

# Catching On



**SUPPORT MATERIAL**

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STD/HIV PREVENTION EDUCATION PROJECT



Department of  
Education & Training

# Acknowledgments



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## Catching On

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# Guidelines for Using the Support Material

## Information for Teachers

This support material is part of the Department of Education & Training's STD/AIDS Prevention Education Strategy. The strategy aims to support schools to implement the *AIDS/HIV Policy and Implementation Guidelines* (1991). These guidelines require that schools provide all students with education about sexually transmissible infections (STIs), HIV/AIDS and blood-borne viruses (BBVs) within the context of a comprehensive health education.

The aim of this support material is to provide teachers and students with information about HIV/AIDS, sexually transmissible infections and blood-borne viruses in a sexual health context. Sexual health includes the biological, psychological and social issues that relate to and promote health. As a teacher reference the support material is designed to be used as a resource to update teachers' knowledge and inform curriculum development in this area. The support material is one component of the *Catching On* resource kit, a comprehensive approach to providing STI, HIV/AIDS and BBV prevention education. The *Catching On* resource kit also contains teaching and learning activities for students in years 9 and 10; this student and teacher reference booklet and a professional development video. It is vital that the information in this booklet is used in conjunction with the teaching and learning activities that provide students with the skills and attitudes that maximise their ability to prevent infection and minimise discrimination.

The support material can also be a useful resource for students conducting research activities in relation to sexually transmissible infections, blood-borne viruses and HIV/AIDS. For the support material to be used effectively for this purpose, it is vital that teachers supervise students' use of the support material, including the sources of more detailed or specific information listed at the end.


The support material is designed to place sexually transmissible infections, blood-borne viruses and HIV/AIDS within the context of sexual health. In accordance with this aim Section 1 outlines the concept of sexual health and explores relationships and decision making, sexual identity and the possible consequences of sexual activity in relation to this.

Section 2 explores sexually transmissible infections other than HIV/AIDS, their symptoms, causes, transmission and treatment. It focuses on prevention of these infections and the health outcomes associated with them.

Sections 3 – 6 look at HIV and AIDS. They examine the difference between HIV and AIDS, infection and the effect of HIV on the immune system, transmission and, most critically, prevention.

Section 7 provides information on living with HIV, including support, care and treatment. It also highlights important issues around discrimination and the law.

Section 8 provides references to sources of reliable statistics on HIV/AIDS globally in Australia and Victoria.



It is supported by Section 9 which provides a brief historical snapshot of the epidemic.

Section 10 provides a glossary of words which lists simple explanations or descriptions of words used in this support material.

Section 11 provides sources of more detailed information for more detailed or specific research.

To help make things clear, summary and fact boxes have been included at the beginning of each section to summarise the most important information for everyone to understand. Question boxes at the end of each section list areas for further thought, discussion and debate — either with friends and family or in the classroom.

To make the facts about sexually transmissible infections (STIs) more real, people with or involved in sexually transmissible infections share their experiences. These stories are included throughout the support material.

With information and skills, young people will be able to enjoy and be responsible for their sexual health. Understanding sexually transmissible infections, blood-borne viruses, including HIV/AIDS, will enable young people to protect themselves and others, and to minimise discrimination.

## Information for Students

Learning the facts about sexually transmissible infections will help make them less frightening. With accurate information, individuals can make informed decisions about what they need to do to protect themselves and others from infection.

There are many ways to find out about sexually transmissible infections. The first step is to be clear about the questions — what is really being asked? Is it about how HIV affects people's lives, or the number of women and men with chlamydia, or perhaps it is about the different types of hepatitis viruses?

Once the question or area of interest is clear, research can be done through a number of different sources of information. These include:

- books
- newspapers and magazines
- pamphlets and information sheets
- radio, videos and television
- family and friends
- talking with workers in the field
- the Internet.

Local agencies such as libraries, community agencies and health services can be visited to find out what resources they have, what services they provide, how they work with young people, and other issues of interest.

A good starting point for information is this booklet.

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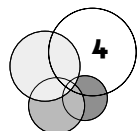
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# Sex, Sexuality and Relationships

*This section looks at sexual health and sexually transmissible infections and how these relate to individuals, relationships, sexuality, sex and the possible consequences of sexual activity.*

## Fact Box

- *Recent Australian research indicates that 50% of young people are sexually active before leaving high school.*
- *11% of rural year 8 and 10 students didn't describe themselves as heterosexual (3% were attracted to same sex, 2% to both sexes and 6% were unsure).*
- *Alcohol is related to 20% of students having sex without condoms, and a further 25% having unwanted sex because they were too drunk or high at the time or felt pressured by their partner.*
- *Of those students who are sexually active, most felt good and positive about their last sexual experience.*
- *Every year in Australia 23,000 teenage girls become pregnant. Of those, 11,000 choose to keep their babies.*

HIV/AIDS, sexually transmissible infections (STIs) and blood-borne viruses (BBVs) can seem scary, complex and confusing. Images in the media show illness, relationship breakdown, grief, sickness and sometimes death. People need information to help make sense of all these messages and to know what is correct and what is not. Many people experience sexual attraction and desire as a pleasurable and exciting thing. Remembering the reality of STIs can seem to contradict this.

It is a fact that STIs are a possible consequence of sexual contact between two people. Not all STIs are curable and some may have life-long consequences such as infertility (the inability for either men or women to have a baby) or infection with a disease for the rest of a person's life.

It is also a fact that most sexually transmissible infections, including HIV/AIDS, can be prevented by safe sex practices. To effectively practise safe sex people need information about STIs, how they are transmitted, their specific consequences and the skills to prevent their transmission.

The subject of sexual health is more than information about diseases. Because it is about sexual matters, it is also about feelings, beliefs and actions. Learning about sexual health provides an opportunity to explore one's own values and to develop skills to act in positive and responsible ways.

This support material aims to provide that information and enable students to make informed decisions that are in the best interests of their sexual health and happiness.

## 1.1 Sexual Health

There are a lot of changes and competing priorities at puberty — body changes, sexual feelings, friendships, school, family, responsibilities, work, money, the future and more. Health and well-being take on personal importance and it is important for people to pay attention to their bodies. The growing responsibilities and challenges that young people face increase the importance of maintaining their health — from getting enough sleep to eating well, to learning how to communicate.

Sexual health is another important part of a person's overall health. It helps to know about their bodies and how they work. This includes how the body responds to sexual feelings, menstruation and wet dreams. It is important that people are able to feel good about their bodies, their sexual reactions and their ability to decide who will and who will not share their body.

Being sexual with another person can have many consequences — physical, emotional and, in some instances, long-term consequences



such as infertility. Sexual health means preventing illnesses and infections so that a person is sexually healthy for life. Protection from sexually transmissible infections is each person's responsibility — it is a decision and responsibility everyone needs to face.

## 1.2 Making Decisions

Making decisions about relationships and sexual activity can be complicated. There is a lot to think about and there can be many pressures on young people to act in a certain way. These pressures can come from friends, family, religion, boyfriends or girlfriends, media, and community standards. Whether a person feels confident and secure can also influence their decision making.

Importantly, making decisions can also effect how a person feels about themselves. That is, by practicing taking control and making decisions, a person can start to feel more confident. Making decisions is a skill like many others, and it takes practice to choose and communicate choices.

There is a lot of misinformation about relationships and sexual activity. There are many different messages about what is right or wrong, what is good or bad. Sometimes the messages are different for women and men, or different for people of different ages, or different for people with specific beliefs and values. Everyone should have the opportunity to identify what is important to them, to understand the issues and options available, and to develop the skills to make decisions, communicate and act.

Being attracted to another person happens to everyone at different times. It can be exciting and enjoyable, but at the same time a little frightening. Getting used to these feelings, understanding them and making decisions about acting or not acting on them takes time. People can be attracted to the opposite gender, same gender or either gender. Being attracted to someone of the same gender does not immediately mean that person is homosexual or bisexual — a person's sexual identity also takes time to develop.

Deciding to be sexual with someone else is more than deciding to have sexual intercourse or not. There are a lot of different activities that two people can do that are sexual. Sexual activity and being intimate with someone includes kissing and cuddling, close sexual touching, and perhaps oral sex, vaginal or anal intercourse. Being intimate with another person means respecting their decisions and negotiating what both people want to do and do not want to do. Saying yes to sexual activity will also involve planning contraception and/or protection from STIs. Remember, it is OK for anyone to say 'no' to sexual

*My name is Andy and I think I am heterosexual. I like girls a lot. But, there have been a couple of guys I like too. So, maybe I'm bisexual — I don't know yet. What I do know is that if I was to talk about it at school I'd be given heaps of crap by all the other kids. It's weird you know, we're supposed to learn about sex, relationships and all that stuff, but it's not OK to talk about feelings. Not for the guys anyway. Everyone has to be so straight, so tough. Just because I like guys doesn't mean I am worth less than anyone else, or that I'm not as good at playing soccer anymore. I just wish everyone didn't get so hung up on things, then I could just be myself.*

*Andy, 16 years*

activity they don't want, and it is illegal for anyone to force another person to have any type of sex with them. Making choices about whether to be sexual, how to be sexual and with whom to be sexual is each person's individual decision.

### 1.3 Sexual Behaviours and Sexual Identity

It can be difficult to talk about sexual activity because it is such a personal and intimate issue. Finding the right words to explain sexual behaviours can be hard and embarrassing. To avoid this, sometimes what a person does sexually is confused with their sexual identity. So, terms such as 'heterosexual sex' and 'homosexual sex' are used to describe different types of sexual behaviour. But, these words do not clearly explain what is really meant because it confuses sexual activity (behaviour) and sexual identity (heterosexual, homosexual or bisexual).

There are many different types of sexual behaviours that people can share with another person. Kissing, intercourse, mutual masturbation, touching, oral sex, hugging are all ways to experience and give pleasure. None of these behaviours is necessarily heterosexual, homosexual or bisexual.

Generally, people share sexual activities with each other because they are attracted to each other. People can be attracted to different people for different reasons and at different times. It is quite common for people to experience attraction to other people of the same gender at some time in their lives. This does not mean they are gay, lesbian or bisexual.

Over time, individuals develop a sexual identity that expresses how they feel about themselves and to whom they are attracted. So, a person might identify as heterosexual or straight which means they are attracted to people of the other gender. If a person identifies as bisexual, they can be attracted to either genders. A homosexual is attracted to someone of the same gender. A homosexual or gay man is attracted to other men. A homosexual woman or lesbian is attracted to other women. Developing a sexual identity may take some time and may change during a person's life. A person's identity is something that only they can define; it cannot be defined for them because it is how they feel about themselves.

A person's sexual identity does not tell you about their sexual behaviours. However, it is sometimes assumed that they are the same. For example, anal sex is sometimes seen as 'homosexual sex' but men and women can have anal sex. Or, it is assumed that someone who is heterosexual is only sexually active with people of the opposite sex. This is not true, there are men and women who identify as heterosexual but who also have sex with people of the same gender.

So, when talking about sexual activity or sexually transmissible infections it is important to be able to talk about specific sexual behaviours. This way, people will know what risks are associated with sexual behaviours and be able to think about them when they are having sexual contact with a man or a woman. Each person can then make a decision about what type of sexual contact they want, what risks they might take, and the possible consequences of taking action.

*I thought I knew about sex and all that stuff when I was in school. But I got a real surprise when my girlfriend told me she was pregnant. I thought she couldn't get pregnant if I pulled out in time. But I was wrong. It was hard working out what to do. But we worked it out together, with some help from a counsellor.*

*Peter, 19 years*

## 1.4 Possible Consequences of Sexual Activity

There are some possible outcomes of sexual activity that need to be considered, and it's best if this is done before sexual activity happens.

### 1.4.1 Pregnancy

A woman can become pregnant through vaginal sex with a man. There are many forms of contraception which minimise the risk of pregnancy, however, none are 100% reliable. The possibility of pregnancy needs to be considered by both the male and female partner. Contraception is a joint responsibility.

### 1.4.2 Sexually Transmissible Infections

Sexually transmissible infections, or STIs, result from infections which can be passed on from one person to another during sexual contact. Men and women of any age can get a STI and can transmit it to their male and/or female partner(s). It's important to know that it's not who a person is, it is what a person does that might put them at risk of sexually transmissible infections.

The most common way a STI can be passed from one person to another is through specific sexual behaviours:

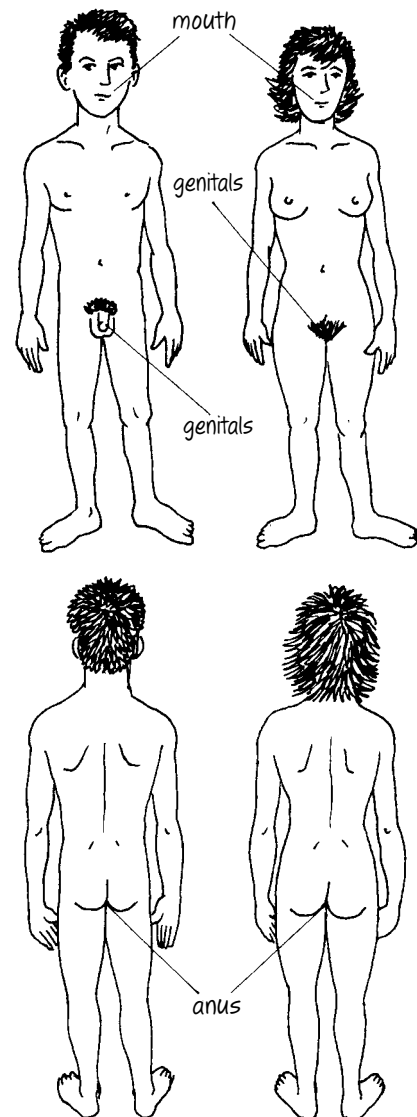
- vaginal intercourse (penis in vagina)
- anal intercourse (penis in anus)
- oral sex (mouth on vagina or mouth on penis).

However, some STIs can also be passed on by close physical contact or even by fingers touching infected areas.

Section 2 gives an overview of sexually transmissible infections including the cause of infection, symptoms and consequences of infection, transmission, testing, treatment and prevention. Sections 3 – 8 provide detailed information about HIV/AIDS.

Diagram 1

### How STIs Spread



### Question Box

- What are the positive and negative effects of alcohol in relation to having sex?
- People often want different things out of relationships. Ask other people about what they want from a relationship. Discuss the similarities and differences in class.
- What reasons might someone have for deciding not to have or to have a sexual relationship?
- How are different sexual identities discussed and valued or not discussed and devalued in this society?

# Sexually Transmissible Infections and Blood-Borne Viruses

*This section gives information about the cause, symptoms, testing, treatment and prevention of the most common sexually transmissible infections and blood-borne viruses.*

The term 'sexually transmissible infections' is the preferred term used to describe a number of different infections which can be passed from one person to another during sexual contact, including sexual intercourse, close body contact and oral sex. This term includes infections that can be but are not only transmitted sexually, for example, hepatitis A, thrush, or pubic lice.

'Blood-borne virus' is the term used for viruses found in and transmitted through blood. Some sexually transmissible infections are blood-borne viruses and are also transmitted through blood to blood exchange. Hepatitis B and hepatitis C, like HIV, are spread via infected bodily fluids including blood, semen and vaginal fluids.

There are many ways to group or classify STIs. In this Section, STIs are divided into groups according to the type of infection that causes them:

- virus
- bacteria
- yeast infection
- lice or mites.

The information below is based on brochures available through the Better Health Channel, ([www.betterhealth.vic.gov.au](http://www.betterhealth.vic.gov.au)) only the most common STIs are included here. There are other types of STIs that are not discussed here; information about them can be found in brochures and books.

## Fact Box

- *In about 30-40% of cases of Hepatitis B infection, people do not know how the infection occurred.*
- *A 2001 Melbourne study found 6.2% of women under 25 had chlamydia, putting them at risk of infertility, ectopic pregnancy, and chronic pain.*
- *Young women should start getting Pap smears to check for cancer about a year after their first sexual contact, or at the age of 18.*
- *It is unlikely a person would catch HIV, Hepatitis B or C while participating in sport.*

## 2.1 STIs Caused by Viruses

### 2.1.1 Genital and Anal Warts


Genital warts are one of the most common sexually transmitted infections (STIs). They are caused by the human papilloma virus (HPV). There are over 100 strains of HPV, but only some affect the genitals. Genital warts can appear around the genitals and anus or, sometimes, inside the vagina, rectum or urethra.

#### *Appearance of genital warts*

Genital warts appear as painless growths and may be:

- Flat or raised
- Single or multiple with a cauliflower-like appearance.
- Sometimes they are not visible

In many cases a person could be carrying the human papilloma virus (HPV) in an area of your skin, even though you do not have any visible warts. This commonly happens with women and often the virus is only detected when they have a Pap smear.



### ***Transmitted by direct contact***

Genital warts are spread by direct skin-to-skin contact during vaginal or anal sex. Infection may occur after direct contact with a visible wart. It is also possible that contact with an area of skin with a subclinical infection may result in infection.

### ***A variety of treatments***

Treatment removes the visible wart but not the virus. Always consult your doctor about any treatments. The options include:

- Cryotherapy - the warts are frozen off with liquid nitrogen or dry ice.
- Podophyllotoxin - this lotion can be applied at home.
- Laser treatment - this is used for warts in places that are difficult to reach.

### ***Genital warts can recur***

After treatment for warts, you should remember:

- The virus may persist in the skin, even though the visible wart has gone. This means that the wart may reappear. The virus is usually gone months or years later.
- If the wart reappears, it does not necessarily mean that you have caught the infection again.

### ***HPV and cervical cancer***

Other strains of HPV infect the cervix and increase the risk of cervical cancer. HPV causes changes to cervical cells that may progress to cancer in a few cases.

### ***The value of Pap smears***

Pap smears can detect cell changes. Most cell changes do not cause cancer and can be treated (for example, using laser treatment). If you have a history of genital warts or HPV, you will need regular Pap smears.

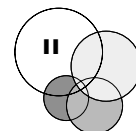
### ***How to prevent the spread of genital warts***

You can help reduce the risk of spreading genital warts by:

- Treating warts as soon as they appear.
- Using condoms - they protect the area of skin that they cover, but their ability to provide reliable protection against warts is not established.

### ***Things to remember***

- Genital warts are caused by the human papilloma virus (HPV).
- People with HPV can spread the infection, even if they do not have visible warts.
- Warts may reappear after treatment but most disappear for good eventually.



### 2.1.2 Genital Herpes

Genital herpes is caused by herpes simplex virus type 1 or 2. The herpes infection is spread by skin-to-skin contact and can be transmitted during genital, oral or anal sex. Cold sores on the mouth can cause genital infection during oral sex.

The virus can be spread when there is an 'episode' (when you have a sore, ulcer or skin split) or in between episodes. This is called viral shedding. During viral shedding, you may not be aware that the virus is at the surface of the skin and can be passed on.

#### *Symptoms*

Many people with genital herpes are not aware that they have the infection because they have no symptoms. Symptoms associated with the first attack of genital herpes may include:

- Flu-like symptoms - feeling unwell, headaches, pains in the back and legs.
- Small blisters around the genitals - which break open to form shallow, painful sores. These scab over and heal after one to two weeks.

#### *Recurrent outbreaks*

After the initial attack, the virus stays in the body and can cause recurrent outbreaks. Recurrences may be triggered by stress, sexual activity, and general illness.

#### *The first attack is usually the most painful*

The first attack of herpes can cause considerable pain and distress. However, future attacks are usually less painful and shorter in duration. Over time, the frequency of attacks becomes less frequent and may stop altogether.

#### *Diagnosing herpes infection*

If you think you have herpes, your doctor will need to take a swab from an affected area. If the herpes virus is detected from the swab, you have the infection. In certain circumstances there is a blood test available that may assist in the diagnosis of herpes; you should discuss this with your STI clinic or doctor.

#### *Treatment eases symptoms but is not a cure*

There are no drugs to rid your body of the herpes virus. Treatment is aimed at easing symptoms and to reduce the chance of transmitting the virus to a person's sexual partners.

#### *Proper condom use can prevent the spread of herpes*

Condoms can stop the transmission of the herpes virus across the area of skin that they cover. Transmission of herpes is most likely to occur when you have genital, oral or anal sex during an outbreak of sores, blisters or reddened areas or a few days before. You can still spread the virus, even if infection on your genital skin is not obvious.

#### *If you become pregnant after developing genital herpes*

Herpes infection may be transmitted to the baby during delivery, leading to serious illness.

***Things to remember***

- Genital herpes can be spread by genital, oral or anal sex.
- Outbreaks of genital herpes usually become less frequent and painful over time.
- There is no cure for herpes, but treatment helps ease symptoms.
- Genital herpes is common.

**2.1.3 Hepatitis A**

Hepatitis A is a viral disease that affects the liver. Anyone can be infected with hepatitis A if they come in direct contact with food, drinks or objects contaminated by the faeces (poo) of an infected person. Hepatitis A is also common in developing countries where hygiene standards are poor.

***Outbreaks have also occurred in childcare centres.***

This is because children under three years of age often don't show any symptoms but can infect childcare workers or other children, especially if care is not taken during nappy changing.

***Hepatitis A, B & C are different***

One attack of hepatitis A will give you lifelong protection. However, remember that hepatitis A, hepatitis B and hepatitis C are caused by different viruses. This means that prior infection with one type won't offer any immunity against the others.

***It takes time for the symptoms to show***

You can fall ill any time between 15 and 50 days after catching the virus, with the average incubation period being 28 days. Many infected people, show few or no symptoms. For older children and adults, the symptoms include:

- Fever
- Nausea
- Abdominal discomfort
- Dark urine
- Yellow skin and eyes (jaundice).

***The disease is infectious***

Hepatitis A is caused by a virus. It is spread when taken by mouth, which can happen when hands, foods or other items are contaminated with the faeces from a person with hepatitis A. The disease can also be spread sexually by oral-anal contact. A person with hepatitis A is infectious from two weeks prior to showing symptoms, to one week after they become jaundiced.

***Strict hygiene is important***

To reduce your risk of catching hepatitis A, you should:

- Wash your hands with soap and hot running water before handling food, after going to the toilet and after handling used condoms or having contact with the anal area of another person.
- Clean bathrooms and toilets often, paying attention to toilet seats, handles, taps and nappy change tables.
- Boil your drinking water if it comes from an untreated source, such as a river.

***You can be immunised against Hepatitis A***

Immunisation against hepatitis A includes a course of injections over six to 12 months. Hepatitis A immunisation is a good idea for people travelling to places where the disease is common. The vaccine is also recommended for childcare workers, gay men, people with liver problems, food handlers, injecting drug users and some other groups.

***Type of help available***

Hepatitis A can be diagnosed with a blood test. There is no specific treatment, but your doctor can help prevent the disease from spreading to other family members by offering them an injection of immunoglobulin.

***Things to remember***

- Hepatitis A is a viral disease that affects the liver.
- Hepatitis A, hepatitis B and hepatitis C are caused by different viruses so catching one doesn't offer immunity against the others.
- Children under three years of age often don't show symptoms.

**2.1.4 Hepatitis B**

There are several viruses that can cause hepatitis (inflammation of the liver) and each virus is known by a particular letter in the alphabet, such as hepatitis B. All of the viruses cause similar problems, but they are spread in different ways.

***Symptoms of hepatitis B***

The symptoms of hepatitis B vary. They include:

- Loss of appetite, nausea and vomiting.
- Pain in the liver - this is felt under the right hand side of the ribcage.
- Fever and pain in the joints.
- Jaundice - the urine becomes darker and the eyes and skin turn yellow.
- Tiredness.
- Carriers can spread the virus even if they are not sick

***Carriers of hepatitis B:***

- Often show no symptoms
- Can infect others, even when they look and feel well
- May eventually develop liver cancer or chronic liver disease.
- Babies and children are more likely than adults to become carriers.

***How hepatitis B is spread***

Hepatitis B can be spread by:

- Having sex without a condom
- Sharing needles, syringes and other injecting equipment
- Sharing razor blades and toothbrushes
- Body piercing and tattooing the skin with improperly cleaned and sterilised equipment
- Infected blood coming into contact with the open cuts of an uninfected person.



- Hepatitis B can be passed from mothers who are carriers to a baby in the womb or during the birth. Immunisation at birth will protect these babies from the disease.
- In about 30 to 40 per cent of cases, infections occur without a known cause.

### ***Avoiding hepatitis B***

To protect against hepatitis B:

- Get immunised.
- Use condoms for vaginal or anal sex.
- Do not get friends to do your body piercing or tattooing. Go to a professional tattooist or piercing studio.
- Oral sex is normally unlikely to spread hepatitis B, but it is best to avoid oral sex if you or your partner has herpes, ulcers or bleeding gums.
- Do not share needles, syringes or other equipment (such as spoons, swabs and water) if you inject drugs.
- Wear disposable gloves when cleaning up blood or administering first aid.

If you think you have been exposed to hepatitis B, see your doctor immediately. You can be given treatments that may greatly reduce the risk of hepatitis B infection.

### ***You can be immunised against hepatitis B***

You need three injections to be fully immunised:

- The first two injections are given one month apart.
- The third injection is given five months after the second dose.
- Side-effects are uncommon, but can occur soon after immunisation. They include fever, injection site soreness, nausea and joint pain.

### ***Things to remember***

- Hepatitis B can cause serious illness or death.
- Body piercing and tattooing are a risk for Hepatitis B, especially if done by a non-professional.
- Carriers can spread the virus, even if they look and feel well.
- Immunisation is 95 per cent effective.

## **2.1.5 Hepatitis C**

Hepatitis C is a blood-borne virus that causes inflammation of the liver. It is most often transmitted through sharing needles, syringes and other equipment during drug use. There is currently no cure for hepatitis C and no vaccine to prevent it, however, there are ways to alleviate the symptoms and drug therapy is successful for some people.

### ***How people become infected by hepatitis C***

A range of activities can lead to hepatitis C. Most people in Australia are infected by sharing drug injecting equipment. An increased risk of hepatitis C is also associated with:

- Tattooing and body piercing using unsterilised equipment.
- Sharing razor blades or toothbrushes.
- Health care work where there is exposure to blood.

- Kidney dialysis.
- Blood transfusions given before 1990.
- Immunisations and health care procedures in some overseas countries.

#### ***Activities with a low risk of infection***

There is a low risk of infection from:

- Sexual intercourse. (The risk may be greater if there is bleeding, for example, during menstruation.)
- Blood transfusions given since 1990.
- Transfer from mother to baby during pregnancy, at the time of birth or during breastfeeding.

#### ***Symptoms can be mild***

People with hepatitis C may show only mild, flu-like symptoms or no symptoms at all. Symptoms that do appear include:

- Dark-coloured urine
- Jaundice - when skin and the whites of the eyes go yellow.
- If you have these symptoms, see your doctor, who will give you a blood test for hepatitis C. It may not show up until two or three months after you were originally infected.

#### ***Hepatitis C often becomes chronic***

When the initial infection persists for more than six months, it is called chronic hepatitis C. Symptoms of chronic hepatitis C include:

- Mild to severe tiredness
- Loss of appetite
- Nausea and vomiting
- Soreness in the upper right side of the stomach (under the ribs)
- Fever
- Joint pain.

#### ***Most people infected become carriers for life***

More than 70 per cent of people infected with hepatitis C continue to carry the virus in their blood. These people have an increased risk of developing cirrhosis (scarring) of the liver and some will develop liver cancer. They can also infect other people at any time.

#### ***How to avoid catching hepatitis C***

There is currently no vaccine to protect people against hepatitis C. Everyone should take the following steps to help protect themselves:

- Avoid sharing personal items such as toothbrushes, razors, nail files or nail scissors, which can carry blood.
- Go to registered professionals for tattooing or piercing. Do not get friends to do it.
- Use 'safe sex' practices, including condoms for vaginal, anal and oral sex.

#### ***There is no vaccine for Hepatitis C.***

If a person injects drugs they should:

- Never share drug-injecting equipment such as needles, syringes, tourniquets, spoons, swabs and water.

- Always wash their hands before and after injecting have any contact with blood.

#### ***Treatment for hepatitis C is limited***

People who have hepatitis C will feel better if they:

- Avoid drinking alcohol
- Eat a well-balanced, low fat diet
- Rest when tired
- Consult their doctor regularly.

Hepatitis C can be treated with drug therapy. However, the success of drug therapy depends on many factors and treatment does not benefit everyone. Side effects are common.

#### ***Things to remember***

- Hepatitis C is hard to treat and easy to spread.
- There is no vaccine for hepatitis C.
- Hepatitis C could be transmitted by unsafe piercing and tattooing practices.
- See your doctor immediately if you have any symptoms.

#### **2.1.6 HIV**

The Human Immunodeficiency Virus (HIV), the virus that causes AIDS, is discussed in detail in the remaining sections of the support material.

## **2.2 STIs Caused by Bacteria**

### **2.2.1 Chlamydia or Non-Specific Urethritis**

Chlamydia infection is a common sexually transmitted disease caused by a bacterium called *Chlamydia trachomatis*. In women, chlamydia infects the cervix. In men, it infects the urethra (the inside of the penis) and is called non-specific urethritis (NSU). Chlamydia can also occur in the anus or throat and can be spread by vaginal, anal or oral sex.

***Chlamydia infection may produce no symptoms at first***  
Symptoms often do not develop at first but may include:

- An unusual discharge from the vagina
- Pain while urinating.

***Undetected chlamydia infection can cause pelvic inflammatory disease***

If left undetected, chlamydia can lead to pelvic inflammatory disease (PID). Symptoms of PID include:

- Lower abdominal pain and tenderness
- Deep pain during sexual intercourse
- Heavy and painful periods
- Fever.

***Infertility or permanent pelvic pain can occur***

PID can cause inflammation of the fallopian tubes, which can lead to infertility or permanent pelvic pain if left untreated.

***Men can also be infected with chlamydia***

Symptoms of chlamydia in men do not always occur but include:

*I've got hep C. It took me a while to remember that one night when I was with some friends at a party they were doing drugs and I wondered what it was like. When I saw the needles, I wasn't so sure but they said they would look after me. There were only two needles and four of us. So, one of my mates injected me after he did himself. It was a good night, but now I'm paying for it. It was the only time I ever injected, I never did it again. But, I'll be living with hep C for the rest of my life. It has been difficult telling people, I've had a lot of different reactions. Nearly everyone assumes I am or have been some junkie. It's really made me see how badly people treat others. I've had friends stop visiting, others who don't want me to touch their kids. I'm lucky though, because I've had a lot of support from my partner and family. The doctors reckon I need to change my diet, give up alcohol. I can have a baby and all that but I'm not ready to think about that yet. I want to educate other people — hep C is a risk for people who share needles and not everyone who does that sees themselves as a 'junkie'.*

*Heidi, 27 years old*

*It took a lot of courage but I wanted to know. So, I found a health service for young people and made an appointment. Actually, I didn't turn up to a few appointments because I was so scared. But they were really friendly when I got there. I took my best friend with me and we waited. The doctor introduced herself and asked me what I wanted. I said I'd heard about chlamydia not having symptoms and I wanted to be checked. She asked me some questions — they were pretty personal — but she made it easy to talk about them. Then, we talked about how the test was done and if I had any more questions. My friend stayed with me when the doctor took the test. I rang up the next week and got my results. I was so happy that I didn't have chlamydia. I got lots of condoms from the doctor and I'm using them now. I also know that I can go back whenever I have a question or want another test. I like the place and have told some friends about it too.*

*Tara, 17 years*

- A clear or white discharge from the penis
- A burning sensation while urinating. Sometimes the pain occurs without the discharge.

#### ***Chlamydia infection is treated with antibiotics***

Treatment depends on how long the chlamydia infection has been present:

- Early chlamydia infection - in men and women can be treated with antibiotics.
- Advanced chlamydia infection and PID in women - may require a longer course of antibiotics. Hospital treatment is sometimes needed in severe cases.

#### ***Prevention of chlamydia is best:***

- Always use condoms
- Speak to your doctor about being tested for chlamydia if you are concerned.
- Heterosexual men have a particular responsibility not to pass chlamydia infection onto their female partner because it can lead to PID and infertility.

#### ***Things to remember***

- Chlamydia may not cause symptoms at first
- Chlamydia can lead to infertility or permanent pelvic pain in women
- Prevention is best.

### **2.2.2 Gonorrhoea**

Gonorrhoea is a common sexually transmitted disease. It is caused by bacteria known as *Neisseria gonorrhoeae*. It usually affects the genital area, although the throat or anus may also be involved. Gonorrhoea affects both men and women and is easily transmitted during vaginal intercourse. It can also be transmitted during anal or oral sex.

#### ***Gonorrhoea may not cause symptoms in women***

A lack of specific symptoms means gonorrhoea may go undetected for longer in women. Often there are no symptoms. Sometimes, gonorrhoea causes:

- An unusual discharge from the vagina
- Pain while urinating.
- Untreated gonorrhoea can lead to infertility in women

If left untreated, gonorrhoea can lead to pelvic inflammatory disease (PID), which can cause infertility. Symptoms of PID include:

- Lower abdominal pain and tenderness
- Deep pain during sexual intercourse
- Heavy and painful periods
- Fever.

Women who have had PID need to be especially careful about gonorrhoea, because the risk of infertility increases with each bout of inflammation.

#### ***A check for gonorrhoea may be recommended***

Because gonorrhoea may not cause symptoms until PID has already developed, sexually active women who have

recently had a change of sexual partner or feel they may be at risk of a sexually transmitted disease (STD) should have a test for gonorrhoea (and for chlamydia).

***Men may experience a burning sensation while urinating***

Gonorrhoea commonly infects the inside of the penis (the urethra). Symptoms may include:

- A burning sensation while urinating
- A white or yellow pus-like discharge from the penis
- Swelling and pain in the testicles, which can occur if the gonorrhoea infection goes untreated.
- In a small percentage of men there are no symptoms at all.

***Oral and anal gonorrhoea***

In both men and women:

- Anal gonorrhoea often occurs without symptoms
- Gonorrhoea in the throat may cause a sore throat, however, it usually occurs without symptoms.

***Gonorrhoea is treated with antibiotics***

Gonorrhoea is treated with antibiotics. Some strains of gonorrhoea are now resistant to penicillin and some other antibiotics. Tell your doctor if you have been travelling overseas because many of the new resistant strains have originated outside Australia.

***Things to remember***

- Gonorrhoea may occur without symptoms, especially in women.
- Gonorrhoea can lead to infertility in women.
- Use condoms to prevent gonorrhoea infection.
- Sexually active women should discuss with their doctor whether they should be tested for gonorrhoea.

### 2.2.3 Syphilis

Syphilis is a sexually transmitted infection caused by a bacterium called *Treponema pallidum*. It affects both men and women. Pregnant women who have syphilis can pass on the infection to their unborn baby. It can also be transmitted by blood transfusion. Used properly, condoms will reduce the risk of syphilis. There are three stages of syphilis. Only the first two stages are infectious.

Syphilis is not very common in the southern parts of Australia today, but it is still common in many parts of the world. Blood tests will show if you have the infection.

***Symptoms during the three stages of syphilis***

*First stage (4 to 6 weeks)*

The first stage of syphilis occurs as a sore on the penis, vulva (lips of vagina), anus or mouth. The sore may be hidden from view, in the rectum or on the cervix and is usually painless.

*Second stage (0 to 12 months)*

During the second stage, there may be a flat, red skin rash. This may be on the soles of the feet or palms of the hands, or it may cover the entire body. It is very contagious.

*Third stage (may occur years later)*

This occurs in about one third of untreated individuals. Severe brain or heart complications may occur during this stage.

***Penicillin is very effective against syphilis***

Penicillin is a very effective treatment for syphilis. Treatment early in the infection is needed to help prevent third stage complications.

***Avoid sex until the infection is cured***

You should not have sex until your treatment has finished and follow-up blood tests have confirmed the infection is cured.

***Things to remember***

- There are three stages of syphilis. The first two are infectious.
- Syphilis is easily treated.
- If left untreated, syphilis could lead to serious brain or heart complications.

## 2.3 STIs Caused by Yeast Infections

### 2.3.1 Thrush

Thrush can cause itching and discomfort. Vaginal thrush is a common infection caused by a yeast called candida albicans, which lives in the bowel, mouth and in the vagina. Thrush develops when candida numbers grow excessively. Thrush is also known as candidiasis.

***Vaginal itching or burning are common symptoms***

Symptoms which you may experience if you develop thrush include:

- Vaginal discomfort - itching or burning
- A thick white discharge with a 'cottage cheese' appearance
- Redness or swelling of the vagina or vulva
- Stinging or burning while urinating.

***Diagnosis of thrush***

For a diagnosis of thrush to be made, your doctor will need to examine your genitals and take swab specimens from the affected area.

***How thrush occurs***

Thrush is not a sexually transmitted disease. It is caused by an overgrowth of candida, which normally lives in the vagina. The overgrowth may be due to:

- Antibiotic use
- Oral contraceptive use
- Diabetes
- Pregnancy
- General illness and immune system disorders.
- Sometimes, the reason for candida overgrowth cannot be identified.

***Treatment includes creams and suppositories***

Treatment usually involves antifungal creams or pessaries (tablets), which are placed in the vagina at night. This helps to reduce candida numbers and thrush symptoms.

### ***Treatment is not always necessary***

Sometimes symptoms only last for a short time (for example, the week before your period) and treatment is not necessary.

### ***Preventing thrush***

To help prevent thrush:

- Wipe from front to back after using the toilet. This will prevent the spread of candida from the anus to the vagina.
- Use mild soap or sorbolene-glycerine cream to wash the genital area daily.
- Avoid using antiseptics, irritating douches or perfumed sprays in the genital area.
- Avoid tight fitting pants and synthetic underwear.

### ***Ruling out other conditions***

A number of other vaginal conditions result in symptoms that are similar to those of thrush. If you have repeated episodes of thrush, despite following treatment and prevention guidelines, you should see your doctor. They will establish whether you have thrush or another vaginal condition.

### ***Things to remember***

- Thrush is caused by an overgrowth of a yeast known as candida.
- Vaginal creams and pessaries help reduce candida overgrowth and thrush symptoms.
- Consult your doctor if you have recurrent attacks of thrush.

*My boyfriend gave me a really hard time after the doctor told me I had thrush. We weren't having sex with each other so he thought I must have had sex with someone else. It took a lot of time to explain to him that women can get thrush without having sex — it just happens naturally. It really made us aware of how much we trusted each other.*

*Rhianon, 18 years*

## **2.4 STIs Caused by Lice and Mites**

### **2.4.1 Pubic Lice and Scabies**

Crab lice are small, flat, light brown insects that cling to pubic hair and suck blood for nourishment. They prefer pubic hair and do not leave the body voluntarily. Crab lice fix their eggs (nits) to pubic hair. Blood sucking from crab lice can cause small red areas or sores, and itching. Crab lice are spread by close physical contact, including sexual activity.

### ***Removing crab lice from pubic hair***

- Treating crab lice involves applying permethrin liquid (Quellada cream rinse) to all skin between the chest and knees.
- Treating any clothing, bedding or towels used in the last two days should be washed in hot water or dry cleaned.

### ***Contact sexual partners***

Your sexual partners may also require treatment for crab lice.

### ***Things to remember***

- Crab lice cling to pubic hair and suck blood for nourishment.
- The blood sucking can cause small red sores and itching.
- Crab lice do not voluntarily leave the body and will need to be treated with permethrin solution.

## 2.5 Symptoms, Treatment and Getting Help

If you develop symptoms that could indicate you have a sexually transmitted infection (STI), it is important that you discuss these with your doctor immediately. Do not try to diagnose your condition yourself. You could be at risk of acquiring an STI if you have sex with a new partner or if your partner has an STI. Proper use of condoms reduces, but does not eliminate, the risk of acquiring an STI. Many people who catch an STI do not develop any signs and symptoms. Therefore, the only way to check if you have an infection is to have a check-up. Not all diseases can be detected at a check-up, but most of those that can be detected can also be treated or managed.

### 2.5.1 Signs and symptoms you should discuss with your doctor

#### *An irritation or rash on or under the foreskin*

Redness, swelling, soreness or tightening around the foreskin can be associated with:

- Many skin conditions not related to STIs, for example balanitis, which is the most common reason for these symptoms.
- Some STIs, such as genital herpes.

#### *Pain or discomfort when urinating*

Pain during urination may be due to:

- Chlamydia.
- Gonorrhoea.
- Non-specific urethritis in men.
- Genital herpes.
- A urinary tract infection (particularly in women).

#### *Genital itchiness*

Genital itchiness may result from:

- Crabs (pubic lice).
- Scabies.
- Herpes.
- Candidiasis (vaginal thrush). This is a common cause of vaginal itching and is not usually sexually transmitted.
- Dermatitis, tinea or reactions to prescription drugs.

#### *Lumps on the genitals*

Genital lumps may be associated with:

- Genital warts.
- Molluscum contagiosum. This viral condition is spread by both sexual and non-sexual body-to-body contact.
- Normal anatomical variants (for example, penile papules).

#### *Discharge from the genitals*

- Discharge from the penis is often caused by gonorrhoea, chlamydia or non-specific urethritis. Discharge from the vagina is more commonly associated with vaginal thrush, trichomoniasis (a bacterial STI) or bacterial vaginosis.
- Discharge can also be caused by gonorrhoea and chlamydia.



### ***Genital sores***

Small sores around the genitals may be the result of:

- Herpes.
- Syphilis.
- Minor small abrasions, cuts or tears during sexual activity or masturbation.
- Dermatological conditions, which are not sexually transmitted.
- An allergic reaction to medications.

### ***A number of skin problems can affect the genitals***

A number of skin conditions can affect the genitals. Some of these include Psoriasis, Eczema, Dermatitis, and Tinea.

These conditions are not sexually transmitted. Do not apply any creams, lotions or disinfectants to the area until you have been examined by your doctor or an appropriately qualified health care worker.

### ***Things to remember***

- Not all genital symptoms are caused by an STI.
- Your doctor is the only one who can accurately diagnosis your condition.
- If you think you have been exposed to an STI, you should have a check up even if you don't have any signs or symptoms.

## **2.6 Pap Tests for All Women**

Every woman between 18 and 70 years of age who has ever been sexually active, should have a Pap test every two years. The Pap test saves 1,000 women from developing cervical cancer each year because it detects abnormalities before they develop into cancer. Most Pap test results are normal. Abnormal results are usually due to conditions that clear up naturally or are easily treated.

### ***The Pap test detects abnormal cells in the cervix***

The early stages of cervical cancer often have no symptoms. The only way to know if you have abnormal cells in your cervix is to have a Pap test.

Pap tests can screen for cervical cancer because the cervical cells pass through a series of detectable changes before they become cancerous. The progression of abnormalities to cervical cancer can take up to ten years and even severe abnormalities will not automatically progress to cervical cancer.

### ***Abnormal Pap test results***

Of the small number of Pap tests that return an abnormal result, almost all of them are not due to cervical cancer. Most abnormalities indicate common infections or conditions that clear up naturally or can be treated easily.

HPV may show up on an abnormal Pap test result, and its presence in the body has been linked to cervical cancer. Four out of five women have HPV at some time in their lives. HPV is very common and most women with genital HPV will not develop cervical cancer.

***Treating abnormalities***

Some abnormalities will require further investigation through colposcopy using an instrument which gives a magnified view of the cervix. You may be referred to a colposcopy clinic or a gynaecologist for this examination.

More severe abnormalities may require treatment to remove the abnormal cells. Your doctor or gynaecologist will recommend the best treatment for you.

Treatment usually requires only a day stay in a hospital or clinic and does not affect fertility.

Women should start having Pap tests about a year after their first sexual contact or at the age of 18, whichever comes later. Lesbians need Pap tests too. Some women who have had a hysterectomy still need to have regular Pap tests; check with your doctor the next time you visit. Menopause does not protect women from cervical cancer. In fact, most cases of cervical cancer occur in women older than 40 years. All women need to keep having a Pap test every two years until the age of 70.

***Things to remember***

- All women aged from 18 to 70 years should have a Pap test every two years.
- Pap tests are an easy and effective way to detect cell changes that may lead to cancer.
- Most Pap test results are normal.
- Most abnormal test results are due to common infections or conditions that clear up naturally or can be treated easily.

## **2.7 Immunisation for Hepatitis B does not cover A or C.**

***Immunisation against hepatitis B is a good idea.***

What you should know about hepatitis B immunisation:

- Immunisation for hepatitis B does not cover a person for hepatitis A, or hepatitis C.
- There is an immunisation for hepatitis A.
- There is not an immunisation for hepatitis C.
- Anyone can be immunised against hepatitis B. Immunisation provides protection against hepatitis B for 95 per cent of people.
- You need three doses of the vaccine over six months to be protected. These are given by injection.

The Australian Government provides free hepatitis B immunisation for all infants at birth and with their routine immunisations at two, four and 12 months of age. It is also offered to all 11 to 12 year old (Year 7) school students if they have not previously completed a course of hepatitis B vaccination.

Other people can obtain hepatitis B immunisation through their family doctor or local government immunisation provider. The vaccine is not free.

People who regularly provide first aid should consider hepatitis B immunisation. Infection control procedures

should still be used if you are immunised, as there is no immunisation for Hepatitis C, or HIV.

#### ***Who should be immunised***

Immunisation is recommended for everyone, and especially:

- Injecting drug users.
- Health workers and others who come in contact with blood during their work.
- Workers (and residents) at facilities for people with an intellectual disability.
- Sexually active people.
- People with other medical conditions - for example, people with other forms of hepatitis or liver disease, or people who receive medical treatment with blood products or who are on kidney dialysis.
- Prisoners and people who share a house with an infected person.
- Travellers.

#### ***Things to remember***

- Immunisation is the best prevention.
- Use safe sex practices.
- Never share injecting equipment.
- Never get friends to do piercing or tattoos. Always go to professionals.

## **2.8 Prevention through the proper use of condoms.**

The best way to prevent infection with a sexually transmitted infection, apart from choosing not to have sex, is to always use condoms. The rules for using condoms include:

- Open the packet carefully so that you don't tear the condom.
- Pinch the tip of the condom before carefully rolling it down the entire shaft of the erect penis.
- Do not use spit, Vaseline, baby oil or other oil-based lubricants.
- Use water-based lubricants, such as KY, Muko or Wet Stuff.
- Withdraw the penis before the erection is lost, so that the condom does not fall off. Hold the base of the condom to prevent spills.
- Store condoms in a cool, dry place and check the expiry date.

### **Question Box**

- *The media seem to focus on HIV and not on other STIs. How could the media make society more aware of the other STIs?*
- *People often think safe sex equals condom use. Investigate which STIs condoms prevent and which they do not prevent.*
- *What effects might alcohol and drug use have on sexual activity and safe sex?*
- *Attitudes to sexual activity and young people have changed over the last decade or so. What messages do newspapers, magazines and the media give about sexual activity and young people?*

# HIV/AIDS — The Basics

*This section gives some basic facts about HIV/AIDS — what it is, what it isn't, and how the body reacts to infections.*

## Fact Box

- *The immune system is responsible for fighting viruses and other infections and illnesses.*
- *Human immunodeficiency virus (HIV) specifically targets the T cells that tell other immune system cells to fight 'enemies'.*
- *It can 10 to 12 years for HIV to overtake the body's immune system, so a person can look and feel well for many years.*
- *HIV is transmitted through blood, semen, pre-ejaculate, vaginal fluids and breast milk.*
- *Being HIV positive is not the same as having AIDS.*

There is a lot of confusion about HIV/AIDS — some of it is easy to explain and understand. It just takes some time and interest. It is important to understand the basics about HIV/AIDS and the way the body deals with infection. More specific information about the details of HIV/AIDS can then make more sense.

## 3.1 The Difference between HIV and AIDS

Many people think HIV and AIDS are the same thing, but they are different.

AIDS stands for Acquired Immune Deficiency Syndrome.

- **Acquired:** because it is an infection that is transmitted between people; it is acquired from another person. This distinguishes infectious immunodeficiency syndrome from genetic or other causes.
- **Immune Deficiency:** because it is a disease that weakens the body's immune system. The immune system gives the body the ability to fight off infectious diseases. When the immune system stops working properly, people are said to have an immune deficiency.
- **Syndrome:** because it is an infection that has a wide range of symptoms (a syndrome is a group of symptoms or diseases) that are all due to the infection.

AIDS is caused by a virus. The virus which causes AIDS is called the human immunodeficiency virus, or HIV. HIV was discovered in 1983 and given this name in 1986. The name tells us:

- **Human:** because it causes disease only in humans
- **Immune deficiency:** this virus affects the immune system and causes it to become weak or deficient
- **Virus:** because it is a virus that causes the infection.

Although people with HIV look and feel well, the virus is slowly weakening their immune system.

Having HIV does not mean that a person has AIDS; the development of AIDS usually occurs only many years after infection with HIV. Section 4, HIV Infection and Progression explains this further.



### 3.2 Different Types of HIV

Currently, two different types of human immunodeficiency viruses have been identified — HIV-1 and HIV-2. Both are transmitted in the same way (vaginal or anal sex without condoms, sharing of injecting equipment and mother to newborn child) and both result in the development of AIDS. HIV-1 is responsible for the epidemic being experienced in Australia; very few cases of HIV-2 have been identified in Australia. HIV-2 is found in other parts of the world, in particular countries in West Africa.

This support material focuses on HIV-1.

### 3.3 The Immune System

The immune system protects the body against invading organisms which cause disease. These intruders include:

- bacteria
- viruses
- yeast infections
- parasites.

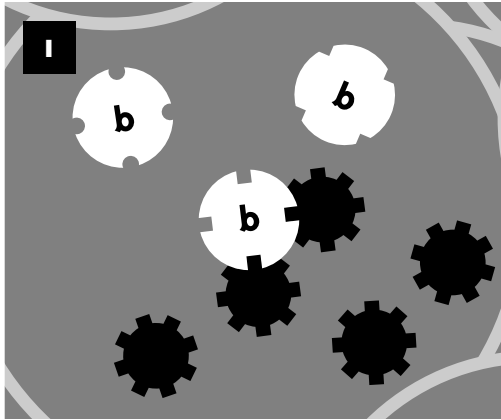
The immune system can respond to any of the millions of possible intruders. Once it has attacked an intruder, the immune system remembers that intruder for the rest of the person's life. This is why people get a disease like mumps once and are then 'immune' to them.

The immune system is very complex, made up of several different organs and sets of glands, and millions of cells circulating through our bodies. These cells are constantly patrolling, looking for intruders.

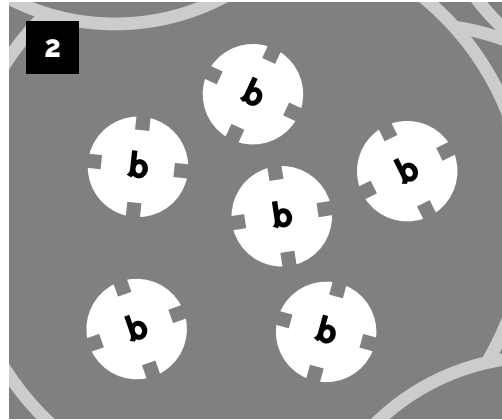
One of the most important set of cells in the immune system is the lymphocytes. There are two kinds of lymphocytes, B-cells and T-cells. The T-cells are the 'boss' cells – they recognise any enemies, like bacteria and viruses, and tell the B-cells to make antibodies. The antibodies then fight the intruders.

Diagram 2

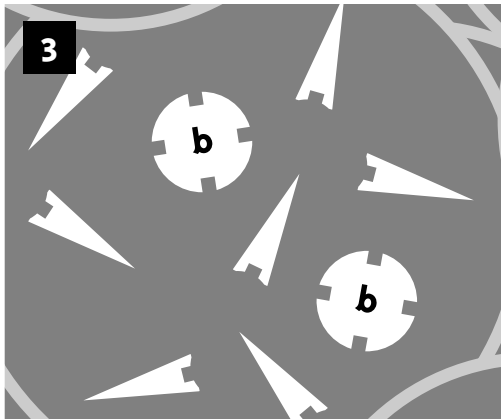
How the Immune System Works



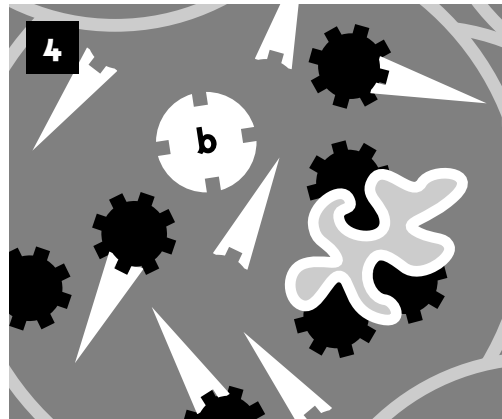
1  
B-cells are coded for different intruders.  
Intruder encounters B-cell.



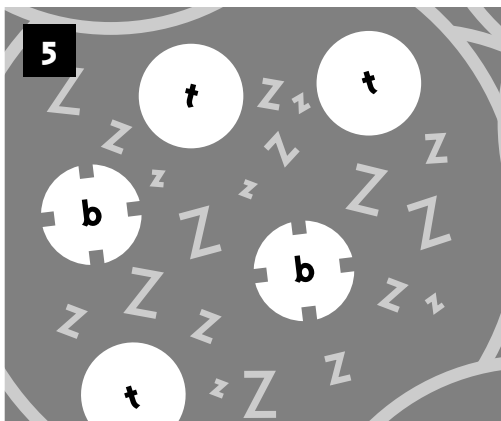
2  
B-cell produces 'clones' of itself.



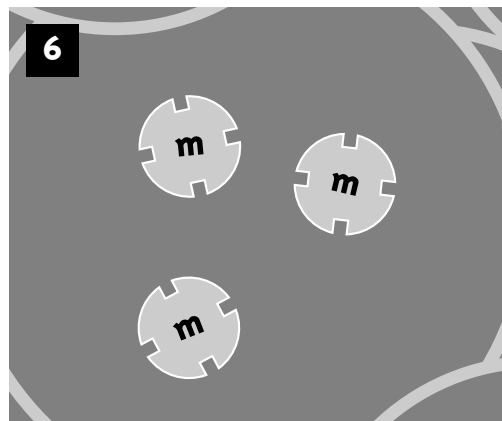
3  
B-cell produces antibodies.



4  
Antibodies attack intruder.  
Other antibodies attract macrophages which  
'eat' intruders.



5  
T-cells produce lymphokines which stimulate,  
regulate and eventually suppress B-cell activity.



6  
Memory cells keep watch for return of the  
intruder.

There are two kinds of lymphocytes, called B-cells and T-cells. Certain T-cells, the hunter killer cells, recognise particular intruders. When an intruder enters the body, it soon encounters a T-cell that recognises its unique structure. The T-cell then tells the B-cell to rapidly create thousands of 'clones' of itself. These in turn produce millions of tiny protein molecules, called antibodies.

Antibodies come in many varieties, and work in different ways to defeat the intruder. Some may attach themselves to the intruder and ingest it. Others serve to attract larger cells called macrophages, which attack and destroy the intruders. Antibodies are produced for all infections. The time it takes the immune system to produce antibodies differs for different infections, and is called 'the window period'.

Other T-cells do not produce antibodies, but some of them, called the T-helper (or CD4) cells, serve to 'switch on' the B-cells. T-cells can also recognise and directly attack some foreign intruders, as well as cells which have been infected by viruses.

Once the intruder has been defeated another type of T-cell, the T-suppressor cell, turns the system off and most of the fighting cells and antibodies disappear. Some remain, however, and stay in our systems for the rest of our lives, waiting for that particular intruder to return.

With HIV infection, the immune system is unable to remove HIV or stop it from developing.

### Question Box

- *What are the signs of the immune system working effectively? Does it differ with different injuries or diseases?*
- *Write a journal listing symptoms and responses to illness. What can a person do if they are too sick to attend school or work?*
- *Research how HIV/AIDS is discussed in the media. Critically question if the language, style and information is presented in an unbiased or biased way.*
- *Are boys and girls or men and women allowed to 'be sick' in different ways? What is acceptable behaviour for either and both genders?*

# HIV Infection and Progression

*This section outlines what happens when HIV enters the body, how it progresses, and the development of HIV to AIDS.*

## 4.1 HIV and the Immune System

When HIV enters the bloodstream there are two responses (i) the immune system's response and (ii) HIV's response.

The immune system responds to a new intruder by identifying it and producing antibodies to try to kill it (see Section 3.3). It can take between 6 and 12 weeks for antibodies to develop. These antibodies stay in a person's body for the rest of his or her life.

HIV, like other viruses, needs to live inside a cell in its host to continue to survive. Without this, HIV is unable to live very long. When HIV enters a person's bloodstream, it needs to attach itself to a living cell. HIV prefers to attach to the T-helper cell of the immune system.

People with HIV can stay healthy for many years and may not know that they are infected.

Once inside the T-helper cell, HIV reproduces more viruses. This eventually kills the T-helper cell and releases more HIV cells into the bloodstream which then attach to other T-helper cells. This is how the immune system becomes deficient. Over time, it cannot produce enough T-cells to fight HIV or other infections.

Eventually, the virus kills so many T-helper cells that the immune system cannot recover. The person then has an immune deficiency.

## 4.2 From HIV Infection to AIDS

HIV disease is divided into four major categories each describing a stage of infection. This classification system was originally developed by the Centers for Disease Control and Prevention (CDC) in the United States. With new treatment options significantly changing HIV positive people's health, the distinction between stages is not used as much as it has been in the past. Now, there is a greater tendency to consider a continuum of HIV disease. Even so, understanding the classification system gives some picture of the effects of HIV on the immune system.

### 4.2.1 Stage One: Primary Infection and Seroconversion

With every new intruder, the immune system responds by identifying and trying to kill it. The immune system responds to HIV in the body by producing antibodies. This is called 'seroconversion' — when someone converts from not having HIV antibodies to having HIV antibodies. Some people may experience a seroconversion illness within weeks of infection. This illness is often like glandular fever. Symptoms include fevers, headaches, feeling weak and

### Fact Box

- People with HIV do not look any different to people without HIV.
- The time the body takes to develop antibodies to infection by a virus is called 'the window period'. The window period for HIV is 6 – 12 weeks.
- Currently, in Australia, approximately 50% of people with HIV will develop AIDS in 10 years; however, new treatment options are changing this.
- HIV can be transmitted to others during the window period.



unwell, and sometimes a rash. These symptoms may last for several weeks and people usually get better without medical attention. There is nothing special about this range of symptoms that might suggest to anyone that it is HIV. It can be easily mistaken as a flu or feeling run down.

Usually within 6 to 12 weeks, the body has responded to infection by producing HIV antibodies. This is called ‘the window period’ — the time between infection and the development of antibodies. These antibodies are present in the blood and can be detected through a blood test called the HIV Antibody Test (which is often but incorrectly called an AIDS test).

#### 4.2.2 Stage Two: Asymptomatic Infection

The second stage of infection is called ‘asymptomatic infection’, which means people have HIV but have no symptoms. HIV is present in the body and is continually multiplying even though it may not be causing disease. This can be detected through a test called a viral load test (see Section 7.4). The immune system is able to manage HIV infection at this stage.

During this stage of infection, there are no signs or symptoms that would make anyone suspect they have HIV and would only know about infection through a HIV antibody test (see Section 7.1). This stage may last from months to years. With new treatments, the time people live with HIV infection without symptoms may be extended.

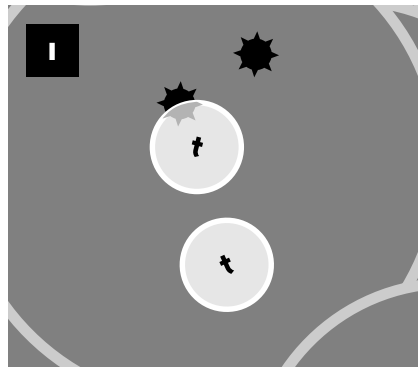
**Diagram 3**

<b>Stages of HIV Infection</b>		
<b>Stage</b>	<b>Symptoms</b>	<b>Duration*</b>
HIV infection	Short flu-like illness	A few days to a week
Asymptomatic or silent infection	No symptoms	Average is about 10 years
Symptomatic illness	A range of symptoms	Can last several years
Advanced disease or AIDS	Severe symptoms	Average is about 2 years

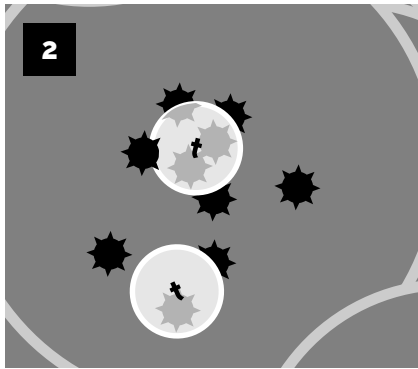
\* New treatments may extend the duration of time a person is at a particular stage and may prevent people from developing further illnesses or diseases.

## Diagram 4

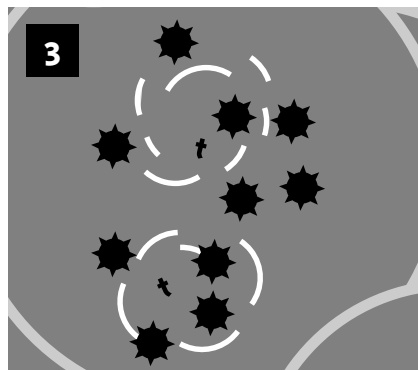
### How HIV Causes Immune Deficiency



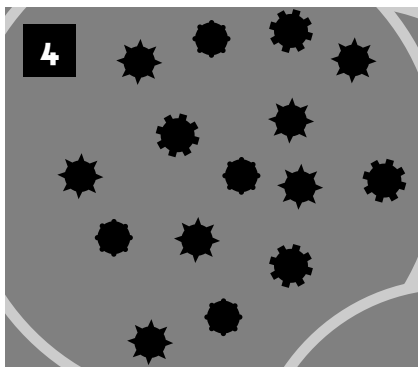
HIV enters the body and attacks T-helper cells.



HIV enters T-helper cells and forces them to make more HIV.



HIV kills off T-helper cells.



Other intruders are left unchecked by immune system.

### 4.2.3 Stage Three: Symptomatic Illness

During this stage, infected T-cells are reproducing HIV and releasing more HIV into the bloodstream. The immune system responds by producing more T-cells to try to kill HIV, only to have those T-cells infected with HIV. As HIV continues to reproduce, T-cells are destroyed to the extent that the immune function begins to decline. The immune system gets progressively weaker as it has less and less fighting ability.

Once HIV has begun to kill large numbers of T-helper cells, people with HIV infection begin to get mild illnesses caused by this immune deficiency. These mild illnesses are sometimes called AIDS-related conditions, or ARC. Some of the symptoms of this period of HIV illness include:

- sudden, severe and unexplained loss of weight
- fever that has no apparent cause and which comes and goes
- heavy sweating at night
- loss of appetite and constant tiredness
- severe or persistent diarrhoea
- persistent thrush
- swollen glands in the neck, armpits and groin.

Of course, some or all of these symptoms can be caused by infections other than HIV. A HIV antibody test is the only way to determine if the cause is HIV. If HIV is the cause, these symptoms may come and go, and they may last for several years.

It may take anything from 2 years to 15 years or more after infection for AIDS-related conditions to develop. With improved treatment options, it is hoped that HIV infection will be managed and people will live longer and healthier lives.

### 4.2.4 Stage Four: Advanced Disease or AIDS

AIDS is the final stage of infection with HIV and is an indication of the level of damage done to the immune system. Eventually, people with immune deficiency caused by HIV develop more serious illnesses. These are caused by organisms like viruses, parasites and bacteria which a healthy immune system can manage. These illnesses and diseases are often called 'opportunistic infections' because they require the opportunity to cause infection provided by a weak immune system.

When these serious diseases appear, a HIV-positive person is diagnosed with AIDS. There are over 20 AIDS defining illnesses and these include opportunistic infections and malignancies; neurological diseases; and lymphomas. Some examples are listed below:

- a particular kind of pneumonia called *Pneumocystis carinii* pneumonia (or PCP) which rarely affects people without HIV infection
- a rare kind of skin cancer called Kaposi's Sarcoma (or KS)
- cervical cancer in women with HIV
- HIV wasting disease

- HIV-related dementia
- one of a number of other rare infections (usually of the brain or digestive system) or other rare cancers.

Some of the infections and cancers that appear in people with AIDS can be treated. But because the immune deficiency which allows them to happen cannot be treated, illnesses keep coming back.

Eventually, these illnesses can cause death. People with AIDS die from these infections, not AIDS. So, someone may die from cancer which has developed because of acquired immune deficiency syndrome.

It is believed that 50 per cent of people with HIV will develop AIDS in 10 years. However, some people may develop AIDS in a longer or shorter amount of time. At present, doctors think that nearly all untreated HIV-positive people will have AIDS by 15 to 20 years after infection. Around 50 per cent of people diagnosed with AIDS will die within two years of diagnosis.

In the mid 1980s, with limited treatments, a lower percentage of people survived. With increasing knowledge of how HIV works, and with more treatments available, the percentage of people surviving with AIDS for one and two, and possibly more years is increasing. It is expected with new treatments, that the development of AIDS will take longer or may be prevented, and that people with AIDS will live longer than they do today (see Section 7.4).

### Question Box

- *What images do the media provide of people with HIV/AIDS and other STIs?*
- *What impact might HIV infection have on a person's relationships, work, and family relations? What other areas of a person's life could be affected?*
- *Grief, loss, illness and death can be difficult to talk about. How is grief discussed and expressed in Australia? Are there other ways grief is dealt with around the world?*
- *What might be important questions to ask about new treatments and medications before starting to take them?*

# HIV Transmission

*The specifics of how HIV is passed from one person to another is the focus of this section and it looks at the 'what ifs' and 'maybes'.*

## Fact Box

- HIV cannot be spread by kissing, touching, sharing cutlery and crockery, or using toilets or swimming pools.
- World-wide, HIV infection occurs mainly through heterosexual contact, ie sex between men and women. In Australia, 80 per cent of HIV infection has occurred via unprotected sexual contact between men.
- In Australia the level of HIV infection among people who inject drugs has remained below 3%. In some other countries where Needle and Syringe Programs are not in place, or were established too late, the rate has risen to over 50%.
- In Australia, with treatment during pregnancy, approximately 2% of children born to HIV-positive mothers are infected. This is significantly lower than the worldwide percentage.

## 5.1 How Infectious is HIV?

When a disease (or a virus which causes a disease) spreads among people more frequently than expected, this is called an epidemic. In the 1970s, an epidemic of HIV infection began to spread around the world. Today, this infection is causing an AIDS epidemic throughout the world, with over 150 countries reporting cases.

The knowledge we have about HIV and AIDS is based on extensive scientific and medical research. National and international conferences on HIV/AIDS over the last 15 years confirm this knowledge and gives great confidence in our understanding of the nature and behaviour of HIV, how it is spread and how infectious it is.

Fortunately, HIV is not highly infectious when compared with many other viruses, such as those which cause colds and flu. In 1918, for example, a flu epidemic killed millions of people in a few months. If HIV was as infectious as the flu virus, most of the world's population would be infected by now.

HIV is a fragile virus and does not live long outside the body. It is very sensitive to temperature and can be killed easily outside the body with bleach. Once inside the body, HIV seems impossible to kill and difficult to control.

## 5.2 HIV Transmission

HIV can pass from person to person only in very specific and direct ways. Scientific research clearly shows that for infection to occur, HIV must:

- leave the body of an infected person in an infectious body fluid
- be in a sufficient quantity or 'dose' to cause infection
- enter the bloodstream of another person.

Studies have shown that the only fluids through which HIV can be transmitted are:

- blood (including menstrual blood)
- semen
- vaginal fluids.

Breast milk has been found to transmit HIV to newborn infants. While HIV has been found in small amounts in saliva (spit) and urine (wee), the amounts are not large enough to infect other people.

We know that HIV cannot be spread:

- through the air, for example by coughing
- through food
- on toilet seats or in swimming pools
- through sharing eating or bathroom facilities with a person with HIV
- by mosquitoes or other insects
- through kissing a person with HIV.

HIV is spread only when blood, semen or vaginal fluids from an infected person enter the body or bloodstream of another person. These three body fluids need to get direct access to the bloodstream either through cuts, tears or open wounds, or through mucous membranes such as the eye, nose, mouth, vagina or anus.

### 5.2.1 Risk Behaviours — Not Risky People

Nearly always, HIV infection results from some act that each person can choose to do or choose not to do. These acts are called risk behaviours. This means that HIV infection can nearly always be prevented by avoiding risk behaviours. It may not always be easy to avoid the risk behaviours, and some people are not aware of what is risky behaviour.

It is not who a person is that puts them at risk of HIV infection. It is what a person does that counts. So, being a gay man or an injecting drug user doesn't immediately mean that person is at risk of HIV. Anyone who has unprotected sex (woman or man, heterosexual, bisexual or homosexual) and anyone who shares equipment used to break the skin are possibly at risk of HIV. HIV does not discriminate!

There are four distinct ways HIV can be passed from a person with HIV to another person. These are:

- through anal and/or vaginal intercourse
- through sharing drug-injecting equipment such as needles and syringes
- through exposure to infected blood or blood products (for example, needle stick injury or transfusion)
- from a mother with HIV to her child during pregnancy, delivery or through breastfeeding.



### 5.3 Sexual Intercourse

HIV is found in the blood and semen of infected men, and in the blood, menstrual blood and vaginal fluids of infected women. HIV can be passed on during sexual intercourse if these fluids get direct access to another person's bloodstream. This can occur during vaginal and anal intercourse between women and men, and anal intercourse between men and men.

In Australia, HIV and AIDS appeared first in homosexual (or gay) and bisexual men. Some people think this means that HIV/AIDS is 'caused' by gay and bisexual men. This is not true (see Section 3.1).

Anal intercourse (whether between men or between men and women) can easily transmit HIV infection, because the lining of the rectum is fragile and allows the virus to get into the bloodstream. During anal intercourse, the lining can be damaged. Both partners are at risk in anal sex because tiny amounts of blood (too small to see) or semen can get from one person directly into the bloodstream of the other. Blood and/or semen get into the bloodstream through small tears in the lining of the rectum, through small tears on the penis, or through the urethra (the tube in the penis).

HIV can also be transmitted through vaginal intercourse between men and women. So, a HIV-positive man can infect his female partner(s) or a HIV-positive woman can infect her male partner(s). In some regions, particularly throughout Africa and Asia, nearly all HIV-positive people were infected through sexual intercourse between women and men. A small, but growing number, of men and women in Australia have been infected in this way.

It is clear that HIV can easily be passed on through vaginal intercourse, although not as efficiently as anal intercourse. Doctors believe that HIV is transmitted more easily from men to women than from women to men. But, it is important to remember that HIV can be and is transmitted from women to men. Some people may be more vulnerable to infection than others. People who have sores or ulcers caused by other untreated sexually transmissible infections are more easily infected by HIV. It is important that people take care of their overall sexual health.

The risk from oral sex (mouth on vagina or penis in mouth) is low. HIV is present in semen (cum), in vaginal fluids (the liquid that comes from the vagina when a woman is sexually aroused or excited) but in lesser quantities than in semen or blood. When having oral sex, these fluids might get into cuts or sores in the mouth and may result in infection. Worldwide, there has been only a handful of cases of oral transmission of HIV documented compared to tens of millions from vaginal and anal sex.

## 5.4 Sharing Needles and Syringes

HIV needs to get directly into the bloodstream of a person for infection to occur. Reusing or sharing needles and syringes to inject drugs can transmit HIV. This is because a small amount of blood remains in the needle and syringe after a person has used it. If the syringe is used again by another person, the first person's blood will be injected into their bloodstream. If the first person has HIV, then the blood left in the syringe will have HIV in it. Other people who use the syringe may become infected with HIV.

It is sharing needles and syringes that carries the risk of HIV infection, not the drug use itself. Other risks are associated with drug use.

This means that not only people who are regular users of drugs can get HIV infection — people who inject drugs occasionally, or just once, can also get infected. Their sexual partners are also at risk if they do not practise safe sex (see Section 6.1). In Australia, HIV infection among injecting drug users is less common than in some other countries.

It is also possible that other kinds of skin puncturing, such as ear or body piercing and tattooing, can pass on HIV infection if needles are shared and not properly disinfected. This is why licensed tattooists and piercing agencies must use clean, sterilised needles. Some people do not use registered agencies for tattooing or piercing — great care needs to be taken to make sure infection does not occur.

Sharing equipment used for injecting also places people at risk of other blood-borne viruses such as hepatitis B and C (see Section 2).

## 5.5 Exposure to Infected Blood or Blood Products

In the early years of the AIDS epidemic, a number of people were infected with HIV through blood transfusions or through using blood products for treating other illnesses. Many people with haemophilia, who need regular blood products to prevent bleeding, were infected at that time.

The blood that infected these people came from donors who were HIV-positive without knowing it. Because AIDS was not seen before 1981, and HIV was not discovered until 1984, some HIV-positive people donated blood before the risk was known.

In May 1985 all Australian blood banks began testing all donated blood for HIV. As well, blood banks legally require that people whose behaviours make them more likely to be at risk of HIV



infection do not donate blood. Australia's blood transfusion system is now among the safest in the world. For the hundreds of thousands of blood donations tested, there have been very few people with HIV identified in Australia or Victoria. For example, in 1995, the Victorian Red Cross Bloodbank tested over 240,000 blood donations and none were found to be infected with HIV.

The other way in which people can be directly injected with blood that has HIV in it is through accidents in hospitals and other settings. In Australia, all hospitals have brought in strict guidelines for handling needles and sharp instruments, to try to stop accidents that might spread infection in this way. Anyone who is doing first aid that may bring them into contact with another person's blood should follow these rules (see Section 6.3).





## 5.6 Mother to Child

It is possible for HIV to be transmitted from a woman to her baby during pregnancy, birth or through breastfeeding. This is called vertical transmission. HIV, like other infections, can pass to an unborn child when it is in the womb. It is also possible for infection to occur when a baby comes in contact with their mother's blood during birth. Infection can also occur during breastfeeding.

However, not all children born to HIV-positive women are infected. Without medication, approximately 20–30 per cent of babies born to HIV-positive women will be infected. With treatment provided to the mother, this percentage can be significantly reduced. In Australia, the rate of transmission from mother to child with treatment is 2 per cent.

The decision to have and/or continue with a pregnancy is the mother's. Access to treatment, support and care is important.

In Australia about 2% of babies born to HIV-positive mothers have HIV infection.



### Question Box

- *There is a lot more to sex than vaginal or anal intercourse. Think of the things that two people might do with each other sexually and check if they are risky for HIV or other STIs.*
- *Why do people change their behaviour and what might make it difficult?*
- *How could young children be educated not to pick up sharp objects like needles and syringes?*
- *The media has, at times, suggested there are 'innocent' and therefore 'guilty' people with HIV. How might this impact on a person with HIV/AIDS in the way they feel about themselves, their relationships, their work and their personal lives?*

# HIV Prevention

*Choices, decisions and responsibility. This section looks at all the options available to stop HIV transmission — for individuals and society.*

## Fact Box

- *Whenever a person is in contact with someone else's blood, they should always use gloves.*
- *Apart from choosing not to have sexual intercourse, research shows condoms are still the most effective way of preventing the spread of STIs, HIV, and unwanted pregnancy.*
- *Injecting drugs is dangerous. The possible transmission of HIV and other blood-borne viruses make injecting drugs even more dangerous. If people use drugs they should take them in ways other than through injecting. If they do inject they should use a new needle for every injection and never share any equipment (such as spoons, filters, water, swabs or tourniquets).*
- *Australia has been praised around the world for responding effectively to the HIV epidemic.*

Once it became known how HIV was transmitted it became possible to prevent infection through behavioural and social change. One step was to stop HIV spreading through blood transfusions, and this risk has now been minimised (see Section 5.5).

Another step was to educate people to avoid the behaviours that spread infection. All of the most common ways in which HIV is spread can be prevented.

## 6.1 Prevention and Sexual Activity — Safe Sex

There are many ways in which people can express intimacy and experience sexual pleasure which carry no risk of HIV infection.

The decision not to have vaginal or anal sex is one option — and is certainly the safest option to minimise the risk of HIV transmission. This does not mean that a person can not touch or be touched. A person might decide to have safe sex — to touch their partner in ways that do not allow the exchange of semen, vaginal fluids or blood. Sexual satisfaction can still be reached through sexual activities such as kissing, mutual masturbation, cuddling and caressing.

Deciding to be sexual with another person is a personal decision, as is choosing the kinds of sexual activity. It is wrong to force someone to have sex. It is also illegal. It is a decision each person needs to make in their own time. However there are other kinds of sexual pressure that can still leave a person feeling like they have no choice. Situations where a person can feel like 'they can't say no', or fear that the other person will get angry with them if they change their mind, for example when two people have been going out for a 'long' time, (some research indicates some young people believe 6-weeks to 3-months to be a long time). No-one should ever have sex because they feel like they should. No-one should ever have sex because they are worried about what will happen if they decide not to have sex. It is every person's right to have sex in the best possible circumstances to make sure it is happy and safe experience.

If a person decides to have sexual intercourse, HIV infection can be prevented if people avoid the sexual practices which pass on infection. Infection through sexual intercourse can be prevented by:

- having vaginal or anal sex only with a partner who is not HIV infected (the only way to be sure of this for both partners is to be tested for HIV and for both partners not to have any other risk behaviour)
- always using condoms (and using them properly) for anal and vaginal intercourse with any other partner; or
- always using condoms with every partner every time!

Using condoms every time sexual activity happens takes commitment. It is about each person deciding to look after themselves and their partner. It is a commitment to respecting and looking after their sexual health — now and for the future. All people can do this — both young women and young men, heterosexual, bisexual or homosexual.

Condoms need to be used properly every time vaginal or anal sex happens for effective protection from HIV. The following guidelines should be followed when using condoms:

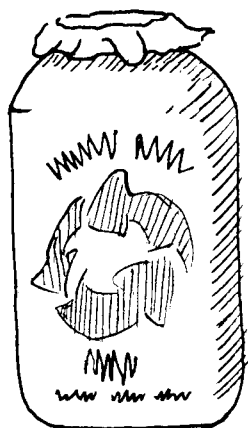
- Use a good quality condom that meets Australian standards (this will be printed on the condom packet).
- Store condoms in a dry and cool place (be careful of wallets, bags or glove boxes as the heat can damage the condom).
- Make sure the condom has not passed the use-by date before it is used.
- Open the condom carefully — don't tear the condom with fingernails or teeth.
- Make sure it is the 'right' way out (it should unroll easily).
- Squeeze air out of the tip of the condom to leave space for semen and to make sure there is no pressure that will break the condom.
- Roll the condom on an erect penis all the way down to the base of the penis.
- Use water-based lubrication for extra wetness (such as *KY Jelly*, *Wet Stuff*). Other types of lubricant (such as Vaseline) weaken the condom.
- Soon after ejaculation, hold on to the base of the condom and withdraw the penis.
- Dispose of the condom thoughtfully — don't put it down a toilet. Either tie a knot at the top of it and put it in the rubbish or tie it in a bag and put the bag into the garbage.

Condoms can be used for oral sex too if a person wants to. In fact, there are unlubricated condoms available and ones that are flavoured too. Dams (sometimes called dental dams) are also available for safe oral sex; or a condom can be cut open and used as a dam. These are square pieces of latex that can be placed over the vagina or anus before the mouth comes in touch with that area. Dams can be difficult to find and are not as easy to get as condoms. Sometimes it can be difficult to access condoms too.

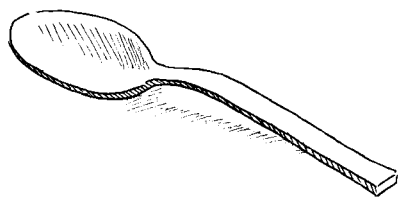
If condoms are not available or a person doesn't want to use one, then there are plenty of ways to show affection and share intimacy without having vaginal or anal sex (including mutual masturbation, touching, feeling, kissing). Not having a condom is not an excuse for unsafe sex.

It's what I do, not who I am that puts me at risk of getting HIV.





Dispose of needles safely.



Do not share needles, syringes and other injecting equipment (including water and spoons).

### *Alcohol and safe sex*

Obviously alcohol and safe sex do not mix. Research has shown that:

- People are less likely to use a condom if they are drunk.
- People who get drunk often are more likely to have unplanned sex with someone they do not know so they are less likely to have a condom with them.
- One in four Australian school students in Years 10 and 12 said they have had unwanted sex because they were 'too drunk' or because of pressure from their partner.
- Young men in Year 10 were the most likely to report having sex while drunk.

## **6.2 Prevention and Injecting Drug Use**

People use drugs for a number of reasons. Injecting drugs is dangerous. HIV and other blood-borne viruses (such as hepatitis B and C) make injecting drugs even more dangerous.

The safest way to protect yourself from HIV infection is not to inject drugs.

There are some people who do inject drugs, and it is important that safe injecting practices are used. This means:

- not sharing needles, syringes and other injecting equipment (including water, swabs, tourniquets and spoons)
- not reusing a needle that has been used before or, if no other options exist, only reusing a needle that they have used on themselves
- cleaning needles and syringes with bleach before they are used by another person (though this is not totally reliable and cannot be guaranteed to prevent HIV or hepatitis C infection).

Needle and syringe exchange programs exist in the community to provide injecting drug users with new equipment, information, education and support.

## **6.3 Infection Control and First Aid**

Health-care workers have been educated about guidelines to avoid injuries with needles or sharp instruments, and safe ways to care for people's injuries. Nurses, doctors, dentists and other health-care workers are responsible for protecting themselves and their clients.

Anybody who is involved in first aid care or any other activity which may lead to contact with another person's blood should follow basic rules to prevent infection. These rules are:

- Blood must not come into contact with cuts, sores, broken skin or skin conditions like acne or dermatitis. Latex gloves should be used when handling injuries or blood. Blood must not be allowed near the eyes or mouth.
- Blood should be cleaned up promptly and the area sterilised with bleach diluted according to instructions on the package. Bleach kills HIV effectively and quickly in this situation. People who have handled blood or things with blood on them should wash their hands properly.

- People should not touch needles or other sharp objects which they may find in the school or street. These may have blood on or in them. They should be disposed of in a puncture-proof container by a responsible person.

## 6.4 HIV and Pregnancy

As discussed earlier, not all children born to HIV-positive women will be infected. Approximately 20–30 per cent of children will be infected if no treatment is provided. However, recent research suggest that this can be lowered to 8 per cent with the use of some medications during pregnancy. There is a risk of HIV transmission to newborn babies through breastfeeding. Therefore, it is often suggested that HIV-positive mothers do not breastfeed if there is a safe and reliable alternative to breast milk available. There are many parts of the world where alternatives to breast milk do not exist and HIV-positive mothers continue to breastfeed their infants.

Pregnancy and HIV is a complex area with many issues for consideration. Women who may have been exposed to HIV infection can seek counselling and information about testing before they decide to become pregnant and during their pregnancy. Regardless of the risk of exposure and the result of testing, the decision to have a child or to proceed with a pregnancy is one which a woman must make for herself.

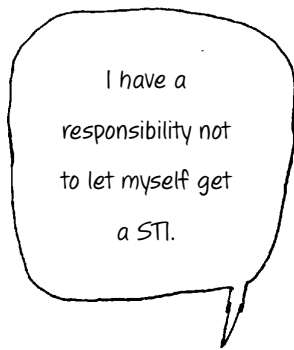
## 6.5 Australia's Response to the HIV/AIDS Epidemic

Australia's response to HIV infection has been acknowledged worldwide as highly effective. While HIV infection has not stopped, Australia has significantly contained HIV and the rate of infection. Australia's response has brought Commonwealth, State and Territory governments, health-care professions, HIV-infected and affected communities, and community organisations to work together.

Since 1998, the Commonwealth Department of Health and Ageing, then Department of Health and Aged Care, has developed four national HIV/AIDS strategies. The strategies outline priority areas of education and prevention, care and support; responsibilities of Commonwealth, State, Territory and local government and community agencies; and outline funding commitments. Each strategy has been evaluated prior to the development of the next strategy.

In 2000 the fourth national HIV strategy *Changes and Challenges: National HIV/AIDS Strategy 1999-00 to 2003-04* was released. Evaluations of the previous strategies recommended that HIV education, clinical and support services continue to work together with responses to other STIs and other blood-borne diseases (such as hepatitis C) in a collaborative and non-partisan manner.

The following priority areas have been identified to guide implementation of the fourth strategy:



### 6.5.1 An enabling environment

National and international research confirms that HIV prevention, education and health promotion is most effective when carried out in an environment that respects and protects the rights of people living with and affected by HIV/AIDS and people at risk of HIV infection. This strategy supports the development and maintenance of a legislative and public policy framework ensuring that people with HIV/AIDS and those at risk of HIV infection have access to prevention information, means of prevention and health promotion programs.

### 6.5.2 HIV/AIDS - related health promotion

This strategy will continue to involve a wide range of programs and activities focussing on education. These will be aimed at preventing HIV transmission and developing initiatives to improve the health and quality of life of people living with HIV/AIDS.

### 6.5.3 Priority groups

Using current research this strategy has identified six population groups as priorities for prevention, education and health promotion initiatives:

- gay and other homosexually active men
- Aboriginal and Torres Strait Islander people
- people who inject drugs
- people in custodial settings
- sex workers
- people living with HIV/AIDS.

Membership of these groups often overlap and includes both men and women. The first three groups are currently the most vulnerable to HIV transmission.

### 6.5.4 Treatment, care and support

Improved health outcomes and the decreasing AIDS death rate means a decline in the level of demand for acute care services but an increase in levels of general practice and community-based care and support services. Support for community-based services must be maintained across Australia.

While a growing number of people with HIV/AIDS are living longer many of them are living in poverty and many experience mental health problems. These issues must be taken into account at all levels of policy development and practice delivery.

### 6.5.5 Research

Research into the various aspects of HIV/AIDS will continue to play a critical role. It is important in medical, treatment, social, behavioural, legal and ethical areas.

Research findings can then inform and help develop effective education campaigns, treatment and care services.

### 6.5.6 International assistance and cooperation

While national initiatives to combat the spread and effects of HIV/AIDS have been relatively successful the scale of the epidemic in the surrounding region is increasing. South and South-East Asia have been identified as the regions with the second highest prevalence of HIV/AIDS in the world. The South Pacific, with the exception of Papua New Guinea, has been identified as a low prevalence region.

Australia contributes financially to the United Nations program on HIV/AIDS which coordinates the campaign against HIV/AIDS in developing countries.

Australian Commonwealth, State and Territory governments have established committees of experts to advise them on HIV/AIDS and its management. These committees include doctors, educators, public health specialists, public servants and people from the communities most affected by AIDS. They usually also include people with HIV or AIDS.

The Commonwealth Government is advised by the Australian National Council on AIDS, Hepatitis C and Related Diseases (ANCAHRD). The Victorian Government is advised by the Victorian Ministerial Advisory Committee on HIV/AIDS.

Governments cannot beat the AIDS epidemic by themselves. Many other groups of people are working to carry out the aims of the national program to defeat HIV/AIDS. These include doctors who are treating people with HIV/AIDS, nurses, counsellors and other health and welfare workers, research scientists and technicians, education officers, parents, siblings, friends, workmates, community volunteers and people with HIV/AIDS themselves.

#### Question Box

- *Schools have a responsibility to educate young people about HIV/AIDS and sexual health. What ways could young people be actively involved in education?*
- *Some people think 'monogamy' is the same as safe sex. What is monogamy and is it safe?*
- *Develop an advertising or education campaign to inform young people about safe sex options other than condoms.*
- *Research condom availability in your local area. What difficulties might young people have in obtaining condoms?*

# Living with HIV/AIDS

*Living with HIV/AIDS is a reality for many people. This section gives an insight into their lives and loves, treatments, legal issues and outlines the needs of people living with HIV/AIDS.*

## 7.1 HIV Antibody Test

An individual can find out if they have HIV or not through a blood test. This test is called the HIV antibody test and is available through medical, health centres or sexual health clinics.

The test actually looks for antibodies to HIV, not the virus itself. The immune system develops these antibodies to fight off HIV (see Section 4).

The test has two possible outcomes — positive or negative. If the HIV antibody test is positive it means HIV antibodies have been found and the person has HIV. A person is then said to be HIV-positive.

If the test result is negative, then the person has not been infected with HIV. A person is then said to be HIV-negative. It can take the body between 6 and 12 weeks to produce antibodies. This happens with all infectious diseases and is called the window period. For HIV this window period usually lasts 6–12 weeks after infection. If an antibody test is taken during the window period, further antibody tests should be done to be certain of a negative test result.

Deciding to be tested is a big decision. There are laws in Victoria that require people to have support in making the decision to have or not have the test. Counselling with an experienced health-care worker should always be available to anyone asking for the test. During this pre-test counselling, individuals can discuss anything, including:

- facts about HIV and other STIs
- the risks that they have taken
- the HIV test
- the possible outcomes of the test
- what they might do if the result is negative or positive.

It is only when someone is clear about the test and their reasons for being tested that they should have the test. The law also requires post-test counselling. That means a person should receive their results in person and have time with the doctor, nurse or counsellor to discuss the result, what it means, and what action they will take. This is important to talk about for a negative and a positive result.

It is important that a person feels safe with the health-care worker that they go to. There are specialist clinics available for HIV testing that provide confidential services together with up-to-date information and support (see Section 11).

### Fact Box

- *It is against the law to discriminate against a person because they have or might have HIV or AIDS.*
- *Developments in treatment for HIV/AIDS are providing much hope that HIV infection can be managed; however, new treatments are not cures.*
- *People with HIV are not 'innocent' or 'guilty' — all people with HIV deserve proper care, treatment, and support.*
- *The HIV antibody test is available through any doctor or health service. Counselling should be available before and after the test.*





## 7.2 Disclosure of HIV Infection

HIV-positive people face the decision of whether to tell, who to tell, and when to tell others about their HIV infection. Their decision can be a very difficult one to make. Often, there are real concerns about how others will respond, whether they will blame or reject and whether they will understand and offer support.

There is no legal requirement in Victoria for HIV-positive people to disclose their status to others. However, many people will choose to tell others for a number of different reasons. Each individual is different and their right to decide to tell or not tell should be respected. HIV status is very personal information.

Some people have experienced great support and relief when they have told others about their infection. Disclosure can sometimes bring people closer together and allow them to share the experience. Unfortunately, many people have experienced rejection and anger from others, and some have lost contact with friends and families. These experiences can add to the difficulties of living with HIV/AIDS and can affect a person's health.

Being HIV-positive does not change people. They are still someone's child, sister, brother, worker, mother, uncle, shop assistant, teacher, friend, next door neighbour, student, driver and more. Family and friends can be surprised and frightened by the information, but people with HIV do not need to be rejected. People with HIV/AIDS are not a risk to friends and family and no special behaviour is needed. If family and friends were confident about their knowledge of HIV/AIDS, then people with HIV/AIDS might feel more support in disclosing their status to others.

## 7.3 Confidentiality, Discrimination and Other Legal Issues

HIV/AIDS raises a number of legal issues and concerns for people with HIV/AIDS, their friends and family, and individuals and organisations that may come in contact with people with HIV/AIDS.

### 7.3.1 Confidentiality

If a person has disclosed any information about their HIV status to an organisation, it is legally required that the agency maintain their confidence. An individual or organisation is not allowed to tell other people or organisations about the person's HIV status.

*I thought about having the test for a long time. I have had a few different partners and there were times when I didn't use a condom or he didn't. I wasn't sure where to go and I was a bit worried that people would find out, especially because I live outside of Melbourne. I found out about the sexual health clinic in the local paper and I drove past it a few times. I eventually got the courage to go. I spent some time with a counsellor discussing HIV and the test. I thought I knew a lot, but she was really good at explaining things. I had learnt so much that she suggested I take some time to think about things and make another appointment for the test. I eventually went back to have the test. I asked about who could find out the results, whether I had to give my full name and if I had to pay for it. The test was free and no one could find out the results but me. She took some blood and we made an appointment for two weeks later. It was hard to wait those two weeks, wondering if I had HIV or not. I thought a lot about how my life might change if I was positive, what I would do, how I would react. But, it wasn't until the counsellor told me I was HIV-positive that it all hit me. There were even more questions, fear, anger. I was frightened, scared and I felt bad. It's taken some time to get used to the idea that I am living with HIV, not dying with HIV. I have too much to do and I am enjoying my life now. I still see the counsellor and doctors at the clinic. I am so glad that I went to a place that knew what to do, where I was treated with respect and care. They have been a real support and that's what everyone needs when they are being tested for HIV. No one needs to be judged or blamed.*

*Marcel, 23 years*

*It's a real shock when I tell people I am HIV-positive. What they see is a woman who is like them and that scares them. So, people automatically believe I am either a sex worker, or I sleep around or I inject drugs. I don't think it's anyone's business how I got HIV. But it is really interesting to see how people judge me and how they react. It's a difficult decision to make — do I tell someone and risk that they will reject me or do I not tell them and risk that they will be angry at me for not telling them earlier? Why would someone who loves me and I love want to leave me because I have HIV? Can I trust people with that information or will they tell everyone else? It is my decision who I tell about being HIV positive. But I can't stop who they tell and gossip gets around fast. I wish people were more understanding and accepting then it would be easier to tell them. I don't expect people to know everything about HIV, I just don't want or need to be treated as a leper.*

*Grace, 29 years*

*I am a gay man. HIV has a big impact on my life. Many of my friends are positive and some have died. I wear a red ribbon to work and down the street. I know there has been a lot of education about HIV/AIDS and sexuality, but it still surprises me when I get called names in the street by complete strangers. People think they have the right to treat me badly because I am a gay man. But they don't. I applied for this really nice flat recently and was really looking forward to moving in. The owner said that I had to have a HIV test before I could move in. I asked why and he said he wanted to make sure no one was at risk from the gay people in his flats. I couldn't believe it. Basically he was saying I look like a gay man so I might have HIV and couldn't move in unless I wasn't infected. I was so shocked I didn't know what to do. I talked to a friend and found out about the Equal Opportunity Commission and called them. I found out what my rights were and what the landlord's rights were. He didn't really want to change his mind, but the law is the law.*

*Pedro, 36 years*

Knowing that personal information is not going to be given to others creates trust and confidence. Maintaining confidentiality is an important way to prevent discrimination. Gossip, rumours and breaking confidence about someone's HIV status or their possible risk of HIV infection is not fair, helpful or respectful.

### 7.3.2 Discrimination

Discrimination against people with HIV/AIDS or those thought to have HIV/AIDS is illegal in Victoria. Discrimination is treating someone less favourably because they are thought to have or are known to have HIV/AIDS. It is illegal to discriminate in employment, accommodation, education, goods and services, clubs and club membership, sport, and local government. There are some exceptions, however these are rare.

If a person believes that he or she has been discriminated against, they can make a complaint to the Victorian Equal Opportunity Commission.

### 7.3.3 Insurance

Insurance and superannuation schemes are able to discriminate against people with HIV/AIDS (and other health issues) if there is objective statistical evidence. The usual practice in Victoria is for insurance and superannuation schemes to provide insurance with some limitation for a number of years. During this time, people with HIV/AIDS cannot claim benefits from their insurance or superannuation if the claim is HIV-related.

## 7.4 Treatment for HIV Infection and AIDS

Treatment options for HIV infection have improved considerably over recent years and further developments are expected. While there is still no cure likely, there is reason for hope. Treatment aims to maintain the health and well-being of people with HIV/AIDS so they can live longer and healthier lives. The long-term hope is that treatment for HIV infection will make it a long-term, manageable illness. Importantly, roughly 95% of people with HIV live in the developing world and do not have access to treatments.

In 1995 a test became available in Australia that could measure the amount of HIV in the blood. This is called a viral load test and shows how much HIV is multiplying. This predicts the development of damage to the immune system before the damage occurs. Treatment can then be given depending on the activity of HIV and the possible damage it could cause.

There are three major approaches to treating HIV infection:

- treatment to stop the virus from replicating — called antivirals
- treatment to prevent or manage the infections and malignancies resulting from the immune deficiency — called symptomatic treatment
- treatment to improve the immune system functioning — called immune system stimulants.

Recent research indicates that the best treatment for people with HIV/AIDS is a combination of antivirals. This is to slow down the rate of HIV multiplying. There are different categories of antivirals that work in different ways. Antivirals can be divided into protease inhibitors, nucleoside analogues, and non-nucleoside analogues. Antivirals are not a cure, but they do give some hope. Some of the common antivirals include *Saquinavir*, *Indinavir*, *Ritonovir* (protease inhibitors), *AZT*, *ddI*, *ddC* and *3CT* (nucleoside analogues), and *Nevirapine* or *Delavirdine* (non-nucleoside analogues).

Taking combination therapy drugs may mean that people are taking a large number of different and very powerful drugs. Side effects can be experienced and not everyone responds well to treatment. Side effects can include:

- Feeling sick
- Diarrhoea
- Difficulty sleeping
- Headaches
- Skin rashes
- Changes in the way body fat is stored on the body.

People need to go to their doctor every three months to have regular blood tests to make sure the treatment is working.

Despite these side effects, research clearly shows that combination therapy improves the health of people with HIV/AIDS and can do so for two or more years.

The long-term effects of these powerful drugs on individuals are not clearly known. The virus can become resistant to those drugs, which means they will not work as well. The treatment may then have to be changed to a different combination of drugs. Australia has significantly improved access to HIV drugs from around the world. Doctors can prescribe medication that is available overseas and have it imported for the use of people with HIV/AIDS.

Some people may also be having treatment to prevent or treat some of the common infections or diseases (such as the pneumonia called PCP, and diarrhoea). This may be medication, transfusions or other therapy. Where possible, it is better to prevent an infection than manage it once it happens. This way, the immune system is not weakened by getting sick in the first place.

Another way to fight HIV infection is to try to build the immune system so it is stronger. Stimulating the immune system to make it stronger can also help to continue the fight.

#### 7.4.1 Clinical Trials

Australia participates in a range of clinical trials for new drugs and combinations of drugs. Clinical trials allow scientists and health-care workers to test if a drug truly has a benefit to people with HIV. In some trials, participants do not know if they have been put on the new drug being tested or a substitute (or placebo) drug. It can be difficult to stay on a trial if the treatment doesn't seem to be helping. In some parts of the world, however, it may be the only way people can access new drugs.

*I live with my partner and we are both HIV-positive. I am Alicia and he is Carlos. There is one whole cupboard set aside for all our medication — some need to be taken with food, others on an empty stomach, some three times a day, some only once a day. Some of the drugs are to stop HIV multiplying, others to stop us from getting particular diseases or infections, and then there are drugs to deal with the side effects of all the other drugs! On top of these pills, I sometimes take herbal remedies for things like period pain, stress or if I'm feeling extra run down. We laugh when we are getting meals together because there are just as many pills as there is food. Sometimes I am sure I rattle because I have so many tablets in my stomach. But they have made a difference. We don't take exactly the same treatment — we are different so we need different medication. My doctor tells me my viral load, the amount of HIV in my blood, has dropped a fair bit. That's a good sign but it doesn't mean it's all over. It's still important for both Carlos and me to look after ourselves, eat well, get lots of rest and sleep, not stress out too much and not to overdo things. We still have a lot of fun and even go out partying sometimes — just not as often as we used to. There's a lot for us to understand about different treatments and I ask a lot of questions. It's my body and I want to know what I am putting into it.*

*Alicia, 30, and Carlos, 27 years*

*I never really had much time for all that natural stuff until I found out I was HIV-positive. I had to look at myself, my life and where I was at and I found out a lot about myself. I started reading about my body and the way it works, about food and stress and things like that. I went to see a naturopath and they suggested some vitamins and dietary changes. I feel so much better. Even things not related to my HIV infection have responded to alternative care. Massage is something I really love. It is such a nice way to care for your body. I know some people are suspicious of these treatments, but I am now convinced.*

*Connor, 36 years*

#### 7.4.2 Complementary Therapies

Many people with HIV/AIDS use complementary therapies to improve their health and well-being. Complementary (or alternative) therapies such as Chinese herbs, naturopathy, stress management, vitamin supplements and nutrition can all contribute to an individual's physical and mental health.

Complementary therapies often contribute to a feeling of well-being and a sense of being in control of one's health. The side effects of powerful medications and treatments discussed above can also be eased with complementary therapies.

Access to complementary therapies can be difficult. Consultation with a complementary health-care worker is not covered under Medicare and the cost of treatment can be expensive.

Given the promise of early treatment, people who think they may be at risk of infection are encouraged to be tested. Early knowledge of HIV infection gives the best chance of early treatment.

Other new treatments are being tested in Australia and around the world. It is not likely that a cure for AIDS will be available soon.

### 7.5 Support and Care for People with HIV/AIDS

In addition to medical care and treatment, people with HIV/AIDS need care and support in a number of different areas. This includes emotional, welfare, legal, financial, dental, accommodation, counselling, peer support, palliative and respite care. There may also be groups of people with HIV/AIDS, with specific needs such as gay men, women, Aboriginal and Torres Strait Islander peoples, injecting drug users, or young people.

Existing health and welfare organisations provide services to people with HIV/AIDS. Additional agencies have been funded to provide specific and targeted services to people with HIV/AIDS. These include the Victorian AIDS Council, Gay Men's Health Centre, Positive Women, People Living With HIV/AIDS, Haemophilia Foundation of Victoria. People with HIV/AIDS have been central to the establishment and development of many of these services.

When people with HIV/AIDS require in-home care, volunteer agencies can provide practical and emotional support. Respite care services exist that provide hospital type care for short periods of time; often to give the person with HIV/AIDS some 'time out' from their usual care. For people in need of special medical care, hospitals or palliative care in hospices can also be arranged.

It is important that all care and support agencies provide their services in a respectful and caring manner. There is a lot of stigma attached to HIV infection. People with HIV/AIDS are

often judged and discriminated against because of their infection and sometimes differently judged by the way individuals became infected. Acceptance, respect and care are very important to the health and well-being of people with HIV/AIDS — not only from health services, but also from the community.

Community understanding and support for people with HIV/AIDS is also very important. Many Australians are not fully informed about HIV/AIDS and may be scared. HIV/AIDS is also associated with personal and intimate issues such as sex, sexuality and drug use. Many people may feel uncomfortable about discussing these issues or having them discussed. This can lead to discrimination, hatred, violence or conflict which is not a safe environment in which to learn. World AIDS Day, held on 1 December every year, is one way that information about HIV/AIDS is provided to everybody. On this day, people are encouraged to think about, ask questions, understand and help in the fight against HIV/AIDS.

Many agencies need to fund-raise money to enable services to be provided. The 'Red Ribbon' and 'Rainbow Ribbon' is one example of fund-raising. The Red Ribbon is an international symbol of HIV/AIDS awareness. People can buy a Red Ribbon from a range of agencies and wear it to show they are aware and supportive of HIV/AIDS issues. The Rainbow Ribbon combines the Red Ribbon with additional ribbons for the colours of the rainbow. This indicates hope for the future and support of all the communities affected by HIV/AIDS infection. Money from sales of Red and Rainbow Ribbons in Victoria goes directly to the financial support of people with HIV/AIDS.

HIV/AIDS has caused the death of many people in Australia. It can be difficult to share with others feelings of grief, loss and sadness that come when someone dies. The Quilt Project is one way of remembering individuals who have died with HIV/AIDS. Friends, family, partners or other interested people can make quilt panels about individuals who have died with HIV/AIDS. These panels can have anything on them that remembers the person who has died. The quilt panels are sewn together and are displayed around Australia and the world. Viewing the Quilt Project is a very powerful and moving way to understand the impact of HIV/AIDS on people's lives.

*Joe died nearly a year ago. I still miss him, we all do. He was so active and full of life. I can still hear him laugh sometimes. Losing someone so close to us was really hard. Some people were ashamed of the fact that Joe died with AIDS. I wanted to do something that reminded people of Joe and his life. Something that let everyone know that I was proud to call him my brother and that he faced life and death with courage, dignity and pride. I had heard about the Quilt Project and found out that there was a display in Melbourne. It was so powerful seeing so many names, so many people who have been lost to this epidemic, so many people who were loved. I decided I wanted to do one for Joe. I invited other members of the family and Joe's boyfriend and friends to contribute. We created a beautiful quilt with all his favourite things — a picture of his motorbike, his leather armband, and a rainbow. I gave the panel to the Quilt Project on World AIDS Day. I was really proud and really sad. Now, everyone who sees the Quilt will know that Joe lived, was loved and cared for by many people. I encourage everyone to see the Quilt, then you will really know what all the hype is about HIV/AIDS.*

*Georgia, 25 years*

### Question Box

- *Everyone in the community can help in the fight against AIDS. What responsibilities does each individual have?*
- *What activities could take place at school, local and community levels that would help decrease the stigma attached to HIV?*
- *Fund-raising is necessary to provide many services to people with HIV/AIDS. Develop a fund-raising campaign aimed at young people.*
- *Why might a person with HIV decide to tell or not tell someone about their infection? What possible consequences could there be of telling or not telling?*

# The HIV Epidemic — Sources of Statistics

*This section provides references to finding basic information about both HIV and AIDS statistics globally and in Australia – an epidemic with an ever-changing face.*

## Fact Box

- *Worldwide most HIV infections occur through sexual contact between men and women, and sharing injecting equipment among injecting drug users.*
- *Since the epidemic began, more than 60 million people have been infected. Of the 42 million with HIV, 38.6 million are adults (19.2 of them women), and 3.2 million are children aged under 15 years.*
- *In Australia new cases of HIV infection among young males declined from 11 per 100,000 in 1991 to 3 per 100,000 in 1998; among young females HIV infection rates have consistently been much lower, about 1 per 100,000.*
- *HIV infection affects young adults, many who may have been infected in their teenage years or early 20s.*
- *The low rate of infection among injecting drug users in Australia is a measure of the effectiveness of needle exchange programs and education.*

## 8.1 Statistics on HIV Infection and AIDS around the World

HIV/AIDS is the fastest growing threat to development today. What sets the disease apart from other epidemics is the speed of its spread. The rate of HIV infection, those affected, and the most common ways HIV is spread varies from country to country. Not all countries have experienced HIV/AIDS as Australia has. Understanding HIV/AIDS around the world means understanding how different countries experience and deal with HIV infection.

When using statistics about HIV/AIDS, it is important to remember that HIV infection takes many years, on average, to develop to AIDS. Therefore, AIDS statistics really give a picture of the level of HIV infection 10 or more years ago. HIV statistics give a much more timely picture of the pattern of infection in Australia or any State or Territory today. However, they can be difficult to interpret as people diagnosed with HIV say in 1995 may have been infected recently or at any time over the past 10 years or more. So, the year of diagnosis is not the same as the year of infection.

The true number of people with HIV/AIDS around the world is unknown for a number of reasons. Many countries do not have the resources to establish comprehensive testing, monitoring or epidemiological services. UNAIDS, the United Nations AIDS Program, uses data available to estimate the most likely numbers of people infected. For up-to-date information on the numbers of people around the world affected by HIV and AIDS go to:

<http://www.unaids.org/en/resources/epidemiology.asp>

For statistics on HIV Infection and AIDS in Australia, there are two national databases established to monitor the number of people with HIV infection and the number of people with AIDS in Australia. These databases are the National HIV Database and the National AIDS Database, and are managed by the National Centre in HIV Epidemiology and Clinical Research. Go to [www.med.unsw.edu.au/nchechr](http://www.med.unsw.edu.au/nchechr) for current statistics.



### Question Box

- *Write a story about the world in 2010 and the impact that HIV/AIDS has had. How are countries, governments, communities and individuals dealing with it?*
- *Consider two or three different countries in the world and describe what might be the experience of living with HIV/AIDS there. Investigate the culture, education and health services, and other factors that might contribute to this.*
- *There is some confusion between risk groups and risky behaviours. What are the problems and benefits of looking at HIV transmission in these two different ways?*
- *Women with HIV/AIDS are often forgotten in the Australian picture. What issues, needs and concerns might women have about HIV/AIDS?*
- *Use the websites, identified in Section 11, to determine the most current statistics of HIV infection in Australia and around the world.*

# A Brief HIV/AIDS History

## Before Anything Was Known

1940s: At about this time, HIV, the virus which causes AIDS, may have begun to spread in central Africa.

1959: A sailor dies in Manchester, England, of a mysterious pneumonia. Many years later, HIV is thought to be found in his stored frozen blood samples. This is the oldest recorded case of AIDS. Stored blood samples in Zaire (formerly the Belgian Congo, in central Africa) from this time also show HIV infection.

1969: A teenage boy in Missouri, in the United States, dies of a mysterious illness, now known to be AIDS. HIV probably began to arrive 'in force' in the United States during the 1970s.

## 1970s

1977: A Danish female surgeon who had worked in Zaire dies of a disease (PCP) caused by immune deficiency. This is the first AIDS case in Europe.

1979: Gay men in New York and San Francisco begin to develop unusual illnesses such as pneumonia and a rare skin cancer, Kaposi's Sarcoma (KS).

## 1980s

5 June 1981: The first report of the unusual cases of pneumonia (PCP) and cancer (KS) in gay men is published in the United States.

7 June 1981: First Australian media report on the new illnesses appears in the gay press.

July 1981: The US health authorities begin to investigate the outbreak. Dr Jim Curran at the US Centers for Disease Control and Prevention (CDC) heads a Task Force to investigate the new diseases.

June 1982: First report of the new illnesses among people who inject drugs.

24 September 1982: CDC officially calls the new disease 'acquired immune deficiency syndrome' (AIDS).

November 1982: The first case of AIDS is reported in Australia by Professor Ron Penny at St Vincent's Hospital, Sydney. The person diagnosed is an American gay man living in Sydney.

January 1983: A total of over 1200 AIDS cases reported in the United States. They include gay men, injecting drug users, people with haemophilia, people who have received blood transfusions, women, and heterosexual partners of other people with AIDS.

6 May 1983: The first article in Australia promoting condoms as a safe sex measure to prevent AIDS appears in a gay newspaper.

15 May 1983: First AIDS organisation in Australia, the AIDS Action Committee, founded in Sydney.

May 1983: French researchers suggest a human retrovirus causes AIDS.

8 July 1983: A gay man living in Melbourne becomes the first person to die from AIDS in Australia.

12 July 1983: The Victorian AIDS Action Committee is founded in Melbourne. This committee later became known as the Victorian AIDS Council.

31 August 1983: First meeting between AIDS organisations and the then Commonwealth Health Minister, Dr Neal Blewett.

1 January 1984: A total of 17 AIDS cases reported in Australia.



April 1984: American scientists announce that they have found the cause of AIDS — a virus which they call Human T-cell Lymphotropic Virus (or HTLV-III). It is later found that it is the same virus identified by French researchers in 1983. In 1986 it is renamed 'human immunodeficiency virus' (HIV).

July 1984: A Sydney man becomes the first Australian with HIV transmitted through a blood transfusion.

15 November 1984: The Queensland Government announces that four babies have died from HIV-infected blood transfusions. This causes huge media attention and community panic. The gay community mobilises and Australian governments begin to respond to HIV/AIDS.

18 November 1984: The Commonwealth Government sets up the AIDS Task Force, chaired by Professor David Penington, and the National Advisory Committee on AIDS, chaired by Ita Buttrose.

1 January 1985: A total of 49 AIDS cases reported in Australia.

April 1985: Australia becomes the first country to screen all blood donations for HIV.

July 1985: Eve von Grafhorst, aged three and HIV-positive, is barred from a preschool in Gosford, NSW. The media attention is so great that the von Grafhorst family leaves Australia.

2 October 1985: Film star Rock Hudson dies of AIDS. Commenting on the death of Hudson, an old friend, President Reagan says the word 'AIDS' in public for the first time.

17 November 1985: First Australian National Conference on AIDS in Melbourne.

17 November 1985: The Australian Federation of AIDS Organisations (AFAO) was established by an alliance of State and Territory AIDS Councils.

1 January 1986: A total of 162 AIDS cases reported in Australia.

May 1986: The first commercial condom advertisements appear on Australian commercial television late at night.

19 September 1986: An American drug company announces AZT may be useful in treating HIV. It is later found not to be as effective as hoped for when used alone.

October 1986: Australia's Second National Conference on AIDS in Sydney.

1 January 1987: A total of 390 AIDS cases reported in Australia.

February 1987: The first Australians with HIV/AIDS receive the anti-AIDS drug zidovudine (AZT) through a clinical trial.

April 1987: The 'Grim Reaper' television advertisements appear warning of the risk of AIDS.

November 1987: Commencement of Victorian Needle and Syringe Exchange Program (NSEP)

1 January 1988: A total of 722 AIDS cases reported in Australia.

January 1988: The 50,000th AIDS case is reported in the United States. A new classification system for HIV infection is applied in Australia.

July 1988: Social research among gay men gives evidence that many gay men have adopted safe sex practices and reduced their HIV risk.

August 1988: Australia's Third National Conference on AIDS in Hobart.

August 1988: First Living Well Conference for People Living with AIDS was held in Melbourne. This was the beginning of the HIV community in Australia.

September 1988: Australia's 1000th AIDS case is reported.

December 1988: Australian Quilt Project to commemorate those who have died of AIDS launched.

December 1988: Commonwealth Government media campaign launched with television advertisement featuring a series of couples in bed. Homosexual couples were removed from the advertisement prior to screening on request of television stations.

January 1989: A total of 1168 AIDS cases reported in Australia. First National HIV/AIDS Strategy.

June 1989: People with AIDS and other AIDS activists demonstrate at the opening of the Fifth International Conference on AIDS in Montreal, Canada.

August 1989: American research shows AZT is effective in preventing some HIV-positive people developing AIDS. Other drugs also showed promise when used in early intervention.

## 1990s

1 January 1990: A total of 1596 AIDS cases reported in Australia.

April 1990: Commonwealth Government establishes the Mark Fitzpatrick Trust to provide financial assistance to people with medically acquired HIV.

July 1990: Australians join boycott of Sixth International Conference on AIDS in San Francisco because of American travel policy which discriminates against people with HIV.

August 1990: Australia's Fourth National Conference on AIDS held in Canberra. People with HIV/AIDS and other AIDS activists demonstrate against Australia's drug approval system.

1 January 1991: A total of 2347 AIDS cases reported in Australia. About 15,000 people have tested positive for HIV (the exact number is not known), 2507 of them in Victoria.

February 1991: The Commonwealth Government accepts the recommendation of a review of Australia's drug regulation system, headed by Professor Peter Baume, which will make it much easier for people with HIV/AIDS to get quick access to new and experimental HIV/AIDS treatments.

June 1991: Sydney holds the first National HIV-Positive Women's Conference.

December 1991: Anti-retroviral drug *ddi* is approved for use in Australia following approval in the United States.

December 1991: Victorian Government announces compensation for people with medically acquired HIV infection.

January 1992: A total of 3096 AIDS cases reported in Australia.

March 1992: First National Aboriginal Conference on HIV/AIDS held in Alice Springs.

October 1992: *ddC*, an anti-viral treatment, is approved for use in Australia.

November 1992: Fifth National HIV/AIDS Conference held in Sydney.

January 1993: A total of 3697 AIDS cases reported in Australia.

January 1993: Commonwealth Government launches a major public education campaign 'HIV doesn't discriminate, people do' in print and television.

March 1993: Commonwealth Disability Discrimination Act makes it unlawful to discriminate on the grounds of HIV/AIDS.

June 1993: A national advertising campaign directed to young gay men attracts considerable media attention and discussion. The 'two boys kissing' advertisement appear in a number of youth and gay magazines.

October 1993: Commonwealth Government launches the Second National HIV/AIDS Strategy.

December 1993: *Cleo* magazine includes a brochure regarding HIV/AIDS, condoms and safe sex.

January 1994: A total of 4530 AIDS cases reported in Australia.

February 1994: Following on from comments made by the then Prime Minister's wife, Annita Keating, the media debates funding levels for HIV and breast cancer.

April 1994: A UK study suggests *AZT* may not be as successful in slowing the replication of HIV as first thought.

June 1994: The national HIV/AIDS discrimination campaign is re-advertised.

January 1995: A total of 5737 AIDS cases reported in Australia.

February 1995: Second National Positive Women's Conference held in Sydney.

May 1995: Medical Journal of Australia reports on the likely route of HIV infection from one patient to another — four patients in a doctor's surgery in Sydney in 1989.

October 1995: Professor R Feachem's report 'Valuing the Past — Investing in the Future', Evaluation of the National HIV/AIDS Strategy 1993 – 94 to 1995 – 96 released commending Australia's approach.

January 1996: A total of 6567 cases of AIDS in Australia.

May 1996: Australia's internationally recognised HIV/AIDS clinical and research hospital, Fairfield Infectious Diseases Hospital (in Victoria) is closed. This reflects the trend for people with HIV/AIDS to be treated in general hospitals rather than specialist centres.

July 1996: Eleventh International Conference on AIDS, held in Vancouver Canada. Conference reports clearly identified the benefits of using a combination of treatments for the management of HIV infection. There was considerable hope and optimism created by this Conference.

December 1996: *Partnerships in Practice — National HIV/AIDS Strategy 1996 – 97 to 1998 – 99*. A strategy framed in the context of sexual health and related communicable diseases.

June 1997: AIDS Impact: Biopsychological Aspects of HIV Infection held in Melbourne.

June 1998: Twelfth International Conference on AIDS in Geneva, Switzerland.

1999: The number of people who have died from AIDS is 2.6 million. In Australia the total number of deaths from AIDS in 1998 was 173.

1999: The Australasian Society for HIV Medicine begins its project work for hepatitis C, training nurses, doctors, dentists and ambulance officers.

## 2000s

July 2000: Thirteenth International Conference on AIDS in Durban, South Africa. This was the first such conference to be held in Africa.

Oct 2001: Fifth International Congress on AIDS in Asia and the Pacific, held in Melbourne.

Dec 2001: The number of people in the world who died from AIDS is 3 million; the number of people in the world living with HIV/AIDS is 40 million.

March 2002: Human trials of AIDS vaccine start in south Africa and USA. Scientists start choosing 48 HIV negative volunteers.

July 2002: 14th International Conference on AIDS in Barcelona, Spain.

July 2002: US\$500 million committed to life-long care of HIV positive mothers. Over 2 million women with HIV are giving birth, resulting in 720,000 babies born with HIV. Low-cost drugs will reduce transmission to babies by 40%.

# Glossary

There are a lot of complicated words used when talking about sex and sexual health. It is important to know exactly what they mean. It is easy to use inappropriate words when talking and writing about HIV/AIDS and the communities affected by it. Some words and phrases can be used in ways which can misinform, spread ignorance, insult people and make the process of education about HIV/AIDS harder.

The words below are given short and simple explanations.

## **Abstinence**

This means staying away from, doing or having something. When applied to sexual behaviour, it means not having sex.

## **AIDS**

The name formed from the initials of the Acquired Immune Deficiency Syndrome. This name was first used in 1982 for the newly discovered disease. It is now used to describe the most severe form of disease caused by infection with HIV.

## **AIDS carrier**

This phrase is an inaccurate way of saying someone has HIV. It can be used to give the impression that people spread infection to everyone they come into contact with. This is not true. The accurate phrase is HIV-positive or person with AIDS.

## **AIDS patient/sufferer/victim**

People living with AIDS are only 'AIDS patients' when they are receiving treatment from doctors or nurses which is only a small part in the life of someone with HIV. The terms sufferer and victim, while usually well-intentioned, suggest that people with AIDS are helpless, which is not true. People living with HIV/AIDS resent being called victims. The terms 'people living with HIV/AIDS' or 'people with HIV/AIDS' are preferred.

## **AIDS-related conditions (ARC)**

A term used to describe some illnesses which are caused by HIV infection. There are many symptoms which are classed as ARC, some of which can be nearly as severe as those of AIDS itself. Some people with HIV infection have ARC symptoms for some years without developing AIDS.

## **Anal sex**

This is when the penis is inserted into the anus (bottom) of the other person. Men can have anal sex with other men or with women.

## **Antibody**

A special kind of blood protein, produced in large quantities by the immune system as part of its response to foreign organisms (called antigens). Each antibody is coded to recognise and attack a unique antigen. Antibodies bind to the antigen making it more 'tasty', triggering bigger immune cells to attack and engulf the antigen.

## **AZT**

The common name for zidovudine (also known by the brand name *Retrovir*), the first drug shown to be of benefit to people with HIV/AIDS. AZT blocks the ability of HIV to copy itself into a form that is necessary to invade the genetic material of human cells. Research has shown that AZT is best used in combination with other medications. AZT is a treatment for HIV/AIDS, but not a cure.

## **Bacteria**

### **(singular form, bacterium)**

A group of microscopic living things, usually consisting of one cell, which are neither plants nor animals. They reproduce by dividing in half. Some bacteria produce diseases in higher life forms, including humans.



## **B-cells or B-lymphocytes**

A subgroup of the lymphocytes, these cells are responsible for producing antibodies in response to invading organisms.

## **Bisexual**

A person who identifies as being sexually and emotionally attracted to both men and women.

## **Blood product**

An artificial product made from human blood and used to treat certain illnesses. An example is Factor VIII, which is made from concentrated human blood and used to help control the bleeding resulting from haemophilia.

## **Body fluids**

Any fluid produced and released from the body. The only body fluids that can transmit HIV are blood, semen, vaginal secretions and breast milk in certain circumstances. Other fluids, like saliva, tears, urine and sweat, do not transmit HIV. So, there is no risk of HIV transmission if these fluids get from one person to the other (for example, with kissing).

## **Cancer**

Cancer is a general term for a large group of diseases. These diseases occur when cells divide in a disorganised and uncontrolled way and the cells produced are not normal in shape or behaviour. A group of abnormal cells is called a tumour. Sometimes cells from this tumour may spread into the surrounding tissue to cause damage. They may also reach the bloodstream and travel to other parts of the body where new cancers form.

## **Cell**

Cells are the basic building blocks of both plants and animals. A human being is made up of billions of cells of various kinds. Cells can be infected by viruses and

other germs, causing diseases. HIV attacks many kinds of cells, but causes immune damage when it attacks a group of blood cells called T-cells.

## **Centers for Disease Control and Prevention (CDC)**

A branch of the Public Health Service of the US Department of Health and Human Services, with headquarters in Atlanta, Georgia. CDC is responsible for investigating, monitoring and controlling all causes of illness and death in the United States. It was the agency which first noticed and investigated the outbreak of AIDS in the United States in 1981.

## **Cervix**

The cervix is the neck of the uterus. It has a passage between a woman's vagina and her uterus.

## **Chlamydia**

Chlamydia is a sexually transmissible infection caused by a bacterium. It infects both men and women and symptoms do not always occur. If left untreated, it can result in severe disease. In women, untreated chlamydia infection can result in pelvic inflammatory disease.

## **Cirrhosis**

The development of scar tissue in the liver. This scarring can become extensive and permanent, seriously affecting the functioning of the liver.

## **Condom**

Is a thin latex sheath that can be placed on a man's erect penis before sexual activity or penetration begins. The latex does not allow semen to go into the other person's body or for the other person's fluids to enter the penis. Because of this, they have been used to minimise the chance of pregnancy and can also be used to reduce the risk of transmission of many sexually transmissible infections.

## Dam or dental dam

A dam is a square piece of latex that can be placed over the vagina or anus before oral contact is made. This means vaginal fluids, including menstrual blood, will not get into the mouth of the other person.

## ddC

The common name for dideoxycytidine, an antiviral drug used to treat HIV/AIDS. Like AZT, it blocks the ability of HIV to make a copy of itself required to invade the human cell.

## ddI

The common name for dideoxyinosine, another antiviral drug available in Australia to treat HIV/AIDS. ddI, like other antivirals, blocks the ability of HIV to make a copy of itself required to invade the human cell.

## Disease

An illness or sickness. Diseases are often caused by infection. AIDS is a disease caused by infection with HIV. (see infection).

## Epidemic

The appearance of a disease more commonly than is normal, especially if the disease spreads rapidly. The study of epidemics is called epidemiology. Epidemics, like HIV infection, which spread all around the world are called pandemics.

## Full-blown AIDS

This is an unnecessary term, used when the distinction between HIV infection and AIDS is confused.

## Gay

A person who identifies as being emotionally and sexually attracted to the same gender. It is the word by which most homosexual men, and some homosexual women, prefer to be known — gay men or gay women. Gay is also used to describe the communities of gay people and their response to issues. For example, the gay community's response to HIV/AIDS has included establishing services, providing support.

## Gender

A person's identity and role as either woman or man, and is made up of a person's genetic, anatomical and social environment. Gender includes how a person is expected to act, what they are expected to do and how other people relate to them. A person's gender is usually the same as their biological sex. Therefore, someone born female identifies as a woman and someone born male has the gender identity of man. Transgender people are people who have a gender identity that is different to their biological sex. Gender identity is different to a person's sexual identity.

## General population

The general population or Australian society includes everybody. However, this term is often used to separate some people from others. For example, to separate homosexuals, sex workers and drug users from the remainder of society. It can then seem that the 'general population' is not at risk from HIV. This is not true. It is what a person does, not who they are that puts them at risk of HIV.

## Haemophilia

Haemophilia is a rare bleeding disorder, caused by the lack of one of 12 essential clotting factors, usually factor VIII. Usually an hereditary disorder, haemophilia mostly affects males but is passed on both by them and unaffected females. People with haemophilia bleed internally. The required treatment is concentrates which are infused into a vein, similar to a blood transfusion. These concentrates are made from blood plasma or from a DNA base. In the past, some people with haemophilia have contracted HIV through contaminated blood supplies. This was before donated blood was screened for HIV. Concentrates are now also heat treated in order to prevent the transmission of blood-borne viruses.

## Hepatitis

Hepatitis means inflammation of the liver. There are a number of hepatitis viruses which all cause inflammation and damage to the liver. However, the different viruses are transmitted differently and may result in different illnesses needing different treatment. To date, seven different hepatitis viruses have been identified (hepatitis A, B, C, D, E, F and G).

## **Herpes or herpes simplex virus**

Herpes is a viral infection that is transmitted through direct contact with infected skin. Herpes sores can be found on or around the mouth (usually called cold sores) and on or around the genitals (called genital herpes). It is possible to transmit oral cold sores to the genital area and vice versa.

## **Heterosexual**

A woman or man who identifies as being sexually and emotionally attracted to members of the opposite gender.

## **HIV**

The human immunodeficiency virus, the virus which causes AIDS. The virus was discovered by French researchers in 1983, and later by American researchers. It was originally given several different names, but was finally named HIV by an international committee in 1986.

## **HIV-positive, HIV-negative**

Terms used to indicate whether a person has HIV infection, based on the results of a HIV antibody test. A HIV antibody-positive person has had a positive HIV antibody test. This means they are infected with HIV. A HIV antibody-negative person has not developed HIV antibodies and is considered not to be infected with HIV.

## **HIV test**

A blood test which looks for antibodies produced in response to HIV infection. The test is simple and painless and can be arranged through any doctor or clinic. The test used in Australia is called the ELISA test. If an ELISA test is positive or uncertain, a more sensitive test called a Western Blot is used to double-check the result. Only a positive Western Blot test is accepted as evidence that a person has HIV infection.

## **Homosexual**

A man or woman who identifies as being sexually and emotionally attracted to members of their own gender. Homosexual women are usually called lesbians or gay women. Homosexual men are usually called gay men.

## **Human Papilloma Virus (HPV)**

Is the virus responsible for genital warts that is transmitted by direct skin contact with an infected person. The warts can be treated and removed, however, the virus remains in the body and warts can reappear.

## **Injecting Drug Use (IDU)**

Drugs can be taken in a variety of ways including injection. This way of taking drugs was called intravenous drug use as many drugs are injected directly into a vein with a needle and syringe (often called 'fit'). Drugs can also be injected under the skin (called skin popping). Injecting drug use refers to any way a drug can be injected into a person. A person who does this is often called an injecting drug user.

## **Innocent victim**

This term, often used to describe children with HIV/AIDS or people infected through blood transfusions, suggests that some other people with AIDS must be 'guilty victims'. No one deliberately gets infected with HIV, so in that sense all people with HIV are 'innocent'. It is more appropriate to use terms such as people with transfusion-associated HIV or medically acquired HIV.

## **Immune deficiency**

A decline in the body's immune system to fight off disease. AIDS is the result of an immune deficiency caused by infection with HIV.

## **Immune system**

The system which enables the body to fight off disease. The immune system can detect and destroy intruders in the body such as viruses and bacteria. It can also spot and prevent the changes in the body's own cells which can cause cancer.

## **Infection**

The invasion of the body by organisms that cause disease. A disease which can be spread from person to person is called an infectious disease. (see disease).

## **Kaposi's Sarcoma**

A cancer of the blood cell wall that is rarely seen except in HIV infected, immune deficient individuals. Kaposi's Sarcoma (or KS) can appear on the body as a

pink or purple lesion; it can be flat or raised. KS can also occur in the oesophagus, gut and other areas of people with HIV/AIDS.

## Lesbian

A woman who is sexually and emotionally attracted to women.

## Lubricant

A fluid that is used to increase wetness or lubrication. Lubricant reduces friction and stress on other materials. With condoms a water-based lubricant (such as *KY Jelly*, *Wet Stuff*) must be used as other forms of lubrication may weaken the condom and make it more likely to break.

## Lymphocytes

A group of white blood cells, which are found in the lymphatic system and in other organs as well as in the blood. Lymphocytes are the basic unit of the immune system.

## Monogamy

Traditionally, monogamy means having only one sexual partner for life. Monogamy is often thought of as a way of avoiding sexually transmissible infections. However, monogamy is now used to indicate that a person is sexual with one person at a time. This does not protect either partner from sexually transmissible infections.

## Mucous membrane

The moist lining of parts of the body such as mouth, eyes, nose, vagina and anus which secrete mucus, a fluid which is rich in immune cells and helps protect against infection.

## Oral sex

Sex where the lips, mouth and/or tongue is placed on, in or around the vagina, penis or anus.

## Pap smear or pap test

A sample of cells from the cervix is taken during a pelvic examination and tested in a laboratory for pre-cancerous changes. The test is not a test for cancer, it is a test for changes in cells of the cervix that may develop into cancer in the future if left untreated.

## Pelvic Inflammatory Disease (PID)

Infection of the cervix, uterus, Fallopian tubes and ovaries usually caused by untreated chlamydia or gonorrhoea infection. Symptoms include lower abdominal pain, deep pain during intercourse, or heavier or more painful periods. PID can result in infertility if untreated.

## *Pneumocystis carinii* pneumonia (PCP)

A rare form of pneumonia that is caused by a parasite that is present in most people. However people with lowered immune systems can develop a life threatening pneumonia. Treatment now exists to prevent and treat PCP.

## Promiscuous

This term generally means someone with a number of sex partners. However, it has no precise definition and is often used in a judgmental or moralistic way. It is often used as a way to put people, especially women, down. It is sometimes suggested that being promiscuous puts people at risk of HIV. It is more accurate to talk about the specific behaviours that put people at risk (such as not using a condom).

## Risk groups

Groups of people who are assumed to practise risk behaviours such as sex without condoms or sharing injecting equipment. The difficulty with risk 'groups' is that the behaviour is not talked about and people are not accurately informed of risk behaviours. A person's identity is seen as being the risk (such as gay men or injecting drug users). If people do not see themselves as belonging to the group, they might think they are safe, but their behaviour might put them at risk of HIV. It is much more accurate to discuss risk behaviours such as sex without condoms or sharing injecting equipment. Sometimes, groups of people with HIV/AIDS are discussed in terms of their needs, issues and concerns. For example, women with HIV/AIDS may have some different needs to gay men with HIV/AIDS.

## Safe sex

Any sexual activity that does not involve the blood, semen or vaginal fluids of one person getting into the bloodstream of another person. Condoms make vaginal, anal and oral sex safe. However, safe sex is more than



condoms. It includes touch, mutual masturbation, rubbing, kissing and more. The term 'safe sex' was originally used in relation to HIV/AIDS. Some STIs can be transmitted even when condoms are used properly.

## **Seroconversion**

The development of antibodies to a specific disease that were not there previously. With HIV, seroconversion can be associated with a severe flu-like illness called 'seroconversion illness'. This illness resolves itself in a short period of time. There is nothing about this reaction that clearly indicates it is related to HIV infection.

## **Sex or sexual intercourse**

This word has a number of meanings. Sex is the general term used to describe vaginal or anal intercourse. However, sex and sexual pleasure includes more than penetration.

## **Sex worker**

This term is now used rather than prostitute. A sex worker is a man or woman who receives payment (financial or other) for sex.

## **Sexually transmissible infections (STIs)**

Any disease which can be passed from one person to another during sexual contact may be termed a sexually transmissible infection. STIs are usually caused by an infectious agent such as a virus, a bacterium, yeast or parasites.

## **Swab**

A swab is a medical procedure where a sample of cells and fluid is taken from somewhere in a person's body to check for infection or disease. Swabs can be taken from the vagina (in women), urethra (in men), throat or anus.

## **Symptom**

A sign that a person has a particular disease. Thus, a cough is a symptom of infection by a cold virus.

## **Syndrome**

A group of symptoms and/or signs caused by the same disease. AIDS is called a syndrome because people with AIDS get a number of different diseases, all caused by HIV infection.

## **T-cells or T-lymphocytes**

A subgroup of the white blood cells called lymphocytes, these cells are responsible for stimulating, monitoring and suppressing the immune system's response to infection. T-cells are divided into T-helper (called CD4 or T4) lymphocytes and T-suppressor (called CD8 or T8) lymphocytes. The T-helper cells are the main target for HIV infection.

## **Urine**

The formal name for wee. It is the body's waste liquid following digestion of food and fluid.

## **Vaginal sex**

This is when the penis is inserted into the vagina.

## **Virgin or virginity**

This term is used to describe someone, male or female, who has not had intercourse. It can be used in a derogatory way or as a judgment of someone's value.

## **Virus**

Viruses are one of the smallest and simplest forms of life. They consist of a single piece of genetic material in a protein coat. They live inside the cells of plants or animals and can only reproduce through live host cells. Many common diseases are caused by viruses. (see disease and infection).

## **Window period**

The period between infection with HIV and the appearance of antibodies. During this period a person will produce a negative HIV antibody test result but may be infectious to sexual partners or needle-sharing partners. The window period usually lasts between 6 and 12 weeks.

# For Further Information

## Relationships, Sex, Sexuality and Young People

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## Videos

Videos can be a great way to check how much you know about the details of a STI and how it may affect relationships, health, communication and behaviours. Generally, information available on video dates very quickly, so you may need to check statistics, research findings, treatment and other issues with more recent sources of information.

## Periodicals

The following general scientific periodicals may be available in schools or regional libraries and often have regular articles on AIDS and HIV infection:

- *Nature*
- *Science*
- *The Scientist*
- *New Scientist*
- *Scientific American*
- *Time*

## Policy

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## Websites

The Internet is a source of up-to-date information about sexually transmissible infections including HIV/AIDS. However, be sure the information is provided by a reliable and trustworthy source. Begin by using any of the search engines with key words such as HIV/AIDS, sexual health, or sexually transmissible infections.

### Warning:

Internet content filtering is recommended by the Department of Education and Training for students P-9. Those schools using EduNet as their Internet Service Provider will already have filtering software. Searches on the web using generic terms such as sexuality may result in students accessing highly inappropriate material, although the filtering software should exclude unsafe sites. Teachers need to exercise some caution in this area.

*The SafetyNet: Internet Usage - Guidelines for Schools* is the Department of Education and Training's advice to schools on ensuring the safety of students on the Internet. This document is made available for download <http://www.sofweb.vic.edu.au/internet/safety.htm>

The following sites may also be a good place to start. Many of these sites have links with other useful sites. Some of the information on the sites may not be directed to secondary school students, and may have detailed and complex information regarding testing, treatment and research.

If the name of a site has changed or a server has become inaccessible, try to find it through a search engine or through links on another site.

### Australian Websites

Access Information Centre At The Alfred  
[www.accessinfo.org.au](http://www.accessinfo.org.au)

The Access Information centre is an excellent starting point for comprehensive information.

The ALSO Foundation  
<http://www.also.org.au>

- activities and services for gay and lesbian communities in Victoria
- gay and lesbian youth specific information
- links to other sites in Australia

Australian Research Centre in Sex, Health and Society, La Trobe University  
<http://www.latrobe.edu.au/arcshs/>

- information about Australian and Victorian social research on sexual behaviour and sex and society.

Department of Human Services, Public Health Branch  
<http://www.dhs.vic.gov.au/phb/>

- up-to-date Victorian and Australian statistics on a range of STIs
- information about sexually transmissible infections
- links to other sites in Australia and around the world

National Centre in HIV Social Research

<http://www.arts.unsw.edu.au/nchsr>

links to other sites in Australia, the region and international organisations

Victorian AIDS Council/Gay Men's Health Centre  
<http://www.vicaids.asn.au/>

- activities, services and priorities of the agency
- information about HIV/AIDS
- links with other sites

<http://www.betterhealth.vic.gov.au>

The Better Health Channel was established in May 1999 by the Victorian (Australia) Government. Its role is to provide the community with access to online health related information which is quality assured and reliable

[www.mshc.org.au](http://www.mshc.org.au)

*Melbourne Sexual Health Centre Online* provides comprehensive and reliable resources for people with questions about sexually transmissible infections (STIs). Go to *Infections and You*.

<http://www.fpv.org.au/>

Family Planning Victoria website The Sex!Life! website is owned by Family Planning Victoria. Family Planning Victoria (FPV) has been providing sexual and reproductive health services in Victoria for over 30 years.

[http://www.health.gov.au/pubhlth/strateg/hiv\\_hepc/hepc/manual.htm](http://www.health.gov.au/pubhlth/strateg/hiv_hepc/hepc/manual.htm)

The National Hepatitis C Resource Manual has been developed as a concise source of accurate and current information about hepatitis C.

[www.lawstuff.org.au](http://www.lawstuff.org.au)

Law information written for under 18 year olds, including matters to do with sex and discrimination. Produced by The National Children's and Youth Law Centre, an independent, non-profit organisation working for all Australians under the age of 25, supported by the Australian Youth Foundation and the University of Sydney, the University of New South Wales and the Public Interest Advocacy Centre.

<http://www.eoc.vic.gov.au/aboutus.html>

The Equal Opportunity Commission - is responsible for eliminating discrimination in Victoria. It is a statutory body and reports to the Victorian Parliament through the state Attorney-General. Go to <http://www.eoc.vic.gov.au/yourrights.html> for information on your rights and sex, gender, sexual harassment, and sexual orientation.

## International Websites

It is important to remember that information from international sites may not apply to Australia or Victoria. So, be careful when using statistics, trends or other information.

Pan-American Health Organization

<http://www.paho.org/>

- information about HIV infection in North and South America, use site index for more details

UNAIDS (Joint United Nations Programmes on HIV/AIDS)

<http://www.who.int/home-page/>

- international issues and statistics
- reports and analysis of international HIV/AIDS issues
- on line queries and searches on topics of interest
- faq health topics A-Z

<http://www.siecus.org/about/abou0000.html>

SIECUS is a 38 year old nonprofit organization, dedicated to affirming that sexuality is a natural and healthy part of life. SIECUS develops, collects, and disseminates information, promotes comprehensive education, and advocates the right of individuals to make responsible sexual choices.

[http://www.who.int/health\\_topics](http://www.who.int/health_topics)

The World Health Organization site is a source of information on all priority health issues globally, including sexual health and HIV/AIDS.

## Where to Find Resources

Information about HIV/AIDS, STIs, BBVs and sexual health is not always easy to find. The following places might be worth visiting or contacting to find out what is available. Most of them will not be able to send you information, but you may be able to visit and/or talk with a worker about your questions.

- school library
- local community health service or centre
- local youth centre or worker
- needle and syringe exchange program
- local library

Many of the resources listed above and others are available for sale through:

- Options Bookshop  
Family Planning Victoria  
901 Whitehorse Road  
Box Hill 3128  
9257 0100  
[http://www.fpv.org.au/2\\_15\\_2.html](http://www.fpv.org.au/2_15_2.html)
- Open Leaves Bookshop  
71 Cardigan Street  
Carlton 3053  
9347 2355  
<http://www.openleaves.com.au/>

## Where to Ask More Detailed Questions

The following telephone information and counselling services can be contacted with specific questions, concerns or issues:

### *AIDS, Hepatitis & Sexual Health Line- No charge*

Phone: 9347 6099

Country Freecall 1800 133 392

TTY for Deaf callers: 1800 032 665

[www.aidshep.org.au](http://www.aidshep.org.au)

### *Access Information Centre at The Alfred*

Fairfield House

Moubray St entrance, Prahran

Phone: 03 9276 6993

Fax: 03 9533 6324

Email: [access@alfred.org.au](mailto:access@alfred.org.au)

[www.accessinfo.org.au](http://www.accessinfo.org.au)

### *AIDSLine*

9347 6099

1800 133 392

1800 032 665 (TTY)

Mon – Fri 9.00 am – 10.00 pm

Sat – Sun 11.00 am – 2.00 pm &  
7.00 pm – 11.00 pm

### *Hepatitis C Helpline*

9349 1111

1800 800 241

1800 032 665 (TTY)

Mon – Fri 9.00 am – 10.00 pm

Sat – Sun 9.00 am – 11.00 am  
6.00 pm – 8.00 pm

### *Hepatitis C Council of Victoria*

9380 4644

### *Gay & Lesbian Switchboard*

9827 8544

1800 631 493

### *Vietnamese Hepatitis C Line*

1800 456 007

Sun – Mon 6.00 pm – 10.00 pm

Wednesdays 2.00 pm – 10.00 pm

## **Sexual Health and HIV/AIDS Specialist Services**

Clinical, education, counselling, support and referral services are available from a range of health and community services. Individuals can find a service that is confidential and anonymous. It is important that people feel comfortable and able to discuss all issues of concern with an appropriate doctor or health worker.

The telephone book or newspaper may provide information about local services. The following organisations also exist to provide a range of service:

Community Health Centres or Services

Doctors and Health Services

Family Planning Victoria – Action Centre

Family Planning Victoria

Hospitals – Outpatient Clinics in Family Planning or Sexual and Reproductive Health

Melbourne Sexual Health Centre

People Living With HIV/AIDS – Positive Living Centre

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