



## What do you know about male circumcision, HIV and health – and why does it matter?

- Do you know about the campaign to medically circumcise boys and men?
- Do you know why medical circumcision is promoted as part of HIV prevention?
- Do you know what circumcision involves?
- Do you know the pros and cons of circumcision for different people?

A mass campaign of Medical Male Circumcision (MMC) is being rolled out in many African countries that are hard-hit by HIV/AIDS, in an effort to reduce new infections.

Scientific studies have shown that MMC can cut the risk of a man contracting HIV from vaginal sex by up to 60%. The World Health Organisation (WHO) has recommended that the governments of countries worst affected by the epidemic should offer medical circumcision to all boys and men aged 15–49 years, and should consider circumcising all newborn males.

The WHO points out that MMC on its own is not going to defeat the epidemic. It must be part of a comprehensive HIV prevention strategy that includes HIV counselling and testing, screening for other sexually transmitted infections, correct and consistent use of male and female condoms, safer sex practices and access to treatment for people who test HIV-positive.

The South African Government has embarked on an intensive campaign to encourage 4.3 million boys and men to medically circumcise by 2015. *It is critical that all men – whether HIV-negative or positive, straight or gay, young or old – and women, as partners and mothers, are well informed about MMC and its particular implications for them.*

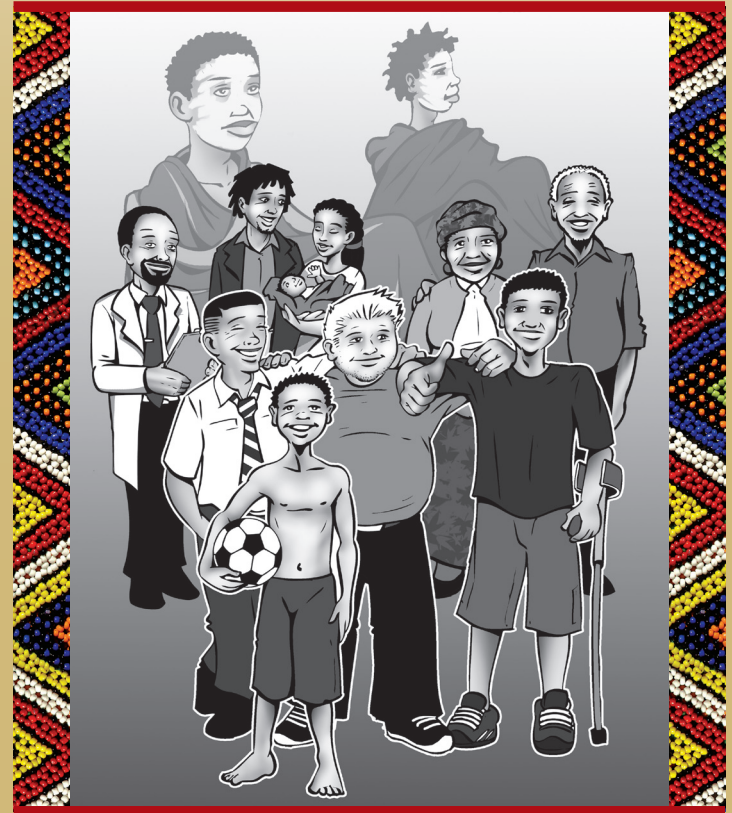
The pursuit of ambitious targets for MMC must not lead to neglect of quality counselling – particularly for couples and for those who test HIV-positive. MMC must support, not replace changes in sexual behaviour that will reduce HIV infections and gender-based violence. It should provide a gateway, not an alternative to comprehensive sexual and reproductive health care, including treatment for HIV-positive men and women-controlled prevention methods. Questions and concerns about issues such as the devices used to circumcise, the implications for traditional circumcision practitioners and the introduction of neonatal circumcision must be openly and honestly addressed.

This book examines the implications of MMC for boys, men and women, so that everyone affected can ask the questions and get the answers they need to be fully informed and protect themselves against HIV. It explores various aspects of both medical and traditional circumcision, their links to HIV and health, and the pros and cons of different practices. It looks at how the 'model' for MMC as part of HIV risk reduction should be rolled out in practice if it is to achieve its objectives and highlights what recipients and providers of health services need to know and do to make this happen.



# Male circumcision, HIV and health

## A guide



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Kingdom of the Netherlands



The opinions expressed in this book are not necessarily those of the writer, editors, reviewers or publisher but reflect some of the views in the ongoing debate about male circumcision.

We welcome any suggestions and feedback on the contents of this book.

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# Abbreviations

|        |   |
|--------|---|
| AIDS   | Acquired Immune Deficiency Syndrome                 |
| ART    | Antiretroviral Therapy                              |
| ARVs   | Antiretrovirals                                     |
| BCG    | Bacillus Calmette–Guérin (Tuberculosis vaccine)     |
| DSMB   | Data Safety and Monitoring Board                    |
| FGC    | Female Genital Cutting                              |
| GUDs   | Genital Ulcerative Diseases                         |
| HCT    | HIV Counselling and Testing                         |
| HIV    | Human Immunodeficiency Virus                        |
| HPV    | Human Papilloma Virus                               |
| HSV-2  | Herpes Simplex Virus type 2                         |
| MMC    | Medical male circumcision                           |
| MSM    | Men who have sex with men                           |
| PMTCT  | Prevention of Mother to Child Transmission (of HIV) |
| RCT    | Randomised Controlled Trial                         |
| STI    | Sexually Transmitted Infection                      |
| TMC    | Traditional Male Circumcision                       |
| UNAIDS | Joint United Nations Programme on HIV/AIDS          |
| VMMC   | Voluntary Medical Male Circumcision                 |
| WHO    | World Health Organisation                           |

# Introduction



MC. MMC. VMMC. Circumcision. Male circumcision. Medical circumcision. Traditional circumcision. You have probably heard all these acronyms, labels and concepts but are you clear about what male circumcision is? Do you know how male medical circumcision is linked to HIV risk reduction and health? Are you aware of how male circumcision might affect you – whether you are a man or a woman?

Male circumcision does not just affect Xhosa boys going off to the mountain to 'become men', or Jewish babies or Muslim boys undergoing religious rites. As you read this, boys from different cultures all over the world are preparing for circumcision. At the same time, many African governments are promoting voluntary medical circumcision of all boys and men as part of the fight against HIV/AIDS, as recommended by the World Health Organisation (WHO). Africa is the continent hardest hit by the HIV/AIDS epidemic and this is why it is a high-priority zone with respect to promotion of medical male circumcision (MMC) as part of HIV prevention efforts. Such campaigns have targets to circumcise millions of boys and men.

The focus on circumcision as an HIV risk-reduction measure affects everyone, including the wives, girlfriends, boyfriends, mothers, sisters and brothers of the boys and men involved. The WHO says that there must be 'informed consent' to this procedure. That means individuals should receive all the information they need to decide whether, how, when and where to undergo circumcision. It is important that, with the pressure to meet ambitious targets, everyone involved is fully informed and receives the best possible treatment and follow-up support. Whatever your gender, sex or sexual orientation, whether you are HIV-negative or positive, young or old, single or married, you need to know about male circumcision and how it could affect you.

Whether circumcision is carried out for HIV risk reduction, or for cultural, religious, medical or other reasons, it is not to be undertaken lightly. It is important to discuss it with friends, family, doctors and others close to you, and to come to a decision based on all

the relevant information, not just what you are told by advertisements. No one should be pressurised to do it, or to allow it to be done to a baby or child in their care.

This book aims to answer questions you might have about male circumcision, HIV and health. It covers traditional and medical circumcision, methods of circumcision, the science and studies behind the promotion of circumcision as part of the HIV-prevention campaign, neonatal circumcision and the effects of circumcision on sex, among other aspects.

For those who decide to undergo circumcision, or to support it for themselves, a partner, son or grandson, the book discusses how to ensure the least risk and the greatest protection.

**Whatever your gender, sex or sexual orientation whether you are HIV-negative or positive, young or old, single or married, you need to know about male circumcision and how it could affect you.**

# Health benefits of male circumcision

Medical male circumcision has come under the spotlight across Africa since about 2007 because of evidence from studies showing that when a man is circumcised he has less chance of getting infected with HIV through sex with a female partner. Other benefits of male circumcision have been documented over the years. The range of positive effects of male circumcision, when done according to recommended procedures and safety standards, include:

- (a) **Reduced risk of HIV infection** for men who engage in vaginal sex. It is believed that over time male circumcision will result in an HIV risk-reduction benefit to women. This is because as prevalence (number of men infected) and incidence (number of new infections occurring) among men drops, women are less likely to have HIV-positive partners.
- (b) **Lower risk for men and women of acquiring chancroid, syphilis and other sexually transmitted infections (STIs)**, especially ulcerative diseases that are known to increase the risk of being infected with HIV.
- (c) **Reduced risk for developing penile cancer** among circumcised males and a reduced risk of developing **cancer of the cervix** among their female partners. Penile and cervical cancers are associated with particular types of the Human Papilloma Virus (HPV). By being circumcised a man reduces his risk of acquiring HPV, and of transmitting it to his female partner.
- (d) **Some protection against urinary tract infections** and against **balanitis and posthitis** – the inflammation of the glans and foreskin respectively.
- (e) **Relief from phimosis and paraphimosis**. Some males find it difficult to pull the foreskin back when bathing and experience pain when the foreskin is pulled back during sex. This inability to pull the foreskin back is termed phimosis. For some males when the foreskin is pulled back it swells to a point that it cannot be returned to its natural position. This condition is known as paraphimosis. Complete removal of the foreskin resolves both phimosis and paraphimosis.

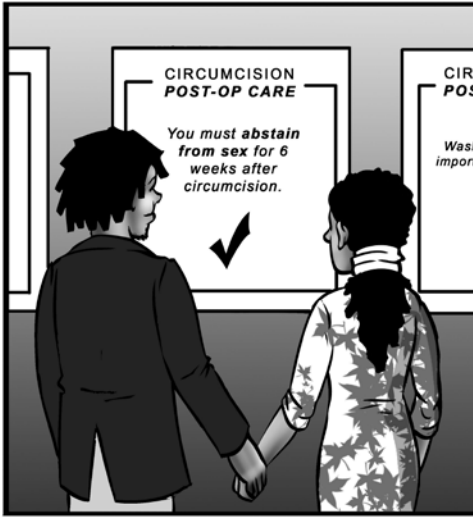
If you are thinking about being circumcised, or considering circumcision for your son or male family member, ensure you have all the information you need to answer your questions and settle any concerns you may have. If you are a woman considering talking to your male partner about being circumcised, it is equally important that you get as much information as you can so that you are able to have an objective discussion and, it is hoped, together reach agreement on whether circumcision is appropriate for you.

# 30 Things You Need To Know About Circumcision

- 1) Circumcision is the permanent **removal of the whole of the foreskin** by cutting it away from the rest of the penis.
- 2) Circumcision is one of the **most common surgical procedures** around the world, performed for cultural, religious and medical reasons.
- 3) Circumcision is a **permanent operation** and cannot be reversed.
- 4) Three Randomised controlled trials (RCTs) as well as other important studies have shown that the removal of the foreskin **reduces the risk of men who engage in vaginal sex getting infected with HIV**. Because of this, the World Health Organisation (WHO) and the United Nations Joint Programme on HIV/AIDS are urging governments of countries that have high rates of HIV infection to include voluntary medical male circumcision (VMMC) in their strategies to prevent HIV/AIDS.
- 5) The evidence suggests that male circumcision provides a reduced risk of men acquiring HIV through heterosexual vaginal intercourse. It does not eliminate the risk. It does not make a man immune to getting HIV.
- 6) Male circumcision is **not shown directly to reduce the risk to women** of contracting HIV infection through vaginal sex.
- 7) Male circumcision is **not** shown to reduce the risk of contracting HIV from anal sex. The risk of acquiring HIV through oral sex is comparatively low and the effect of male circumcision on this was not studied.
- 8) Male circumcision does **not** reduce the risk of injecting drug users getting HIV through shared needles and it does not reduce the risk of HIV infection from blood to blood contact.







- 9) Circumcision at birth does **not** protect male newborns from contracting HIV from breastfeeding.
- 10) It is not known whether **traditional methods** of male circumcision reduce the risk of HIV acquisition. The trials have so far only tested **medical methods**. However, it is likely that where traditional circumcision involves the full removal of the foreskin, under safe and hygienic conditions and with appropriate care, it may provide the same reduced risk. See page 27 for more detailed information on traditional male circumcision, HIV and health issues.
- 11) The circumcised man and his partner must **not** engage in sex or masturbation for a minimum of six weeks or until the wound has **fully** healed after circumcision. Resuming sex before then puts both the man and his sexual partner at an increased risk of HIV. It may also increase the likelihood of complications, such as reopening the wound, pain or bleeding, and may even cause long-term damage. There is evidence that the surgical wound takes longer to heal fully in HIV-positive men than HIV-negative men. The risk for an HIV-positive man of infecting his HIV-negative female partner increases by more than three times during this period.

12) Procedures that are called circumcision but do not remove the entire foreskin are not known to reduce the risk of HIV infection. These include slits and incisions to the foreskin made for ritual purposes. Men who follow such practices can protect themselves and their partners from HIV by using condoms **correctly and consistently** and engaging in safe sexual practices, being faithful to their partners or abstaining from sex.



13) Male circumcision is **not** a prevention measure on its own. It reduces the risk of HIV for circumcised men by 50 to 60%. Using condoms correctly every time you have sex provides 90-99% protection for both partners.

14) The evidence suggests that neither medical nor traditional male circumcision reduces the risk of HIV infection for men who have sex with men (MSM).

15) Evidence that MSM and HIV-positive men gain no HIV prevention benefits from circumcision should not be used to exclude them from voluntary circumcision. To use sexual orientation or HIV status as grounds to deny access would cause stigma and discrimination that can lead to increases in HIV infection rates. HIV-positive men may, like any other males, be refused circumcision if they are not in good health as the procedure may put them at risk of complications.

16) The voluntary medical male circumcision (VMMC) campaign is primarily aimed at heterosexual HIV-negative males aged 15 to 49 years. However, any male, whether gay or straight, HIV-positive or HIV-negative, aged 15, 50 or older and from whatever background, has the right to choose whether to be circumcised, unless there are medical reasons it cannot be done.

17) The WHO insists that take-up of the medical male circumcision campaign must be 100% **voluntary** and so if you decide against circumcision for yourself or your son, if he is too young to consent, then this decision should not be challenged. Deciding not to get yourself or your son circumcised does not put you or your son at a disadvantage

or increase the risk of being infected as long as condoms are used each and every time you have sex, or if you abstain from sex.

- 18) It is important to **practise safe sex** even after circumcision. Increasing the number of sexual partners, having more unprotected sex or engaging in riskier sexual activities is likely to remove all of the risk reduction that circumcision provides and put both you and your sexual partner at greater risk of HIV infection.



- 19) The evidence linking male circumcision to reduced risk of HIV infection does not support any argument that female genital cutting (FGC), often called female circumcision, helps prevent HIV. There are many health and rights issues associated with FGC and it may actually increase the risk of HIV for women and for men.
- 20) The promotion of male circumcision to reduce the risk of a male contracting HIV from his female partner does not mean women are to blame for the spread of AIDS. Women are more vulnerable to HIV infection but the virus is spread by men and women and both partners need to work to reduce their risk.
- 21) Circumcision is a surgical procedure and, as with all surgical procedures, there might be pain in the days afterwards and there is the chance of complications, although if the circumcision is performed properly, these are rare.
- 22) Hygienic and careful post-operative care is very important. If anything does not seem right after circumcision it is important to seek a medical opinion by visiting a clinic or hospital. The earlier possible complications are addressed the lower the risk. See the **Post-operative section** on page 59 for more in-depth information.
- 23) The risk of severe complications depends on the quality of the circumcising surgeon (traditional or medical), how effective the post-operative care is (eg. keeping the wound clean) and behaviour and practices (including abstaining from sex for six weeks) after circumcision.

- 24) **Never** attempt a self-circumcision or attempt to circumcise a friend or family member. The likelihood of serious complications, including amputation of the penis or serious infection, or death is extremely high if the procedure is performed by an unskilled person. Safe medical circumcision is widely available through government facilities, free of charge or at a small cost depending on the country. Traditional circumcision can be done by a registered, skilled practitioner at an affordable fee. See the **Steps to Circumcision section** on page 54 for more information.
- 25) Male circumcision has absolutely no impact on the ability of a man to have children. This is a myth. Circumcision only removes the foreskin of the penis; it does not have any effect on the testicles and so has no impact on ability to produce sperm.
- 26) Male circumcision is sometimes promoted as a way to improve sexual experience or performance, increase appeal to women, or make a man more accepted. Such effects have not been proven.



- 27) Male circumcision does not only affect the boy or man being circumcised; it affects all those around him. It directly affects his sexual partner and may have consequences for his family, community and friends, especially if there is not agreement on the circumcision of a child or if there are complications from the procedure. The decision to circumcise to reduce the risk of HIV infection should be discussed with relevant people, including sex partners, and health practitioners and, in the case of children, parents.
- 28) **Voluntary HIV counselling and testing** (HCT) is an important part of the MMC campaign. You need to be medically fit for a surgical procedure. If you know your status – positive or negative – you can protect your health. A man who wants to be circumcised and tests HIV-positive should have his CD4 count taken first, to check whether he needs to get onto ARV treatment.
- 29) **Be fully informed.** Governments that roll out a mass male circumcision campaign as part of their HIV prevention strategy are supposed to provide all the relevant information to those who are going through the procedure. Exercise your right to make an informed decision by making sure all your questions are answered. Since HCT and circumcision are both voluntary no one can force you to undergo either. It is however important that you opt for HCT prior to circumcision so you are better informed of your health status and can take appropriate action to protect yourself and your loved ones.
- 30) **Maximise your protection.** Combine prevention measures to protect yourself from HIV.

- Don't have sex until you are ready
- Don't pressurise anyone to have sex
- Do not have sex without a condom
- Know your status – and that of your partner
- Be faithful to your partner
- If you have more than one sexual partner, they have a right to know this so that you can all protect yourselves
- Avoid combining alcohol or drugs and sex.

Male circumcision will help to reduce your risk of contracting HIV but only if used together with these other prevention strategies.

# Impact of Male Circumcision on People at Risk of HIV

This section highlights the possible impacts of the MMC campaign for various groups of people who are at risk of HIV infection.

## HIV-negative men

Medical male circumcision is being recommended by the WHO and by several governments in Africa for all HIV-negative boys and men aged 15 to 49 years. This is because of the evidence linking circumcision to reduced risk of HIV infection for males through vaginal sex. It is important to note that this reduced risk does not apply to anal sex. South Africa has the highest number of people infected (prevalence) with HIV in the world. Other Sub-Saharan African countries also have very high prevalence and infection rates. HIV-negative men engaging in unprotected sex are therefore at risk.

As noted in the previous section, MMC does not provide immunity or complete protection from infection.

## Women

Although it is boys and men who are circumcised, whether medically or as part of cultural rites of passage, the practice affects women, as sexual partners, as mothers, sisters and daughters.

Women are encouraged to read all the information this book contains – not just this section – so that they can discuss the issues with their partner, family members or health



care providers and understand the effects circumcision can have on their lives and that of their partner or son.

- Medical male circumcision has not been shown to reduce a woman's risk of contracting HIV from her partner. However, it is believed that with widespread male circumcision, fewer men will become infected with HIV and this will eventually reduce the risk for women. In the meantime, it is important to make sure that barrier methods such as male or female condoms are used every time a couple has sex, regardless of whether the male partner is circumcised.
- Men have the right to access circumcision regardless of whether they are HIV negative or positive. If a circumcised man engages in unprotected sex, he can still become infected with HIV. **Therefore, the fact that a man is circumcised does not mean that he is HIV-negative. The only way to know the HIV status of your male partner is to take up Couple HIV Counselling and Testing (CHCT).**
- Where circumcision leads to reduced use of condoms, as a result of circumcised men, their partners, or both, believing they are protected, this may significantly increase the risk of acquiring HIV for women. Women often have difficulty in negotiating condom use so it is critical that women as well as men are well-informed about the importance of maximising their protection against HIV.
- Sex must not be resumed until the circumcision wound on the penis has fully healed. On average, this abstinence should last for six weeks but may be longer if healing is slower. If couples do not wait until the wound has fully healed the risk of transmitting or contracting HIV is greatly increased. For HIV-negative women, the risk of contracting the virus from an HIV-positive partner if the wound has not fully healed is three times higher than when she has sex with an HIV positive man who is either not circumcised or whose wound is completely healed. A circumcised man who has sex before the wound is healed significantly increases his risk due to the virus having easy access into the blood through an open wound.
- There is **no** evidence that circumcision increases or decreases sexual enjoyment. Circumcision does not make a man a better or worse lover. While sex may feel different before and after, the evidence is inconclusive as to whether the difference affects each partner's sexual experience positively or negatively.
- There have been suggestions that because male circumcision only protects men from HIV transmission by women, and because it is being so actively promoted, women must be the spreaders of HIV. This is completely false. Women are at greater risk of HIV infection than men for various reasons but both partners have the responsibility to reduce their risk.
- There are several ways in which women are affected by circumcision, as mothers and partners. Women need to be aware of health and other implications of circumcision. If a

man is getting circumcised to reduce his risk of HIV, his partner, or partners, should have access to accurate information. If circumcision is proposed for an infant or boy, it is usually the mother who is providing aftercare, or dealing with the trauma if anything goes wrong.

- Neonatal circumcision is promoted by the WHO and UNAIDS in Africa because it is regarded as easier and more cost-effective. This is discussed on page 38. In many cases it is women as single mothers who have to make the decision to allow their babies to be circumcised but the advertisements and campaigns focus on men. Mothers have a right to accurate, adequate and unbiased information to help them to make a decision on neonatal circumcision.
- Since mothers will likely play a central role in **post-operative care** for circumcised babies, they need information on how to provide this. Hygienic and effective post-operative care is crucial to long-term health and reducing complications. See the post-operative care and complications section of this book for the necessary information.
- The reduced risk of a woman contracting the Human Papilloma Virus (HPV), which can cause some types of cervical cancer, is a benefit to women of male circumcision. However, there are vaccines available that provide full protection against HPV and all girls and women (and indeed men) should be given information about and access to these.

## Men who have sex with men (MSM)

- The current evidence does not give any indication that circumcision reduces the risk of contracting HIV or other STIs for men who practise anal sex. Receptive partners would not receive any risk reduction benefit from being circumcised.
- Correct and consistent condom use and safer sexual practices must continue to be the primary HIV prevention method for MSM, as they should be for all other groups also. ARV treatment as prevention might be effective in reducing infection risk among MSM (and other groups) but this is still being studied.
- Men who are gay/have sex with men are not at a higher risk of HIV than straight, circumcised men if they protect themselves. In fact, circumcised straight men who do not use condoms are at greater risk of HIV infection than MSM who use condoms correctly and consistently.





- There is no reason that men who are gay/have sex with men cannot get circumcised; they have the right to do so. There should be no exclusion of MSM from the mass medical male circumcision campaign. There is no reason being allowed circumcision should have anything to do with a man's sexual orientation.

## Men aged 50 and older

- The WHO and UNAIDS aim to have 80% of men aged 15-49 years in targeted countries circumcised by 2015. This does not mean that men over the age of 50 are not able to get circumcised. In fact, older men who feel they are at particular risk of HIV are encouraged to seek circumcision should they feel it will help reduce their risk.

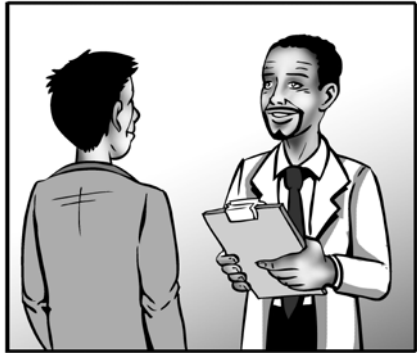


- There is no evidence to suggest that men over the age of 50 will not receive the benefits that circumcision may provide; so if there are no medical issues, men over the age of 50 should not be excluded from accessing male circumcision.
- It must be made clear that the older the man when circumcision is performed, the greater the risk of complications. Also the time taken to heal after a surgical procedure tends to be longer. This should be considered in the decision-making process.
- As with all groups, older men who get circumcised should not stop using condoms.

## HIV-positive men

- While the mass medical male circumcision campaign is targeting HIV-negative men to prevent new infections, the procedure is supposed to be widely and easily available to all, and not discriminatory.
- There is no evidence that circumcision has any HIV-related benefits for HIV-positive men, but it offers protection against other STIs, such as HPV, and against cancer of the penis. The UNAIDS/WHO recommendations state that if there are no medical reasons that circumcision cannot be performed then medical professionals should not refuse you.
- As with all other men seeking circumcision, HIV-positive men must be in good health. If

there is any doubt, an HIV-positive man may be referred for a CD4 count to check that his immune system is healthy enough to heal the wound effectively after the surgery. This ensures there is not a greater risk of complications and that infections are not more dangerous.

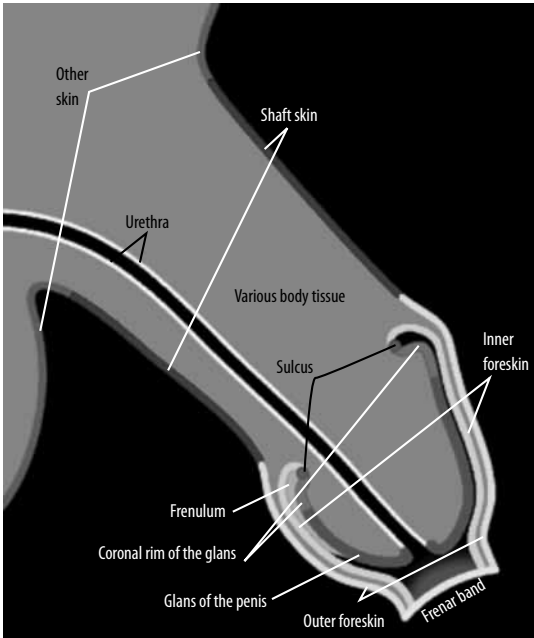


- If an HIV-positive man is not in good health and is advised not to undergo circumcision, he should be counselled and referred for treatment.
- It must be pointed out that for most HIV-positive men it takes longer for the circumcision wound to heal than for HIV-negative men. This means HIV-positive men will likely need to wait longer than the advised six weeks for the wound to heal before engaging in sex or masturbation.
- There is a tendency to discourage HIV-positive men from getting circumcised in order to meet targets and to produce better results with reduced infection rates. This is a dangerous distraction and could further promote the idea that circumcised men are HIV-negative and do not need to use condoms.

## Men who do not know their status

- Men who do not know their status and who do not wish to know their status are also not prevented from getting circumcised. HIV testing is an important though voluntary part of the medical male circumcision campaign. A man who does not wish to test, or to know the results of an HIV test, but wishes to be circumcised will still need to be checked to ensure he is healthy enough to have the procedure. Should the doctor say someone is healthy enough to be circumcised, it does not mean that person should assume he is HIV-negative; only an HIV test can determine HIV status. Men are strongly encouraged to find out their HIV status so that they can reduce their risk of contracting the disease if they are HIV-negative, or get treatment if they are HIV-positive.
- Men who get tested primarily because they want to be circumcised might not be prepared to discover they are HIV-positive. Men in this situation should receive counselling, should get their CD4 count taken, their health assessed and begin ARV treatment if necessary. Health officials and those promoting circumcision should make sure HIV-positive men are not simply diverted from the campaign.

# Anatomy of the Penis



(<http://www.circlist.com/styles/page1.html>)

- The penis is a cylindrical shaft with a rounded tip.
- The rounded, bell-shaped tip is called the **glans**.
- The groove at the bottom of the glans (the bottom of the bell shape) just before the shaft of the penis starts is called the **sulcus**.
- The skin that covers the glans from the sulcus to the tip is called the foreskin or the **prepuce**.
- The foreskin has outer and inner parts. The **outer foreskin** is a continuation of the shaft skin and is hardened (keratinised) like other skin. The **inner foreskin** is a complex

structure of nerves, immune system cells and erogenous (sexually stimulating) receptors. The entire foreskin (both inner and outer) is removed during medical and some forms of traditional circumcision. The exact amount of the inner or outer foreskin that is removed depends on the method and style of cut (see the styles of circumcision section).

- The foreskin is not useless or 'extra skin'; it has a number of functions, including protecting the glans and sexual stimulation.
- There is a band of elasticised tissue between the foreskin/shaft skin and the glans at the back of the penis. This is called the **frenulum** of the prepuce. It is similar to the thin, elastic-like frenulum under your tongue. The frenulum is known to be highly sensitive and important in the natural movement of the foreskin for an uncircumcised man. The frenulum also has a high number of Langerhans cells, which are part of the immune system (see the science section).
- The **urethra** is the tube through which urine is expelled from the body. It is also where semen is ejaculated.
- The opening of the urethra is called the **meatus**.
- The **testicles** ('balls') below the penis produce sperm and the hormones required for this. The testicles are not in any way affected by circumcision.

# Styles/types of Circumcision

There are four different 'styles' or types of circumcision and these mostly affect the appearance and feel of the circumcision. The style, and resulting appearance, will depend mostly on the method used to do the circumcision but also on the experience of the surgeon. Here are the four styles:

- **Low and Loose**
- **Low and Tight**
- **High and Loose**
- **High and Tight.**

Tight or loose refers to the tension applied to the shaft skin, which is determined by how much shaft skin is removed along with the foreskin. High or low refers to whether more of the inner or outer foreskin is removed.

- **Low Circumcision:** When more inner foreskin is removed than outer foreskin.
- **High Circumcision:** When more outer foreskin is removed than inner foreskin. High circumcisions retain much of the inner foreskin with this around the sulcus on a loose circumcision and pulled on to take the place of the shaft skin on a tight circumcision.
- **Tight Circumcision:** When as much foreskin as possible is removed including from the shaft of the penis. In tight circumcisions the penis is pulled tighter to the body, almost making it look smaller and semi-erect. The removal of the inner and outer foreskin and some of the shaft skin give this style. Tight circumcisions leave the sulcus fully exposed and open
- **Loose Circumcision:** When less skin is removed from the shaft and the skin removed is primarily the foreskin. Loose circumcisions do not pull up the penis by removing shaft skin and retain some inner or outer foreskin around the sulcus. Loose circumcisions retain the frenulum in most cases
- A tight circumcision style means there will be less movement of the penis skin during sex or masturbation. A loose circumcision means some skin movement, though very little compared to an uncircumcised male.
- Artificial lubrication is advisable for both tight and loose circumcisions (though less so with a loose circumcision), due to the change in the motion of sex and lack of natural lubrication a foreskin provides.
- A high circumcision will leave the scar line closer to the body (higher up the penis) and a low circumcision will leave a scar line closer to the glans and sulcus (lower down the penis)
- With the mass medical male circumcision campaign that is being rolled out in the 14 countries targeted in Africa, the style will generally be determined by the skills and experience of the practising surgeon and the method/ device that is used. Generally, a semi-loose circumcision is preferred by practitioners but a varying high or low style might be given.

*\* For images and detail on styles of circumcision, see [www.circlist.com](http://www.circlist.com) though be aware of pro- or anti-circumcision bias on these kinds of websites*

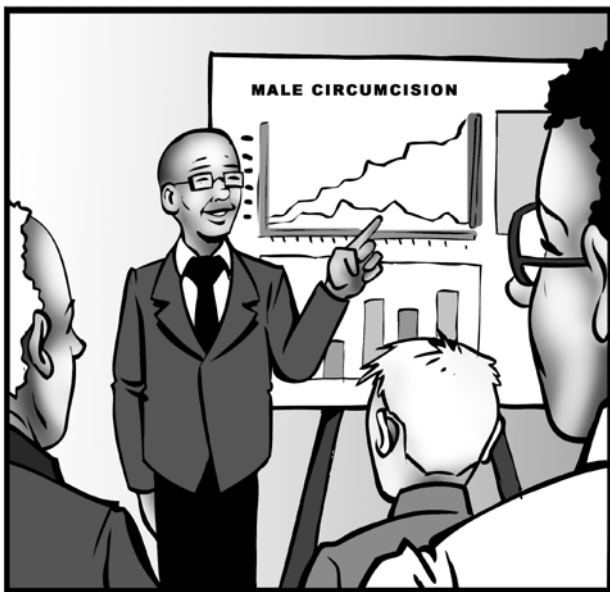


## Sex and Circumcision

- The impact of circumcision on sex is a hotly debated subject. Both those in favour of circumcision and those against it use fear of sexual dysfunction or overstate positive influence on sexual enjoyment in order to support their position. However, there is not enough solid evidence to suggest circumcision has a negative or positive effect on sex. Therefore, your position on male circumcision should not be influenced by any perceived impact it has on sex.
- There have been a large number of studies to determine whether circumcision affects time to ejaculation, erectile dysfunction, sexual sensitivity, female enjoyment, sex drive or overall enjoyment. The results differ significantly, with some research concluding that circumcision negatively impacts on sex, some finding that circumcision positively affects sex and others finding no difference. The weight of evidence simply does not support any view.

- The vast majority of men who have experienced sex before and after circumcision as a result of adult circumcision mostly say that sex, and the feeling, sensation, enjoyment and satisfaction from sex, is simply different. Some men prefer sex after circumcision, some preferred sex before circumcision and some notice no real difference. Circumcision is going to change sex because the normal rolling and gliding mechanism that the foreskin provides during sex is absent after circumcision. One should expect sex to feel different and some people even say the feeling changes over time. The keratinisation (hardening) of the exposed glans of a circumcised male, which some researchers associate with reduced HIV risk, might reduce sensitivity. This is not backed up by evidence from circumcised men although the change in sensation over time reported by some men might be the result of keratinisation (see science section on page 65).
- There are many physical, emotional and other factors in sexual enjoyment. Most men around the world, circumcised or not, rarely complain of a lack of sensitivity or sexual enjoyment as a result of their circumcision status.
- It is important to emphasise that emotional excitement and stimulation play arguably the most significant part in sexual enjoyment and make more of a difference than whether a man has a foreskin or not. Psychological and emotional factors are often far more central to changes in sexual function, both positive and negative. If erectile dysfunction occurs at any point after circumcision, as it does in men of all ages, this is often said to be the result of the circumcision. However, it could be the result of relationship problems, sexual dissatisfaction, a lack of emotional connection, a lack of sexual attraction or any number of psychological factors. The fact that both uncircumcised and circumcised men are affected by erectile problems in life suggests that circumcision is not causing significant increases in erectile dysfunction.
- It cannot be discounted that overly tight circumcisions or complications from circumcision may impact on the normal function of the penis but these are rare.

**Quite simply, there is not enough solid evidence to suggest circumcision has a negative or positive effect on sex and for this reason your decision on whether to circumcise should not be determined by any impact you think it may have on your sexual experience.**



## The Medical Male Circumcision Campaign in Africa

All the 14 African countries that are implementing voluntary medical male circumcision campaigns (VMMC) are following the guidelines set by the World Health Organisation (WHO) and UNAIDS. These guidelines were issued after the release of the results from three Randomised Controlled Trials (RCTs) showed circumcision reduced the risk of HIV infection for men. After 2007, the WHO and UNAIDS began to advise governments in Sub-Saharan African countries with high prevalence of HIV and low prevalence of male circumcision to promote male circumcision to help prevent HIV transmission. The guidelines include the following points:

- The evidence for circumcision as a measure to reduce the risk of contracting HIV is viewed as “compelling” and therefore it is suggested that male circumcision could become an important part of the HIV prevention effort. The guidelines state that it is crucial that circumcision is added to the already established prevention package, not adopted in place of other strategies. Circumcision should be promoted in **addition** to measures such as condom use, delayed sexual debut, reducing the number of sexual partners, avoiding



penetrative sex and voluntary HIV counselling and testing.

- Circumcision should **not** replace condoms or decrease their usage. Condoms used correctly and consistently provide more than **90%** reduced risk of HIV infection whereas circumcision may only provide a **50-60%** reduced risk of contracting HIV.
- There should be a human rights-based approach to promoting male circumcision, with appreciation for ethical, legal and human rights principles.
- Informed consent is central to the voluntary medical male circumcision programme. This means governments must do their best to inform citizens of all they need to know about the procedure.
- Safety is extremely important and male circumcision should be provided under sanitary and safe conditions by well-trained professionals.
- Men and adolescents, aged 15-49 years, are the main focus of the campaign. This should not exclude those outside of this age group, particularly older men at high risk.
- The aim is for at least 80% of the male population in the target group to be circumcised by 2015 in each of the countries implementing an MMC campaign.
- Neonatal circumcision is suggested as worth considering by UNAIDS and the WHO. Though neonatal circumcision is not the primary focus of the MMC campaign, it is seen as a possible longer-term strategy.
- The procedure should be inexpensive, or free of charge, and readily available to all those who wish to be circumcised. The cost varies across the continent but most health systems or donors bear the cost so that it is affordable. The waiting times for medical male circumcision, due to high demand, can often be from weeks to months. Circumcision can also be carried out, usually with short waiting periods, at private clinics but this will often be at an increased cost for the individual.
- UNAIDS/WHO have set an ambitious total target of **20,855,905** male circumcisions to be carried out across 14 Sub-Saharan African states by 2015.
- More than 1.4 million circumcisions (just under 7% of the target) had been performed by the end of 2011.

## South Africa

- Aims to have 4.3 million men circumcised by 2015 to reach 80% coverage.
- As of December 2011, 442,201 circumcisions (10.2% of target) had been performed
- The South African government aims to “aggressively” rollout MMC
- Neonatal circumcision is to be incorporated into the PMTCT package. This means that neonatal circumcision is likely to be discussed in antenatal settings and offered after birth.
- Xhosa, Pedi, Venda and Sotho are among the traditionally circumcising groups.

## Malawi

- Aims for 2,101,566 men to be circumcised by 2015 in order to achieve 80% coverage
- 80% of adult and newborn males targeted
- 15,000 circumcisions carried out by December 2011
- Non-circumcising North, circumcising South. Lomwe and Mang'anja tribes completely remove foreskin. The Yao also circumcise, in line with their Islamic faith
- HIV prevalence is higher in the circumcising South
- There was an estimated 21% prevalence of male circumcision prior to the beginning of the MMC campaign.

## Kenya

- Government aims for an increased 94% coverage of circumcision among men in the target age group of 15-49 years
- Aims to complete 860,000 male circumcisions by 2015 in order to achieve this 94% coverage
- Had achieved 391,483 male circumcisions (45% of the target) by the end of 2011
- A number of groups traditionally circumcise, including the Kikuyu and Bukusu; traditionally non-circumcising groups include the Luo and Turkana.

## Uganda

- 4,245,184 male circumcisions are needed for 80% coverage
- Before the MMC campaign started there was  $\pm$  25% male circumcision prevalence
- By December 2011, a total of 98,828 circumcisions had been completed. This rose to 380,000 by March 2012
- The Bagisu are among the traditionally circumcising groups.

## Botswana

- 345,244 male circumcisions are needed for 80% MC coverage
- Male circumcision prevalence was estimated at 11% before the MMC campaign
- 25,858 male circumcisions were completed by 2011.

## Ethiopia

- Only 40,000 medical male circumcisions are needed for 80% MC coverage
- A total of 11,000 male circumcisions were completed by the end of 2011
- Prevalence of circumcision was estimated to be around 93% prior to the MMC campaign
- Orthodox Christians in Ethiopia have a very high prevalence of male circumcision.

## Zambia

- 1,949,292 circumcisions are needed for 80% coverage
- Before the MMC campaign, male circumcision prevalence was estimated at 12.8%
- 167,000 circumcisions were completed by 2011
- Adult, adolescent and neonatal circumcision is being promoted
- Traditionally circumcising groups include the Lunda and Luvale. The Kaonde are among the non-circumcising.

## Mozambique

- 1,059,104 circumcisions are needed for 80% coverage
- Prior to the MMC campaign male circumcision prevalence was estimated to be at 52%
- 37,325 male circumcisions were completed by 2011
- Adolescent and neonatal circumcision are seen as long-term strategies
- The Yao are among the circumcising groups.

## Lesotho

- 367,795 circumcisions are needed for 80% coverage. (No data was available on progress at time of going to press)
- The pre-MMC campaign male circumcision prevalence was an estimated 48%
- There is a focus on early infant MC within maternal health services
- The Sotho people traditionally practise circumcision, hence the high prevalence of circumcised males.

## Namibia

- 330,218 male circumcisions are needed for 80% coverage
- Prior to the MMC campaign male circumcision prevalence was estimated to be at 21%
- 8,110 male circumcisions were completed by 2011.

## Rwanda

- 1,746,052 circumcisions are needed for 80% coverage
- There was an estimated 12% prevalence of male circumcision before MMC campaign
- 26,694 male circumcisions were done by 2011.

## Tanzania

- 1,373,271 circumcisions are needed in order to achieve 80% coverage
- Prevalence before the MMC campaign was estimated at 67%
- 139,320 male circumcisions were completed by 2011
- The Yao peoples traditionally circumcise though often in line with their Islamic beliefs. The Sukuma are also among the traditionally circumcising groups.

## Swaziland

- 183,450 circumcisions are needed for 80% coverage
- Adolescent and neonatal circumcision is seen as the longer-term strategy
- Pre-MMC campaign male circumcision prevalence was estimated to be 8.2%
- 38,106 male circumcisions were carried out by 2011.

## Zimbabwe

- 1,912,595 circumcisions are needed for 80% coverage
- There was an estimated 10% prevalence of male circumcision prior to the MMC campaign
- 50,580 circumcisions were completed by 2011.

*\*Statistics from WHO progress report for 2011. Accessed at [www.malecircumcision.org/country\\_updates/male\\_circumcision\\_country\\_updates.html](http://www.malecircumcision.org/country_updates/male_circumcision_country_updates.html)*





## Traditional Male Circumcision Across Africa

Traditional male circumcision (TMC) is performed for cultural purposes and is common across Africa. It is most often seen as an initiation rite but more accurately is a component of a broader cultural practice that constitutes the rite of passage to manhood and acceptance in the adult community.

- The RCTs into male circumcision only studied medical methods. Therefore, it is not possible to say that traditional male circumcision is equally effective as medical circumcision in reducing risk of infection with HIV, other STIs, or penile and cervical cancers among men and women respectively. However, it is likely that traditional male circumcision performed in the same manner as medical male circumcision (MMC); with sterile instruments, with the whole foreskin being removed, with high quality post-operative care and effective behaviour change communication, could provide the same reduced risk of HIV infection and other health benefits as shown in the RCTs.
- Traditional circumcisions include ritual forms of cutting the foreskin that are called circumcision, or a similar term, in local languages but are not the same as medical forms. While the scientific explanations as to exactly how circumcision creates a reduced risk of HIV infection for men are inconclusive, the studies that support it as a partially protective measure were done with men by medically removing the entire foreskin. Methods that differ

from this have not been studied in relation to HIV and so cannot be certain to reduce risk.

- o Certain groups perform a 'dorsal slit' (sometimes referred to as a superincision), which involves making a single cut of the foreskin from the opening of the foreskin to the edge of the coronal sulcus. This simply exposes the head of the penis (glans) and does not remove any skin. The foreskin folds under the penis around the frenulum. This does not bring about any of the changes (keratinisation, reduced surface area or reduction in Langerhans cells etc – see **Science** section) associated with a reduction in the risk of contracting HIV. This differs from the medical (full) dorsal slit procedure which makes the cut along the foreskin in the same manner as above but removes the foreskin around the sulcus and leaves almost no foreskin.
- o Other groups perform a partial circumcision, where only the tip of the foreskin is removed to expose some of the glans. This also cannot be recommended for reduced risk of HIV infection. A 're-circumcision' may be an option for those who have undergone a partial circumcision in accordance with cultural beliefs to gain the potential HIV risk-reduction benefits. The re-circumcision should be done within the first week before wound healing but due to the time spent in seclusion as part of initiation this may not be possible. This procedure may be costly, may not be simple if the wound has already healed and may not have the best cosmetic results
- o There are some traditional procedures that make a cut/incision in the penis and do not remove any foreskin. Again these have not been shown to reduce HIV risk for men.
- o Among groups that traditionally practise 'full circumcision', the amount of foreskin removed varies. Therefore, traditional surgeons might remove less or more foreskin than indicated in medical circumcision. Similarly, this has not been studied and the reduced risk of contracting HIV seen in the RCTs may not be achieved by such methods.
- In summary, removal of only some of the foreskin, a simple incision or a cut along the length of the foreskin to open it up are not known to provide a reduction in HIV acquisition risk. In some cases a medical re-circumcision is an option for the individual to achieve the reduced risk of acquiring HIV that someone who has had a medical circumcision is seen to have. It is best to speak to a doctor prior to the first circumcision and consider your options. There are also issues with how this is seen by the community and cultural leaders that might need to be considered. What is most important, regardless of the tradition followed is that condom use must be maintained as this, not circumcision, is a man's primary barrier against HIV.
- It is important that traditional surgeons are aware of the theories linking medical



circumcision to reduced risk of HIV for men, and the practices that are shown to achieve this. In some cases, there has been good cooperation between traditional leaders, traditional circumcision practitioners, medical doctors researchers and government officials to improve methods, reduce the rate of complications and provide appropriate HIV prevention education. There has also been resistance among various groups, with suggestions on one hand that traditional practices should simply give way to medical approaches and on the other hand that government and medical scientists should stay out of traditional affairs. If both traditional and medical surgeons work together and respect is mutual then traditional circumcision may play an important role in addressing the HIV epidemic in Africa. In Kenya and Mozambique, there are a growing number of traditionally circumcising groups that combine performance of the traditional initiation rites with circumcision performed under medical settings.

- While TMC has not been shown to provide HIV risk reduction, the teachings that form a vital part of initiation for many traditional cultures may also have a positive effect on the sexual attitudes and behaviour of men that can reduce risky behaviour. It is recommended that positive aspects of both systems are integrated so that both protective cultural teachings and health practices are strengthened.
- There are four main concerns with traditional male circumcision from the point of view of health and human rights:

- o Male circumcision must be voluntary. Those who choose to be circumcised whether by traditional or medical methods must be free from pressure or coercion.
- o Male circumcision should not compromise the safety of the individual undergoing the procedure. Safety must be ensured by traditional surgeons, nurses and family members and be equal with the low risk of complications to medical methods.
- o Thorough health checks are necessary before circumcision to make sure there are no medical reasons that would mean circumcision could lead to or complicate health problems. If there are medical reasons not to perform circumcision or to delay it until the health issue is addressed, then such advice should be followed.
- o There must be respect of the laws and regulations and agreed standards for circumcision, including the Constitutional provisions on children's rights and the human right to bodily integrity, as well as specific local, provincial and national laws that are directed at circumcision practices.

## **Key concerns with traditionally performed circumcision in the context of HIV & AIDS**

Several concerns are raised about possible risks associated with some traditional practices compared to medical circumcision. Many traditional leaders and traditional surgeons work with the Department of Health and other bodies to put an end to harmful practices and protect initiates' health and safety. Among the challenges they are addressing are:

- Traditional circumcision is often performed in remote places, such as near forests or mountains. This can make it more difficult to ensure hygiene and infection control procedures when performing the circumcision, which can lead to increased likelihood of complications. The remote settings mean that if complications arise, medical assistance is not close by and may not be easily accessible.
- The lack of anaesthesia or pain management during and after the circumcision can lead to excessive pain, especially if the procedure is not performed correctly.
- Not all surgeons use sterile gloves when performing the circumcision, which can result in poor hygiene and infection.
- Where circumcision is done by a surgeon who has little training or experience and who is not supervised, there is a high risk of complications, and the surgeon is less likely to notice when something goes wrong and may be unable to provide effective post-operative care.
- Traditional circumcisions are usually done 'freehand', with no protection of the glans and



this leaves a greater possibility for error and severe damage to the penis.

- Furthermore, the type of instruments used by traditional surgeons may increase the likelihood of severe complications. Blunt instruments, unsterilised tools and tools such as spearheads can cause serious damage to the penis, impair healing and cause infection.
- There are traditional ways of sterilising instruments, such as using fire. If the cutting tool is not sterilised, this can cause infection and transmit STIs and HIV.
- In some traditional settings, the same blade/tool/instrument used for the circumcision is used on more than one initiate. This can transmit STIs including HIV.
- Products applied to the wound after the circumcision sometimes cause infection, inhibit wound healing and lead to complications. Some leaves and plant products used to cover the wound do not always assist healing correctly. While many traditional products are reported to be effective, not all traditional practitioners are trained in the correct use of such natural remedies.
- Improper post-circumcision care, including lack of water/food, unhygienic living conditions and extreme weather conditions can all factor into increasing the likelihood of complications from the circumcision. Post-operative care of the circumcision wound may be given by former initiates, male family members or paid assistants, who need to be carefully selected and well-informed about how to look after the initiates. Neglect, physical abuse and denial of medical treatment are regarded by some as being part of the process of becoming a man. Addressing this can be difficult as initiates may tolerate and not report abuse due to peer pressure.
- Consumption of alcohol and other drugs during initiation, and related irresponsible behaviour can hinder the healing of the wound and increase the risk of infection.
- Gangrene, incomplete circumcision, haemorrhage, penile amputation, dehydration, infection, transmission of blood borne viruses or STIs, excessive blood loss and septicaemia are widely reported consequences of circumcision performed in unhygienic circumstances or by unskilled practitioners.<sup>1</sup>

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<sup>1</sup> <http://www.plusnews.org/InDepthMain.aspx?InDepthID=61&ReportID=73278>.  
<http://www.bbc.co.uk/news/10350471>.



## Practices common to the majority of traditionally circumcising groups in Africa

- Endurance is often an important part of the initiation process and initiates are pushed to the limit by restriction of water and food, minimal clothing/protection from the elements and uncomfortable sleeping conditions.
- The final test is the pain of the circumcision itself. This testing of endurance is to prepare the boy for the responsibilities of being a man in his culture.
- Crying out in pain is frowned upon, as bringing shame to the initiate and his family, or as symbolising failure in the passage to manhood. Initiates are expected to accept and deal with pain.
- Almost all traditionally circumcising groups avoid the use of anaesthesia or pain management. Some cultures make the initiates sit in the cold water of a river to numb the pain after the circumcision but many cultures expect the initiate to bear the pain.
- Circumcision is usually considered the final separation between a boy and a man. However, in many traditional cultures there are multiple stages towards attaining manhood, of which circumcision is just one, performed at different ages by different groups.
- Almost all initiations involve a period of seclusion in isolated areas such as the mountains or in the bush with fellow initiates, often in a hut specially constructed for the initiation.
- The initiates are usually not allowed any direct contact with women during the period of seclusion and what occurs during initiation is strictly guarded from women.

- Many of the initiation ceremonies are run by a high-ranking member of the group, often assisted by former initiates.
- The traditional surgeons who perform the circumcision have usually been trained by older, more experienced practitioners from their cultural tradition. Some have also received basic medical training in surgical methods, hygiene and post-operative care. In many countries there are traditional circumcision panels or forums, comprising surgeons, traditional leaders, community representatives and others, which meet to plan, regulate and monitor proceedings of each circumcision season. Traditional surgeons who wish to perform circumcisions must apply for permission to the traditional leader in the area concerned.
- Initiation schools and ceremonies are largely focused on teaching about and passing on important cultural traditions, responsibilities, laws, principles of respect, how to treat women and elders, what it means to be a man and other values that the culture demands of a man. Circumcision is often a small but important part of the overall initiation into manhood. These teachings are generally greatly valued in the many cultures that practice initiation and the boys who are initiated together form a bond for life through their shared experience.
- There are taboos concerning what information can be shared with outsiders and different views about the effects of the cultural teachings. Some people report that initiates are more responsible and respectful when they return home. Others say some of the teachings have a negative effect on sexual behaviour and put the young men at greater risk of HIV. Of course, boys learn about social expectations of men throughout childhood, not just at initiation school.
- In some cases, though certainly not all, boys are encouraged to engage in sex upon returning to the village to 'practise' after the initiation. This poses a danger, especially with an open wound that makes it much easier to get HIV. Early sex can also prevent the wound from healing properly and may cause complications, such as reopening the wound and scarring.
- There is the belief among certain traditionally circumcising groups that males who are not circumcised will never become a man, regardless of age, and cannot be respected by the community. Similarly, some also believe that those who get medical circumcision are not real men though this differs across the continent; for example, the Xhosa in South Africa are generally against medical male circumcision while the Venda in South Africa and the Kikuyu of Kenya are accepting of both medical and traditional methods of circumcision.

There are many differences in practices and methods among traditionally circumcising groups. Some do not strictly prohibit the presence of women, some do not stress the need for the initiate to refrain from exclaiming pain and some do not regard circumcision as denoting manhood.

There are differing traditions even within the groups discussed below. In some cases, the circumcision part of the initiation is completed at a hospital and in others isolation in the mountains or forests no longer occurs and initiation is done just outside of the village or town, in a hut constructed of modern scrap materials. Due to school commitments, the length of seclusion for initiation has dramatically shortened and economic issues mean that the ceremonies can often be much less elaborate today, though no less important. In some cases, improvements to health and hygiene have been introduced by the traditional practitioners; in others, medical practitioners have been invited to provide training.

The examples below serve to briefly explain the practices involved with traditional circumcision across Africa in their typical form.

## Examples of traditionally circumcising groups across Africa

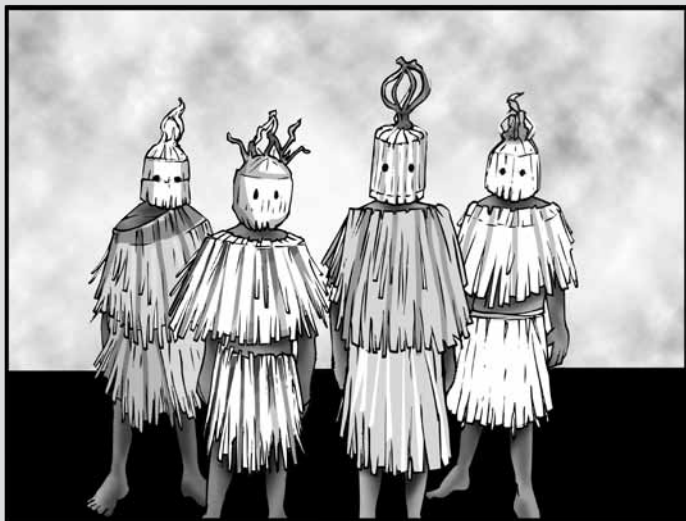
### Kikuyu – Kenya

- Ritual is called *irua*.
- Initiation is a process into adulthood and to become a full member of Kikuyu society.
- The initiate must not flinch as he is cut or this is considered a failure and shameful.
- The initiates are organised into age groups/sets (*mariika*) that form bonds that are important for life. These age groups are central to Kikuyu societal structure and evidence the importance of traditional circumcision in Kikuyu culture.
- There is a growing number of boys who get circumcised medically at hospitals and then follow the rest of the initiation in the traditional way. This differs widely depending on the location.

There are some cases of initiates being encouraged to 'wipe the soot' upon returning from initiation where sex is advised to prevent becoming sick or to prove their manhood. This dangerous practice can place the initiate at greater risk of infection with HIV or other STIs.

## Yao – Malawi (Also in Tanzania and Mozambique)

- Initiation is called *jando*.
- The initiation lasts one month and is held once per year
- Importance is placed on the teaching of specific values regarding community, traditions, morality and life lessons
- Involves a period of seclusion in the forest.



## Luvale – Zambia

- Initiation called *mukanda*.
- The initiation lasts one to two months
- Heavy emphasis on instruction on hygiene, family values, parenthood, morality and how to treat women during the initiation
- Involves isolation in the bush in a specifically constructed hut
- Food, bathing and movement restrictions are placed on the initiates during their seclusion.

## Xhosa – South Africa

- Initiates are called *abakhwetha*
- Initiation occurs in colder winter months and this seclusion traditionally lasted up to three months

- Age of initiates varies though is usually between the ages of 15–20
- Skin of initiates is painted white with clay and they wear only a blanket
- Heavy emphasis on endurance for the duration of the initiation with limited food, water restrictions and lack of protection from the cold
- Washing off of the white clay at a river after the circumcision symbolises the washing away of boyhood and emerging as a man.

## Makhuwa – Mozambique

- The traditional ritual is called *kumbi*
- This initiation sometimes overlaps with the Islamic religious mandate for circumcision
- A *padrinho* (a male relative) acts as a guardian and will remain with the initiate until the circumcision wound has healed sufficiently and acts as a guardian
- Traditionally the initiation was intended to last from October to February and was located in far out in the bush. In modern times, however, due to school commitments this lasts just one month and often takes place close to the initiate's home
- There are also a growing number of circumcisions being performed at hospitals.

## Islamic Circumcision Practices

- Called **Khitan** or **Tahara**
- Circumcision is mentioned in the Hadith and is practised as part of the covenant that Islam teaches was made with God by Abraham.
- The age at which circumcision occurs varies from infancy to the start puberty; it is usually recommended before the age of 10.
- It is seen as beneficial for cleanliness, especially in relation to the important Muslim concept of bodily cleansing before prayer.
- In most Muslim communities circumcisions are performed in medical settings though in the case of various African Muslim groups they may be incorporated into traditional African rituals. This is the case with the Yao people of Southern Africa.
- Circumcision is not compulsory in Islam but is practised by the vast majority of Muslims.

## Jewish Circumcision Practices

- The circumcision ritual is called **brit milah**
- The male child is circumcised on the 8th day after birth in accordance with tradition unless there are medical reasons that prevent this. In this case the circumcision is postponed until it is safe to do so.

- The circumcision is usually done in a synagogue but can be performed at other locations such as the child's home.
- Traditionally the *brit milah* is performed by a trained practitioner in circumcision, called a *mohel*.
- Jewish circumcision is also done for the Covenant of Abraham referred to in the Torah. It is important that blood is drawn to mark the covenant and for this reason there are sometimes objections, particularly among more Orthodox Jews, to using the Plastibell device, which is usually bloodless.
- There are varying practices of circumcision among the different branches of Judaism.

## Christian Circumcision Practices

- Though Christianity does not usually promote circumcision as a religious practice there are some churches, such as Orthodox Christians in Ethiopia, who almost universally practise circumcision. This does not mean that other Christians do not get circumcised or circumcise their children but circumcision is done for reasons other than religious obligation.





## Neonatal Male Circumcision: A Guide for Parents and Parents-to-be

The challenges of rolling out a huge medical male circumcision campaign for men and boys aged 15-49 for HIV prevention led to policy debate about whether the campaign should include all newborn males, in a similar way to a vaccine. This topic has caused a lot of controversy and there has been a great deal of debate over the subject. This section covers both the positive and negative aspects of neonatal male circumcision for parents and parents-to-be. It provides information that will help parents make a decision for or against circumcising their infant son. The methods and devices used for neonatal circumcision are described in the **Methods of Circumcision** section. Neonatal post-operative care is outlined in the **Post-Operative Care and Complications** section.

- Though neonatal male circumcision is often presented as being similar to vaccinations given during infancy such as BCG, polio, diphtheria or tetanus, there is no scientific evidence to suggest neonatal circumcision has any of the same lifelong effects. Neonatal circumcision, like adult or adolescent male circumcision, is NOT a vaccine but a surgical procedure. At best it may only potentially reduce the risk of HIV infection through heterosexual intercourse in later life.
- Neonatal circumcision does not in any way reduce the male child's risk of contracting HIV



from blood to blood contact or from breastfeeding during infancy and will only have any effect from the onset of sex.

- Circumcision is a body-altering procedure and therefore the individual concerned should be making an informed decision on his own behalf. The main issue in neonatal circumcision as part of a state HIV prevention strategy is whether parents are prepared to decide unilaterally to circumcise the infant, or wish to allow the child to make an informed decision on his own as he grows up.
- There are many laws in various countries that limit circumcision without consent. The UNAIDS and WHO campaign emphasises the *voluntary* aspect of the procedure but in the case of neonatal circumcision the parents are tasked with the choice.
- The eventual effects on sexual satisfaction, enjoyment and performance as a result of neonatal circumcision are unknown.
- If parents do decide to proceed with circumcising their infant son, after weighing the positives against the negatives, they should ensure that circumcision is conducted in a hygienic, medical setting with appropriate pain management/analgesia, performed by a trained and experienced medical practitioner familiar with circumcision of a child, and that effective, capable post-operative care follows the procedure.
- Neonatal and infant male circumcision should only be performed on full-term infants weighing more than 2,500g. Full health checks must be performed to make sure no serious health problems are caused or made worse by the circumcision.
- Parents should think carefully about and discuss circumcision prior to the child's birth. They should not be coerced by doctors, nurses or anyone to make or change a decision. If parents decide that they do not wish to make the decision on circumcision on behalf of their child, and therefore do not agree to circumcision of their newborn, that position should be fully respected.

## The case for neonatal circumcision

- Some evidence suggests that male circumcision before sexual debut may be more beneficial. The theory is that the younger the age at which circumcision is performed, the greater the preventive effect offered may be since there is more chance of reducing the risk before the male comes into contact with the virus. Obviously, a circumcision after HIV infection has no value in HIV risk reduction.
- In most countries where there is neonatal MC the HIV prevalence is much lower than in countries where it is not practised.
- The younger the circumcision is performed the lower the risk of complications and the safer the procedure is:
  - o Safer due to thinner and less vascular foreskin



- o Quicker wound healing. Typically full healing within 14 days
- o Stitches are usually not required
- o Fewer difficulties and likelihood of complications compared to adult circumcision
- o Risk of complications as a result of erections averted.
- Neonatal circumcision significantly reduces the risk of certain painful conditions that may require circumcision later in the child's life. It must be noted that these are relatively rare conditions and can often be treated non-surgically:
  - o Balanoposthitis – the inflammation of the foreskin and the glans
  - o Phimosis – the inability for the male to fully retract his foreskin due to the tightness of the foreskin.
  - o Paraphimosis – the inability for a male to return the retracted foreskin to its natural position covering the head of the penis.
- There is a small reduction in the already low risk of infants contracting urinary tract infections. One percent risk in uncircumcised infants compared to 0.1% in circumcised.
- Neonatal male circumcision is cost-effective as a prevention strategy due to the relatively simple and cheaper procedure compared with adult or adolescent circumcision.
- May give lifelong reduction of the risk of contracting HIV for the male though no studies have at present indicated this.

- If the keratinisation (hardening of the skin on the penis – see Science and Studies section of this book) theory is correct then the glans of the penis is likely to be significantly keratinised (hardened) by the time of sexual debut. Therefore neonatal circumcision could be a better long term option, leading to greater resistance to abrasions and breaks in the skin that provide an entry-point for HIV infection.

## Concerns about neonatal male circumcision

- The Randomised Control Trials (RCTs) studied adult men, not newborns and only studied the effects of circumcision on those who had been circumcised and then were able to engage in sexual intercourse after a 6-week period of abstinence. There is not yet proof that neonatal male circumcision has any effect on HIV transmission for men or women. However, it is promoted because it is simpler and more cost-effective to perform than voluntary circumcision of older males.
- The foreskin protects the glans of the penis from urine and faeces during early infancy when the child is wearing nappies/diapers. Since circumcision removes this natural protection post-operative hygiene is critical and can be compromised where there are poor sanitary conditions.
- Neonatal circumcision might not be acceptable within traditionally circumcising cultures where circumcision is part of a coming-of-age/pubertal ritual between the ages of eight





and 20. If the circumcision is done at birth it cannot then be done as part of initiation and this could cause problems for the male with acceptance within some cultures.

- Neonatal circumcision being decided by parents removes the right of the male to bodily integrity. The medical male circumcision campaign is completely voluntary and children are entitled to the same right of choice that adult men are given with circumcision.
- It is ethically questionable to remove normal, functioning body parts from a healthy infant to prevent sexually transmitted diseases during adulthood.
- Male circumcision only has benefits regarding HIV once the child engages in sexual activity. It is entirely reasonable to suggest that once the child is of age he can then make his own informed decision.
- Circumcision of male infants may breach various children's rights laws. Section 12(8) of the South African Children's Act, for example, prohibits circumcision of a child under the age of 16 unless this is done for religious (including traditional) purposes or for medical reasons.

Wherever parents take a decision to have an infant or child circumcised - or not to do so - it is important to remember that it is not a 'vaccine' or a 'magic bullet'. Surgery is not a substitute for communication and socialisation around relationships and sexual behaviour as the child grows. Children learn gender norms and social expectations from a very early age. Promoting a healthy and responsible lifestyle from infancy should be part of a comprehensive prevention strategy.

# Methods of Circumcision – Devices and Procedures

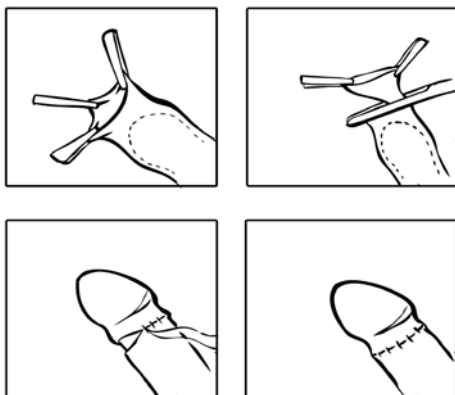
## Methods for adult male circumcision

Detailed below are the various methods used for adult and adolescent medical male circumcision in Africa. It is the right of all men who decide to get circumcised to refuse circumcision by certain methods if they are concerned about the safety or have a preference regarding the results. It might not be possible to be circumcised with certain devices in some countries where they are not available especially with mass campaigns. It may be possible to find places that can circumcise patients with some of those devices or less common procedures though these may be private clinics and will be more expensive. All the methods here provide the desired results and are being used around the continent for the MMC campaign.

*\*For the methods used for neonatal circumcision see the end of this section*

## Forceps Guided Method

- The foreskin is pulled forward over and in front of the glans using clamps.
- A large pair of forceps is then clamped across the pulled foreskin just in front of the tip of the glans, being careful not to clamp and damage the glans itself. This is to stop blood flow.
- When the blood flow has been sufficiently stopped by the forceps a scalpel is run along the top of the forceps to remove the foreskin. Scissors may also be used instead of a scalpel.
- The forceps act to protect the glans from the scalpel and as such lower the risk of glans damage.



- Bleeding is more profuse as the forceps do not completely cut off the blood flow.
- Stitches are needed to close the wound.
- The forceps guided method may not be perfect as it does not remove as much of the foreskin as other methods. Current understanding of how circumcision helps reduce the risk of HIV acquisition suggests that removing more may be the most effective.
- **pros:**
  - o It's a simple and easy-to-learn procedure
  - o Almost all surgeons are familiar with the method
  - o Quick procedure time is ideal for a mass MMC campaign
  - o Excellent safety record
  - o This is the most widely practised, well known and most common and popular method around the world
  - o A surgical assistant is not always necessary
  - o It is ideal for low-resource settings.
- **cons:**
  - o This leaves 0.5-1.0cm of foreskin around the coronal sulcus and considering current understanding of circumcision for HIV risk reduction it may not be the best with the amount of foreskin removed
  - o It gives a less satisfactory appearance
  - o In rare cases the forceps might clamp the top of the glans as there is no protection for glans
  - o This procedure leaves an open wound, does not fully stop blood flow and requires stitches.

## Sleeve Resection Method

- The sleeve resection method is a freehand circumcision.
- The foreskin is pulled down below the sulcus and a mark is made around the shaft as far back as the scar line is desired. Another is made close to the sulcus.
- Two freehand circular cuts are made around these marks, using a scalpel and then a lengthways cut is made between the two round cuts. This cylinder of foreskin between the two cuts is then removed.
- Skin tags are then removed and blood vessels are clipped.
- The two edges of the cut are stitched together.
- Healing is said to be rapid.
- A short 'collar' of skin is left around the sulcus.
- The result is usually a high and semi-loose circumcision but this can vary.
- This is less ideal for a mass campaign due to the time and experience required of the

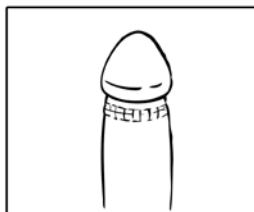
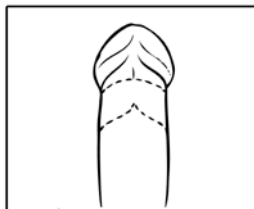
surgeon but it is an effective method in individual settings and where there are no constraints.

- **pros:**

- o This method should be familiar to all surgeons
- o It gives the best cosmetic results
- o It can remove the ideal amount of foreskin as there is much more control when using this method
- o Less issues with safety or complications if it is performed by an experienced surgeon
- o With an experienced surgeon this may provide better results over quicker 'cut and go' methods.

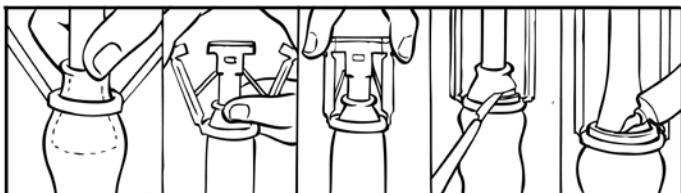
- **cons:**

- o Neither the glans or penis shaft are protected from the scalpel
- o This method requires an assistant
- o A much greater level of surgical skill is needed to perform the procedure
- o A hospital setting is preferential to clinical setting
- o The procedure leaves a collar of foreskin around the sulcus
- o This is not ideal for a mass male circumcision campaign.



## Tara KLamp

- This is a Malaysian invention being used in Southern Africa.
- Circumcision begins by placing the device on the penis, with the inner part sitting inside the foreskin and protecting the glans. The device then clamps the foreskin, cutting off the blood supply so that the skin above the clamping point will die. A scalpel is then used to cut just above the point of clamping. The foreskin above the point of the clamp can be left uncut but this is unhygienic.
- The Tara KLamp is left on the penis and usually separates after five to ten days. Most doctors advise that it is only removed after at least a week, by a doctor. **You should never try to remove it yourself.** Full wound healing is not complete once the KLamp has come off and those circumcised with the device still need to abstain from sex and masturbation until the wound has completely healed, which takes at least six weeks.



- The Tara KLamp failed a randomised controlled trial in South Africa after a significant (over 30%) number of complications were observed compared to the forceps guided method.
- Controversy still rages over why Southern African governments are allowing the use of the Tara KLamp. There is evidence that an improved technique is being used, particularly in South Africa where the complication rate is significantly lower. However, there are calls for more study and evaluation to be conducted on the device.
- **pros:**
  - o The device can only be used once, so there is no chance of cross-contamination/transmission
  - o The glans is completely shielded from the scalpel
  - o There are no sutures, ligatures or dressings required
  - o There is no open or exposed wound
  - o It can remove a greater amount of foreskin compared to forceps guided method if positioned correctly, which it is suggested may give a greater reduction in risk of contracting HIV
  - o The swiftness and simplicity of the procedure make it preferred for a mass MMC campaign.
- **cons:**
  - o There are concerns over pain and the high rate of complications with the device
  - o The device does not always simply separate after 5-10 days and has to be surgically removed (some doctors insist on this)
  - o The device has failed a randomised controlled trial due to the high rate of complications. There are real concerns over the safety of the device compared to other methods
  - o There is discomfort from the large clamp remaining on the penis for up to 12 days.
  - o Those with a tight foreskin or suffering phimosis (the inability to fully retract the foreskin) may not be able to receive circumcision with this device. Alternatively, a dorsal slit may need to be made to use the device which *does* leave an open wound and blood.



# Full Dorsal Slit Method

- The full dorsal slit is a less common, freehand method of circumcision and requires a good level of surgical skill.
- The full dorsal slit method begins with the foreskin being pulled forward by two forceps and then two further forceps are used to make the foreskin tight.
- A cut is then made at the top of the foreskin from the opening back to the coronal sulcus.
- The foreskin is then cut around in a circular motion around the sulcus to remove the whole foreskin.
- Skin tags are then clipped and bleeding vessels clipped.
- The wound is stitched and a dressing applied.
- While most doctors are familiar with this method of circumcision it is much less common than the other methods.
- This medical method differs from the technique used by traditional surgeons, which is also called a dorsal slit or super-incision. The traditional method only cuts from the foreskin opening to the sulcus and does not remove any of the foreskin, which hangs underneath the penis. For this reason, the traditional method cannot be seen to provide any reduction in risk of contracting HIV. The full dorsal slit method of circumcision does however satisfy the requirements of circumcision and so is likely to provide the reduced risk of HIV seen in the RCTs.
- **pros:**
  - o Should be familiar to most surgeons
  - o No significant issues with safety or complications
  - o The time required and the required experience of the surgeon may provide better results over quicker 'cut and go' methods.
- **cons:**
  - o Freehand procedure requires a skilled circumcision surgeon
  - o Requires surgical scissors (an expensive instrument).
  - o Time-consuming procedure
  - o Not ideal for mass MMC campaign
  - o Glans is not protected from the scalpel
  - o Possibility of uneven cut.

# PrePex Device

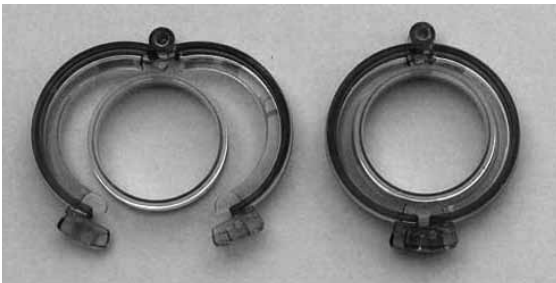
- Consists of 4 parts:
  - o Placement ring
  - o Verification thread
  - o Inner ring
  - o Elastic ring.



- Sizing plate is used to select the corrective size inner ring.
- A mark is made with a pen at the point of cutting off the foreskin.
- The elastic ring is placed on the placement ring in the notches provided. This is then placed at the base of the penis in preparation.
- The inner ring is then placed under the foreskin and sitting around the sulcus, with lubrication used to reduce discomfort.
- The placement ring is then aligned on the outside with the inner ring under the foreskin. When the two are correctly aligned, the elastic ring is snapped on to the groove in the inner ring, clamping the foreskin between the elastic ring and the inner ring under the foreskin.
- After seven days the foreskin tissue has died as a result of the loss of blood supply. It is removed with blunt, safe scissors (so that the glans cannot be harmed).
- The elastic ring is then pierced so that tension is released and it is removed.
- The inner ring is then removed and this is expected to cause brief pain.
- **pros**
  - o Simple procedure, requires little training
  - o No bleeding. Needles, anaesthesia or sutures not required
  - o Positive safety record in preliminary trials
  - o Ideal for low resource settings
  - o Ideal for a mass male circumcision campaign.
- **cons:**
  - o The device may not remove enough foreskin if used incorrectly
  - o Multiple sizes to choose from may lead to error and affect results
  - o The device still requires further studies and trials to determine safety, acceptability and effectiveness across the continent and in a variety of settings
  - o Those with a tight foreskin or suffering phimosis (the inability to fully retract the foreskin) may not be able to receive circumcision with this device. Alternatively, a dorsal slit may need to be made to use the device which *does* leave an open wound and blood.

# Shang Ring Device

- Consists of two plastic rings that clamp the foreskin.
- Procedure begins by measuring the penis with a provided measuring tape to determine the correct size device to use.
- Inner ring is then placed around the sulcus on the outside of the foreskin.
- The foreskin is then pulled forward and then down and over the outside of the inner ring.
- The foreskin is then clamped between the inner and outer ring and crushed between them.
- The foreskin is then cut away from the underside of the clamping point.
- After seven to 10 days the device needs to be removed manually by a trained person, by removing the outer ring and then cutting away the inner ring in two places.
- **pros**
  - o Bloodless, no need for needles or sutures
  - o Short, swift procedure
  - o Simple and easy to train persons to use
  - o Good cosmetic results.
- **cons:**
  - o Multiple sizes to choose from may lead to error and affect results
  - o Occasional issues with detachment of the device
  - o No protection for the glans
  - o Currently only available in China; pending African introduction. Still requires continued study for the African context
  - o Phimosis or tight foreskin may prevent use of this device.



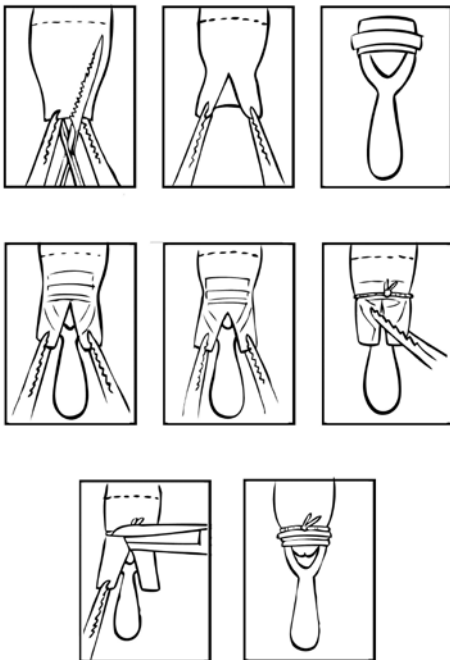
# Circumcision methods used for Neonatal Circumcision

## General

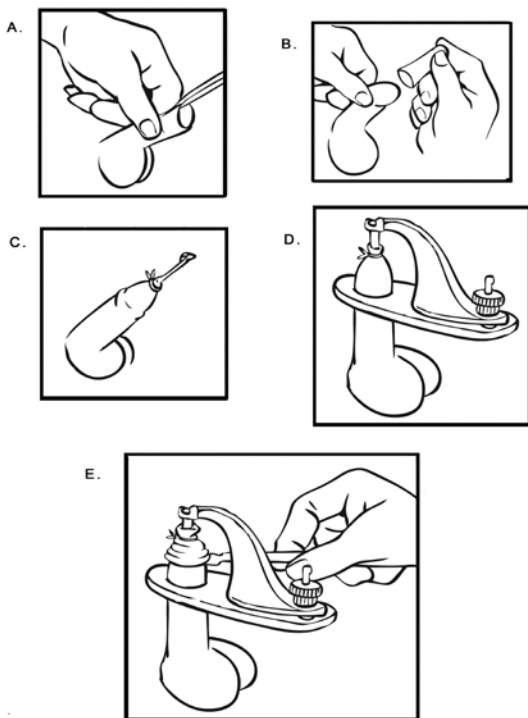
- General anaesthesia is never used for neonatal circumcision as this can cause breathing problems.
- Injections of local anaesthesia or anaesthetic topical creams are used in some cases though the swelling they can cause makes surgery more difficult. The use of anaesthetics can be dangerous for newborn circumcision though doctors must always use some kind of pain management.
- With almost all neonatal circumcisions the foreskin is forcibly torn away from the glans. At birth the foreskin and glans have not separated as they are attached by synechia and they detach as the child grows up. Some evidence suggests that this tearing can damage the glans and leave skin bridges.
- Parents who decide to circumcise their son have the right to choose the method of circumcision.
- The circumcision should be left until at least one week after birth so that the child is stable and any genital issues can be seen and assessed. Some medical conditions may mean that circumcision is not advisable.
- The Forceps Guided Method detailed before is also used for neonatal circumcision in almost the same way as for adult and adolescent circumcision.

## Plastibell Device

- The Plastibell is marketed as being easy to use, requiring little training and is used almost solely used for neonatal and child circumcision. The Plastibell is commonly used around the world for neonatal circumcision.
- The opening of the foreskin is stretched to allow an opening. Sometimes a dorsal slit is made in order to make the opening wide enough.
- The plastic bell of the Plastibell is placed inside the child's foreskin over the glans. There are a number of different sizes of Plastibell for differing sizes of the glans in children.
- The foreskin is pulled over the plastic bell and a ligature (string) is tied around the outside and tied onto the grooves/ridges of the Plastibell. The ligature is pulled as tight as possible to cut off blood supply by crushing the skin against the Plastibell.
- After a few minutes, once the blood supply has been stopped, a scalpel is used to cut off the foreskin above the ligature. The Plastibell protects the glans from the scalpel. It is more hygienic to remove the dying foreskin but some doctors may leave it until it dies and falls off.



- The handle of the Plastibell is snapped off at this point, leaving just the small Plastibell and ligature around it.
- The remaining foreskin tissue will die and in 5-12 days this, along with the Plastibell and ligature, will simply separate and fall off, much like the umbilical cord does.
- In some cases, swelling may mean the Plastibell does not separate. **Do not try and remove this yourself**, a doctor will be required to either reduce the swelling non-surgically or manually cut the Plastibell away from the penis.



## Gomco Clamp

- The Gomco Clamp is a specially designed metal device for circumcision.
- The foreskin is first stretched to widen the opening much like the Plastibell method with the foreskin being torn away from the glans. Again sometimes a dorsal slit may be required.
- A lubricant is put on the glans before the bell-shaped instrument with a handle is placed over the top. This is so that the bell does not stick to the glans and reduces discomfort.
- The foreskin is then pulled up over the bell and tied with a ligature (string) on to the handle.
- The tightness of the circumcision is determined by how much skin is pulled up.
- The clamp is then applied and the clamp sits at the coronal sulcus.
- If everything is correctly in place, the clamp is then tightened, cutting off the blood supply to the foreskin above the clamping point.

- A cut is made around the foreskin just above the clamp with the glans being protected by the metal bell.
- The clamp is left in place for 5-10 minutes in order to let the blood clot and then is removed. Note: the Gomco Clamp does not stay on the penis like the Plastibell. Sometimes small sutures are needed if the wound does not seal when the device is removed.
- A dressing is needed to cover the antiseptic that is then put around the wound.

## Mogen Clamp

- The Mogen Clamp is placed over the penis, with a groove in the underside for the glans to be placed.
- The foreskin is pulled up through the opening, which is supposed to open only to 3.0mm, so that it cannot clamp the glans. This procedure is essentially 'blind' as the surgeon/ mohel cannot see the glans underneath the clamp.
- The clamp is then closed over the pulled forward foreskin, in a similar way to the forceps-guided method but with greater force. This crushes the foreskin in the clamp, cutting off blood supply.
- The clamp itself does not cut the foreskin; it only clamps it. A scalpel is then used to remove the clamped foreskin.
- The clamp is left on for a few minutes to ensure haemostasis and, like the Gomco Clamp, it does not remain on the child like the Plastibell.



(<http://www.surgicalinstruments.com>)

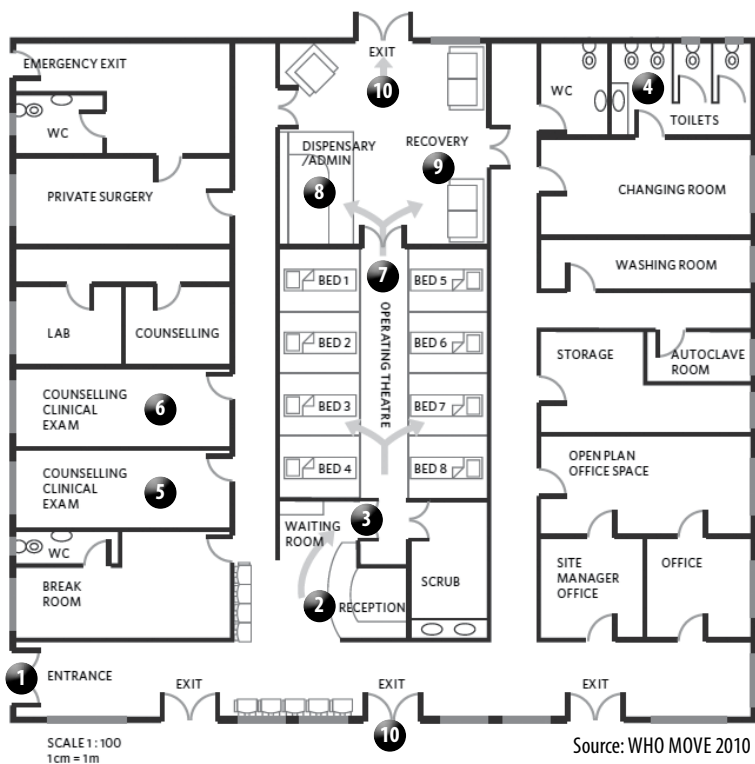
The makers of the Mogen Clamp were put out of business in the United States after being sued for over 10 million dollars, after a child's glans was severely mutilated by the device. There are concerns with the safety of this device due to the lack of protection for the glans and the blind nature of this method though the Mogen Clamp is still being used in parts of Africa.

# The Process of Circumcision

This section provides a very general guide to the process of getting circumcised, what needs to be done, what you need to know and what services and support you should receive. With the campaign stretching from Ethiopia to South Africa there will be many different situations and settings. Mass medical male circumcision camps and drives may not operate in the same way due to the numbers involved and the time available. Couples counselling is encouraged in the VMMC campaign but assessments to date show many sites are not geared for this.

## What a VMMC clinic should look like

The Centre for HIV and AIDS Prevention Studies (CHAPS) in South Africa pioneered the use of the model layout shown below to ensure safety, efficiency, high turnover and appropriate service provision at sites providing VMMC.





All sites, whether they are temporary facilities set up in schools or under canvas, or are in state of the art hospitals, should have the facilities shown.

They should all have qualified, trained, considerate staff – from whom clients receive appropriate, accessible information about every stage of the VMMC process in a language they understand. This information should cover the partial protection against contracting HIV from vaginal sex that MMC provides for men; the importance of maximising protection by using barrier methods; reducing the number of sexual partners and abstaining from unprotected sex; the importance of personal hygiene especially during recovery; the need to abstain from sex, including masturbation, for at least six weeks and until the wound is completely healed; and the importance of returning for health checks.

### **VMMC clinic floorplan key**

1. Clearly signposted entrance.
2. Reception area – where clients are welcomed and given information about MMC, HIV and sexual and reproductive health care. *Ask for this if it is not offered.*
3. Waiting area – where clients receive group counselling and/or view information videos
4. Toilets and washing facilities
5. Private counselling room – where clients and their partners/ parents receive counselling on HIV risk and prevention, and sexual and reproductive health care, and can undergo a rapid HIV test. *Ask for this if it is not offered. Ask about male and female condoms and access to HPV vaccines.*
6. Private examination room – where general health status of client is checked. *If you have tested HIV-positive, you should be referred to have your CD4 count checked. If it is high enough to indicate you are healthy, you can proceed with circumcision; if not, you may need to start antiretroviral treatment first. The clinic must put your right to care and treatment before its targets for circumcision.*
7. Operating theatre – a sterile area containing a number of beds in cubicles or separated by curtains, where the surgical procedure will take place. *Ask about anything you are unsure or worried about.*
8. Dispensary – where clients receive any medication needed, such as painkillers and antibiotics. *Ask for pain medication if you need it.*
9. Recovery room – a quiet area where clients' vital signs (heart rate and blood pressure among others) and general state are monitored. *Make sure that you rest for at least 30 minutes and have a physical check before you leave the site.*
10. More than one exit – so that clients may leave without undergoing circumcision if they wish to decline or delay the procedure.

## What to do before getting circumcised

1. Free VMMC is being provided at many state clinics and hospitals, and at specially established sites. Visit your local clinic or hospital to discuss HIV prevention and in particular medical male circumcision. South Africa has an MMC hotline operated by MatCH (Maternal, Adolescent and Child Health). The hotline is 082 043 3399. Anyone can phone or send a 'Please call me' for info on MMC and where it is available.
2. If you decide, after considering all of the information available and discussing the issue with your partner (if you have one), family and friends, and healthcare providers, that you wish to get medically circumcised, or to have your son medically circumcised, there are several steps in the process. Remember that circumcision is permanent and once someone has had the operation there is no way to fully regain the foreskin. Make sure the decision to circumcise is for the right reasons: to maximise your protection from HIV and **not** in order to stop using condoms, to use condoms less, because of pressure or in the belief that it will have a positive impact on sex.
3. The WHO recommends counselling couples together. This is not routinely offered, but it is important for couples to discuss all aspects of their sexual and reproductive health and make decisions that are beneficial for each partner. You can ask for couple counselling, or choose a site where it is offered.



## ***What to expect on the day***

1. Attend an HIV counselling and testing session. This is not compulsory but if it is not offered, ask for it. The counsellor will discuss HIV prevention with you and discuss the best ways to protect yourself and your loved ones. Be sure to ask questions and raise any concerns you may have.
2. You will then be checked by the nurse to make sure you are healthy and there are no medical reasons that you should not be circumcised.
3. The counsellor will ask if you wish to take an HIV test. This is a simple test that requires a small needle prick to draw blood from your finger and takes just a few minutes. Knowing your status is extremely important to protect yourself against HIV/AIDS and you are strongly advised to take the test. No one will be told of your result, only those you choose to tell. It is 100% confidential.
4. If the test is positive you should be counselled and referred. Ask to be referred for a CD4 test and for treatment should you need it, if this is not offered. Though circumcision gives no known HIV benefits for those who test positive you should not be refused circumcision. There may be other benefits, in terms of prevention of other STIs and penile cancer. You should be aware of the risks and doctors, nurses and counsellors must prioritise your health over the necessity of a circumcision.
5. The final decision to circumcise should be your own. If you are uncertain, there is no reason that you cannot simply walk away at any point before the procedure.
6. Should you be sure you wish to get circumcised and there are no medical reasons preventing this then inform the counsellor that you wish to proceed with the circumcision. If you do not wish to be circumcised with a particular circumcision devices (see the **methods of circumcision** section) make sure you let the counsellor know. You have the right to choose the method of circumcision if you are at all concerned with the safety of any device.
7. MMC may be done in mass circumcision days, with up to 60-100 men or you may undergo the procedure in a hospital setting, alone or among a smaller number.
8. A nurse will give a local (not general) anaesthetic via an injection at the base of the penis. There may briefly be a little pain, as with any injection. This will numb the entire penis.
9. You will be completely awake during the procedure but should feel no pain.
10. A doctor will perform the circumcision using one of the methods detailed in the methods of circumcision section in this book.
11. A nurse will then stitch the wound (in the case of the forceps-guided or sleeve resection methods), apply a dressing if necessary and/or apply petroleum jelly for some of the devices to ease discomfort and promote healing. The nurse may also apply an antiseptic cream to reduce the risk of infection.



12. The time this procedure will take depends on the method of circumcision, the skill of the surgeon and nurse and the extent of any bleeding or other immediate complications. The time may vary between 10 and 30 minutes in most cases, though this does not include pre- and post-operative time and may be longer for the more complex methods.
13. Once the circumcision has been completed and any surgical wound has been dressed, the patient will be transferred to a recovery room and then sent home to recover.
14. Analgesic tablets/ painkillers will be provided for the days after the surgery. While there are frequent claims that little or no pain is felt after the circumcision, it is normal that after a surgical procedure on a tender area of the body there will be discomfort.

## ***What to expect afterwards***

1. Ask for clear, written instructions on post-operative care and recovery for yourself or your child.
2. You should make arrangements to return for check-ups. With devices such as the Tara Klamp, PrePex and Shang Ring you will need to return after one week or more to have the device removed. Do **not** ever attempt to remove these devices yourself. **You must also arrange a follow-up appointment for around six weeks after you have been circumcised.** Remember, you must not have sex or masturbate during this time. This appointment is important as the doctor can check whether the wound has healed or not and advise whether sex may be resumed. This is also another opportunity to raise any further questions about circumcision and HIV prevention.
3. Make arrangements/ request a certificate for any time you need to take off work or study.
4. For detailed information on post-operative care in the next few days and weeks please see the next section.

This is how the system *should* work but there are differences from one site to another. These differences should not mean that any of the core principles should be excluded, including HIV counselling and testing, medical checks and acceptance of healthy HIV-positive men or men over the age of 50. It is your right to demand access to safe, quality and correct medical male circumcision and to raise any concerns. Circumcision camps or mass circumcision events should also not skip any of these steps in the rush to raise numbers and there is no reason that you cannot walk away if you are concerned about your safety or any aspect of the procedure.



*There is no reason for a boy or man with a disability to be refused circumcision. However, someone suffering from an injury or illness might be advised not to undergo the procedure until he has fully recovered.*

## Post-Operative Care and Complications

There are a number of factors that impact on the chance of complications after circumcision. By practising good post-operative care, one can reduce the risk of these. Effective post-operative care is simple but essential. If the individual concerned is an infant or young boy, his parents or main caregiver should play an important part in this. They can teach the child to care for the wound and help make sure complications are prevented. If a man has a wife or girlfriend, she can provide support in post-operative care, especially in making sure abstinence of at least six weeks is maintained and encouraging her partner to seek medical advice promptly if something appears to be wrong. It is extremely important to book a follow-up appointment six weeks after the circumcision so a nurse or doctor can make sure there are no problems with the circumcision, check that the wound has healed fully and answer any questions. Those circumcised with any of the circumcision devices will need to book a follow-up appointment after about one week to have the device removed. Regardless of the method of circumcision used it is a good idea to book a follow-up appointment a week or 10 days after the surgery to check there are no problems

as well as the six week follow-up. **The appointment after six weeks however is very important and must be attended.** Do not hesitate to visit a clinic or hospital immediately if the problem is serious or urgent as the quicker the issue is addressed the better the outcome.

## Complications

- The age of the patient when circumcision is performed affects the likelihood of complications. As circumcision may be more beneficial before sexual debut and the chance of complications increases with age, it is suggested that circumcision is safer and more effective as an intervention when done earlier (and before the person comes into contact with HIV).
- The degree of experience and skill of the surgeon in the circumcision procedure will affect the chance of complications. However most of the surgeons who perform circumcisions under medical settings are more than competent in performing the relatively simple circumcision procedure. There can be a higher chance of complications when male circumcision is performed by unregistered traditional surgeons, or there is inadequate post-operative care; however where traditional surgeons are experienced and use sterile methods, fewer complications arise.
- The conditions under which circumcision is performed factor into the rate of complications. Regardless of the setting, the practitioner must use a single sterile blade or device for each individual. The area where the circumcision takes place must be clean and anyone assisting during or after the procedure must practise good hygiene and infection control.
- If the patient has pre-existing conditions, such as diabetes or other blood sugar problems, clotting disorders or issues with blood flow, this will impact on the the risk of infection, ability to heal and to heal quickly. It is important to let the surgeon know about any previous medical conditions as early as possible and certainly before the circumcision.
- The personal condition/health of the person is also a factor. HIV status also has an impact. Studies show that HIV-positive men take longer to heal than HIV-negative men and so this must be taken into account. It means that abstinence from sex will likely be longer than six weeks for HIV-positive men in order to allow the wound to heal fully.
- Other factors that affect the chance and type of complications include:
  - o The tool used by the surgeon. Traditional tools can sometimes be blunt or cause significant scarring, leave an uneven cut, not remove enough foreskin or prevent proper healing of the wound.
  - o The quality of the post-operative care, especially in traditional settings. In many cases the post-operative care is handled either by the boy himself or former initiates during the initiation process. They need a sound understanding of post-operative

care to prevent neglect of the wound that can lead to infection.

- Anyone who has concerns about the wound should see a doctor instead of waiting to see if it heals itself. After the surgery, the surgical wound will be very raw, there may be some dried blood and it is likely this will be uncomfortable for at least a few days afterwards.

### **If you notice any of the following do not hesitate to see a doctor:**

- Bleeding (if there is a lot of bleeding it is best to apply light pressure to the wound with something to stem the bleeding, such as tissues or gauze)
- Discharge (especially green pus) from the wound or the penis
- Excessive pain, or pain continuing for four or five days after the circumcision
- Stitches or sutures that have come away and opened the wound
- Bruising remaining after a week (a sign of internal bleeding)
- Significant discomfort
- Pain when urinating
- Itchiness on or around the wound
- If when circumcised with a medical device, the device is pulled away from skin and is causing pain

## **Post-operative care**

- You **must** abstain from sex and masturbation until the wound has **completely** healed, which takes **a minimum of six weeks** but can take longer. Healing time depends on many factors. Just because six weeks has passed do not assume it is safe to engage in sex or masturbation. All men heal at different speeds and it is extremely important to make an appointment around six weeks after the circumcision to see a doctor or nurse. This way a medical professional can determine whether the wound has healed or not. You can use this appointment to ask any questions or raise any concerns you may have. The consequences of resuming sex before the wound has healed can be serious. The risk of contracting HIV is dangerously increased and the risk of passing on HIV to your partner is also increased if you do not wait until full wound healing. Similarly, it is highly likely that other STIs are transmitted and acquired much more easily with an open wound and direct contact with blood. Interrupting the healing process by engaging in sex or masturbation may also cause complications such as bleeding, fistulas, scarring or infection, and will likely cause pain. It is in your long-term health interests **not** to have sex during the healing period.
- You should be aware that the appearance of the penis will be very swollen, tender and

raw, possibly with dried blood depending on the method used. This is normal as with any surgery but will become less pronounced as the wound heals. You may need to take time off work though this varies widely depending on the method of circumcision, the pain experienced afterwards, the tenderness of the wound and the job of the individual.

- Do not pull at or try to remove the stitches or sutures where the wound has been sealed after circumcision. These will either dissolve or be removed by a doctor in a scheduled follow-up session. Trying to remove them at home will lead to painful complications, especially if the wound is re-opened. Bleeding, infection and/or pain are likely. If the stitches come apart accidentally or continue to cause pain after the surgery, see a doctor.
- Likewise if a dressing has been applied over the wound by the nurse after the surgery you should not remove this until the wound underneath has sufficiently healed. You should be informed by the nurse how long to keep the dressing on though this should not be longer than a week. If necessary reapply a new dressing to maintain good hygiene.
- Daily washing of the penis is important to reduce the chance of infection. Make sure that washing is very light, does not disrupt the wound and is only done using only clean, lukewarm water. Avoid using soaps or chemical products as this may cause irritation.
- Erections may cause pain, especially in the first week or so after the surgery, but if this continues for more than two weeks after circumcision it may be worthwhile to see a doctor. If there is no pain from erections this does not mean sex can be resumed; six weeks abstinence must be strictly maintained.
- Avoid wearing tight underwear or clothing that may press against the penis, or restrict blood-flow to the wound. As after any surgical procedure try to avoid causing irritation to the wound. This is especially important if circumcised with devices such as the Tara KLamp or PrePex. Change underwear regularly and keep the area around the wound clean to minimise the chance of infection.
- The Tara KLamp, PrePex and Shang Ring circumcision devices will usually need to be removed manually by a doctor after about seven days. It is strongly advised **not** try to





remove any of these devices at home, even if it is uncomfortable, as this may tear open the wound and cause not only bleeding but long-term complications. If the device is presenting a problem it is important to see a doctor.

- Applying Vaseline around the healing edge at the base of the Tara KLamp, Shang Ring or PrePex Device (closer to the body) is good practice and ensures the skin is kept supple. This helps with easing discomfort when the device is removed.
  - There should not be any significant bleeding after the surgery. Dried blood is to be expected but gentle bathing should clean this. Seek medical attention if there is significant and continuing bleeding.
  - Both anti-inflammatories and paracetamol for the pain should be provided after surgery to assist in post-operative care. These will help to reduce the swelling and bruising and to ease pain and discomfort that are to be expected after any surgery.
  - The skin immediately below the sulcus will be slightly pinker and look different to the shaft skin; this is natural and will be more pronounced the higher and tighter the circumcision.
  - There will be a scar line on the shaft of the penis from the circumcision wound. It varies in position and appearance depending on the healing ability of the individual, the experience of the surgeon and the quality of the post-operative care. As with any scar, it will become less prominent over time.
  - After six weeks a follow-up appointment with a nurse or doctor is needed to confirm that the wound has healed fully. Only after this, may sex and masturbation be resumed. The feeling and motion during masturbation and sex will be different compared to before circumcision. Artificial lubricants may be needed due to the lack of natural lubrication (see the **sex and circumcision** section for more information).
- When resuming sex, it is critical to use condoms for protection from HIV and other STIs. Circumcision is only recommended as part of a comprehensive prevention strategy. Condoms are as essential to prevent HIV as they were before.

## Neonatal post-operative care

- Post-operative care for children should be performed with great sensitivity. Young children, especially infants, cannot describe the pain they feel or care for their own wound. It is the responsibility of parents to give careful, considerate attention and ensure the hygienic care of the wound.
- Bathing the child frequently is important to reduce infection; avoid adding soap or other products to the water or applying anything to the skin, as it may cause irritation. Simply wash carefully with warm water.
- Nappies/diapers should be changed frequently to reduce the chance of infection from



urine or faeces and to maintain hygiene. Also ensure that the child's nappies, diapers or underwear are not so tight as to cause pain or irritation.

- With the Plastibell, putting Vaseline or petroleum jelly on the healing edge of the wound to keep it supple is good practice and reduces discomfort when the device comes loose.
- The Plastibell device will fall off by itself, with the dead foreskin, after around one week. If, after 10 days the device has not separated, you should see a doctor – do **NOT** try to remove it yourself. Some doctors may insist on a follow-up visit after a week to ten days to ensure the Plastibell method of circumcision is healing properly or to remove it if it is not.
- Swelling and bruising will occur as a result of the procedure and should disappear within one to two weeks.
- There should not be excessive bleeding or swelling, especially after the first five days. See a doctor if this is the case.
- If the child is in pain or if you are concerned about his health, do not hesitate to see a doctor. Keep a close eye on the wound and be sure to see a doctor if you suspect any problems, especially if:
  - o the wound is not healing properly;
  - o you think the wound may be infected;
  - o the child is not passing urine;
  - o the child is unable to sleep at all or seems in pain;
  - o there is any bleeding or discharge.

Book a follow-up appointment after a week to ten days after neonatal circumcision.

# The Science and Studies behind Male Circumcision

There have been a large number of observational studies since the 1980s that have attempted to provide evidence to support the theory that male circumcision reduces the transmission of HIV in Africa. Observational studies look at existing information and statistics about a particular issue, such as HIV infection, and compare the situation in different areas or among different groups of people, without exploring the reasons for what they find. Several observational studies of HIV infection in Africa have compared statistics across several countries or parts of countries. Some have found lower levels of HIV infection in parts of Africa with higher rates of circumcision. Circumcision supporters suggest that there is a link between Southern African countries having low numbers of circumcised men and high numbers of people infected with HIV. This is compared to West and North African countries, where circumcision numbers are high and HIV numbers are low. They also attribute falling rates of circumcision in countries such as the United States and Australia to increases in numbers of HIV infected individuals.

However, there are many complex factors involved and these studies have not been able to prove conclusively the link between circumcision and HIV risk reduction. South Africa is regarded as a country with low rates of circumcision but there are parts of the country where

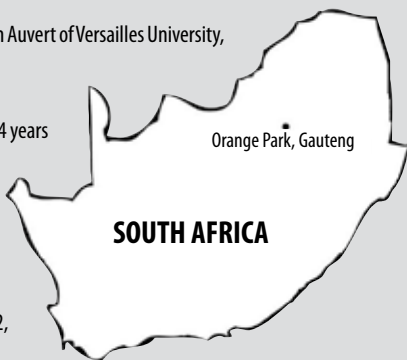


circumcision is widely practised and HIV rates are not lower than in areas where it is not. Comparing Europe and the United States or north and south Malawi shows that while there is much evidence that male circumcision is linked to reduced risk of HIV, there is also evidence that it is not. There are examples such as Rwanda, Lesotho and Malawi with higher rates of HIV among circumcised men than uncircumcised men. The observational studies ignored complex cultural, religious, geographical, and sexual differences across Africa. For example, followers of Islam, who routinely circumcise males, also do not drink alcohol, have comparatively closed sexual networks and strict laws against adultery.

In order to provide evidence to support the theory that circumcision reduces the risk of HIV infection, three randomised controlled trials (RCTs) were conducted in the early 2000s. An RCT randomly selects participants from a target group (eg. men in a city), then half of them 'test' a new product or practice, which the other half (the control group) do not. The three RCTs concerned studied groups of men in South Africa, Kenya and Uganda. All three trials randomly selected half the participants to undergo circumcision immediately (the **intervention** group) and half to undergo circumcision at a later date. All the men were given counselling on safe sex. All were screened for HIV prior to the start of the study and HIV-positive men were not excluded to avoid stigmatisation. These are as follows:

## Orange Farm, Gauteng, South Africa

- Semi-urban setting
- Study headed by Professor Bertran Auvert of Versailles University, France
- 3,128 participants
- Participants were men aged 18-24 years
- Started in July 2002 and stopped before completion in November 2004, by Data and Safety Monitoring Board (DSMB) for ethical reasons\*
- Check-ups conducted at three, 12, and 21-month intervals
- Forceps-guided method used
- Circumcisions performed by general practitioners
- Evidence of 60% reduced risk of HIV infection for circumcised men
- Funded/commissioned by the French National Agency for Research on AIDS (Agence Nationale de Recherches sur la SIDA).



## Kisumu, Nyanza province, Kenya

- Large-town setting
- Study headed by Professor Robert Bailey from the University of Illinois, USA, though the study was a joint project between American, Canadian and Kenyan researchers
- 2,784 participants
- Participants were men aged 18-24 years
- Started in February 2002 and stopped before completion by DSMB in December 2006 for ethical reasons\*
- Check-ups conducted at one, three, six, 12, 18, and 24-month intervals
- Forceps-guided method used
- Circumcisions performed by study physicians
- Evidence of 53% reduced risk of HIV infection for circumcised men
- Funded/commissioned by USA National Institutes of Health (under the National Institute of Allergy and Infectious Diseases) and Canadian Institutes of Health Research.



## Rakai district, Uganda

- Rural setting
- Study headed by Professor Ronald Gray, of Johns Hopkins University, Bloomberg School of Public Health, Baltimore, USA
- 4,996 participants
- Participants were men aged 15-49 years
- Started in August 2002 and stopped before completion by DSMB in December 2006 for ethical reasons\*
- Check-ups conducted at six, 12, and 24-month intervals
- Sleeve procedure used
- Circumcisions performed by trained physicians
- Evidence of 51% reduced risk of HIV infection for circumcised men
- Funded/commissioned by USA National Institute of Health (under the National Institute of Allergy and Infectious Diseases).



\*The 'ethical reasons' that caused the RCTs to all be stopped early were that male circumcision showed such good prevention results that to not circumcise the control group would have been unethical and placed them at higher risk. This is of course a controversial issue but it must be noted that it was the Data and Safety Monitoring Board and *not* the researchers that stopped the trials early.

These RCTs are the primary evidence used to promote medical male circumcision as a measure to reduce the risk of HIV transmission in Africa. They show that circumcision could be a valuable tool in the fight against HIV and can be implemented in a variety of settings. Medical male circumcision was only seen to be effective in reducing the risk for men having vaginal sex with women but the researchers suggested that by reducing HIV in men through male circumcision female HIV prevalence would eventually be lessened. The recommendations from all three studies suggested that male circumcision should be added to prevention strategies in Africa immediately. The RCTs are supported by a small number of additional studies mostly by those involved in the RCTs. A follow-up to the Kenyan RCT, for example, found that the effect of circumcision in reducing the risk of contracting HIV was maintained for at least 54 months. The researchers suggested therefore that circumcision might be an effective longer-term strategy.

The rollout of MMC in Africa is premised on a model based on the RCTs that predicts a certain number of infections will be avoided if a sufficient number of circumcisions is performed but these outcomes will depend not only on MMC but also on human behaviour. It is because the model is heavily reliant on behaviour change that the WHO advocates correct and consistent condom use.



A further trial was conducted in Rakai, Uganda, to ascertain whether male circumcision lessened the risk of an HIV-negative woman contracting HIV from her HIV-positive male partner. The trial was abandoned early after it was found that there was **no evidence to suggest any reduced risk for women**. It was, however, found that the risk of a female contracting HIV from a male partner was three times higher if sex was resumed before the circumcision wound had fully healed, which takes six weeks. This evidence suggests that full wound healing must take place before sex is resumed and that condoms are critical to reduce HIV risk where one partner is positive.

There have been various, mostly observational, studies to determine whether men who have sex with men (MSM) who are circumcised have a reduced risk of HIV infection. However,

these studies have found little evidence that circumcised MSM have a reduced risk. The results are difficult to judge because many MSM switch between receptive and insertive intercourse with partners. As circumcision would, logically, offer no risk reduction for the receiving partner (as it has not been shown for female partners) there can be little support for circumcision as a risk reduction strategy for MSM until further evidence is provided.

There is evidence from studies that male circumcision reduces the transmission of Human Papillomavirus (HPV) from men to women. Some forms of HPV are known to cause cervical cancer in women and evidence suggests that male circumcision could reduce cervical cancer rates by 20-30%. However, there are effective vaccines (Cervarix and Gardasil) that provide protection against most cervical cancers, which should be made available to all women. It is disputed whether circumcision reduces the chance of men contracting HPV. However, according to the Centers for Disease Control (CDC), RCTs have shown that one of the HPV vaccines (Gardasil) also provides protection for men against cancer of the penis, anus and back of the throat.

As mentioned earlier, there are a large number of researchers, academics, politicians and members of the public who dispute that male circumcision will be an effective way to reduced HIV infections. It is important for people who are being encouraged to get circumcised to be aware of the arguments against the validity of the RCT results, the findings and the way this data is used. These are briefly discussed below:

- Many of the researchers involved in the three RCTs have a history of advocating circumcision and so objectivity might have been compromised. The Cochrane Report stated in 2003 “Circumcision practices are largely culturally determined, so there are strong beliefs and opinions surrounding them. It is important to acknowledge that researchers’ personal biases and dominant circumcision practices of their respective countries may influence interpretation of findings.” An updated report however stated there were no longer issues with bias. While this position may be true of researchers involved in the RCTs it stands to reason that the personal biases and dominant circumcision practices of those tasked with implementation of VMMC may influence how stringently they observe protocols for informed consent and HCT in the roll out of VMMC.
- All the RCTs were stopped early by their data safety and monitoring boards on the basis that continuing would have been “unethical.” There are suggestions that this may have had an impact on the results of the RCTs. The South African trial was stopped considerably earlier than the other two RCTs and shows a higher reduced risk of HIV acquisition, with 60% compared to 51% and 53% in the Ugandan and Kenyan trials, respectively. Subsequent reanalysis of the Kenya data, overseen by uninvolved scientists have put the protective effect for the Kenya trial much higher, when window periods, among other factors, were considered in a more accurate manner. The need to review the

Kenya data was founded upon the principle that stopping trials early has been found in a number of cases to significantly overestimate results. A cautious action therefore would be to review the Uganda and South Africa data as well and not merely conclude that a review of the Kenya data suffices for the shortcomings of the early termination of these two studies carried out in different population groups.

- At the conclusion of the trials, all the non-circumcised men were offered circumcision, which makes any reliable follow-up studies to see the comparative long-term effects of male circumcision on HIV acquisition difficult, and while this has been done in Kenya, the results are contested.
- Having recent surgery, an open wound and pain in the genital area would make many men unlikely to resume sexual intercourse until the discomfort has ceased or, as in the case of the RCTs, until advised (not before six weeks after circumcision). This could well have delayed the infection results of the circumcised group as, by not having sex for at least six weeks while healing they were potentially less exposed to risk of infection as compared to the uncircumcised men who were able to engage in sex from the start of the trials. Stopping the trials early, so it is argued by some circles, means this delayed effect was not able to be seen and it has been suggested that the longer the trials continued the closer the rates of HIV infection in the two groups would have become as the circumcised group 'caught up'. Although an overwhelming proportion of those in the scientific community argue that the reviewed data from the Kenya trial shows this not to be the case, there are groups that remain convinced that the only real way to have known this for certain would have been to have the trials run to the end as initially planned.
- There continues to be no widely accepted scientific understanding for the results obtained from the RCTs and there is criticism of the theories put forward (discussed later in this section). Although the mechanism of risk reduction through circumcision is not conclusively understood WHO and UNAIDS, after considering the findings of the RCTs accepted that there was compelling evidence to adopt circumcision in high prevalence countries as a component in HIV prevention strategies. There are however those who feel that the large scale promotion of VMMC should only be done when it is clearly understood just how being circumcised reduces infection risk.
- As with all HIV prevention measures, the evidence for MMC is contested. The RCTs have stood up to statistical scrutiny but the inability to fully explain how removal of the foreskin results in risk reduction is a concern. Further community based studies, though demonstrating positive effects, have been unable to provide completely conclusive evidence of effective risk reduction. This means that the anticipated prevention of new infections cannot be guaranteed and so overreliance on circumcision in the fight against HIV may be short-sighted. The RCTs involved extensive, rigorous and repetitive



behavior change and communication components in addition to the surgical procedure of circumcision. It has been argued by some that the design of the RCTs makes it impossible to attribute risk reduction solely to circumcision. Since the risk of HIV infection is significantly higher for circumcised men having sex before the wound has completely healed in comparison to uncircumcised men, it has been argued that the RCTs would have naturally placed greater emphasis on condom use and behaviour change communication among circumcised men than uncircumcised men. Others therefore argue that the resulting risk reduction could just as easily have been the product of comprehensive behaviour change communication as of the removal of the foreskin. What cannot be stressed enough in this debate is the importance of providing comprehensive HIV prevention education to all those who decide to get circumcised and their partners.

## How does removal of the foreskin reduce the risk of HIV infection?

There are a variety of scientific studies and theories that try to explain how circumcision reduces risk of infection with HIV. None of these is universally accepted. The section below gives a brief overview of these explanations and why they are not regarded as conclusive:

### Keratinisation

- Keratinisation is the hardening of skin. There is a theory that the exposed head of the penis (the glans as well as sulcus) becomes keratinised when there is no foreskin to protect it from rubbing against clothing and exposure and to keep the glans moist and supple.



Keratinised surfaces, such as on the shaft of the penis and outer foreskin, are pathogens (such as germs, viruses and fungi) to enter. The hardened outer surface of the glans is then less likely to be penetrated by the HI virus and there is less likelihood of HIV reaching target cells below. The lack of a keratinised surface on the inner foreskin and glans is suggested as a reason that uncircumcised men may be more likely to contract HIV than uncircumcised men.

- The theory that keratinisation and the related decreased likelihood of abrasions and tearing protect against infection is not conclusive. Removal of the foreskin also reduces the natural lubrication of the glans. This can lead to rougher, more abrasive sex, which could negate the possible protective effects of keratinisation. Proponents of the theory of keratinisation argue that as the skin hardens it becomes less permeable to HIV.

## Local induced immunity

- Prof RH Gray and his colleagues who conducted the study of HIV and circumcision in Rakai, Uganda, put forward the theory of *local induced immunity*. This says that circumcised men may develop an immune response as a result of exposure to lower doses of HIV than men who have a foreskin and hence a large area of unkeratinised skin. This theory is supported by the fact that there are people who are highly exposed to HIV yet who remain uninfected (for example there are HIV-discordant couples and commercial sex workers who have not contracted HIV despite frequent unprotected sex).
- The idea of local induced immunity does not account for the fact that vaccines that aim for just this type of immunity, by stimulating an antigenic response, have been largely unsuccessful. This theory may promote the idea that more sex with HIV-positive partners will give increased protection for circumcised men, which is incorrect and extremely risky. It also suggests that protection against HIV is afforded by sex with HIV-positive individuals but ignores that the first unprotected sexual encounter with an HIV-positive individual may well lead to HIV infection, not the start of increased protection. Furthermore, the use of the word 'immunity' gives the impression that circumcision gives a man complete protection from HIV when it definitely does not.

## Infection of Langerhans cells

- The most popular theory of how circumcision reduces HIV acquisition for men is that it removes Langerhans cells, which are frequent in the inner foreskin and are susceptible to infection by the HI virus during sex. This theory suggests that Langerhans cells can be overwhelmed and infected by HIV and begin infecting the surrounding cells. In this way Langerhans cells are suggested to act as an entry point for the virus. It is suggested that by removing the foreskin and removing this possible target for HIV, a circumcised man is at a lower risk of becoming infected with HIV. There is also evidence to suggest

that inflammation may interfere with the normal functioning of Langerhans cells and so inflammation or abrasions of the foreskin may make infection more likely.

- The evidence against this popular theory is that while Langerhans cells do attract HIV they do so as part of immune response and secrete a chemical called Langerin that absorbs and destroys HIV. Studies have suggested that **Langerin** actually provides a natural barrier to HIV infection and efforts to remove this through circumcision could have a potentially negative effect on the human body's ability to repel the virus through sexual intercourse. Therefore, there is evidence to suggest that Langerhans cells in the foreskin are actually important in repelling and destroying HIV in the genital microenvironment as part of the immune response.

### **The foreskin has high density of HIV target cells**

- The foreskin also has a higher density of other types of cells (such as dendritic cells, macrophages and T lymphocytes) that are known to be targets for HIV and are potential entry points for the infection and replication of the virus in the human body. By reducing HIV's access to infectable cells, and therefore to the immune system, circumcision may reduce the risk of HIV infection.
- The human immune system often repels the HI Virus effectively, as evidenced by the fact HIV infection usually occurs at one in 300-1000 exposures. The foreskin incorporates a naturally-occurring part of the immune system and permanently removing this to improve resistance to a virus could be short-sighted.

### **Tiny injuries to the foreskin**

- Some theories suggest that the foreskin is fragile and highly likely to tear or be damaged during sex. It is suggested that tiny tears, cuts or abrasions then allow an entry point for HIV to infect the individual. It is argued that circumcision prevents this.
- While the above may be true, it must also be noted that circumcision reduces natural lubrication and prevents the gliding and rolling motion in sex that the foreskin causes. Therefore, a circumcised male who does not use artificial lubrication may also experience small breaks of the skin on the glans, sulcus or shaft of the penis that will provide an entry point for HIV.

### **Reducing STIs**

- Another explanation given is that circumcision reduces the risk of acquiring other sexually transmitted infections (STIs), such as genital ulcerative diseases (GUDs), which are known to increase the risk of HIV infection. There are a number of studies that provide evidence that circumcision may reduce the rate of acquisition of STIs such as Herpes Simplex Virus-

type 2 (HSV-2), Gonorrhoea, chancroid, syphilis and human papilloma virus (HPV) for men. Many ulcerating infections disrupt the natural barrier of the penile shaft's keratinised skin and provide access for the HI virus to target cells below the skin. By reducing STIs among men through circumcision, HIV transmission to men is also likely to be lessened.

- Most studies aiming to prove whether circumcision reduces the incidence of STIs have been inconclusive. Advocates of circumcision claim the procedure improves penile hygiene but this has not been proven thoroughly. Co-infection with other STIs is well known to increase the risk of HIV infection but whether circumcision reduces the risk of being infected with these is still debated.

## Less surface area

- The theory is that with the removal of the foreskin the virus has access to a reduced surface area and so fewer cells with which to come into contact with, and as a result there are fewer points for HIV to enter the body and infect the individual.
- This idea is plausible but overlooks a number of key principles. Firstly, HIV infection is frequent in the opening in the glans of the penis, which is not affected by circumcision. Secondly, Langerhans cells secreting Langerin are an important part of the immune response and removing or reducing this might have a negative impact on the effectiveness of the immune response of the penis. Until it can be proven whether Langerhans cells inhibit or assist HIV infection, removing part of the functioning immune system may not be advisable. Removing normal, healthy and functioning parts of the body so there is less surface area to infect makes no more sense than removing any other part of the body in order to prevent possible future infections.

## Conclusion

Efforts to turn the tide against HIV in Africa are slowly succeeding. The rate of new infections is declining. The number of people dying of AIDS-related illnesses is falling. The proportion of people living with HIV who are receiving life-saving antiretroviral treatment is increasing, even in the poorest communities. There is also growing evidence of the HIV prevention effects of ARV treatment. However, the burden of disease as a result of HIV infection still weighs heavily on the people and economies of the continent.

It is vital to keep fighting HIV on all fronts.

Medical male circumcision is recommended as one way that boys and men can reduce their risk of getting infected with HIV through vaginal sex. Scientists also believe that MMC will eventually reduce the risk for women (and for men who have sex with men) because their male partners will be less likely to be HIV-positive.

MMC on its own cannot defeat HIV. The WHO recommends it as part of a comprehensive

HIV prevention strategy that includes HIV counselling and testing, screening for other sexually transmitted infections, correct and consistent use of male and female condoms, safer sex practices and access to treatment for people who test HIV-positive.

For this strategy to succeed, MMC needs to be a 'gateway' to quality sexual and reproductive health care for men and for women, whether they are HIV-positive or HIV-negative. It needs to be implemented in conditions where individuals, couples and parents have complete and accurate information to make decisions about their health and that of their children.

Governments, donors, NGOs and media, health practitioners and leaders promoting circumcision, for whatever reason, have a responsibility to make sure people receive all the facts.

The best possible protection against disease is to live a healthy lifestyle. This includes exercising the right to appropriate sexual and reproductive health services and engaging in responsible and respectful relationships, in which all partners minimise their risk and maximise their protection against HIV and other health threats.



# Glossary

- **Abstinence** – in this context the process of refraining from sexual intercourse in order to lessen the risk of contracting STIs or HIV or even pregnancy. Abstinence forms part of the ABC campaign to prevent HIV; the other two letters being 'Be faithful' and 'Condoms'.
- **AIDS** – Acquired Immune Deficiency Syndrome is a disease of the immune system of humans and is caused by HIV infection. It interferes with the immune system and makes those with the virus more susceptible to opportunistic infection as the immune system gradually declines. AIDS is diagnosed when the individual's CD4 count falls below 200.
- **Anaesthesia/anaesthetic** – the use of certain medical drugs to allow a medical procedure to be performed without pain or consciousness for the individual. Local anaesthetic is used in medical circumcision and simply makes the patient unable to feel the pain and distress of the procedure while remaining awake.
- **Balanoposthitis** – the swelling of the foreskin and glans. Balanitis is the inflammation of the glans and posthitis is the inflammation of the foreskin and they usually occur together as balanoposthitis. It can be caused by a number of factors including fungal or bacterial infection.
- **CD4 count** – certain cells have CD4 molecules on their surface which are a target for HIV to infect and replicate within. In simple terms measuring the amount of CD4 presenting cells in a drop of blood shows the strength of an individual's immune system as the CD4 count reflects the amount of certain immune cells left in the individual's system (and therefore the damage HIV has done to the immune system).
- **Circumcision** – the surgical removal of the entire foreskin of the penis. A widely practised procedure for medical, religious and cultural reasons.
- **Femidom** – essentially a female condom. It is a barrier method of protection worn by the receptive partner during vaginal or anal sex to prevent the transmission of STIs as well as prevent unwanted pregnancies.
- **Haemostasis** – this is a process where blood flow is stopped, usually during surgery. In the case of circumcision the tissue that has been disconnected from blood flow (the foreskin) dies as a result of the lack of blood flow. This is an effective way to perform a surgical procedure without an open wound and therefore decreases the likelihood of infection.
- **HCT** – HIV counselling and testing is a vital part of preventing HIV transmission. It

is extremely important to know your status and prior to getting circumcised there are facilities available to get tested for HIV though this is completely optional. HCT is completely private and only you will know your status. HCT involves discussion with the counsellor as well as a very swift and simple HIV test.

- **Heterosexual** – a person sexually attracted to someone of the opposite sex. (Also referred to as straight).
- **HIV** – the human immunodeficiency virus is a virus that causes AIDS, a condition in humans in which the immune system gradually declines before being so weak as to allow life-threatening opportunistic infections. HIV can be transmitted by the transfer of blood, semen, vaginal fluid, pre-ejaculate, or breast milk. The most common routes of transmission are unprotected sex, sharing contaminated needles, breast milk, direct contact with HIV infected blood and transmission from an infected mother to her baby during birth.
- **Homosexual** – a person sexually attracted to someone of the same sex. (Also referred to as gay (male) or lesbian (female)).
- **Human Papilloma Virus (HPV)** – HPV is a virus spread largely through sexual contact and can infect the genital areas as well as the mouth and throat. There are 30 to 40 types of the Human Papilloma Virus of which some may cause genital warts and some can cause cancer. HPV is the cause of nearly all cases of cervical cancer and can also cause penile and anal cancers.
- **Informed consent** – a patient's full agreement to a medical or surgical procedure after being fully advised of all the relevant information as well as the risks and benefits.
- **Keratinisation** – the process where skin hardens as a result of exposure. This often happens on the soles of the feet of those who frequently walk barefoot. The hardened skin is much more resistant to damage such as cuts or tears though this also usually lessens the sensitivity of the area.
- **Neonatal circumcision** – this is the removal of the foreskin of a newly born infant (or neonate). The procedure differs from circumcision of older boys and men due to a number of factors.
- **Observational studies** – these extract information from existing data. Observational studies can often overlook complexities and interfering factors, and hence the need for thorough randomised controlled trials.
- **Paraphimosis** – a painful condition where a man cannot return the foreskin to its natural position covering the glans due to a tight preputial opening.

- **Phimosis** – a condition where a man cannot retract his foreskin down the glans due to the tightness of the preputial opening.
- **Post-operative care** – the care of the wound after a surgical procedure in order to minimise infection, prevent complications, ease pain and maintain hygiene.
- **Randomised Controlled Trial** – is a type of scientific experiment or clinical trial most commonly used in testing the safety, efficacy or effectiveness of medical interventions, procedures, drugs or health technologies. RCTs compare effects on an intervention and control group whose participants are randomly selected.
- **Risky sexual behaviour** – sexual actions and behaviour that put the individual at risk of HIV or STIs.
- **STIs** – sexually transmitted infections are infections spread through sexual intercourse whether oral, vaginal or anal. Previously used acronyms include STDs and VD. Individuals may be infected but carry no symptoms and can infect sexual partners. Examples of STIs include Herpes, Gonorrhoea, Chlamydia, Human Papilloma Virus and of course HIV.
- **Unprotected sex** – engaging in sex without the use of barrier protection such as a condom or femidom.





# Further Reading and Sources of Information

As with any new topic in HIV/AIDS discourse there is frequently new information coming to light. Below are details of some of the books, articles and studies that informed this book. A full list of references is available on request.

## Books and articles

- **Male Circumcision and HIV Prevention** chapter by Ronald Gray, David Serwadda, Godfrey Kigozi and Maria J. Wawer. In the book *HIV Prevention: A Comprehensive Approach* edited by Kenneth H. Mayer and H.F. Pizer. Book published by Academic Press.
- *HIV Essentials* (2011) edited by Paul E. Sax, Calvin J Cohen and Daniel R. Kuritzkes. Book published by Jones and Bartlett.
- **Understanding the Biology of HIV-1 Transmission: the Foundation for Prevention** chapter by Deborah J. Anderson. In the book *HIV Prevention: A Comprehensive Approach* edited by Kenneth H. Mayer and H.F. Pizer. Book published by Academic Press.
- **HIV and Circumcision** chapter by Dirk Taljaard and Chiweni Chimbwete. In the book *HIV/AIDS in South Africa 25 Years On: Psychosocial Perspectives* edited by Poul Rohleder, Leslie Swartz, Seth C. Kalichman and Leickness Chisamu Simbayi. Book published by Springer.
- **Randomized, Controlled Intervention Trial of Male Circumcision for Reduction of HIV Infection Risk: The ANRS 1265 Trial.** The South African RCT on male circumcision and HIV by Bertran Auvert, Dirk Taljaard, Emmanuel Lagarde, Joëlle Sobngwi-Tambekou, Rémi Sitta, Adrian Puren. Available at [www.plosmedicine.org](http://www.plosmedicine.org).
- **Male Circumcision for HIV Prevention in Men in Rakai, Uganda: A Randomised Trial.** The Ugandan RCT on male circumcision and HIV by Ronald H. Gray, Godfrey Kigozi, David Serwadda, Frederick Makumbi, Stephen Watya, Fred Nalugoda, Noah Kiwanuka, Lawrence H. Moulton, Mohammad A. Chaudhary, Michael Z. Chen, Nelson K. Sewankambo, Fred Wabwire-Mangen, Melanie C. Bacon, Carolyn F.M. Williams, Pius Opendi, Steven J. Reynolds, Oliver Laeyendecker, Thomas C. Quinn, Maria J. Wawer. Available at [www.thelancet.com](http://www.thelancet.com).
- **Male Circumcision for HIV Prevention in Young Men in Kisumu, Kenya: A Randomised Controlled Trial.** The Kenyan RCT on male circumcision and HIV by Robert C. Bailey, Stephen Moses, Corette B. Parker, Kawango Agot, Ian Maclean, John N.

Krieger, Carolyn F.M. Williams, Richard T Campbell, Jeckoniah O. Ndinya-Achola. Available at [www.thelancet.com](http://www.thelancet.com).

- **Circumcision in HIV-infected men and its effect on HIV Transmission to Female Partners in Rakai, Uganda: A Randomised Controlled Trial.** The Ugandan RCT on male to female HIV transmission and circumcision by Maria J. Wawer, Frederick Makumbi, Godfrey Kigozi, David Serwadda, Stephen Watya, Fred Nalugoda, Dennis Buwembo, Victor Ssempijja, Noah Kiwanuka, Lawrence H. Moulton, Nelson K. Sewankambo, Steven J. Reynolds, Thomas C. Quinn, Pius Opendi, Boaz Iga, Renee Ridzon, Oliver Laeyendecker, Ronald H. Gray. Available at [www.thelancet.com](http://www.thelancet.com).
- **Circumcision Status and Risk of HIV and Sexually Transmitted Infections Among Men Who Have Sex With Men.** Article by Gregorio A. Millett, Stephen A. Flores, Gary Marks, J. Bailey Reed, Jeffrey H. Herbst. Available at <http://jama.ama-assn.org>.
- **Circumcision for HIV Prevention: Failure to Fully Account for Behavioral Risk Compensation.** Article by S. Kalichman, L. Eaton, S. Pinkerton. Available at <http://www.plosmedicine.org>.
- **Evaluation of a Safer Male Circumcision Training Programme for Ndebele Traditional Surgeons and Nurses in Gauteng, South Africa: Using Direct Observation of Circumcision Procedures.** Article by Karl Peltzer, Xola Kanta, and Mercy Banyini. Available at [www.ncbi.nlm.nih.gov](http://www.ncbi.nlm.nih.gov).
- **Evaluation of a Safer Male Circumcision Training Programme for Traditional Surgeons and Nurses in the Eastern Cape, South Africa.** Article by Karl Peltzer, Ayanda Nqeketo, George Petros and Xola Kanta. Available at [www.ncbi.nlm.nih.gov](http://www.ncbi.nlm.nih.gov).
- **Male Circumcision and HIV Prevention: Is There Really Enough of the Right Kind of Evidence?** Article by Gary W Dowsett and Murray Couch. Available at [www.circumcisionandhiv.com/male-circumcision-and-HIV-studies-for-download.html](http://www.circumcisionandhiv.com/male-circumcision-and-HIV-studies-for-download.html)
- **Neonatal Circumcision – Violation of Children’s Rights or Public Health Necessity?** Article by Y. A. Vawda and L. N. Maqutu. Available at [www.sajbl.org.za](http://www.sajbl.org.za).
- **Acceptability of Male Circumcision for Prevention of HIV/AIDS in Sub-Saharan Africa: A Review.** Article by N. Westercamp and Robert C. Bailey. Available at <http://www.ncbi.nlm.nih.gov>.
- A number of interesting articles can be found at [www.circumcisionandhiv.com/male-circumcision-and-HIV-studies-for-download.html](http://www.circumcisionandhiv.com/male-circumcision-and-HIV-studies-for-download.html). The RCTs can be downloaded from here also. Searching through Google and Google Scholar is another way to find many sources though caution should be taken.

## Websites

Here are some websites on circumcision that provide further information you might require to make an informed decision.

- [www.who.int](http://www.who.int)
- [www.malecircumcision.org](http://www.malecircumcision.org)
- [www.circumcision.org](http://www.circumcision.org)
- [www.avert.org](http://www.avert.org)
- [www.plusnews.org](http://www.plusnews.org)

