strategies, condoms can help to prevent other STIs such as gonorrhea, chlamydia, herpes and syphilis, as well as unintended pregnancy. It is important to encourage condom use when there is an STI present or when there is a risk for STI transmission.

2. Facilitate and support the use of condoms as a prevention strategy.

Condoms and lubricant should be made available and offered to clients (for free, if possible). Service providers can support clients to overcome barriers to consistent and correct condom use. Common barriers to consistent condom use may include difficulty negotiating their use, lack of availability at the time of sex, difficulty getting or maintaining an erection, reduced pleasure or intimacy, discomfort and latex allergies. Possible solutions to these barriers include planning ahead to ensure condoms are available, using lubricant and finding the brand of condom that works best for the person. The solution to latex allergies may be to use non-latex external condoms or to opt for an internal condom instead of an external condom. Exploring barriers to condom use can facilitate a discussion about other highly effective HIV prevention strategies, such as the use of PrEP, for example.

Consider couples-based counselling for people in relationships (whether monogamous or not). This may help to create a supportive space for people in relationships to come to a consensual agreement

on how to lower their chances of HIV transmission, find ways to support each other in using HIV prevention strategies consistently and correctly, and discuss potentially sensitive issues relevant to HIV prevention and condom use.

3. Encourage a comprehensive plan for sexual health.

There are multiple approaches to HIV and STI prevention that can be combined in different ways. Discuss how condoms fit into a comprehensive plan for sexual health, including regular STI testing and other safer sex strategies. It is important that clients understand the benefits and limitations of condoms, and the other options available to them, so they can make an informed decision about how condoms fit into their own comprehensive sexual health plan.

For example, a person taking PrEP can use condoms as an additional HIV prevention method if they miss a PrEP dose. A person who uses condoms regularly may want to consider taking PEP if they experience condom failure (a break, slip or leak) and have a potential HIV exposure. An additional benefit of condoms is that they can also help prevent STIs, which other highly effective HIV prevention strategies do not.

4. Address underlying risk of HIV transmission.

HIV prevention counselling offers an opportunity to engage individuals in additional services. In addition to reinforcing safer sex strategies and providing information about all HIV prevention options, service providers can help clients address the underlying factors that may increase their HIV risk, such as depression or use of alcohol and other substances. Providing referrals and linkage to other appropriate and relevant support services can help set people up to successfully adopt HIV prevention strategies.

5. Be prepared to discuss the legal issues around HIV disclosure.

Canadian law requires that people tell their sex partners that they have HIV in certain

circumstances. Using a condom does not necessarily remove the duty to disclose. However, the law and its application are evolving. For the most up-to-date information on when people with HIV have a legal duty to disclose their HIV status, contact the [HIV Legal Network](#).

Resources

[Using condoms](#)

[External condoms and lube for safer sex](#)

[Internal condoms and lube for safer sex](#)

[Seven ways to prevent HIV](#)

[Seven ways to prevent HIV \(video\)](#)

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Decisions about particular medical treatments should always be made in consultation with a qualified medical practitioner knowledgeable about HIV- and hepatitis C-related illness and the treatments in question.

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