



## CHAPTER 7

# Prevention of HIV in children and mothers

When Gideon's sister Tanya turned 17, she moved to the city to find work. Life was difficult there, and many girls like Tanya got help from older men. Now 19 years old, Tanya faces a crisis.

Are you sure I am HIV-positive? What will happen to the baby and me?

Because you came to the clinic, we can help keep you healthy and your baby HIV-negative.

Do you have a friend you can talk honestly with, who can give you emotional support?

Tanya went to the clinic when she had missed her period for a few months. There she learned all at once she was pregnant and had HIV. Scared and upset, she remembered how her family suffered when her mother died from AIDS, leaving her sister Charity orphaned at a young age. But the doctor told her not to be afraid, that treatment could give her a long and healthy life, and a healthy baby. He encouraged Tanya to tell her boyfriend and also told her about a support group where she could talk to other women in the same situation. And he told her to return to the clinic the next week to start treatment.

Tanya thought angrily about Godfrey, her former boyfriend, who must have given her HIV. Once glad for his help, she now wished they had never met! She was so guilty and afraid for her baby too. So many babies died from HIV. What did that doctor know about HIV and babies anyway!

That week, she could not tell Sam, her boyfriend. Instead, she acted like everything was fine, even though it was not.

When she returned to the clinic, Tanya confessed to the doctor she had not told Sam about the HIV or the pregnancy. He reminded her about the support group and said the women in it would help her. Tanya decided to go.



At the group, she met Jeanette, a woman who also had struggled to tell her boyfriend about testing positive. Jeanette explained how she did it, and advised, "If he loves you, he may stand by you. Even if he becomes angry, he may come around. You must try."

It took all her courage to tell Sam. He was quiet at first. He just clenched his fists and looked away. Then he began to shout: "How can this be? What did you do? Get out! I cannot stand to look at you!"

Tanya ran out of the house weeping. She did not know where to go or what to do. She finally went to a friend's place and told her Sam had gotten drunk and threatened to beat her so she left. Her friend let her spend the night.

Sam, alone in their room, was confused. He was still angry, but also afraid for Tanya and for himself. He was worried he might have HIV too. He had loved and trusted Tanya and didn't understand how this could happen. The next day he woke up lonely and sad. He could not get Tanya out of his mind.

He decided to talk to his cousin. Tombe had HIV, and Sam had not seen him much since he told the family he had HIV, when Sam's uncle said that Tombe was no longer his son, or anyone's cousin or nephew for that matter. Sam had respected Tombe, though, and missed his friendship.

Tombe heard Sam's story and said, "Yes, you have gotten some really bad news. No matter what happens, your life will no longer be the same. Maybe you have HIV, maybe not. But you love that girl, and you know it's really not her fault. She had another boyfriend before you, just like you had someone before her. And that guy probably gave her HIV, just like you could have gotten HIV before too. But it is not the end of the world. People live with HIV now, like me. You would never know I have HIV except for those ignorant members of my family who turned me out."

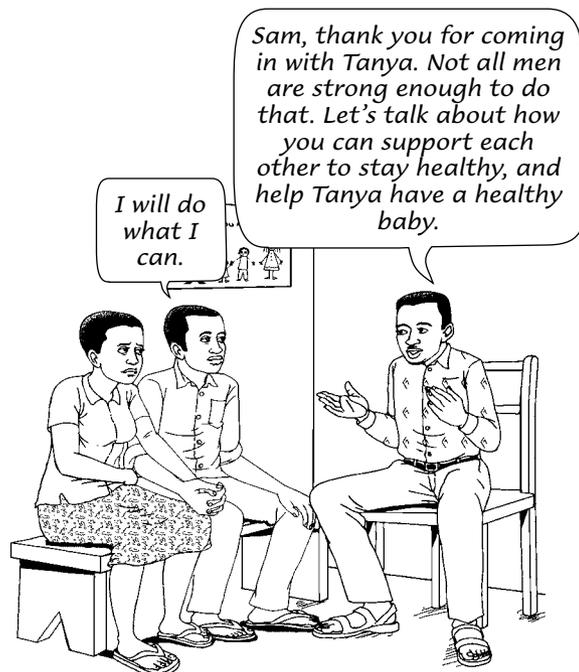
Sam realized he felt bad about avoiding his cousin just because he had HIV. He did not want to do that to Tanya.

Tombe continued, "And that baby is surely yours — don't you want to know who it will be? You should talk to Tanya and decide how to handle this."

Sam said maybe he could cope with the situation; at least he could try. He went home and called Tanya and said they could go to the clinic together.

The doctor told Sam he should not assume he had HIV just because Tanya did. And he explained that even though Tanya was HIV-positive, her baby did not have to be. If Tanya took her medications, took care of her health in other ways, and continued to come to the clinic, it was very likely her baby would be HIV-negative. Sam's help would make a big difference.

Walking home, Tanya thought about when Charity was born. No one knew her mother had HIV and that she would die so early, leaving Charity as an orphan. Tanya decided she would do everything she could to stay healthy and raise a healthy baby. And she was glad Sam was going to try as well.

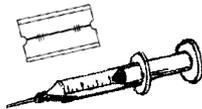
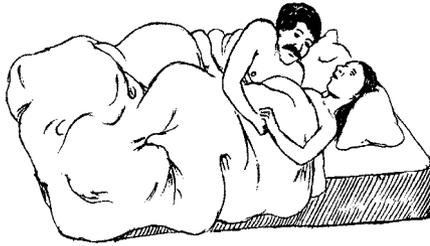


## How HIV spreads

When people have HIV infection, the HIV virus lives in their blood and some of their other body fluids, such as semen, vaginal fluids, and breast milk. HIV spreads when these fluids get inside another person.

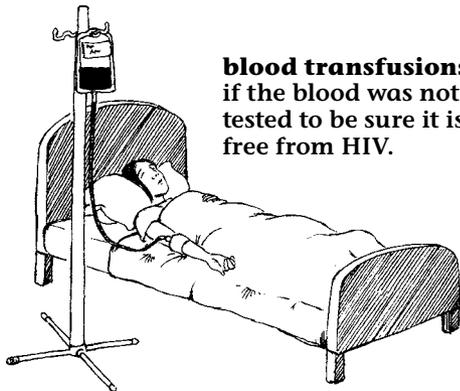
The ways people become infected with HIV are:

**unsafe or unprotected sex** with someone who has the virus. This is the most common way HIV spreads. To learn about safer sex, see pages 109 to 111.

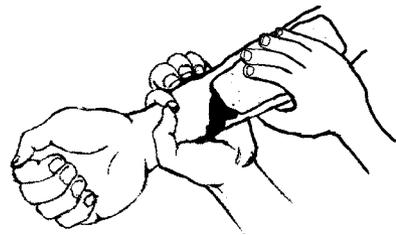


**unclean or shared razors, needles, syringes, or any tool that pierces or cuts the skin.** In some places, sharing syringes to inject drugs spreads as much HIV as sex does.

**for babies, during pregnancy, birth, or breastfeeding** if the baby's mother has HIV (mainly if she is not being treated with ART).



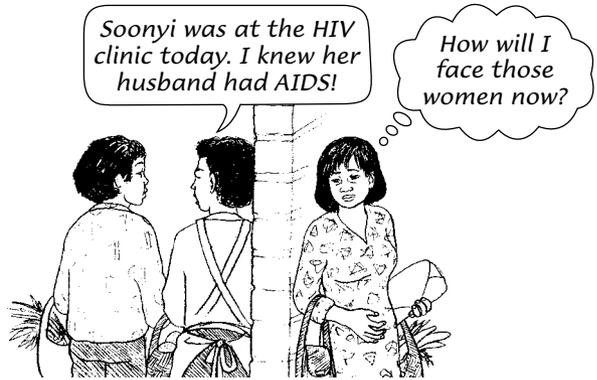
**blood transfusions,** if the blood was not tested to be sure it is free from HIV.



**if HIV-infected blood gets into a cut or sore or open wound of another person.**

## HIV spreads more easily:

- when fear of the stigma of HIV makes people avoid getting tested or treated.
- when people with HIV do not get ART treatment, or they rely only on traditional medicines to “cure” HIV.
- when people are pressured or forced to have unsafe sex.
- when someone has sores on his or her genitals or inside the body. Sores allow HIV to get past the skin and deep into the body, where HIV infection happens. Both sexually transmitted infections (STIs) and schistosomiasis (bilharzia) cause sores inside the vagina. And dry, rough, or forced sex can tear the skin inside the vagina or anus.
- when a person with HIV has a lot of HIV virus (called a high viral load) in each drop of blood. Right after being infected and later when he is very sick are the times when a person has the most HIV in his blood. Having another infection along with HIV, such as TB, an STI, or worms, also increases the amount of HIV in the blood.



## HIV spreads less easily:

- when people use condoms whenever they have sex, and feel more able to ask others to use condoms.
- when people with HIV take ART each day, because this reduces the amount of HIV in their blood.
- when people feel more able to talk about HIV, be tested, and know and disclose their HIV status to partners.
- when people use only sterile needles to inject drugs.
- when men are circumcised.
- when people have sexual relationships with fewer people.



## How HIV does not spread

HIV does not spread through the air or by touching the outside of our bodies. In general, HIV cannot live for more than a few minutes outside the body. This means you cannot give or get HIV in these ways:

by touching, kissing, or hugging



by sharing food, dishes, or utensils



by sharing a bed



by sharing or washing clothes, towels, bed covers, latrines, or toilets



by caring for someone with HIV or AIDS



from insect bites



Learn how to safely live with and care for someone with HIV or AIDS by reading Chapter 12: Common health problems.



## Avoid contact with blood to prevent spreading HIV

HIV and many other illnesses can spread through unclean needles or tools that cut the skin. These can carry blood with HIV from one person's body into another, and into the blood. Do not cut or pierce the skin with sharp objects, such as knives, blades, or needles, unless they are sterilized.



In general, avoid touching other people's blood and body fluids. HIV can spread through blood in diarrhea and vomit. You might touch body fluids while caring for someone who is ill or for someone injured in an accident. Even if the person looks healthy, use gloves or a plastic bag to keep body fluids from getting on your skin, and try not to let fluids splash in your mouth or eyes. Keep any open wounds or sores on your skin covered to prevent contact with another person's blood.

## How to prevent HIV with safer sex

HIV, like other sexually transmitted infections, spreads mainly through sex. This is because the moist, soft skin of the vagina, penis, anus, and mouth is torn easily or may have sores caused by infections or rubbing. Torn skin and sores are openings that allow germs or a virus like HIV to go deeper into a person's body, into their blood where HIV infection happens.



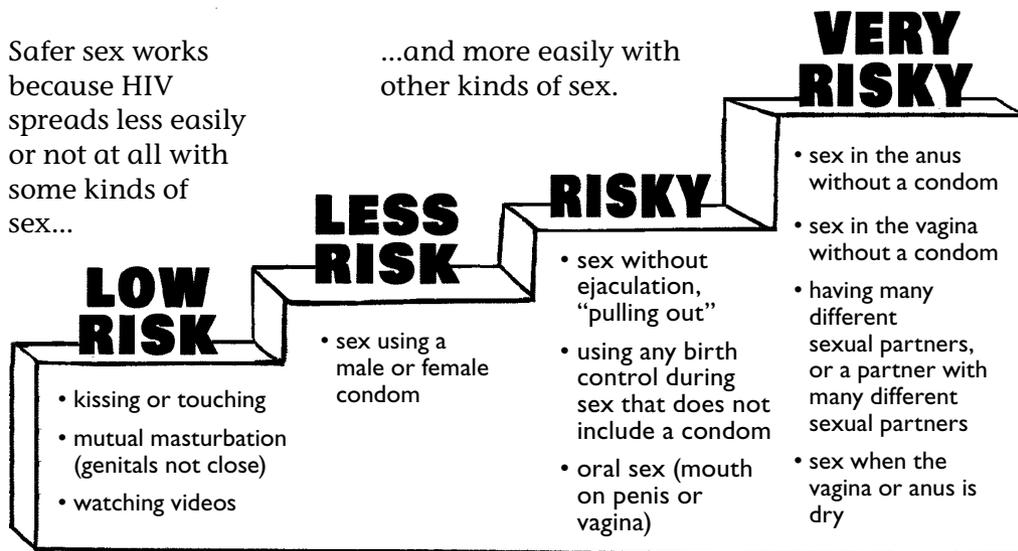
**Using condoms for safer sex can be a way of showing that you care about each other's health.**

When people have safer sex, it means they limit or avoid having their genitals touch skin to skin during sex. So the genital fluids that carry HIV — semen and vaginal fluid — do not touch the areas that can allow HIV into the other person's body — the vagina, penis, anus or mouth. Using condoms is a good way to have safer sex.

If you or your partner have tested positive for HIV, or have more than one sex partner, or do not know your HIV status, safer sex can help you prevent HIV from spreading.

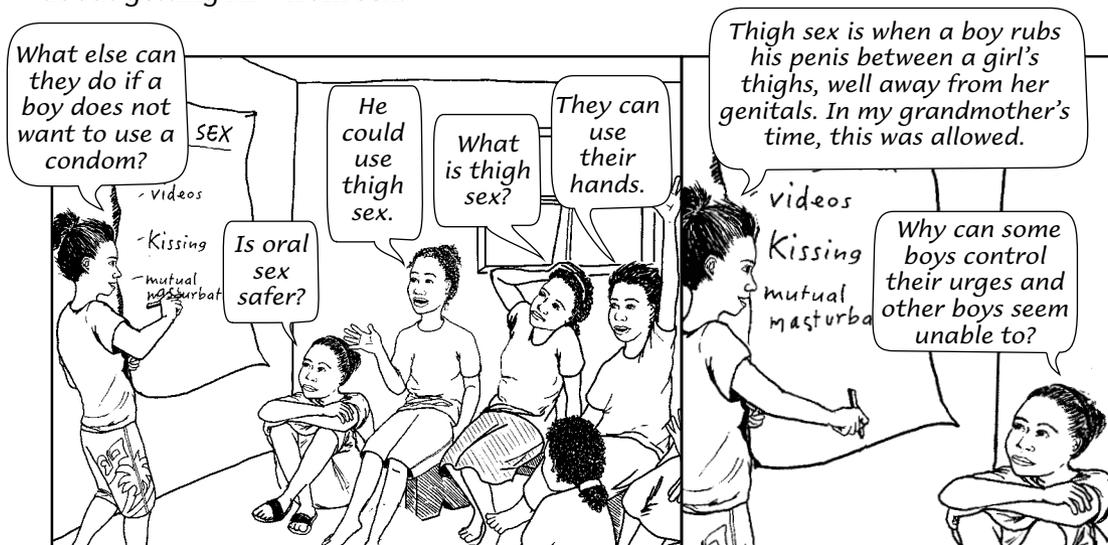
Safer sex works because HIV spreads less easily or not at all with some kinds of sex...

...and more easily with other kinds of sex.



Other ways that can make sex safer are having fewer sexual partners, being tested for HIV before you have sex with any new partner (and asking them to be tested too), using lubricants for sex and avoiding dry sex, having sex without penetration, and treating any sexually transmitted infections quickly. "Dry" sex and forced sex cause torn skin, and many infections cause sores on or in the genitals, so these all help HIV spread. Also, men who are circumcised do not become infected with HIV as easily as uncircumcised men.

If you and your partner are both HIV-negative and have sex with no one but each other, you can have any type of sex you both like, and you need not worry about getting HIV from sex.



## Encourage young people to use safer sex

The way we raise our children can help protect mothers and babies from HIV. When we treat boys and girls more equally from birth, we prevent HIV — and many other problems — by:



- helping girls stay in school.
- helping all children, both girls and boys, develop their abilities, confidence, and sense of worthiness.
- teaching both boys and girls to respect their bodies, and also to respect each person's right to decide when and how to have sex.
- protecting all children from violence and abuse, and helping them heal if they are abused.

Girls and boys can better avoid getting or spreading HIV if they postpone sex and wait to have babies until they are grown and have finished secondary school.

Sex and childbirth are both more dangerous for a girl who is not fully grown. Girls and young women more easily become infected with HIV and other STIs during sex because the skin inside their genitals is more likely to tear before they are fully grown. Also, if their partners are older men, these men are more likely to have HIV because they may have already had other partners.

A girl who is not fully grown may have more difficult births because her pelvis is too small for the baby to pass through. This may make her bleed more, endangering the girl's life and making it easier for HIV to spread to her baby.

Enabling young women and men to use family planning, including condoms, will both prevent unwanted pregnancies and prevent HIV. Working together as parents, teachers, health workers, and religious and community leaders can lead us to find ways to help young people avoid early sex, unwanted pregnancies, and HIV.

*Yonas has offered a large dowry to marry Zeina, but she is just 12 years old.*

*Zeina should finish school before we talk with her about marriage, don't you think?*



## How to prevent HIV with ART

When someone is tested, discovers she has HIV, and starts taking antiretroviral therapy (ART) faithfully, the amount of HIV in her blood goes down. This not only protects her health, but makes her much less likely to infect others. So if a woman with HIV is tested and taking treatment before she becomes pregnant (or even starts ART as soon as she finds out she is pregnant), her chance of infecting her baby is very low.



**Treatment is also prevention. It makes HIV spread less easily.**

If everyone was tested for HIV, treated for HIV if needed, and given the support they need to stay on treatment, HIV would spread more slowly and almost all babies would be born without HIV.

## PrEP (Pre-Exposure Prophylaxis)

ART medicines can also be used by people who do not have HIV, to protect themselves if they were exposed or they know they will be exposed. PrEP means people without HIV take HIV medicines regularly to protect themselves from becoming infected with HIV. For example,

- some people have partners who will not use condoms.
- someone may have a partner who uses injection drugs, which puts them both at a higher risk for getting HIV from sharing needles or syringes.
- some people trade sex to survive and they may not have a choice in negotiating safer sex with their partners.
- PrEP can also help a couple get pregnant more safely when one person has HIV and the other does not. See page 115.

Using PrEP every day can keep these people from getting HIV.

PrEP is usually a combination of two antiretroviral medicines. Talk to a health worker for more information about PrEP.

### Medicines for Pre-Exposure Prophylaxis (PrEP)

If you do not have HIV but are regularly exposed to HIV, for example, because your partner has HIV, you can take 300 mg of tenofovir (TDF) in combination with 200 mg of emtricitabine (FTC) every day to prevent becoming infected. It may be just as effective to take the tenofovir with 300 mg of lamivudine (3TC) instead of the emtricitabine (FTC), if that is what is available.

## PEP (Post-Exposure Prophylaxis)

PEP is a short course of treatment after forced or unprotected sex, or through contact with blood. Both children and adults who have been raped or abused sexually, had unsafe sex, or were stuck with a needle should seek health care and see if they can use HIV medicines to prevent infection. These medicines must be started within 3 days (72 hours) of the exposure and used for 28 days.

### Medicines for Post-Exposure Prophylaxis (PEP)

It is best to take all 3 medicines, but if not all are available, taking even 2 medicines may prevent HIV.

Best combination for a child under 11 years old



Medicine	Weight of child	Dose	Warnings and side effects
• zidovudine (AZT)	4 kg to less than 9 kg	12 mg per kg, 2 times a day	May cause anemia.
	9 kg to less than 30 kg	9 mg per kg, 2 times a day	
	30 kg and over	300 mg, 2 times a day	
• lamivudine (3TC) using a 150 mg tablet	14 kg to less than 20 kg	½ tablet, 2 times a day	
	20 kg to less than 25 kg	½ tablet in morning, 1 tablet in evening	
	25 kg and over	1 tablet, 2 times a day	
• lopinavir/ritonavir (LPV/r) using a 100 mg/25mg children's tablet	15 kg to 25 kg	2 tablets, 2 times a day	Do not crush tablets. May cause belly pain and/or diarrhea.
	over 25 kg to 35 kg	3 tablets, 2 times a day	
	over 35 kg to 45 kg	4 tablets, 2 times a day	

Best combination for a person 11 years old or older



Medicine	Dose	Warnings and side effects
• tenofovir (TDF)	300 mg once a day	May cause kidney problems.
• emtricitabine (FTC) <b>or</b> • lamivudine (3TC)	200 mg once a day  300 mg once a day	
• lopinavir/ritonavir (LPV/r)	400 mg/100 mg 2 times a day	Do not crush tablets. May cause belly pain and/or diarrhea.

A person over 11 years could instead use one of the combinations on page 122 for 28 days if the medicines in the chart above are not available.

## Prevent HIV from spreading to babies

When a pregnant woman has HIV, the HIV lives in her blood, vaginal fluids, and breast milk. Especially if she is not taking ART, her baby can become infected during:



pregnancy



delivery



breastfeeding

HIV spreads less often to a developing baby if the mother takes ART. ART is now recommended for all pregnant women with HIV. The earlier in pregnancy a woman starts, the better for both her and the baby. See page 122 and Chapter 11 for more about using these medicines.

A woman who does not have HIV cannot spread HIV to a baby. So the surest way to prevent HIV in babies is to prevent HIV in women before they become pregnant, and during their pregnancy if they do become pregnant.

### Other ways children can become infected

Most children with HIV were infected as babies, during pregnancy, delivery or breastfeeding. But children can also be infected through sex or contact with blood.



If a child is sexually abused or raped by a person with HIV, the child may become infected. If you know a child has been sexually abused or raped, seek medical care for the child immediately. A clinic may have medicines called PEP that can prevent HIV infection in the child (see page 113).

Many children are sexually abused but we often do not find out until much later. Learn to be more aware of the signs of abuse and work with others to protect children. See Chapter 14 for more on sexual abuse.

Children can also become infected with HIV through contact with infected blood. Keep children away from sharp objects, and teach children not to play with them. If a child is going to receive medicine by injection, be circumcised, or have his or her skin cut or pierced for any reason, make sure sterile equipment is used.



## Prevent HIV infection before pregnancy

Women can prevent becoming infected with HIV best when they know the status of their partners. If a woman's partner has HIV, ART for the partner and safer sex can protect the woman from both pregnancy and HIV infection. If she cannot use safer sex, she can try to get PrEP, see page 112.

If a woman wants to have a baby, there are several ways she and her partner can avoid spreading HIV while trying to become pregnant.

### Safer sex while trying to get pregnant

In many couples, one person **has** HIV and the other **does not have** HIV. Safer sex prevents HIV from spreading during sex, but it also prevents pregnancy. If you want to have a baby, here are some ways to lower the risk of spreading HIV — both to the baby and to the HIV-negative partner — while you are trying to become pregnant.

- Start the person with HIV on ART, and wait a few months so there will be a lower amount of HIV in the person's blood.



- Use condoms except for the few days each month when a woman is mostly likely to get pregnant (when she ovulates — see *Where Women Have No Doctor*).

- If the woman has HIV, she can fill a clean syringe (without a needle) with the man's semen immediately after he ejaculates (comes). She can then "inject" the semen into her vagina.



- Treat sexually transmitted infections (STIs) quickly. This also protects the baby's health.

- Have sex only with the person you want to have the child with.



- Circumcise a male partner to lower his chances of being infected if the woman has HIV.

- Use PrEP to avoid infection, especially if the woman does not have HIV and her partner is HIV-positive and not on ART. See page 112.

## How to prevent HIV during pregnancy

If you do not know your HIV status, get tested as soon as you can. If you need treatment, starting ART as soon as possible will protect your baby from HIV and keep you healthy. Many clinics have Prevention of Mother-To-Child Transmission (PMTCT) programs where women can get tested and start treatment. Programs often have support groups for mothers with HIV.

Health care for pregnant women is called prenatal or antenatal care. Prenatal care is very important for pregnant women, especially women with HIV. Untreated infections of any kind increase the chance that a pregnant woman can get HIV, or that a pregnant woman's HIV will spread from herself to her baby. So treating and preventing infections during pregnancy helps prevent HIV in babies.

Health care for pregnant women and protection from HIV, other diseases, and poisons, such as lead and toxic chemicals, help babies grow well in the womb. Babies develop all the basic parts of their bodies and minds in the womb. So health during pregnancy affects what babies will be able to do as children and adults after they are born.

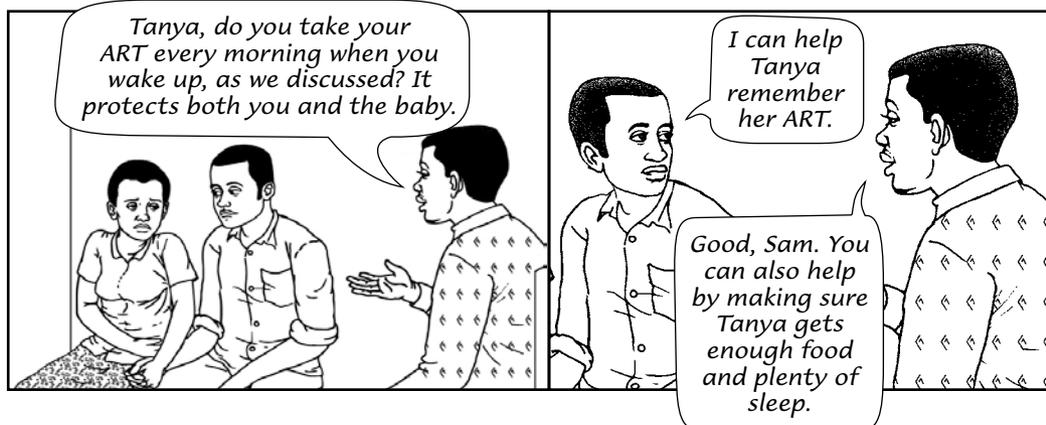
Whether or not you have HIV, practicing safer sex and being tested for HIV early in pregnancy helps protect your own health and the health of your baby.

Prenatal care for women with HIV also includes:

- testing and treatment for anemia (weak blood, usually from lack of iron), which weakens women and makes bleeding worse after birth.
- help talking to sexual partners or family about HIV, and counseling and other support about feeding and caring for the new baby.



**All pregnant women need enough to eat, enough rest, and care for any illnesses they develop.**



## Take ART during pregnancy

Antiretroviral therapy, or ART, started early in pregnancy, prevents almost all babies from being infected during pregnancy, birth, and breastfeeding. Most clinics provide ART to any pregnant woman if she has HIV and to the baby for a short time after the birth. This keeps the mother healthy and works well to prevent babies from becoming infected. See pages 121 and 122.

If you are already on ART and become pregnant, you will usually just continue to take your medicines.

### ***If the mother is already taking ART***

- keep taking ART every day.

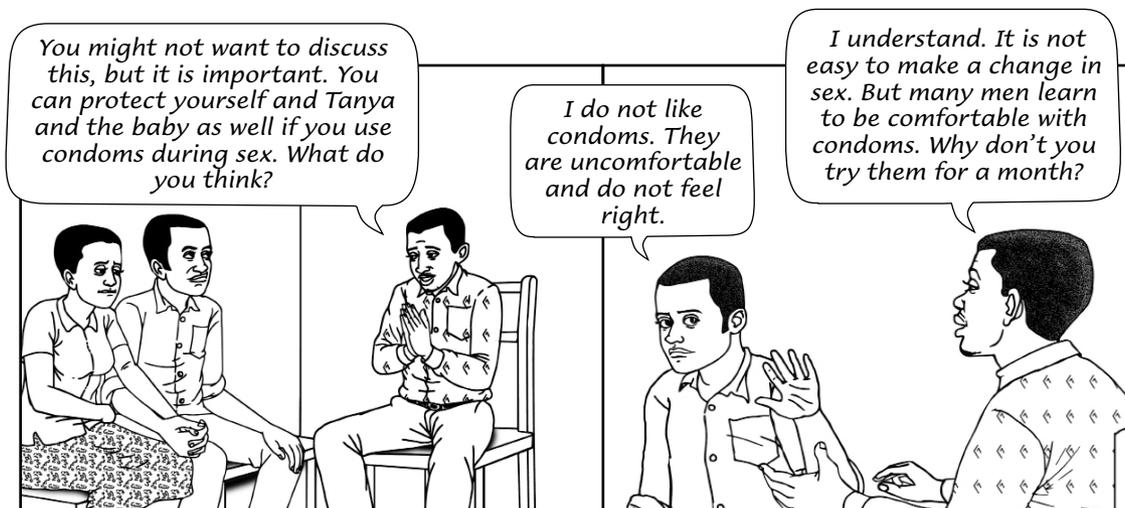
### ***If the mother is NOT taking ART yet***

- start ART as soon as possible.

## Sex during pregnancy

A woman can have sex throughout her pregnancy. Sex is safe for the woman and the baby unless having sex infects the mother with a sexually transmitted infection, including HIV. Becoming infected with HIV during pregnancy or just before the birth strongly increases the chance that the baby will also become infected. Practicing safer sex during pregnancy is important for both women with HIV and without HIV. See pages 109 to 111 for information on safer sex.

Many women are afraid to talk about sex and condoms with their partners, but using condoms is a good way to keep women and their babies healthy.



## How to prevent HIV during the birth

The risk of HIV spreading from a pregnant woman to her baby increases during birth because the baby is in contact with blood and fluids in the mother's vagina then. Mothers with HIV who are not already on ART can protect their babies by taking ART during labor and birth and giving the baby ART as soon as she is born.

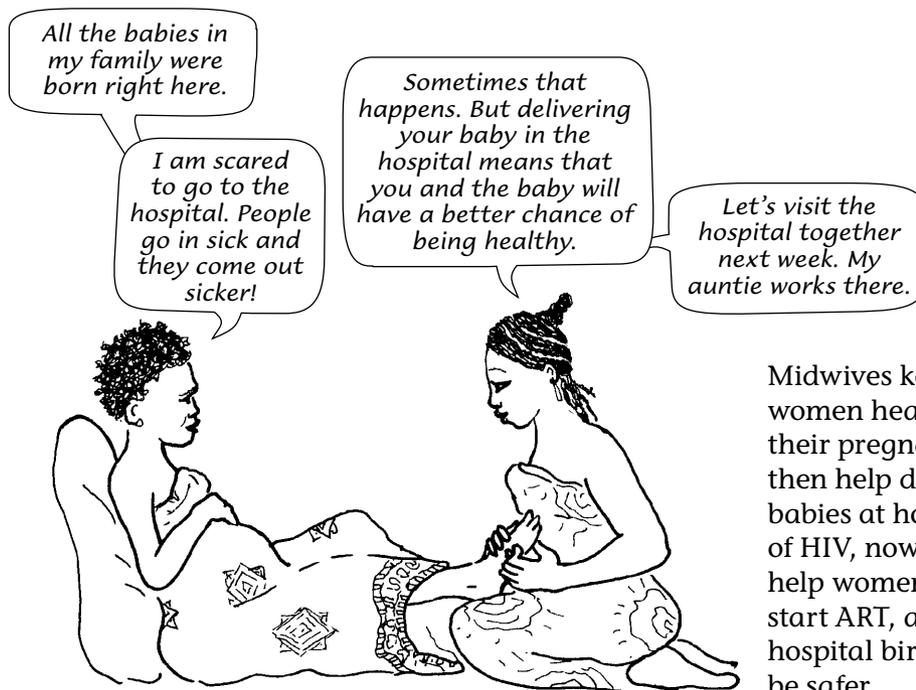
### **If the mother is already taking ART**

- keep taking ART as usual.

### **If the mother is NOT yet taking ART**

- start ART as soon as possible, and take doses on time during labor and birth.

Many mothers with HIV deliver their babies in a hospital or clinic. There, they can have better access to ART, sterile equipment, and other medical services to keep mothers and babies healthy if problems arise. In some cases, health workers deliver the baby by surgery called a Cesarean or C-section — taking the baby out through a cut made in the woman's belly.



Midwives keep many women healthy through their pregnancies and then help deliver their babies at home. Because of HIV, now midwives also help women get tested, start ART, and arrange for hospital births if that will be safer.

If you are in labor and have not been tested for HIV recently or do not know your status, ask to be tested. If you learn you have HIV, you can still protect your baby by taking ART during and after the birth.

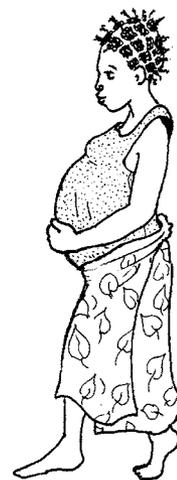
## Birth practices can protect babies from HIV

Wherever you have your baby, talk with your family and midwife about other ways to lower the risk of the baby becoming infected with HIV.

If possible, try not to let labor go too long. Keep labor moving along by walking, changing positions, drinking water and juice often, and urinating. Get help if your labor lasts longer than 12 hours.

Try to avoid anything that causes extra bleeding.

- A doctor or midwife should avoid putting her hand inside the mother's vagina unless absolutely necessary (and should always use gloves).
- Avoid breaking the bag of waters unless absolutely necessary.
- Avoid doing things to the mother or baby that might cut the skin, such as using forceps or a scalp monitor on the baby. Avoid cutting the mother's vagina to make the birth opening bigger.



Also, any razor or knife used to cut the baby's cord should be sterile. For more information about healthy births, see the *New Where There Is No Doctor*, Chapter 26, and *A Book for Midwives*.

## How to prevent HIV after the birth

After birth, both the mother and the baby need care. They each worked hard and need to rest. Here are some ways to help keep them healthy.



Use a syringe with no needle to slowly squeeze medicine into the side of a baby's mouth, back near his throat.

- Give the baby ART to help prevent HIV infection. Any baby born to a mother with HIV should be given ART each day for at least 4 to 6 weeks and longer in some cases. See page 121.
- Keep the baby warm. See page 173.
- Help the mother start breastfeeding, and assure her that her milk is good for her baby — the best food possible.

## Test babies for HIV

Finding out soon after birth if your baby has HIV can save his life, because he can be treated. A special HIV test called a PCR test is needed. See Chapter 8 for more on HIV testing.



## Breastfeeding

Before HIV treatment was available, mothers with HIV were advised to avoid breastfeeding. But with ART, breastfeeding is safer and is healthiest for almost all babies. Formula and other milks have other dangers.

Many babies fed with formula become ill or die because families lack clean water or enough money to buy all the formula the baby needs to grow well. Also, formula and other milks do not provide the same nutrition and all the protections that breast milk does.



Here are two ways to help keep breastfeeding safe:

- Take ART and give ART to the baby. The mother's ART protects her baby from HIV while she is breastfeeding, and ART given to the baby gives more protection.
- Give the baby **only breast milk** for the first 6 months. Other foods or liquids can cause problems in the baby's stomach, making it easier for HIV to spread. After 6 months, add complementary foods and continue to breastfeed.

A woman whose HIV is well-controlled by ART can and should breastfeed for at least 1 to 2 years, weaning (stopping breastfeeding) only when there is enough healthy food to give the child.

See Chapter 9: Breastfeeding and HIV, and Chapter 10: How to keep children healthy, for more information on breastfeeding and weaning.

## Care for the mother after the birth

Check to see that the mother's bleeding is not more than a heavy monthly bleeding (less than about 2 cups of bloody fluid over the first few hours).

Watch the mother for signs of illness: fever, foul-smelling discharge from her vagina, cough, shortness of breath, severe lower belly pain, burning when she urinates, or breasts that are painful, red, or warm. Treat any illness quickly.

Also make sure the mother keeps taking ART every day as usual after the birth, and has support to keep getting her medicines and enough food to eat. Treatment not only protects her health but helps her safely breastfeed her baby.

## ART for babies to prevent HIV

The mother being on ART helps protect her baby from HIV, but the baby needs ART too.

**Give the baby both nevirapine *and* AZT for 6 weeks if:**

- the mother started taking ART less than 1 month before the birth.
- the mother thinks she was infected with HIV during pregnancy or breastfeeding.
- the mother has a lot of HIV in her blood (a viral load over 1000) or feels very sick.

If the mother is breastfeeding, give the baby medicine for 12 weeks, not just 6. Keep giving both nevirapine and AZT or give only nevirapine.

**Give the baby only nevirapine for 6 weeks if:**

- the mother started taking ART before pregnancy or very early in the pregnancy.
- The mother’s HIV is under good control.
- The mother is breastfeeding. If the mother is not breastfeeding, you can give the baby either AZT or nevirapine for 6 weeks.

If for some reason you stop your ART while you are still breastfeeding, begin giving the baby nevirapine again. You can stop giving the baby nevirapine 6 weeks after you restart your ART, or a week after you stop breastfeeding.

 <p><b>Nevirapine comes as a liquid to give babies by mouth.</b></p>	<b>Nevirapine (NVP)</b> Give nevirapine once a day			<b>Side effects</b> May cause rash.
	<b>Age</b>	<b>Weight of child</b>	<b>Dose</b>	
	0 to 6 weeks	less than 2 kg	2 mg per kg	
		2 to 2.5 kg	10 mg	
		more than 2.5 kg	15 mg	
	6 weeks to 6 months .....		20 mg	
6 months to 9 months .....		30 mg		
9 months until breastfeeding ends.....		40 mg		
 <p><b>AZT comes as a liquid to give babies by mouth.</b></p>	<b>AZT</b> Give AZT to the baby for 6 weeks			<b>Side effects</b> May cause anemia.
	<b>Age</b>	<b>Weight of child</b>	<b>Dose</b>	
	0 to 6 weeks	less than 2 kg	2 mg per kg, once a day	
		2 to 2.5 kg	10 mg, 2 times a day	
	more than 2.5 kg	15 mg, 2 times a day		

## ART for treatment and prevention for people 11 years and older

If you have HIV and are pregnant or breastfeeding, you can take the same ART medicines other adults take for treatment. Start as soon as you know you have HIV. Keep taking ART lifelong. If you must stop your ART, do not stop before the baby is 6 to 12 months old, and continue at least as long as you breastfeed the baby.



<b>Combination 1</b>			
<b>Medicines</b>	<b>Dose</b>	<b>Warnings and side effects</b>	<b>Advantages</b>
• tenofovir (TDF)	300 mg, once a day	Can cause kidney problems	<ul style="list-style-type: none"> <li>Preferred combination for pregnant and breastfeeding women and people with hepatitis B.</li> <li>Good combination if taking rifampicin for TB.</li> </ul>
• lamivudine (3TC)	300 mg, once a day		
<b>or</b> • emtricitabine (FTC)	200 mg, once a day		
• efavirenz (EFV)	600 mg, once a day		
<b>Combination 2</b>			
<b>Medicines</b>	<b>Dose</b>	<b>Warnings and side effects</b>	<b>Advantages</b>
• zidovudine (AZT)	250 to 300 mg, 2 times a day	Anemia Low white blood count	<ul style="list-style-type: none"> <li>Good combination if taking rifampicin for TB.</li> </ul>
• lamivudine (3TC)	150 mg, 2 times a day, <b>or</b> 300 mg, once a day		
• efavirenz (EFV)	600 mg, once a day		
<b>Combination 3</b>			
<b>Medicines</b>	<b>Dose</b>	<b>Warnings and side effects</b>	<b>Advantages</b>
• zidovudine (AZT)	250 to 300 mg, 2 times a day	Anemia Low white blood count	
• lamivudine (3TC)	150 mg, 2 times a day, <b>or</b> 300 mg, once a day		
• nevirapine (NVP)	200 mg, once a day for 14 days, then 200 mg 2 times a day		
<b>Combination 4</b>			
<b>Medicines</b>	<b>Dose</b>	<b>Warnings and side effects</b>	<b>Advantages</b>
• tenofovir (TDF)	300 mg, once a day	Kidney problems	
• lamivudine (3TC)	300 mg, once a day,		
<b>or</b> • emtricitabine (FTC)	200 mg, once a day		
• nevirapine (NVP)	200 mg, once a day for 14 days, then 200 mg 2 times a day	Skin rash Liver problems	

**IMPORTANT:** Many people take stavudine (d4T) instead of zidovudine (AZT) in Combinations 2 and 3. Most HIV treatment programs are trying not to use stavudine because long-term use can cause severe side effects. If you use stavudine, do not take more than 30 mg, 2 times a day.