

# *Understanding* Sexually Transmitted Diseases



A Guidebook to  
Better Sexual Health  
(Women)



## Introduction

The aims of this book is to shed light onto how STIs or STDs affect women and their sexual health and well-being. We hope to use this book as a guide to educate our readers on the importance of early STD screening.

My doctors and I encourage female patients to discuss their problems fully without ignoring even the minutest discomfort as there are several STD infections that do not show any obvious symptoms.

Hence, It is important to go for screening even if you do not develop symptoms. Many sexually transmitted diseases can be easily cured after early detection and treatment.

However, if left undetected and untreated for a long period of time, STDs could lead to long-term damage such as infertility and multi-infections.

We always believe in promoting greater sexual health knowledge, so that the community at large can take charge and make informed choices when it comes to your sexual well-being.!

We also have a forum ([www.askdrtan.com](http://www.askdrtan.com)) for Sexual Health, STIs, HIV & AIDS prevention and treatment. The materials in this book should be used as a guide.

Many STIs do NOT cause symptoms and symptoms can be mild. Please visit your physician or our doctors at Dr. Tan and Partners clinic at Robertson Quay (Approved Anonymous HIV Screening Clinic) for more guided tests.

For lady patients who prefer female doctors, we have 2 professional certified female Doctors to attend to your medical needs.

**Dr. Tan**

Remember: HIV  
and most STIs have  
no signs or symptoms  
– get tested regularly  
(at least once a year).

### **Disclaimer:**

We have attempted to provide full, accurate and up to date information in this booklet, based on current medical evidence and opinion. However, information and advice may vary from different sources, and over time. If you have any further questions, see your doctor or healthcare provider.

# Contents

What are Sexual Transmitted Infections	1
What is HIV	2
How is HIV Transmitted	2
Understanding Window period	2
The Signs & Symptoms of STI	3
The Signs & Symptoms of HIV and AIDS	4
STI Symptoms in Women	5
Pelvic Inflammatory Disease (PID) & STIs	7
Pain during sex or Dyspareunia	8
Vaginal discharge	9
Trichomoniasis	10
STI symptoms after Oral Sex	11
Throat Gonorrhoea and Oral Sex	12
Getting HIV from Oral Sex	13
Testing for STIs	15
Anonymous HIV Testing	16
How to Protect yourself from STIs & HIV	17
Human Papillomavirus (HPV) Vaccination	17
HIV Post Exposure Prophylaxis (PEP)	18
Tablets to prevent HIV – PrEP	18
Hotline	19

# What are Sexual Transmitted Infections

Microorganism such as viruses, bacteria, parasites and protozoa are the cause of the infections. These infections are than transmitted from one person to another person during sexual intercourse and other sexual activities. Hence, They are called Sexual Transmitted Infections.

**Syphilis** It is a serious disease that can lead to blood vessel and brain damage. The initial symptom is a painless ulcer that can be in the anus or inside th vagina and therefore not easily seen. Early detection can lead to a complete and early cure.

## **Gonorrhea**

Gonorrhea bacteria can grow in the warm, moist areas of the reproductive tract, the urethra (the tube that carries urine from the bladder to outside the body). The bacteria can also grow in the mouth, throat, and anus.

## **Chlamydia**

It is the most common STD in Singapore. In most women it does not show any symptoms. Women younger than 24 years old are more at risk. If left untreated it can lead to infertility.

## **Viruses Human Immunodeficiency Virus (HIV)**

It is the virus that weakens part of our immune system. Immune system protects us from infection and disease. And HIV is the cause of AIDS over a period of time if untreated.

## **Herpes**

It is caused by two types of viruses. The viruses are called herpes simplex type 1 and herpes simplex type 2. Fluids found in a herpes sore carry the virus, and contact with those fluids can cause infection.

## **Hepatitis A, B and C**

These diseases affect the liver and have different symptoms and treatments. Vaccination is a very cost effective way to prevent such infections. If you already have been vaccinated, speak to your Doctor about doing a serologic test to ensure the antibodies are enough.

## **Human papilloma virus (HPV)**

HVP can cause cervical , vaginal and vulvar cancer in women. You can get checked for HPV at the same you do your PAP smear. HPV can also cause warts to grow in your vagina. There are now vaccines against HPV.

## **Pubic lice (“crabs”)**

They are parasitic insects found in the pubic or genital area of humans. Pubic lice usually spread through sexual contact and are most common in adults.

## **Scabies**

It cause a skin rash composed of small red bumps and blisters and affects specific areas of the body. Direct skin-to-skin contact is the mode of transmission.

# What is HIV

Human Immunodeficiency Virus (HIV) is a virus that weakens our immune system. Our Immune system protects us from infections, cancer and disease. There is no vaccine or cure yet for HIV infection but with early screening and detection and treatment people living with HIV can still lead normal lives.

When our immune system is so weakened by a HIV infection that is not treated, it can lead to Acquired Immune Deficiency Syndrome (AIDS).

# How is HIV Transmitted

HIV is transmitted by body fluids of a HIV +ve person. These body fluids can be transmitted via sexual intercourse, blood transfusion, sharing of infected needles or breastfeeding and therefore HIV infection..

These body fluids are:


- Blood
- Semen (cum)
- Pre-seminal fluid (pre-cum)
- Rectal fluids
- Vaginal fluids
- Breast milk

For transmission to possibly occur, these body fluids must come into contact with damaged tissue or mucous membrane. Mucous membranes are the soft, moist areas just inside the rectum, the vagina, and the mouth.

# Understanding Window period

The window period is the time between potential exposure to HIV infection and the point when the test will give an accurate result. During the window period a person can be infected with HIV and be infectious but have a negative HIV test

Our immune system produces antibodies to try to fight the HIV infection. It can take between 2 weeks and 3 months for antibodies to appear in the blood. The HIV 4th Generation Test is also called the Combo test or the Duo test can detect most HIV infections as early as 4 weeks.



Remember: HIV  
and most STIs have  
no signs or symptoms  
– get tested regularly  
(3 - 6 months).

# The Signs & Symptoms of STI

Many STDs can infect you and yet show no symptoms. Or they may stay in your body for months to years before they show any symptoms.

You cannot determine that your partner has no STDs just because he or she also has no symptoms. If you have been infected with an STD and show no symptoms you can still pass it on to your partner.

## **Chlamydia**

This is the commonest STD in Singapore. Unfortunately, 40% to 60% of people do not show any symptoms. Even when symptoms do appear, they are often mild and disappear quickly. The common symptoms are pain passing urine, abnormal discharge from the vagina.

## **Gonorrhea**

The symptoms can occur as early as 2 days after exposure but in some women it might take months to show symptoms. In 10% of women there are no symptoms at all. The common symptoms are pain passing urine and a discharge from the vagina.

## **NSU**

It very commonly causes no symptoms at all. The common symptoms are mild discomfort passing urine or a mild discharge.

## **Herpes**

It can infect a women for years without showing any symptoms. Sometimes the symptoms are so mild they go unnoticed. For people who do get symptoms, the first time is the worst.

The common symptoms are painful blisters that burst to form painful ulcers. This is usually preceded by a flu-like illness, itching, tingling and pain in the genital area. The first episode is usually very painful and can last up to 3 weeks without treatment.

## **Hepatitis A, B and C**

Some people never develop any symptoms. Or the symptoms are so mild that they go unnoticed. The common symptoms are nausea, loss of appetite, fever, itching, yellowing of the skin or eyes. Smokers sometimes lose their urge to smoke.

## **Syphilis**

Its symptoms can be so mild that they go unnoticed.

The first sign occurs between 9 to 90 days after exposure. It is a painless ulcer where the Syphilis entered the body. It can be on the vagina, rectum, tongue or lips. The ulcer disappears without any treatment which gives patients a false sense of security.

Years later it will surface again as a rash all over the body and fever. If at the time it is still not treated it will affect the brain and major blood vessels of the body causing severe illnesses.

## **Molluscum Contagiosum**

It commonly appears as discrete pearly round lesions on the skin. They are completely painless but might be itchy.

## **HPV**

It commonly appears as skin colored cauliflower like lumps on the skin.

## **Scabies and Lice**

It commonly causes a lot of itching especially at night. Under good lighting and magnification you can actually catch the Scabies which look like translucent tiny insects.

# The Signs & Symptoms of HIV and AIDS

## Stage 1: Acute-Retroviral Syndrome

(2 to 6 Weeks after infection)

### Symptoms:

- General – Fever, Sweats, Lethargy, Malaise, Swollen lymph nodes, Weight Loss
- Skin – Rash, Ulcers, Sore throat
- Digestive – Nausea, Diarrhea, Loss of Appetite
- Neurological – Headache
- Musculo-Skeletal – Muscle aches, Joint aches

Not everyone will develop all these symptoms. These symptoms can develop in varying combinations.

The most common symptoms are fever, sore throat, rash and swollen lymph nodes.

## Stage Two: Chronic HIV Infection

(After 6 Weeks or longer)

### Symptoms:

- Experience no HIV-related symptoms, or only mild ones.

Early detection and treatment of HIV can prevent opportunistic infections.

The virus is living and reproducing in a person's body and attacking the immune system of that person.

Early detections and treatments can help slow or stop the progress of HIV to AIDS.

## Final Stage: AIDS (Acquired Immunodeficiency Syndrome)

Transition from the clinical latency stage to AIDS.

### Symptoms:

- Rapid weight loss
- Recurring fever
- Profuse night sweats
- Extreme and unexplained tiredness
- Prolonged swelling of the lymph glands in the armpits, groin, or neck
- Diarrhea that lasts for more than a week
- Sores of the mouth, anus, or genitals
- Pneumonia (Lung Infection)
- Red, brown, pink, or purplish blotches on the skin or inside the mouth or nose
- Memory loss
- Depression

You are also considered to have progressed to AIDS if you develop one or more opportunistic illnesses, regardless of your CD4 count.

Without treatment, people who progress to AIDS typically survive about 8 - 10 years.

Each of these symptoms can be related to other illnesses. The only way to know for sure if you are infected with HIV is to get tested.

# STI symptoms in Women

STD symptoms you can get if you allowing your partner to insert his penis into the vagina, allowing your partner to use his/her mouth on the vaginal, allowing your partner to insert any objects into the vagina including fingers and sex toys.

Classification	The Symptom	The Cause	When it appears
Urinary	Burning pain passing urine Going to the toilet very often Extreme urinary urgency	Chlamydia Gonorrhea NSU Ureaplasma Mycoplasma Herpe	About 2 - 30 days  Gonorrhea usually presents the earliest. 90% of people will get symptoms by 7 days.
80% of people infected with Chlamydia will not show any symptoms at all.			
Vaginal Discharge	Abnormal discharge from the vagina especially colored or foul smelling	Chlamydia Gonorrhea NSU Ureaplasma, Mycoplasma Trichomonas	Chlamydia usually appears at about 2 weeks.  Gonorrhea usually presents the earliest. 90% of people will get symptoms by 7 days
Skin	Ulcers Blisters Growth Itch	Herpes Syphilis Haemophilus Ducreyi MCV Trichomonas HPV	Syphilis 9 to 90 days  Herpes 1 week or months  HPV commonly 3 to 6 months but can be as early as a week.
Sexual	Pain during sex, bleeding after sex	Chlamydia Gonorrhea NSU Ureaplasma, Mycoplasma HPV	Within a few days to months.
General	Fever  Swollen lymph nodes  lower abdominal pain	Herpes Syphilis Gonorrhea Chlamydia NSU Ureaplasma Mycoplasma	Syphilis 9 to 90 days.  Gonorrhea and Chlamydia can cause symptoms in as early as 3 days from infection but can take 2 weeks or even a month to show. Sometimes, they do not show any symptoms at all.

## Urinary Symptoms

This is one of the most common STD symptoms in women. Women can get pain or a burning sensation passing urine. They can also feel like they need to go to the toilet all the time. The symptoms actually feel very much like a bladder infection or a urine tract infection. Sometimes, women get an ulcer on the labia from Herpes. So when they pass urine, the urine flows pass this ulcer causing pain. This can also feel like 'pain when passing urine'.

## Viginal Discharge (Most Common)

This is easily the most common symptom women get from STDs. Sometimes it is hard to tell apart from a normal discharge. If the discharge smells bad or has an odd color like green or yellow, it is more likely to be an STD.

A quick guide is as follows:

- Yellow and thick – Gonorrhea (STD)
- White and thick – Yeast (not STD)
- Green and smells like fish – Trichomonas (STD)
- Grey and thin – Gardnerella (not STD)
- Yellowish and thin – Chlamydia (STD)



## **Skin Symptoms**

**Ulcers** - These are breaks or craters on the skin. They are usually white. If they are small, multiple and painful, they are likely to be caused by Herpes. If there is only 1 large painless ulcer, it is likely to be Syphilis. If it is 1 large painful ulcer especially if the lymph nodes in the groin crease are also enlarged and painful, it is likely to be a Chancroid caused by the bacteria called Haemophilus Ducreyi. Sometimes, these ulcers can appear inside the vagina which makes it impossible for you to see. Only your doctor will be able to see it with an internal examination. If these ulcers are painless, like the ones due to Syphilis, you might never know you had it.

**Blisters** - These are little fluid filled bubbles on the skin. If they are multiple and painful and burst to form ulcers, they are very likely to be caused by Herpes.

**Growths** - Growths on the skin are usually indicate of an STD. These growth can occur anywhere including the pubic region, on the labia and even in the vagina. Sometimes they can be difficult to see. If the growths are skin colored and have an uneven surface (like a cauliflower), it is likely to be a wart caused by HPV. If the growths look like little pearls stuck onto the skin, it is probably caused by Molluscum Contagiosum Virus.

**Itch** - Itching can be on the skin or inside the vagina. Itching on the skin can be caused by lice or scabies. The itching caused by this is usually very severe and worse at night. Itching in the vagina can be extremely uncomfortable and can be caused by Trichomonas. However, the commonest cause of vaginal itching is still by far a yeast.

## **Sexual Symptoms**

**Pain during sex** - During sexual intercourse, the penis usually gently hits the cervix. This should not be painful. But if the Cervix is inflamed, usually due to an STD, this can be rather painful. In fact, if the Cervix is very sensitive and tender, this could mean that the woman has PID (Pelvic Inflammatory Disease). This is very dangerous.

**Bleeding during or after sex.** - It is very common for the vagina to suffer mild abrasions and tears during intercourse and this can cause some bleeding. However, if there is an infection, the lining of the vagina will be very fragile and can break easily causing more bleeding. Also, if the Cervix is infected with HPV, it may be already turning into pre-cancer. When this happens, the Cervix will bleed much more easily especially when the penis is hitting it during intercourse.

## **General Symptoms**

**Fever** - This symptom is really too general to be useful. In fact, very few STDs aside from HIV actually cause a fever. So if you do have a fever, more likely than not, it has absolutely nothing to do with any STD.

**Swollen Lymph Nodes** - When an area is infected, the lymph nodes will swell as part of the body's natural reaction to help fight the infection. So if there is any infection in the vagina or pelvic region, the lymph nodes along the groin crease will likely swell and may even be a little tender. This can occur with almost any STD including Syphilis, Gonorrhoea, Chlamydia, Chancroid etc. Basically, if you notice swollen and tender lumps in your groin crease, it would be best to see your doctor asap.

**Lower abdominal pain** - STDs that infect the vagina can also infect the cervix. The infection can go even further up to infect the womb (Uterus) and the Fallopian tubes. Once past the Fallopian tubes, the infection is in the pelvis and can lead to Pelvic Inflammatory Disease. Any of these conditions can cause pain in the lower tummy, just above the pubic bone. This is usually caused by Chlamydia but can also be caused by Gonorrhoea, NSU, Ureaplasma, Mycoplasma etc

# Pelvic Inflammatory Disease (PID) & STIs

PID is caused by infection of the upper female genital tract, including the womb, fallopian tubes, ovaries and nearby pelvic structures.

The importance of diagnosing and treating PID early is related to its complications which can have major detrimental effects on a woman's fertility and health.

## What causes PID?

PID is caused by infection that moves upward from the vagina and cervix into the upper genital tract. Commonly the infection is sexually transmitted and the woman may or may not have any symptoms suggestive of an infection. The most common sexually transmitted organisms associated with PID is chlamydia trachomatis and neisseria gonorrhoea.

Other organisms that is linked to PID include gardnerella vaginalis, mycoplasma hominis, ureaplasma urealyticum, herpes simplex virus 2, trichomonas vaginalis, haemophilus influenza, cytomegalovirus, etc.

PID can be caused by both sexually transmitted and non sexually transmitted infections. Studies have shown that up to one third of PID cases is caused by >1 organism. Approximately 20% of untreated chlamydia or gonorrhoea infection progresses to PID.

## Risk factors:

- Multiple sexual partners
- History of sexually transmitted infections (STI)
- Current untreated sexually transmitted infections (STI)
- Previous history of PID
- Previous gynaecological surgical procedures – eg: endometrial biopsy, curettage, etc
- Recent abortion
- Having an intrauterine device (IUD) – risk is highest during the first 6 months after insertion
- Douching

## Symptoms:

With PID, the severity of symptoms may vary in each individual and may take weeks or months for symptoms to present after being infected.

Symptoms include:

- Fever
- Nausea/vomiting
- Pelvic/lower abdominal pain (ranges from mild to severe)
- Abnormal vaginal discharge
- Abnormal vaginal bleeding

## Treatment:

PID can be treated with antibiotics if diagnosed early. However, treatment would not reverse any damage that has already occurred to your reproductive system. Hence, it is important to seek treatment early as the longer you wait, the more likely you will develop complications from PID.

While being treated for PID, it is advisable to abstain from sexual activity until your symptoms have fully resolved and you have completed your antibiotic regimen. It is important for your sexual partner to be tested and treated for STI if necessary so that you do not re-infect each other.

Even after treatment, you can still contract PID again if you get infected again.

If you have had PID before, the chances of getting it again increases.

# Pain during sex or Dyspareunia

Pain during sex also known as dyspareunia, is surprisingly quite common in women and a lot of women would have experience pain during sex at some point during their lives. Dyspareunia is often more common in the young and inexperienced and also in peri- or menopausal women.

This topic is usually not discussed or talked about with your friends, doctor or even sexual partner as it is still a taboo. Besides not being able to enjoy sex, it will also be distressing if you experience pain during sex which may make the situation worse as it will make you tighten up and hence make the pain worse. It is important to recognise that dyspareunia often has an emotional affect not only on yourself but also with your partner and this may occasionally lead to a negative effect on a relationship.

In general most causes of dyspareunia are not serious. However there is a few that can be detrimental to your health and well being. Hence if you are experiencing persistent dyspareunia, it is crucial to get the problem sorted out as soon as possible not only for the benefit of your relationship but also from a medical point of view.

Usually dyspareunia can be divided into deep or superficial pain.

## Lack of vaginal lubrication

This is the most frequent cause of pain during sex, which can be due to nervousness, failure to relax, not enough foreplay, or unskilled foreplay by your partner. Usually the pain can be resolved if you become more relaxed, increases foreplay or you use lubricants.

In peri or menopausal women, vaginal dryness is common due to a fall in the female hormone oestrogen. Using lubricant during sex will be helpful. Other treatment options includes hormone replacement therapy (HRTs) or vaginal hormone creams.

## Vaginitis

Vaginitis which is inflammation of the vagina can be caused by infections such as thrush (candida), trichomonas or bacteria vaginosis (BV). Usually symptoms would include abnormal vaginal discharge, itching and burning of the vagina and vulva. Also, superficial infections such as genital herpes can also cause pain.

Other causes of vaginal infection such as foreign body in the vagina, such as forgotten tampon can cause pain especially if it is associated with an infection. Generally, curing the infection gets rid of the dyspareunia.

## Vulvitis

Vulvitis due to inflammation of the vulva (opening of the vagina) may results in cracks in the skin of the vulva. A common skin disorder – contact dermatitis can affect the vulva where the vulva becomes inflamed as a result of a reaction to an irritant such as perfumed soaps, douches or lubricants. Vulvitis can cause itching, burning and pain including contact pain during sex.

## Vulvodinia

This is a distressing condition in which the vulva is very sensitive and just touching can make the area very painful. The cause is unknown but there are many treatments available and is usually successfully treated.

## Genital warts

Genital warts can sometimes cause pain especially if they become infected.

## Injury

Commonly, women can get injury around the vulva or vagina caused by an episiotomy cut or tears during labour which may cause pain during sex that can last for several months. Badly healed stitches can also cause pain. If you experience any of these problems, you see should see a doctor sooner.

## Vaginismus

Vaginismus can cause both deep and superficial pain and is due to spasm of the vaginal muscles, mainly caused by fear of being hurt. Vaginismus can make sex painful or impossible. Women with vaginismus may have never been able to use tampons or even have a pap smear test due to the fear of vaginal examinations.

Although vaginismus is often no one's fault, it causes a lot of strong emotions in women who have vaginismus and they are usually angry with themselves, their partners or doctors.

Common causes of vaginismus include a restrictive upbringing, a history of rape or childhood sexual abuse and a history of painful vaginal infections such as genital herpes. Vaginismus can cause both deep and superficial pain during sex.

## Problems with the cervix

During sex the man's penis is able to hit the cervix. Hence infections of the cervix, such as that cause by STDs such as gonorrhoea, Chlamydia, trichomoniasis, genital herpes, etc and tender areas on the cervix can cause pain during deep penetration. This is also known as 'collision dyspareunia'.

Also, occasionally an intrauterine contraceptive device (IUCD) or 'coil' sitting at the cervical canal can also cause pain during sex especially if it has been displaced.

## Problems in the uterus (womb) or ovary

Various womb disorders such as fibroids, fixed retroverted uterus, can cause deep pain during sex. Ovarian cysts can also cause dyspareunia.

## Endometriosis

Endometriosis is usually a painful disorder in which the type of tissues normally lining the uterus starts growing outside the uterus. The location of these tissues usually determines the amount of pain you may experience during sex. If the endometriosis is behind the vagina and lower part of the uterus, it is more likely to cause pain during sex.

# Vaginal discharge

## What is normal vaginal discharge?

Normal vaginal discharge is usually clear or milky white in colour and odourless. The amount and consistency of normal vaginal discharge can vary individually and also depending on where you are in your menstrual cycle.

Usually during Day 14-16 (mid cycle) of your menstrual cycle, you may notice profuse, egg white consistency discharge which is associated with ovulation. More often, this can be accompanied with a slight tinged of blood (mid cycle bleeding). The good news is that this is a sign of fertility and would increase your chances of pregnancy if you have sex during this period.

## What is abnormal vaginal discharge?

Abnormal vaginal discharge is when there is a change in your 'normal' vaginal discharge, ranging from a change in colour, consistency or smell.

## What is STIs related abnormal vaginal discharge?

This would usually signal the presence of an infection which could include:

- Candida (Yeast/vaginal thrush)
- Bacterial vaginosis
- Trichomoniasis
- Chlamydia
- Gonorrhoea

Gonorrhoeal infections are manifested by cloudy yellow discharge often accompanied by pelvic pain and frequent urination.

Trichomoniasis (a parasitic infection) gives yellowish frothy discharge with bad odor. This is usually transmitted through unprotected sex. These infections are commonly treated with over-the-counter antibiotics, most effective one being metronidazole in forms of tablets, vaginal gel/creams and suppositories.

White, cottage-cheese-like discharge often accompanied by itching is due to yeast infection known as candidiasis.

Other type of infections that you could get which could cause abnormal vaginal discharge includes chlamydia, ureaplasma and mycoplasma.

Remember, infections like trichomoniasis, Chlamydia and gonorrhoea are considered sexually transmitted infections, while infections such as candidiasis and bacterial vaginosis are not considered sexually transmitted.

If you have noticed a change in your vaginal discharge or worried that it isn't normal, see your doctor for further advice. If needed, swab tests can be performed to confirm the presence of any infection. Last but certainly not least, the majority of these infections are easily treatable.

For lady patients who prefer female doctors, we have 2 professional certified female Doctors to attend to your medical needs.

## Trichomoniasis

Ladies, ever wondered what that yellowish-green vaginal discharge is?

Besides Chlamydia or gonorrhoea, could it be due to trichomoniasis?

### **What is trichomoniasis?**

It is a sexually transmitted infection (STI) caused by the parasite, *Trichomonas vaginalis*. Despite being not as famous as Chlamydia or gonorrhoea, it is one of the commonest STIs worldwide and is increasing in prevalence. Symptomatic trichomoniasis is more common in women.

### **So why the big fuss with trichomoniasis?**

Research has shown that infection with *T.vaginalis* increases the risk of HIV transmission in both men and women. Trichomoniasis also increases susceptibility to other STI and is strongly associated with co-infection with other STI.

In women, trichomoniasis is linked with adverse pregnancy outcomes, infertility, pelvic inflammatory disease (PID), postoperative infections and cervical tumour.

### **Symptoms**

In women, symptoms can range from none to severe pelvic inflammatory disease (PID).

- Abnormal vaginal discharge – yellow/green purulent, frothy or bloody
- Abnormal vaginal odor (musty)
- Vulvovaginal itchy, burning or soreness
- Pain during sex (dyspareunia)
- Pain during urination (dysuria)
- Bleeding after sex (post coital bleeding)
- Lower abdominal pain

Patient and sexual partner should be treated and should abstain from sex until treatment is completed and their symptoms have resolved.

# STI symptoms after Oral Sex

STI symptoms you can get if you use your mouth on your partner's genitals.

Classification	The Symptom	The Cause	When it appears
Throat	Sore throat Painful throat Pus on the tonsils	HPV Gonorrhea Chlamydia Herpes	about 2 weeks to months to appear
Skin	Ulcers & Blisters around the mouth	HPV Herpes Syphilis	less than a week to months to appear
General	Fever Swollen lymph nodes	Herpes Gonorrhea Chlamydia	Swollen lymph nodes on their own are not a symptom of STDs. However, if you have ulcers in the throat or a bad sore throat and swollen lymph nodes in the neck, this is more suggestive of STDs. So the time of onset is related to when the primary symptoms (ulcer, sore throat etc) appear.

## Throat Symptoms

These symptoms are very much like any other sore throats you have had in the past. It is more suggestive of an STD if the pain is very severe or there is yellow pus on the tonsils. Most people think the tonsil is the teardrop shaped thing that hangs down in the middle at the back of the mouth. This is the uvula, it is not the tonsils. The tonsils are the 2 spongy round things you see on the sides.

Since the sore throats caused by STDs like Gonorrhea or Chlamydia can be no different from your usual sore throat, the only way to know if you have caught an STD in the throat or not is to get a throat swab.

Very painful ulcers in the throat especially if the lymph nodes in the neck are swollen and tender, is very likely to be caused by Herpes.

Although not common, you can also see warts in the mouth caused by HPV. These look like red colored growths in the mouth most commonly found on the inner lining of the cheek.

## Skin Symptoms

Ulcers/Blisters - This applies mainly to Herpes. This appears as painful blisters and/or ulcers usually on the line where the lips and the skin meet (vermillion border). However, these ulcers and blisters can also happen anywhere on the face. Ulcers are breaks in the skin. They are usually wet. If the area of skin surrounding it is red, this is more suggestive of Herpes. Blisters are fluid filled sacs like bubbles on the skin. Herpes ulcers are usually painful.

If you have a single painless ulcer that is slightly bigger (> 8mm), it may be a symptom of Syphilis. This is rare in oral sex but still possible.!

Growths - As discussed above, HPV can cause growths inside the mouth. These same growths can also appear around the mouth and lips although this is rare. This will look like skin colored lumps which have an uneven surface like a cauliflower.

## General Symptoms

Swollen lymph nodes - Swelling of the lymph nodes is a normal and natural way the body fights off an infection. When an area is infected, the lymph nodes close to it will swell to help fight off the infection. So if there is an infection in the throat, the lymph nodes in the neck will swell. This is a very general symptom and can be caused by STDs or non-STD infections.

Fever - This is an extremely rare symptom for STDs affecting the throat and mouth. If you have a fever, chances are that it has absolutely nothing to do with your oral sex encounter.

# Throat Gonorrhoea and Oral Sex

It can be spread via deep kissing and oral sex. Although it can cause severe throat pain, it is frequently asymptomatic. So if you have used your mouth during a sexual contact, and your partner has Gonorrhoea, the chances are you could very well have throat Gonorrhoea.

## What is Throat Gonorrhoea?

Throat Gonorrhoea (aka Gonorrhoea of the Throat, The Clap) is an infection of the throat by the bacteria *Neisseria Gonorrhoea*.

## Why your Throat can be infected with Gonorrhoea?

Let's get back to basics. Gonorrhoea is a bacteria. It can and will infect any area of the body that is soft, warm and moist, namely mucosa. The 3 areas of mucosa exposed to the environment are the genital tract, anus and throat. So, if the Gonorrhoea bacteria lands on any of these areas, it will set up home and cause an infection.

Needless to say, these 3 areas of mucosa frequently come into contact during a sexual encounter. Gonorrhoea can therefore pass from one area to another as long as they come into contact. So pick any combination you want; penis-mouth, vagina-mouth, penis-vagina, penis-anus, vagina-vagina, anus-mouth, mouth-mouth etc etc.

As long as one party has Gonorrhoea, the other has a chance of catching it.

## How do I know I have it?

90% of the time, Throat Gonorrhoea has no symptoms. 10% of the time, it causes a sore throat, fever and swollen neck glands. This usually happens 2 to 10 days after exposure.

## How can I catch it?

Throat Gonorrhoea is caught when you have unprotected oral sex with a partner who is infected with gonorrhoea. It is much easier to catch Throat Gonorrhoea via receptive penile oral sex (i.e. having your partner's penis in your mouth) than through receptive anal oral sex (i.e. licking or sucking your partner's anal).

## If I have Throat Gonorrhoea can I pass it to my partner?

Yes. If you have Throat Gonorrhoea, you can pass it to your partner by having unprotected oral sex. If your partner develops symptoms of Gonorrhoea (pain passing urine, discharge) after having oral sex with you, you should have yourself checked for Throat Gonorrhoea.

## How do I check for Throat Gonorrhoea?

See your doctor. He will take a swab from your throat and send it to the lab for a special culture. Please let your doctor know you are worried about Throat Gonorrhoea. It requires a special swab. The normal swab for Strep Throat will not detect Throat Gonorrhoea.

## How is Throat Gonorrhoea Treated?

The commonest treatment for Throat Gonorrhoea is an injection of an anti-biotic called Ceftriaxone. If you are unable to take this injection you will be given pills instead. You might need to visit the doctor again to make sure the Throat Gonorrhoea is fully cured.

## How can I protect myself from Throat Gonorrhoea?

Always use a condom when having oral sex.

## Are there other STDs associated with Throat Gonorrhoea?

Yes. If you have Throat Gonorrhoea you likely will have Gonorrhoea in other areas such as the Urethra (urine tube) or Anus. You should ask your doctor to check for these too.

Throat Gonorrhoea is also associated with other STDs such as HIV, Syphilis and Hepatitis B.

# Getting HIV from Oral Sex

## **What you need to know:**

It is possible but extremely rare. The risk is much lower than anal or vaginal sex.

Scientific Data on HIV transmission in Oral Sex is not strong. The type of Oral Sex that carries the highest risk is Receptive Fellatio. Ejaculation, Gum Disease, Poor Dental Hygiene, Ulcers in the mouth and the presence of blood can increase the risk.

## **Oral sex refers to contact of the mouth to the ano-genital region.**

- Receptive Fellatio (using your mouth on your partner's penis)
- Insertive Fellatio (inserting your penis into your partner's mouth)
- Analingus (using your mouth on your partner's anus)
- Cunnilingus (using your mouth on your partner's vagina)

While every one of these oral sex acts have case reports suggesting that they are possible, the only one with enough evidence to estimate a risk is Receptive Fellatio.

Therefore, it is accepted by most experts that this is the highest risk of all sex acts.

What exactly is the risk of contracting HIV from Oral Sex?

Unfortunately, no one knows for sure. Most experts would agree that risks are extremely low.

## **Factors that increase the risk of transmission are:**

- Mouth Ulcers
- Gum Disease
- Use of Crack-Cocaine
- Presence of blood (e.g. during menses)
- High HIV Viral Load
- Ejaculation

There have been many studies done on the transmission of HIV in oral sex. The vast majority concluded that oral sex in itself is NOT a risk factor for HIV transmission.

There were however a handful of studies that found oral sex to be significantly associated with HIV infection. These studies focus on MSM (men-who-have-sex-with-men), CSWs (commercial sex workers) and people from lower socio-economic groups with a higher incidence of poor oral hygiene and mouth sores.

What serves for more scary reading are the case reports. Bear in mind that case reports are not as scientifically or statistically significant or important as clinical studies.

That said, there have been many case reports on possible Oral transmission of HIV. More notable cases include:

- Female to female transmission of HIV via oral sex
- A man who was bitten by a HIV +ve patient while trying to help him during a seizure

Studies conducted in San Francisco and London in 2000 and 2001 amongst MSM indicated that 6% to 8% of HIV +ve cases were believed to be cause by oral sex. Note that this does NOT mean the risk of getting HIV from oral sex is 6% to 8%.



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### **So what exactly is the risk of getting HIV from oral sex?**

No one really knows. A systematic review done in 2008 concluded that there was insufficient data to precisely estimate the risk. In my opinion, there are so many variable factors that there is really no way to accurately estimate the risk anyway.

However, everyone would agree that the risk is less than penetrative sex which has been estimated to be anywhere between 1% and 0.01%. So what we can say at this point in time is that the risk of contracting HIV via oral sex is less than this.

The only type of oral sex where there was any kind of risk estimation at all was receptive fellatio (the partner using his mouth) amongst MSM. The magic number given to this per-act-risk is 0.04%. Even then, some experts believe that this risk was over estimated because it was calculated from very complex mathematical models.

What is in saliva that kills HIV?

In 2008, a Swedish research team discovered that HIV –ve people produced antibodies in their saliva that can 'kill' the HIV virus. This provided an explanation as to why HIV transmission via oral sex is so low.

Another study found that the concentration of saliva is so low (i.e. hypotonic) that it 'kills' the white blood cells that carry the HIV virus. There was an experiment done in the lab (not on live patients) to show that if the volume of semen is high enough, it makes the overall environment closer to the concentration of cells (i.e. isotonic) and therefore increases the chance of cell survival and as a result increases the risk of HIV infection. This may explain why ejaculation is thought to increase HIV risk in oral sex.

There was also a study that suggested that a chemical found in saliva called Mucin can also inactivate the HIV virus.

The real problem is that there have not been any good quality studies on HIV and Oral Sex. Most are based on interviewing HIV +ve patients on their sexual practices. So there is a problem of 'recall bias' (i.e. they forgot or their lying).

Furthermore, most studies involve relatively few participants. Since the incidence of HIV from oral sex is so low in the first place, many studies did not even have a single case of HIV transmission so were unable to estimate the risk in anyway.

So far in the studies that have been done, the estimated risk of contracting HIV from oral sex is either zero or really close to zero. So close to zero that physicians like myself find it hard to counsel patients who are concerned about getting HIV from oral sex. On the one hand, we do not want to tell them with absolute certainty that they are not at risk, on the other hand, we do not want to unnecessarily play up the risk leading to unwarranted anxieties, tests and treatments.

# Testing for STIs

Many STDs can infect you and yet show no symptoms. Or they may stay in your body for months to years before they show any symptoms. You cannot determine that your partner has no STDs just because he has no symptoms. If you have been infected with an STD and show no symptoms you can still pass it on to your partner. Condoms reduce the risk of catching STDs but it is not 100% safe.

## Types of STD Tests

(Blood tests)

Human Immunodeficiency Virus (HIV)

Syphilis – Treponemal (TP Ab, TPHA), Non-Treponemal (VDRL, RPR)

Hepatitis A

Hepatitis B

Hepatitis C

Herpes Simplex Virus (HSV) Type 1 and 2 (Swab tests also available)

(Swab / Urine tests)

Gonorrhea – Urethra, Vagina, Cervix, Throat Gonorrhea, Rectal Gonorrhea

Chlamydia - Throat Chlamydia, Rectal Chlamydia, Eye Chlamydia

Non gonococcal urethritis (NGU)

Mycoplasma

Ureaplasma

Bacterial Vaginosis





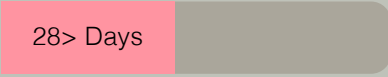



Trichomonas

Candidiasis

(DNA swab tests)

Human Papillomavirus (HPV) – Genitals, Peri-Anal

## Type of Test for HIV

HIV RNA PCR Test			10 - 12 Days		7 days
	Blood			Period of Exposure	Results
Rapid Anonymous HIV Combo test		or 	28 > Days		20 mins
	Blood	Saliva		Period of Exposure	Results
Rapid Anonymous HIV Antibody		or 	90 > Days		20 mins
	Blood	Saliva		Period of Exposure	Results

# Anonymous HIV Testing

Not all clinics are allowed to conduct anonymous HIV tests. This is because according to the Infectious Diseases Act, all medical personnel are required to inform MOH of the details of any person they know or suspect of being infected with HIV.

Our clinic at Robertson Walk is mandated by MOH as a official Anonymous HIV Testing Clinic

All Our Friendly Doctors are fully certified and trained in advance HIV testing.

## STEP 1: RECEPTION

1. Just walk into our clinic Robertson Walk.
2. Let our staff you are here for the '3 step test'\*.
3. You will be given Anonymous HIV Test (AHT) Registration Form.
4. The form does not require any personal details from you

1

## STEP 2: SEE OUR DOCTORS

5. The doctor will see you in his or her room.
6. You will have a private consultation with the doctor
7. Doctor will proceed with the HIV Test

2

## STEP 3: RESULT and POST-RESULTS CONSULTATION

8. After 20 minutes your results will be ready
9. Doctor will discuss the results of the test with you

3

## What is the Our "3 Step Test"?

- the Oraquick Advance HIV 1/2 Test,
- the Determine HIV 1/2 Test and
- the SD Bioline HIV Combo test.

Remember: HIV and most STIs have no signs or symptoms – get tested regularly (3 - 6 months).

# How to Protect yourself from STIs & HIV

## **Use a Condom:**

Condoms prevent sexual bodily fluids or blood to pass from one person to another.

With correct and consistent condom use, Latex condoms are highly effective at preventing the transmission of HIV and some other sexually transmitted diseases. "Natural" or lambskin condoms do not provide sufficient protection against HIV infection.

## **Sharing Needles and Syringes:**

Transmission occurs when a person uses the same syringe with a HIV+ve person without first cleaning it. The reuse of a blood-contaminated needles or syringes by another person can be an effective means of transmission because a large quantity of blood can be injected directly into the bloodstream.

Although HIV does not generally survive well outside the body, it can survive for long periods of time (over 28 days) if hermetically sealed in syringe.

## **Regularly get tested for STIs & HIV:**

Know your HIV status. Everyone should be tested for HIV at least once. If you are at increased risk for HIV, you may need to get tested for HIV more than once a year.

If you have HIV, you can get medical care, treatment, and supportive services to help you stay healthy and reduce your risk of transmitting the virus to others.

If you are pregnant and find that you have HIV, treatments are available to reduce the chance that your baby will have HIV.

## **Sticking to the Right Sexual Partner**

Abstain from sexual activity or be in a long-term mutually monogamous relationship with an uninfected partner.

Limit your number of sex partners. The fewer partners you have, the less likely you are to encounter someone who is infected with HIV or another STD.

# Human Papillomavirus (HPV) Vaccination

HPV is a virus that is spread through direct contact. i.e. skin to skin contact, sexual contact including vaginal sex, oral sex, anal sex, even handjobs. Basically any sexual contact and condoms offer zero protection against HPV.

Among other things, it causes genital warts. For those of you who have not suffered from genital warts before, you might not fully appreciate the mental anguish and anxiety it brings. For those of you who have, you know exactly what I am talking about.

The HPV vaccine will afford protection against certain HPV-related conditions and cancers in males, and vaccination of males with HPV may also provide indirect protection of women by reducing transmission of HPV.

Genital warts are these really ugly fleshy looking things that can grow around your pubic area, penis, vagina, anus and basically everywhere down south. They are ugly, embarrassing and very difficult to get rid of.

Treatment usually involves multiple sessions of painful laser or freezing treatments. Even then, warts can still recur and are even deemed to be 'incurable'.

HPV has also been linked to the dreaded Cervical Cancer.

Cervical cancer is the 4th most common cancer among women in Singapore and 3rd most common in the world.

# HIV Post Exposure Prophylaxis (PEP)

HIV Post Exposure Prophylaxis (PEP) is a medicine given to people who are at high risk of getting HIV. They are up to 99% effective in preventing a HIV infection.

When you have been exposed to potentially HIV infected body fluids and your exposure was less than 72 hours ago, see your doctor immediately about starting PEP.

Factors that can increase the risk of HIV infection include:

- Condom Break
- Presence of Blood (e.g. Menses)
- Presence of Cuts
- Presence of Ulcers
- You are not Circumcised

These medicines have to be started within 72 hours after possible infection/exposure. They are taken twice a day for 1 month.

The side effects vary from person to person and also depend on which medicines are used.



If you are within the first 3 days of possible HIV infection please see us about PEP.

## Tablets to prevent HIV – PrEP

PrEP is simply a tablet taken daily that reduces a person's risk of contracting HIV. It's that simple. The tablet most studied for use as PrEP contains 2 medicines and its called TRUVADA®.

We must bear in mind that like every other method of HIV prevention, PrEP is not failsafe. It is one of the many weapons in our current arsenal to reduce the burden of HIV on the world. Other prevention methods include:

- Consistent and correct condom use.
- Access to treatment. Treatment as prevention.
- Education.
- Male circumcision.

### **What are the side effects of PrEP?**

Minor side effects such as nausea, headache and weight loss are possible. Major side effects like effects on the kidney and bone density are rare.

In my personal experience prescribing PrEP, I have not come across anything more than some minor nausea.

# Hotline

## **Health Promotion Board (AIDS/STI Helpline)**

+65 6295 2944

24-hour (pre-recorded in 4 languages)

1800 252 1324

AIDS/STI Information Hotline (to speak to a counsellor during office hours)

## **Life Goes On**

+65 6254 0212

A self-help group that offers support to heterosexual men with HIV.

## **Club Genesis**

+65 6254 0212

A self-help group that supports men who have sex with men.

## **Muslim + (M+)**

+65 9835 1982

Peer support group catering to infected Malay/Muslim.

## **AWARE**

1800 774 5935 (Mon – Fri 3pm to 930pm)

Women's action group that provides support for women for a variety of issues.

## **Oogachaga**


6226 2002

Counselling for the gay, lesbian, bisexual and transgender community in Singapore.

## **The Singapore Anti-Narcotics Association (SANA)**

1800 733 4444 (Mon-Sun 7.30am - 12.00am)

A Voluntary Welfare Organisation for substance addiction & abuse.



Remember: HIV  
and most STIs have  
no signs or symptoms  
– get tested regularly  
(at least once a year).

Together we can promote healthy living!

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**dr. TAN**  
**+partners**  
medical centre

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