

# HPV, anal dysplasia and anal cancer

## Summary

Anal cancer typically develops over a period of years, beginning with a precancerous condition called *anal dysplasia*.

Anal dysplasia occurs when clusters of abnormal cells form *lesions* in the mucosa (“wet lining”) of the anal canal (between the anus and the rectum). These lesions may also form just outside the anal opening.

A sexually transmitted virus called *human papillomavirus* (HPV) causes most cases of anal dysplasia and anal cancer. There are different types of HPV. Only some types cause anal dysplasia and anal cancer.

Screening tests can sometimes detect anal dysplasia. If treated early, anal dysplasia is less likely to develop into anal cancer. Treatments are used to remove the lesions before they turn into cancer.

Anal cancer is usually treated with radiation and chemotherapy or with surgery, to remove the cancer, slow its growth and/or prevent it from spreading.

People living with HIV have a higher risk of developing anal cancer.

There are several vaccines that can prevent acquiring the most common types of HPV that can lead to anal cancer.

Consistent and correct condom use reduces, but does not eliminate, the risk of getting HPV or passing it to someone else.

Quitting smoking can help reduce the risk of developing anal dysplasia and anal cancer.

## FACT SHEET

Published  
2023

[www.catie.ca](http://www.catie.ca)

 /CATIEinfo

Getting regular anal *Pap tests* and digital rectal exams may help to catch anal dysplasia or anal cancer early, improving treatment outcomes.

Key messages for clients on HPV, anal dysplasia and anal cancer, are available at the end of this fact sheet.

**The words we use here** – CATIE is committed to using language that is relevant to everyone. People use different terms to describe their genitals. This text uses medical terms, such as vagina and penis, to describe genitals. Cisgender<sup>i</sup> people can often identify with these terms. Some transgender<sup>ii</sup> people may use other terms, such as front hole and strapless. CATIE acknowledges and respects that people use words that they are most comfortable with.

## What are anal dysplasia and anal cancer?

Anal cancer starts as a precancerous condition called anal dysplasia (abnormal changes in cells) in the lining (mucosa) of the anal canal (the area connecting the anus to the rectum). Groups of these abnormal cells form areas of abnormal tissue called lesions. Over time, these lesions can develop into cancer.

Some lesions form but then shrink or disappear; some lesions return after disappearing; and some remain present without changing. Other lesions progress from low-grade to high-grade lesions, which may then progress to cancer. Anal cancer happens when cells in the anus or anal canal grow and multiply uncontrollably, spreading into and damaging surrounding tissue.<sup>1-4</sup>

## What causes anal dysplasia and anal cancer?

A sexually transmitted virus called human papillomavirus (HPV) causes almost all cases of anal dysplasia and anal cancer. This makes HPV the most important risk factor for anal cancer.

Some types of HPV can be transmitted sexually, through bodily fluids, such as semen and vaginal secretions. HPV can also be transmitted through skin-to-skin contact (such as genital-to-genital contact) even when bodily fluids are not present.

Only some types of HPV cause anal dysplasia and anal cancer. HPV types 16 and 18, in particular, account for most cases of anal cancer, as well as most cases of cervical cancer. Other types can cause warts on, in or around the anus or genitals (*anogenital warts*).

Most sexually active people acquire HPV at some point in their lives. In most cases, an HPV infection will clear from the body on its own without causing any health problems. However, this does not make someone immune to future infections with other types of HPV.

One way in which HPV may cause cancer is by interfering with how the body prevents cancer from developing. The human body produces cells that make proteins, which help prevent dysplasia and cancer. In some cases, HPV can shut off these proteins.<sup>1,5-9</sup>

## Who is at risk?

Anyone who is sexually active can get HPV, including the types that cause anal cancer.

HPV can be passed through vaginal sex, anal sex and oral sex (mouth on penis, mouth on vagina). It can also be passed through oral-anal contact (rimming) and the sharing of sex toys.

Engaging in receptive anal intercourse can increase the risk of anal cancer later because it increases the risk of getting an HPV infection in or around the anus.

Other factors can contribute to the development of anal dysplasia and anal cancer, when HPV is present.

People with weakened immune systems are at greater risk for anal dysplasia and anal cancer. This includes people living with HIV.

Other important risk factors for anal dysplasia and anal cancer include cigarette smoking, diets lacking

in fruit and vegetables, being over the age of fifty, and history of other sexually transmitted infections.

Symptoms or history of other HPV-related conditions, such as cervical cancer, can also indicate that a person is at risk for anal cancer, because the HPV types that cause these conditions might also cause anal cancer.

People living with HIV have a higher risk of acquiring an HPV infection and of developing precancerous lesions. They also have higher rates of anal cancer, particularly among gay, bisexual and other men who have sex with men (gbMSM) living with HIV. GbMSM living with HIV who also have a history of hepatitis B infection may be at still higher risk of developing anal cancer.<sup>1,7,8,10-13</sup>

## Symptoms

Individuals with anal dysplasia often do not experience any clear symptoms until it is quite advanced or has become anal cancer. Early stage anal cancer may not produce any signs or symptoms either. In more advanced anal cancer, bleeding from the anus is the most common symptom, and usually the first. The blood may be visible in the stool (poo). The amount of blood may be very small. Other possible symptoms include lumps around the anus or groin, abnormal discharge from the anus or changes in bowel habits (such as narrow stool, constipation or diarrhea). Because not all of these symptoms are specific to anal cancer, they may be mistaken for other conditions.

Having anogenital warts may be a sign that a person should be tested for anal dysplasia or cancer. Even though anogenital warts and anal cancer are caused by different types of HPV, people with the type(s) that cause anogenital warts are more likely to also have the type(s) that cause anal cancer. Anogenital warts usually consist of a series of bumps or mini-cauliflower-like growths. These may be easily visible if they are located in, on or around the vagina or anus. Warts on the cervix or in the anal canal may not be detected prior to internal examination.<sup>1,2,6,14,15</sup>

## Development of anal cancer

The abnormal cells that develop as a result of anal dysplasia can eventually develop into anal cancer, particularly if not detected and treated early. Because anal dysplasia is hard to detect with routine screening, it may not be diagnosed before it becomes anal cancer.

If the cancer has spread deeply into the tissues of the anal canal and/or rectum, removing the cancer or preventing its spread may make the bowels not function properly.

If anal cancer is not diagnosed and treated early, the cancer is more likely to spread to other parts of the body. More aggressive cancer treatments may then be required.<sup>1,5,6</sup>

## Testing and diagnosis

Routine medical check-ups with anal examinations by healthcare providers may help to detect early cancers. These routine examinations involve a digital anorectal exam (DARE) to feel for tumours (lumps that might be cancerous) in the anal canal. DARE usually cannot detect anal dysplasia. An annual DARE may be useful for gbMSM who are living with HIV, as well as gbMSM who engage in receptive anal sex (bottoming). PHAC recommends DARE for people living with HIV who have anogenital warts.

Another type of examination, called an anoscopy, can detect anal dysplasia. An anoscopy is a visual examination of the anal canal using a device called an anoscope. An anoscope is a small hollow plastic tube with a light on the end of it, that is inserted a few centimetres into the anal canal to inspect for lesions. The anoscope is inserted with lubricant to minimize discomfort.

There is a special kind of anoscopy, called high-resolution anoscopy (HRA), which is better still at detecting anal dysplasia. HRA uses a magnifier to provide more detailed images of the mucosa. During the HRA procedure, lesions are enhanced by first applying a thin layer of dilute vinegar to the mucosa and then iodine to highlight any abnormal or precancerous areas.

During an HRA, a biopsy (tissue sample) may be taken of an abnormal area, using forceps (a special kind of pinchers or tweezers). The tissue sample is then examined in a laboratory to determine if a high-grade lesion is present. Pain is rare. No bowel preparation is necessary before this procedure. The drawback of HRA is that it is not widely available. It must be performed by a trained and specialized healthcare provider.

Another, more widely available test, called an Anal Pap test, may be useful as a screening tool to detect anal dysplasia. Anal Pap tests take around five minutes to complete. Cells collected from a swab inserted in the anus are examined under a microscope.

One drawback of Anal Pap tests is that they often fail to diagnose the correct degree of dysplasia (low-grade/high-grade). They also have a high rate of false negatives for the highest risk groups (false negatives are when a test says someone does not have a disease, when they actually do). Among gbMSM living with HIV, rates of false negatives for Anal Pap tests can be particularly high. For these reasons, it may be useful to screen using an anal Pap test as well as an HRA (if available).

CT (computed tomography) scans or MRIs (magnetic resonance imaging) do not detect dysplasia, but may detect cancer. Other examinations, such as sigmoidoscopy and colonoscopy, do not adequately examine the anal canal. Having a colonoscopy does not necessarily mean a person has been screened for anal cancer.

Some anal cancers occur just outside of the anal canal (perianal area). These may be visible by spreading the buttock cheeks. A biopsy of the perianal skin will confirm the diagnosis.<sup>1,6,12,16–19</sup>

## Notification of partners

HPV is not a reportable infection in Canada. This means that when an infection is confirmed by a clinic, healthcare provider or laboratory it is not required to be reported to public health authorities. Partner notification is not required as a public health measure, unlike with a diagnosis of chlamydia, gonorrhoea, syphilis or HIV.<sup>20</sup>

## Treatment

HPV itself cannot be treated, but the immune system is able to clear most cases of HPV. A variety of treatments are used for anal dysplasia and anal cancer. Treatments vary, depending on severity, location and size, and whether any cancer present has spread to other parts of the body.

There are several ways that anal dysplasia may be treated:

- *Cryotherapy* destroys the lesion by freezing. This procedure can be done in the doctor's office. There can be some discomfort or pain.
- *Laser treatment* destroys the lesion with an intense beam of infrared light. This procedure is often done in a day-surgery clinic. It can be uncomfortable and can cause slight bleeding afterwards.
- *Electrocautery (EC)*: The lesion is destroyed using heat from an electric current, applied using an electrode. Using a gentle brushing technique, the dead tissue is then removed with forceps.
- *TCA (trichloroacetic acid)*: The lesion is treated by being touched with acid-soaked cotton. This is simple and painless but four or more treatments may be needed over several weeks.
- *Surgery*: The lesion is cut out by a surgeon. Surgery may also involve removing part of the lining of the anal canal.
- *Watch and wait*: Sometimes the dysplasia is too widespread to remove without causing damage to the anus. In this case, healthcare providers may just observe it for months or years. If cancer does develop, it can be treated very early and with good results.
- *Topical treatments*: A medication called imiquimod is sometimes prescribed in a cream formulation. Applied regularly to an affected area, this medication can help the immune system to attack lesions. An anti-cancer drug called fluorouracil may also be prescribed in cream formulation.

If cancer is present, treatment may involve surgery, chemotherapy, radiation therapy or a combination of these.

- Surgery called “local excision” may be used to remove small, early-stage tumours. If the cancer is small, this may be enough. If the cancer has already spread more deeply into the tissues, trying to remove the cancer may impair the function of the anus (which is to help regulate the passage of stools). In this case, the anus and part of the rectum are removed and stool is diverted to a bag attached to the body (this procedure is called a colostomy).
- Early diagnosis and treatment is important, because people with advanced forms of anal cancer are at increased risk of the cancer spreading to other areas of the body.<sup>3,6,12,14,21,22</sup>

## What about HIV?

HIV weakens the immune system which can make a person more vulnerable to some cancers.

Effective HIV treatment (also known as antiretroviral therapy or ART) can lower the risk of developing some cancers. However, even with effective HIV treatment, people living with HIV have a higher risk of HPV infection, more often carry multiple HPV types and have a higher risk of HPV-related disease—including faster progression to cancer. Therefore, people with HIV should get regular care, including screening for HPV-related disease and talk with a doctor or nurse about getting vaccinated against HPV if necessary.<sup>1,23,24</sup>

## Prevention

HPV vaccines are widely available and highly effective at preventing certain types of HPV, including those that most often cause anal dysplasia and anal cancer.

The vaccines do not provide protection against HPV types that people are already infected with but provide excellent protection against HPV types the person has not been exposed to.

It is also important to remember that even if someone has received one of the vaccines, they are

only protected against the cancer-causing HPV types covered by the vaccine they have received.

Different vaccines prevent different types of HPV. Although several vaccines are approved to reduce the risk of HPV infection (and related cancer) in Canada, the most commonly used today reduces the risk of infection with nine types of HPV. This vaccine is called Gardasil-9.

It is estimated that, in Canada, immunization against HPV types 16 and 18, can prevent between 70% and 84% of anal and genital cancers.

Because the types of HPV that cause anal dysplasia and anal cancer are transmitted sexually, prevention benefits are greatest if a person is vaccinated before they have had their first sexual encounter. But even if a person is sexually active or has already acquired an HPV infection, vaccination can protect them from getting types of HPV they have not yet acquired.

People living with HIV are at reduced risk from HPV infection when given HPV vaccination. However, it is unclear whether HPV vaccination is as effective among people living with HIV as it is among people who are not living with HIV.

All provinces and territories provide school-based immunization programs for young people, starting in grades four to seven. “Catch-up” programs are also available in all provinces and territories for people who did not receive vaccination through school-based programs, but availability varies, based on age or sex.

The correct and consistent use of condoms during insertive vaginal and anal sex can reduce the risk of transmitting HPV, but does not eliminate the risk completely. This is because HPV can be transmitted from areas of skin not covered by a condom to the skin of a sexual partner.

There are two types of condoms available. The external condom (sometimes called the “male” condom) is a sheath made from polyurethane, latex or polyisoprene that covers the penis during sex. The internal condom (sometimes called the insertive or “female” condom) is a pouch made of polyurethane or a synthetic latex material called nitrile that can be inserted into the vagina or

rectum. Some trans men may cut a condom or oral dam to fit their genitals.

The use of condoms or oral dams can reduce the risk of passing on HPV during oral sex or rimming.

When sharing sex toys, using a new condom and cleaning the toy between each use can reduce the risk of HPV transmission.

Quitting or reducing smoking reduces the risk of developing anal dysplasia and anal cancer.

Screening for anal dysplasia can increase the chances of catching the dysplasia early, so that it can be treated before cancer develops.<sup>1,23,25–29</sup>

## Notes

I Cisgender – someone whose gender identity aligns with the sex they were assigned at birth

II Transgender – an umbrella term that describes people with diverse gender identities and gender expressions that do not conform to stereotypical ideas about what it means to be a girl/woman or boy/man in society

(Definitions taken from *Creating Authentic Spaces: A gender identity and gender expression toolkit to support the implementation of institutional and social change*, published by The 519, Toronto, Ontario.)

## Resources

Condoms for the prevention of HIV transmission – *fact sheet*

Safer Sex Guide – *client resource*

Oral Sex – *client resource*

Viral STI Basics – *fact sheet*

Sexually Transmitted Infections – *booklet (Public Health Agency of Canada)*

## References

- Public Health Agency of Canada. *Canadian Guidelines on Sexually Transmitted Infections. Chapter. 5 Management and Treatment of Specific Infections. Human papillomavirus (HPV) infections*. 2014. Available at: <https://www.canada.ca/content/dam/phac-aspc/migration/phac-aspc/std-mts/sti-its/assets/pdf/section-5-5a-eng.pdf>. [Accessed Nov 28, 2022]
- Canadian Cancer Society. *Anal Cancer*. 2022. Available at: <https://cancer.ca/en/cancer-information/cancer-types/anal>. [Accessed Nov 28, 2022]
- Cleveland Clinic. *Anal Cancer*. 2022. Available at: <https://my.clevelandclinic.org/health/diseases/6151-anal-cancer#:~:text=Anal%20cancer%20happens%20when%20abnormal,surgery%2C%20chemotherapy%20and%20radiation%20therapy>. [Accessed Nov 28, 2022]
- National Cancer Institute U.S. Department of Health and Human Services. *Dictionary of Cancer Terms: lesion*. Available at: <https://www.cancer.gov/publications/dictionaries/cancer-terms/def/lesion>. [Accessed Nov 28, 2022]
- BC Centre for Disease Control. *Human Papillomavirus (HPV) / Genital Warts*. Available at: [http://www.bccdc.ca/health-info/diseases-conditions/human-papillomavirus-\(hpv\)-genital-warts](http://www.bccdc.ca/health-info/diseases-conditions/human-papillomavirus-(hpv)-genital-warts) [Accessed Nov 28, 2022]
- Canadian Cancer Society. *Precancerous conditions of the anus*. Available at: <https://cancer.ca/en/cancer-information/cancer-types/anal/what-is-anal-cancer/precancerous-conditions>. [Accessed Nov 28, 2022]
- Medford RJ, Salit IE. Anal cancer and intraepithelial neoplasia: Epidemiology, screening and prevention of a sexually transmitted disease. *Canadian Medical Association Journal*. 2015 Feb 3;187(2):111–5.
- Siddharthana RV, Lanciault C, Tsikitis VL. Anal intraepithelial neoplasia: Diagnosis, screening, and treatment. *Annals of Gastroenterology*. 2019 May 3;32(3):257–63.
- The Society of Obstetricians and Gynaecologists of Canada. *HPV: Treatment*. 2022. Available at: <https://www.hpvinfos.ca/%20treatment/>. [Accessed Nov 28, 2022]
- Canadian Cancer Society. *Risk factors for anal cancer*. Available at: <https://cancer.ca/en/cancer-information/cancer-types/anal/risks>. [Accessed Nov 28, 2022]
- American Cancer Society. *Risk Factors for Anal Cancer*. 2020. Available at: <https://www.cancer.org/cancer/anal-cancer/causes-risks-prevention/risk-factors.html>. [Accessed Nov 28, 2022]
- Hirsch B, MCGowan JP, Fine SM et al. *Screening for Anal Dysplasia and Cancer in Adults With HIV*. Johns Hopkins University HIV Clinical Guidelines Program. 2022.
- Aldersley J, Lorenz DR, Misra V et al. Increased risk of anal squamous cell carcinoma in HIV-positive men with prior hepatitis B virus infection. *AIDS*. 2019 Jan 2;33(1):145–52.
- Pelvic Floor Center and Colon & Rectal Surgery Associates. *Abnormal Anal Pap test, Anal Dysplasia and Anal Cancer*. 2016. Available at: <http://www.pelvicfloorcenter.org/content/abnormal-anal-pap-smear-anal-dysplasia-and-anal-cancer>. [Accessed Nov 28, 2022]
- American Cancer Society. *What is Anal Cancer?* 2017. Available at: <https://www.cancer.org/cancer/anal-cancer/about/what-is-anal-cancer.html>. [Accessed Nov 28, 2022]
- Centers for Disease Control and Prevention. *CDC Human Papillomavirus (HPV) Infection - STI Treatment Guidelines*. 2021. Available at: <https://www.cdc.gov/std/treatment-guidelines/hpv-cancer.htm#print>. [Accessed Nov 28, 2022]
- Leeds IL. Anal cancer and intraepithelial neoplasia screening: A review. *World Journal of Gastrointestinal Surgery*. 2016;8(1):41.
- Weiss ES. RE: Recommendations re: cancer screening. *Canadian Medical Association Journal*. 2018. Available at:



<https://www.cmaj.ca/content/re-recommendations-re-cancer-screening>. [Accessed Nov 28, 2022]

19. Public Health Agency of Canada. *Laboratory Diagnosis of Sexually Transmitted Infections*. 2016 Dec.

20. Public Health Agency of Canada. *Human Papillomavirus (HPV)*. 2020. Available at: <https://www.canada.ca/en/public-health/services/infectious-diseases/sexual-health-sexually-transmitted-infections/human-papillomavirus-hpv.html#sm>. [Accessed Nov 28, 2022]

21. National Cancer Institute U.S. Department of Health and Human Services. *Dictionary of Cancer Terms: infrared coagulation*. Available at: <https://www.cancer.gov/publications/dictionaries/cancer-terms/def/infrared-coagulation>. [Accessed Nov 28, 2022]

22. Cleveland Clinic. *Laparoscopic Abdominoperineal Resection*. 2021. Available at: <https://my.clevelandclinic.org/health/treatments/3897-laparoscopic-abdominoperineal-resection-basic-surgical-steps>. [Accessed Nov 28, 2022]

23. Staadegaard L, Rönn MM, Soni N, et al. Immunogenicity, safety, and efficacy of the HPV vaccines among people living with HIV: A systematic review and meta-analysis. *eClinicalMedicine*. 2022;52:101585

24. Palefsky JM. Human papillomavirus-associated anal and cervical cancers in HIV-infected individuals: Incidence and prevention in the antiretroviral therapy era. *Current Opinion in HIV and AIDS*. 2017 Jan; 12(1):26–30.

25. Canadian Cancer Society. *Reducing your risk for anal cancer*. Available at: <https://cancer.ca/en/cancer-information/cancer-types/anal/risks/reducing-your-risk>. [Accessed Nov 28, 2022]

26. Public Health Agency of Canada. *Updated Recommendations on Human Papillomavirus (HPV) Vaccines: 9-valent HPV vaccine 2-dose immunization schedule and the use of HPV vaccines in immunocompromised populations*. Available at: <https://www.canada.ca/en/public-health/services/publications/healthy-living/updated-recommendations-human-papillomavirus-immunization-schedule-immunocompromised-populations.html>. [Accessed Feb 20, 2023]

27. BC Centre for Disease Control. *Smart Sex Resource: Know Your Chances*. Available at: <https://smartsexresource.com/sexually-transmitted-infections/sti-basics/know-your-chances/>. [Accessed Nov 28, 2022]

28. Lacey CJ. HPV vaccination in HIV infection. *Papillomavirus Research*. 2019 Dec 1;8: 100174

29. Canadian Partnership Against Cancer. *Access to HPV immunization across Canada*. Available at: <https://www.partnershipagainstcancer.ca/topics/hpv-immunization-policies/access-hpv-immunization/>. [Accessed Nov 28, 2022]

**This fact sheet was developed in partnership with the Sex Information and Education Council of Canada (SIECCAN).**

**Author:** Miller D

## Disclaimer

CATIE strengthens Canada's response to HIV and hepatitis C by bridging research and practice. We connect healthcare and community-based service providers with the latest science, and promote good practices for prevention and treatment programs.

CATIE endeavours to provide up-to-date and accurate information at the time of publication, but it should not be considered medical advice. Decisions about particular medical treatments should always be made in consultation with a qualified medical practitioner. CATIE resources may contain descriptions or depictions of sex, sexuality or drug use, with the goal of promoting public health. Any opinions expressed herein may not reflect the policies or opinions of CATIE or any partners or funders.

Production of this document has been made possible through a financial contribution from the Public Health Agency of Canada.

## Permission to reproduce

This document is copyrighted. It may be reprinted and distributed in its entirety for non-commercial purposes without prior permission, but permission must be obtained to edit its content. The following credit must appear on any reprint: *This information was provided by the Canadian AIDS Treatment Information Exchange (CATIE). For more information, contact CATIE at info@catie.ca.*

CATIE fact sheets are available for free at [www.catie.ca](http://www.catie.ca)

[www.catie.ca](http://www.catie.ca)

 /CATIEinfo



# What you need to know about human papillomavirus (HPV) and anal cancer

*Human papillomavirus (HPV)* is a virus that is most easily passed during sexual contact. The body clears most HPV on its own. But certain types of the virus can cause a condition called *anal dysplasia*, which can then develop into anal cancer. Other types of HPV can cause other types of cancer. Some other types can cause warts of the genitals or anus (*anogenital warts*).

HPV cannot be cured by medication, but vaccines can prevent a person from getting some types of HPV, including the types that most often cause anal cancer. Consistent and correct condom use can reduce but not eliminate the risk of getting or passing on HPV during anal, vaginal or oral sex, and when sharing sex toys.

Early screening and treatment for anal dysplasia can help prevent anal cancer from developing. If anal cancer is caught and treated early, this can prevent the cancer from getting worse or spreading.

**The words we use here** – CATIE is committed to using language that is relevant to everyone. People use different terms to describe their bodies. This text uses medical terms, such as vagina and penis, to describe genitals. Other people may use other terms, such as private parts or dick or front hole. CATIE acknowledges and respects that people use words that they are most comfortable with.

## FACT SHEET

Published  
2023

[www.catie.ca](http://www.catie.ca)

 /CATIEinfo

## What are human papillomavirus (HPV), anal dysplasia and anal cancer?

HPV is a virus that is most easily passed on during sex. There are many different types of HPV, and they can infect different parts of the body. Many people with HPV have no symptoms, so they don't know they have it – but they can still pass HPV on to someone else.

Some types of HPV can cause cancers, including cancer of the anus and anal canal (anal cancer).

Anal cancer starts as a condition called anal dysplasia. Anal dysplasia happens when abnormal cells form areas of abnormal tissue called *lesions*.

Anal dysplasia usually doesn't show symptoms, particularly in the early stages. Similarly, anal cancer often shows no clear symptoms until it is advanced and harder to treat. Symptoms of anal cancer can include:

- bleeding from the anus or blood in the stool (poo, shit)
- lumps around the anus or groin
- abnormal discharge
- changes in bowel habits (such as narrow stool, constipation or diarrhea)

Some of these symptoms are not specific to anal cancer, so they may be mistaken for other conditions.

## Am I at risk of getting HPV, anal dysplasia or anal cancer?

Almost all cases of anal dysplasia and anal cancer are caused by HPV, so having HPV is the most important risk factor for these conditions.

Anyone who is sexually active, including people who experience sexual violence, can get HPV.

HPV is most easily passed on during condomless insertive sex. This includes anal sex and vaginal sex.

HPV can also be passed on through:

- oral sex (mouth on penis; mouth on vagina)

- oral-anal contact (rimming)
- sharing sex toys
- during a hand job or fingering
- through skin-to-skin contact of the genitals (even if no body fluids are present)

Engaging in condomless receptive anal sex (penis in anus) increases the risk of later developing anal cancer because it can result in an HPV infection of the anus or anal canal.

For people who have one or more of the types of HPV that can cause anal cancer, factors like cigarette smoking and unhealthy diet can increase the chances of anal cancer developing.

Some groups of people carry a higher burden of anal cancer (it is more common). These include gay, bisexual and other men who have sex with men (gbMSM) as well as people who have had other HPV-related cancers, like cervical cancer.

## HPV and HIV

People living with HIV have a higher risk of acquiring an HPV infection and of developing anal dysplasia. They also have higher rates of anal cancer. These rates are particularly high among gbMSM who are living with HIV. GbMSM living with HIV who also have a history of hepatitis B infection may be at still higher risk of developing anal cancer.

Effective HIV treatment greatly lowers the chances of developing HIV-related illnesses, including some cancers.

## What can I do?

### Reduce your chances of getting HPV infections

Get vaccinated against HPV to prevent future infections. HPV vaccines are widely available and highly effective. Talk to your healthcare provider about your options.

Use a condom during anal intercourse and vaginal intercourse.

Use a condom or oral dam during oral sex.

When sharing a sex toy, use a new condom and wash the toy between every use.

### Get tested

If you experience any symptoms of anal cancer, speak with a healthcare provider right away.

If you have risk factors for anal dysplasia or anal cancer, speak with your healthcare provider, even if you do not have any symptoms. They may suggest routine screening.

A healthcare provider can examine the anal canal using a gloved finger (digital exam) to check for cancerous bumps (tumours).

To check for anal dysplasia, a healthcare provider may examine the anal canal using a magnifying device with a light on it (anoscope). A small tissue sample (biopsy) may be taken, to determine if there are signs of dysplasia or cancer.

An anal *Pap test* may also be performed by inserting a swab into the anus and collecting cells to examine for changes that could lead to cancer.

### Get treated

HPV cannot be cured from the body with medication.

Several treatments are used for anal dysplasia to remove or destroy lesions before they lead to cancer. Treatments include freezing (cryotherapy), laser treatment and surgery. Some of these treatments can be quite effective if the dysplasia is treated early.

Treatments for anal cancer aim to remove cancerous tissue, slow the cancer's growth and/or prevent it from spreading to other parts of the body. Treatment may involve surgery, radiation therapy, chemotherapy or combinations of these and other treatments. Treatments are most effective if the cancer is diagnosed and treated early.

**This information sheet was developed in partnership with the Sex Information and Education Council of Canada (SIECCAN).**



Canada's source for  
HIV and hepatitis C  
information



### Disclaimer

CATIE endeavours to provide up-to-date and accurate information at the time of publication, but it should not be considered medical advice. Decisions about particular medical treatments should always be made in consultation with a qualified medical practitioner. CATIE resources may contain descriptions or depictions of sex, sexuality or drug use, with the goal of promoting public health. Any opinions expressed herein may not reflect the policies or opinions of CATIE or any partners or funders.