Health Benefits and Associated Risks

Male circumcision involves the surgical removal of the foreskin, the tissue covering the head of the penis. In adult men, a four to six week period is required to fully heal the wound. Healing is usually complete after about one week when circumcision is performed for babies.

Research shows that removing the foreskin is associated with a variety of health benefits[i,ii,iii]:

- Studies have found lower rates of urinary tract infections in male infants who are circumcised[iv].
- Circumcision prevents inflammation of the glans (*balanitis*) and the foreskin (*posthitis*).
- Men who are circumcised do not suffer health problems associated with the foreskin such as *phimosis* (an inability to retract the foreskin) or *paraphimosis* (swelling of the retracted foreskin causing inability to return it to its normal position).
- Circumcised men find it easier to maintain penile hygiene. Secretions can easily accumulate in the space between the foreskin and glans making it necessary for an uncircumcised man to retract and clean the foreskin regularly.
- Two studies now suggest that female partners of circumcised men have a lower risk of cancer of the cervix, which is caused by persistent infection with high-risk oncogenic (cancer-inducing) types of human papillomavirus[v].
- Circumcision is associated with a lower risk of penile cancer[vi,vii].
- Circumcised men have a lower prevalence of some sexually transmitted infections, especially ulcerative diseases like chancroid and syphilis[viii,ix].

In numerous observational studies lower levels (prevalence) of HIV infection have been found in circumcised men compared to uncircumcised men and three randomized controlled trials in South Africa Kenya and Uganda have demonstrated a lower risk of acquiring HIV infection in circumcised men compared to those who remain uncircumcised[x,xi,xii].

The likely biological explanation for the higher levels of sexually transmitted infections, including HIV infection, seen in men who are not circumcised is that the inner mucosal surface of the foreskin is only thinly keratinized[xiii] and is therefore susceptible to minor trauma and abrasions which facilitate entry of pathogens. The area under the foreskin is a warm, moist environment which may enable pathogens to replicate, especially when penile hygiene is poor[xiv]. Circumcision does not guarantee complete protection from any of the infections cited above and is medically indicated as treatment for only a few conditions – most commonly for phimosis.

Male circumcision, as with any surgical procedure, carries a risk of post-operative infection. In inexperienced hands, penile mutilation and even death can occur. The surgery can lead to excessive bleeding, haematoma (the formation of a blood clot under the skin), meatitis (inflammation of the opening of the urethra), and increased sensitivity of the glans penis for the initial months after the procedure. In addition, adverse reactions to the anaesthetic used during the circumcision may occur.

The safety of male circumcision clearly depends on the setting and expertise of the provider. When circumcision is performed in a clinical setting, under aseptic conditions, by well trained, adequately equipped health care personnel the level of risk is low. Among adults the operation is more complex and the complication rates for clinical circumcision are between 2 and 4 per 100 procedures. Few of these complications are serious. Neonatal circumcision is a relatively simple, quick procedure; fewer than 1 in 500 procedures results in complications and these are usually minor.

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Male circumcision for religious or traditional reasons frequently takes place in a non-clinical setting although, in some cultures, an increasing proportion takes place in clinics[xv,xvi]. Circumcisions undertaken in unhygienic conditions by inexperienced providers with inadequate instruments, or with poor after-care, can result in very serious complications, including death. For example, among 50 patients admitted to hospital with post-circumcision complications in Nigeria and Kenya between 1981 and 1988, 80% had been circumcised by unqualified traditional surgeons[xvii].

Action is required to improve male circumcision practices in many regions and to ensure that health care providers and the public have up-to-date information on the health risks as well as the benefits of safe male circumcision. Many boys and men wishing to be circumcised do not have access to safe circumcision services or to post-circumcision care if they suffer from complications. Health authorities need to monitor the practice and to ensure that health-care practitioners are properly trained and licensed to perform the procedure safely.

Since male circumcision has now been shown to be effective in reducing the risk of HIV infection, care must be taken to ensure that men and women understand that the procedure does not provide complete protection against HIV infection. Male circumcision must be considered as just one element of a comprehensive HIV prevention package that includes the correct and consistent use of condoms, reductions in the number of sexual partners, delaying the onset of sexual relations, avoidance of penetrative sex, and testing and counselling to know one's HIV serostatus.

Male circumcision also raises human rights issues, as is generally the case with medical and health procedures. In line with internationally accepted ethical and human rights principles, no surgical intervention should be performed on anyone if it results in adverse outcomes in terms of health or the integrity of the body, and where there is no expectation of health benefit. Nor should any surgical intervention be performed on anyone without informed consent, or the consent of the parents or guardians when a child is not capable of providing consent.

Detailed information on the procedures for male circumcision can be found in the forthcoming *Manual on Male Circumcision under Local Anaesthesia* prepared jointly by WHO, UNAIDS, and JHPIEGO (2007). The manual provides technical guidance on clinical and programmatic approaches to male circumcision in an appropriate human rights framework. It also addresses broader issues of sexual and reproductive health of men and emphasizes that male circumcision must be set within the context of other strategies for reducing the risk of HIV infection.

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