

= Circumcision =

Male circumcision is the removal of the foreskin from the human penis . In the most common procedure , the foreskin is opened , adhesions are removed , and the foreskin is separated from the glans . After that , the circumcision device (if used) is placed , and then the foreskin is removed . Topical or locally injected anesthesia is occasionally used to reduce pain and physiologic stress . For adults and children , general anesthesia is an option , and the procedure may be performed without a specialized circumcision device . The procedure is most often an elective surgery performed on babies and children for religious and cultural reasons . In other cases it may be done as a treatment for a condition or for preventative reasons . Medically , it is a treatment option for problematic cases of phimosis , balanoposthitis that does not resolve with other treatments , and chronic urinary tract infections (UTIs) . It is contraindicated in cases of certain genital structure abnormalities or poor general health .

The positions of the world 's major medical organizations range from considering elective circumcision of babies and children as having no benefit and significant risks to having a modest health benefit that outweighs small risks . No major medical organization recommends either universal circumcision for all males (aside from the recommendations of the World Health Organization (WHO) for areas with high rates of HIV) , or banning the procedure . Ethical and legal questions regarding informed consent and human rights have been raised over the circumcision of babies and children for non @-@ medical reasons , and for that reason the procedure is controversial .

Evidence supports that male circumcision reduces the risk of HIV infection among heterosexual men in sub @-@ Saharan Africa . Therefore , The WHO recommends considering circumcision as part of a comprehensive HIV prevention program in areas with high rates of HIV , such as Sub Saharan Africa . However , evidence for a health benefit against HIV for men who have sex with men is less clear . Additionally , the effectiveness of using circumcision to prevent HIV in the developed world is also unclear . Circumcision in general is associated with reduced rates of cancer causing forms of HPV and risk of both UTIs and cancer of the penis . Prevention of those conditions , however , is not a justification for routine circumcision of infants . Studies of its potential protective effects against other sexually transmitted infections have been unclear . A 2010 review of literature found circumcisions performed by medical providers to have a typical complication rate of 1 @. @ 5 % for babies and 6 % for older children , with few cases of severe complications . Bleeding , infection and the removal of either too much or too little foreskin are the most common complications cited . Complication rates are higher when the procedure is performed by an inexperienced operator , in unsterile conditions , or when the child is at an older age . Circumcision does not appear to have a negative impact on sexual function .

An estimated one @-@ third of males worldwide are circumcised . The procedure is most common in the Muslim world and Israel (where it is near @-@ universal for religious reasons) , the United States , and parts of Southeast Asia and Africa . It is relatively rare in Europe , Latin America , parts of Southern Africa , and most of Asia . The origin of circumcision is not known with certainty ; the oldest documented evidence for it comes from ancient Egypt . Various theories have been proposed as to its origin , including as a religious sacrifice and as a rite of passage marking a boy 's entrance into adulthood . It is part of religious law in Judaism and is an established practice in Islam , Coptic Christianity , and the Ethiopian Orthodox Church . The word circumcision is from Latin circumcidere , meaning " to cut around " .

= = Indications and contraindications = =

= = = Routine or elective = = =

Neonatal circumcision is usually elected by the parents for non @-@ medical reasons , such as religious beliefs or personal preferences , possibly driven by societal norms . Outside the parts of

Africa with high prevalence of HIV / AIDS , the positions of the world 's major medical organizations on non @-@ therapeutic neonatal circumcision range from considering it as having a modest net health benefit that outweighs small risks to viewing it as having no benefit with significant risks for harm . No major medical organization recommends universal neonatal circumcision , and no major medical organization calls for banning it either . The Royal Dutch Medical Association , which expresses some of the strongest opposition to routine neonatal circumcision , does not call for the practice to be made illegal out of their concern that parents who insist on the procedure would turn to poorly trained practitioners instead of medical professionals . This argument to keep the procedure within the purview of medical professionals is found across all major medical organizations . In addition , the organizations advise medical professionals to yield to some degree to parental preferences , which are commonly based upon cultural or religious views , in their decision to agree to circumcise .

Owing to the HIV / AIDS epidemic there , sub @-@ Saharan Africa is a special case . The finding that circumcision significantly reduces female @-@ to @-@ male HIV transmission has prompted medical organizations serving the affected communities to promote circumcision as an additional method of controlling the spread of HIV . The World Health Organization (WHO) and UNAIDS (2007) recommend circumcision as part of a comprehensive program for prevention of HIV transmission in areas with high endemic rates of HIV , as long as the program includes " informed consent , confidentiality , and absence of coercion " .

= = = Medical indications = = =

Circumcision may be used to treat pathological phimosis , refractory balanoposthitis and chronic , recurrent urinary tract infections (UTIs) . The World Health Organization promotes circumcision as a preventive measure for sexually active men in populations at high risk for HIV . Circumcision is also recommended for HIV prevention by the International Antiviral Society @-@ USA for all sexually active heterosexual males and is recommended that it be discussed with MSM who engage in primarily insertive anal sex with other men , especially in areas where HIV is common .

= = = Contraindications = = =

Circumcision is contraindicated in infants with certain genital structure abnormalities , such as a misplaced urethral opening (as in hypospadias and epispadias) , curvature of the head of the penis (chordee) , or ambiguous genitalia , because the foreskin may be needed for reconstructive surgery . Circumcision is contraindicated in premature infants and those who are not clinically stable and in good health . If an individual , child or adult , is known to have or has a family history of serious bleeding disorders (hemophilia) , it is recommended that the blood be checked for normal coagulation properties before the procedure is attempted .

= = Technique = =

The foreskin extends out from the base of the glans and covers the glans when the penis is flaccid . Proposed theories for the purpose of the foreskin are that it serves to protect the penis as the fetus develops in the mother 's womb , that it helps to preserve moisture in the glans , and that it improves sexual pleasure . The foreskin may also be a pathway of infection for certain diseases . Circumcision removes the foreskin at its attachment to the base of the glans .

= = Removal of the foreskin = = =

For infant circumcision , devices such as the Gomco clamp , Plastibell and Mogen clamp are commonly used in the USA . These follow the same basic procedure . First , the amount of foreskin to be removed is estimated . The practitioner opens the foreskin via the preputial orifice to reveal the glans underneath and ensures it is normal before bluntly separating the inner lining of the foreskin (

preputial epithelium) from its attachment to the glans . The practitioner then places the circumcision device (this sometimes requires a dorsal slit) , which remains until blood flow has stopped . Finally , the foreskin is amputated . For adults , circumcision is often performed without clamps , and non @-@ surgical alternatives such as the elastic ring controlled radial compression device or the Shang ring are available .

= = = Pain management = = =

The circumcision procedure causes pain , and for neonates this pain may interfere with mother @-@ infant interaction or cause other behavioral changes , so the use of analgesia is advocated . Ordinary procedural pain may be managed in pharmacological and non @-@ pharmacological ways . Pharmacological methods , such as localized or regional pain @-@ blocking injections and topical analgesic creams , are safe and effective . The ring block and dorsal penile nerve block (DPNB) are the most effective at reducing pain , and the ring block may be more effective than the DPNB . They are more effective than EMLA (eutectic mixture of local anesthetics) cream , which is more effective than a placebo . Topical creams have been found to irritate the skin of low birth weight infants , so penile nerve block techniques are recommended in this group .

For infants , non @-@ pharmacological methods such as the use of a comfortable , padded chair and a sucrose or non @-@ sucrose pacifier are more effective at reducing pain than a placebo , but the American Academy of Pediatrics (AAP) states that such methods are insufficient alone and should be used to supplement more effective techniques . A quicker procedure reduces duration of pain ; use of the Mogen clamp was found to result in a shorter procedure time and less pain @-@ induced stress than the use of the Gomco clamp or the Plastibell . The available evidence does not indicate that post @-@ procedure pain management is needed . For adults , general anesthesia is an option , and the procedure requires four to six weeks of abstinence from masturbation or intercourse to allow the wound to heal .

= = Effects = =

= = = Sexually transmitted diseases = = =

= = = = Human immunodeficiency virus = = = =

There is strong evidence that circumcision reduces the risk of HIV infection in heterosexual men in high @-@ risk populations . Evidence among heterosexual men in sub @-@ Saharan Africa shows an absolute decrease in risk of 1 @. @ 8 % which is a relative decrease of between 38 percent and 66 percent over two years , and in this population studies rate it cost effective . Whether it is of benefit in developed countries is undetermined .

There are plausible explanations based on human biology for how circumcision can decrease the likelihood of female @-@ to @-@ male HIV transmission . The superficial skin layers of the penis contain Langerhans cells , which are targeted by HIV ; removing the foreskin reduces the number of these cells . When an uncircumcised penis is erect during intercourse , any small tears on the inner surface of the foreskin come into direct contact with the vaginal walls , providing a pathway for transmission . When an uncircumcised penis is flaccid , the pocket between the inside of the foreskin and the head of the penis provides an environment conducive to pathogen survival ; circumcision eliminates this pocket . Some experimental evidence has been provided to support these theories .

The WHO and the Joint United Nations Programme on HIV / AIDS (UNAIDS) state that male circumcision is an efficacious intervention for HIV prevention , but should be carried out by well @-@ trained medical professionals and under conditions of informed consent (parents ' consent for their infant boys) . The WHO has judged circumcision to be a cost @-@ effective public health

intervention against the spread of HIV in Africa , although not necessarily more cost @-@ effective than condoms . The joint WHO / UNAIDS recommendation also notes that circumcision only provides partial protection from HIV and should not replace known methods of HIV prevention .

The available evidence does not indicate that circumcision provides HIV protection for heterosexual women . Data is lacking regarding the effect circumcision may have on the transmission rate of men who engage in anal sex with a female partner . It is undetermined whether circumcision benefits men who have sex with men .

= = = Human papillomavirus = = =

Human papillomavirus (HPV) is the most commonly transmitted sexually transmitted infection , affecting both men and women . While most infections are asymptomatic and are cleared by the immune system , some types of the virus cause genital warts , and other types , if untreated , cause various forms of cancer , including cervical cancer and penile cancer . Genital warts and cervical cancer are the two most common problems resulting from HPV .

Circumcision is associated with a reduced prevalence of oncogenic types of HPV infection , meaning that a randomly selected circumcised man is less likely to be found infected with cancer @-@ causing types of HPV than an uncircumcised man . It also decreases the likelihood of multiple infections . No strong evidence indicates that it reduces the rate of new HPV infection , but the procedure is associated with increased clearance of the virus by the body , which can account for the finding of reduced prevalence .

Although genital warts are caused by a type of HPV , there is no statistically significant relationship between being circumcised and the presence of genital warts .

= = = Other infections = = =

Studies evaluating the effect of circumcision on the incidence of other sexually transmitted infections have reached conflicting conclusions . A 2006 meta @-@ analysis found that circumcision was associated with lower rates of syphilis , chancroid and possibly genital herpes . A 2010 review found that circumcision reduced the incidence of HSV @-@ 2 (herpes simplex virus , type 2) infections by 28 % . The researchers found mixed results for protection against trichomonas vaginalis and chlamydia trachomatis and no evidence of protection against gonorrhea or syphilis . Among men who have sex with men , reviews have found poor evidence for protection against sexually transmitted infections other than HIV , with the possible exception of syphilis .

= = = Phimosis , balanitis and balanoposthitis = = =

Phimosis is the inability to retract the foreskin over the glans penis . At birth , the foreskin cannot be retracted due to adhesions between the foreskin and glans , and this is considered normal (physiological phimosis) . Over time the foreskin naturally separates from the glans , and a majority of boys are able to retract the foreskin by age three . Less than one percent are still having problems at age 18 . If the inability to do so becomes problematic (pathological phimosis) circumcision is a treatment option . This pathological phimosis may be due to scarring from the skin disease balanitis xerotica obliterans (BXO) , repeated episodes of balanoposthitis or forced retraction of the foreskin . Steroid creams are also a reasonable option and may prevent the need for surgery including in those with mild BXO . The procedure may also be used to prevent the development of phimosis . Phimosis is also a complication that can result from circumcision .

An inflammation of the glans penis and foreskin is called balanoposthitis , and the condition affecting the glans alone is called balanitis . Most cases of these conditions occur in uncircumcised males , affecting 4 ? 11 % of that group . The moist , warm space underneath the foreskin is thought to facilitate the growth of pathogens , particularly when hygiene is poor . Yeasts , especially *Candida albicans* , are the most common penile infection and are rarely identified in samples taken from circumcised males . Both conditions are usually treated with topical antibiotics (metronidazole

cream) and antifungals (clotrimazole cream) or low @-@ potency steroid creams . Circumcision is a treatment option for refractory or recurrent balanoposthitis , but in recent years the availability of the other treatments have made it less necessary .

== Urinary tract infections ==

A UTI affects parts of the urinary system including the urethra , bladder , and kidneys . There is about a one percent risk of UTIs in boys under two years of age , and the majority of incidents occur in the first year of life . There is good but not ideal evidence that circumcision reduces the incidence of UTIs in boys under two years of age , and there is fair evidence that the reduction in incidence is by a factor of 3 ? 10 times . Prevention of UTIs does not justify routine use of the procedure , however . Circumcision is most likely to benefit boys who have a high risk of UTIs due to anatomical defects , and may be used to treat recurrent UTIs .

There is a plausible biological explanation for the reduction in UTI risk after circumcision . The orifice through which urine passes at the tip of the penis (the urinary meatus) hosts more urinary system disease @-@ causing bacteria in uncircumcised boys than in circumcised boys , especially in those under six months of age . As these bacteria are a risk factor for UTIs , circumcision may reduce the risk of UTIs through a decrease in the bacteria population .

== Cancers ==

Circumcision has a protective effect against the risks of penile cancer in men , and cervical cancer in the female sexual partners of heterosexual men . Penile cancer is rare , with about 1 new case per 100 @,@ 000 people per year in developed countries , and higher incidence rates per 100 @,@ 000 in sub @-@ Saharan Africa (for example , 1 @.@ 6 in Zimbabwe , 2 @.@ 7 in Uganda and 3 @.@ 2 in Swaziland) . Penile cancer development can be detected in the carcinoma in situ (CIS) cancerous precursor stage and at the more advanced invasive squamous cell carcinoma stage . Childhood or adolescent circumcision is associated with a reduced risk of invasive squamous cell carcinoma in particular . There is an association between adult circumcision and an increased risk of invasive penile cancer ; this is believed to be from men being circumcised as a treatment for penile cancer or a condition that is a precursor to cancer rather than a consequence of circumcision itself . Penile cancer has been observed to be nearly eliminated in populations of males circumcised neonatally .

Important risk factors for penile cancer include phimosis and HPV infection , both of which are mitigated by circumcision . The mitigating effect circumcision has on the risk factor introduced by the possibility of phimosis is secondary , in that the removal of the foreskin eliminates the possibility of phimosis . This can be inferred from study results that show uncircumcised men with no history of phimosis are equally likely to have penile cancer as circumcised men . Circumcision is also associated with a reduced prevalence of cancer @-@ causing types of HPV in men and a reduced risk of cervical cancer (which is caused by a type of HPV) in female partners of men . Because penile cancer is rare (and may get more rare with increasing HPV vaccination rates) , and circumcision has risks , the practice is not considered to be valuable solely as a prophylactic measure against penile cancer in the United States .

A 2015 meta @-@ analysis found a non @-@ statistically significant reduced risk of prostate cancer associated with circumcision , but that this reduction was significant among blacks and in studies looking at post @-@ PSA and -testing groups .

== Adverse effects ==

Neonatal circumcision is generally safe when done by an experienced practitioner . The most common acute complications are bleeding , infection and the removal of either too much or too little foreskin . These complications occur in approximately 0 @.@ 12 % of procedures , and constitute the vast majority of all acute circumcision complications in the United States . Minor complications

are reported to occur in three percent of procedures . Severe complications are rare . A specific complication rate is difficult to determine due to scant data on complications and inconsistencies in their classification . Complication rates are greater when the procedure is performed by an inexperienced operator , in unsterile conditions , or when the child is at an older age . Significant acute complications happen rarely , occurring in about 1 in 500 newborn procedures in the United States . Severe to catastrophic complications , including death , are so rare that they are reported only as individual case reports . Other possible complications include buried penis , chordee , phimosis , skin bridges , urethral fistulas , and meatal stenosis . These complications may be avoided with proper technique , and are most often treatable without requiring a hospital visit .

= = = Pain = = =

The circumcision procedure may carry the risks of heightened pain response for newborns and dissatisfaction with the result . Newborns that experience pain due to being circumcised have different responses to vaccines given afterwards , with higher pain scores observed .

= = = Sexual effects = = =

Circumcision does not appear to decrease the sensitivity of the penis , harm sexual function or reduce sexual satisfaction . A 2013 systematic review found that circumcision did not appear to adversely affect sexual desire , pain with intercourse , premature ejaculation , time until ejaculation , erectile dysfunction or difficulties with orgasm . However , the study found that the existing evidence is not very good . Another 2013 systematic review found that the highest @-@ quality studies reported no adverse effects of circumcision on sexual function , sensitivity , sensation or satisfaction .

= = = Psychological effects = = =

Behavioral effects have been observed following infant circumcision including changes in sleep patterns , irritability , changes in feeding , and parental bonding . Some men who were circumcised as an infant involuntary , described their feelings about the procedure using the terms " violation , torture , mutilation and sexual assault " .

= = Prevalence = =

Circumcision is one of the world 's most widely performed procedures . Approximately 37 % to 39 % of males worldwide are circumcised , about half for religious or cultural reasons . It is most often practiced between infancy and the early twenties . The WHO estimated in 2007 that 664 @, @ 500 @, @ 000 males aged 15 and over were circumcised (30 ? 33 % global prevalence) , almost 70 % of whom were Muslim . Circumcision is most prevalent in the Muslim world , Israel , South Korea , the United States and parts of Southeast Asia and Africa . It is relatively rare in Europe , Latin America , parts of Southern Africa and Oceania and most of Asia . Prevalence is near @-@ universal in the Middle East and Central Asia . Non @-@ religious circumcision in Asia , outside of the Republic of Korea and the Philippines , is fairly rare , and prevalence is generally low (less than 20 %) across Europe . Estimates for individual countries include Taiwan at 9 % and Australia 58 @. @ 7 % . Prevalence in the United States and Canada is estimated at 75 % and 30 % respectively . Prevalence in Africa varies from less than 20 % in some southern African countries to near universal in North and West Africa .

The rates of routine neonatal circumcision over time have varied significantly by country . In the United States , hospital discharge surveys estimated rates at 64 @. @ 7 % in the year 1980 , 59 @. @ 0 % in the year 1990 , 62 @. @ 4 % in the year 2000 , and 58 @. @ 3 % in the year 2010 . These estimates are lower than the overall circumcision rates , as they do not account for non @-@ hospital circumcisions , or for procedures performed for medical or cosmetic reasons later in life ;

community surveys have reported higher neonatal circumcision . Canada has seen a slow decline since the early 1970s , possibly influenced by statements from the AAP and the Canadian Pediatric Society issued in the 1970s saying that the procedure was not medically indicated . In Australia , the rate declined in the 1970s and 80s , but has been increasing slowly as of 2004 . In the United Kingdom , rates are likely to have been 20 ? 30 % in the 1940s , but declined in the late 40s . One possible reason may have been a 1949 British Medical Journal article which stated that there was no medical reason for the general circumcision of babies . The overall prevalence of circumcision in South Korea has increased markedly in the second half of the 20th century , rising from near zero around 1950 to about 60 % in 2000 , with the most significant jumps in the last two decades of that time period . This is probably due to the influence of the United States , which established a trusteeship for the country following World War II .

Medical organizations can affect the neonatal circumcision rate of a country by influencing whether the costs of the procedure are borne by the parents or are covered by insurance or a national health care system . Policies that require the costs to be paid by the parents yield lower neonatal circumcision rates . The decline in the rates in the UK is one example ; another is that in the United States , the individual states where insurance or Medicaid covers the costs have higher rates . Changes to policy are driven by the results of new research , and moderated by the politics , demographics , and culture of the communities .

= = History = =

Circumcision is the world 's oldest planned surgical procedure , suggested by anatomist and hyperdiffusionist historian Grafton Elliot Smith to be over 15 @,@ 000 years old , pre @-@ dating recorded history . There is no firm consensus as to how it came to be practiced worldwide . One theory is that it began in one geographic area and spread from there ; another is that several different cultural groups began its practice independently . In his 1891 work History of Circumcision , physician Peter Charles Remondino suggested that it began as a less severe form of emasculating a captured enemy : penectomy or castration would likely have been fatal , while some form of circumcision would permanently mark the defeated yet leave him alive to serve as a slave .

The history of the migration and evolution of the practice of circumcision is followed mainly through the cultures and peoples in two separate regions . In the lands south and east of the Mediterranean , starting with Sudan and Ethiopia , the procedure was practiced by the ancient Egyptians and the Semites , and then by the Jews and Muslims , with whom the practice travelled to and was adopted by the Bantu Africans . In Oceania , circumcision is practiced by the Australian Aborigines and Polynesians . There is also evidence that circumcision was practiced among the Aztec and Mayan civilizations in the Americas , but little detail is available about its history .

= = = Middle East , Africa and Europe = = =

Evidence suggests that circumcision was practiced in the Arabian Peninsula by the 4th millennium BCE , when the Sumerians and the Semites moved into the area that is modern @-@ day Iraq . The earliest historical record of circumcision comes from Egypt , in the form of an image of the circumcision of an adult carved into the tomb of Ankh @-@ Mahor at Saqqara , dating to about 2400 ? 2300 BCE . Circumcision was done by the Egyptians possibly for hygienic reasons , but also was part of their obsession with purity and was associated with spiritual and intellectual development . No well @-@ accepted theory explains the significance of circumcision to the Egyptians , but it appears to have been endowed with great honor and importance as a rite of passage into adulthood , performed in a public ceremony emphasizing the continuation of family generations and fertility . It may have been a mark of distinction for the elite : the Egyptian Book of the Dead describes the sun god Ra as having circumcised himself .

Though secular scholars consider the story to be literary and not historical , circumcision features prominently in the Hebrew Bible . The narrative in Genesis chapter 17 describes the circumcision of Abraham and his relatives and slaves . In the same chapter , Abraham 's descendants are

commanded to circumcise their sons on the eighth day of life as part of a covenant with God .

In addition to proposing that circumcision was taken up by the Israelites purely as a religious mandate , scholars have suggested that Judaism 's patriarchs and their followers adopted circumcision to make penile hygiene easier in hot , sandy climates ; as a rite of passage into adulthood ; or as a form of blood sacrifice .

Alexander the Great conquered the Middle East in the 4th century BCE , and in the following centuries ancient Greek cultures and values came to the Middle East . The Greeks abhorred circumcision , making life for circumcised Jews living among the Greeks (and later the Romans) very difficult . Antiochus Epiphanes outlawed circumcision , as did Hadrian , which helped cause the Bar Kokhba revolt . During this period in history , Jewish circumcision called for the removal of only a part of the prepuce , and some Hellenized Jews attempted to look uncircumcised by stretching the extant parts of their foreskins . This was considered by the Jewish leaders to be a serious problem , and during the 2nd century CE they changed the requirements of Jewish circumcision to call for the complete removal of the foreskin , emphasizing the Jewish view of circumcision as intended to be not just the fulfillment of a Biblical commandment but also an essential and permanent mark of membership in a people .

A narrative in the Christian Gospel of Luke makes a brief mention of the circumcision of Jesus , but the subject of physical circumcision itself is not part of the received teachings of Jesus . Paul the Apostle reinterpreted circumcision as a spiritual concept , arguing the physical one to be no longer necessary . The teaching that physical circumcision was unnecessary for membership in a divine covenant was instrumental in the separation of Christianity from Judaism . Although it is not explicitly mentioned in the Quran (early 7th century CE) , circumcision is considered essential to Islam , and it is nearly universally performed among Muslims . The practice of circumcision spread across the Middle East , North Africa and Southern Europe with Islam .

Genghis Khan , and the following Yuan Emperors in China forbade Islamic practices such as halal butchering and circumcision . This led Chinese Muslims to eventually take an active part in rebelling against the Mongols and installing the more tolerant Ming Dynasty .

The practice of circumcision is thought to have been brought to the Bantu @-@ speaking tribes of Africa by either the Jews after one of their many expulsions from European countries , or by Muslim Moors escaping after the 1492 conquest of Spain . In the second half of the 1st millennium CE , inhabitants from the North East of Africa moved south and encountered groups from Arabia , the Middle East and West Africa . These people moved south and formed what is known today as the Bantu . Bantu tribes were observed to be upholding what was described as Jewish law , including circumcision , in the 16th century . Circumcision and elements of Jewish dietary restrictions are still found among Bantu tribes .

= = = Indigenous peoples of Australia , the Pacific and Americas = = =

Circumcision is practised by some groups amongst Australian Aboriginal peoples , Polynesians , and Native Americans . Little information is available about the origins and history of circumcision among these peoples , compared to circumcision in the Middle East .

For Aboriginal Australians and Polynesians , circumcision likely started as a blood sacrifice and a test of bravery , and became an initiation rite with attendant instruction in manhood in more recent centuries . Often seashells were used to remove the foreskin , and the bleeding was stopped with eucalyptus smoke .

Christopher Columbus reported circumcision being practiced by Native Americans . It was also practiced by the Incas , Aztecs , and Mayans . It probably started among South American tribes as a blood sacrifice or ritual mutilation to test bravery and endurance , and its use later evolved into a rite of initiation .

= = = Modern times = = =

Circumcision did not become a common medical procedure in the Anglophone world until the late

19th century . At that time , British and American doctors began recommending it primarily as a deterrent to masturbation . Prior to the 20th century , masturbation was believed to be the cause of a wide range of physical and mental illnesses including epilepsy , paralysis , impotence , gonorrhea , tuberculosis , feeble-mindedness , and insanity . In 1855 , motivated in part by an interest in promoting circumcision to reduce masturbation , English physician Jonathan Hutchinson published his findings that Jews had a lower prevalence of certain venereal diseases . While pursuing a successful career as a general practitioner , Hutchinson went on to advocate circumcision for health reasons for the next fifty years , and eventually earned a knighthood for his overall contributions to medicine . In America , one of the first modern physicians to advocate the procedure was Lewis Sayre , a founder of the American Medical Association . In 1870 , Sayre began using circumcision as a purported cure for several cases of young boys diagnosed with paralysis or significant motor problems . He thought the procedure ameliorated such problems based on a " reflex neurosis " theory of disease , which held that excessive stimulation of the genitals was a disturbance to the equilibrium of the nervous system and a cause of systemic problems . The use of circumcision to promote good health also fit in with the germ theory of disease during that time , which saw the foreskin as being filled with infection @-@ causing smegma (a mixture of shed skin cells and oils) . Sayre published works on the subject and promoted it energetically in speeches . Contemporary physicians picked up on Sayre 's new treatment , which they believed could prevent or cure a wide @-@ ranging array of medical problems and social ills . Its popularity spread with publications such as Peter Charles Remondino 's History of Circumcision . By the turn of the century , in both America and Great Britain , infant circumcision was near universally recommended .

After the end of World War II , Britain moved to a nationalized health care system , and so looked to ensure that each medical procedure covered by the new system was cost @-@ effective and the procedure for non medical reasons was not covered by the national health care system . Douglas Gairdner 's 1949 article " The Fate of the Foreskin " argued that the evidence available at that time showed that the risks outweighed the known benefits . Circumcision rates dropped in Britain and in the rest of Europe . In the 1970s , national medical associations in Australia and Canada issued recommendations against routine infant circumcision , leading to drops in the rates of both of those countries . The United States made similar statements in the 1970s , but stopped short of recommending against it ? simply stating that it has no medical benefit . Since then they have amended their policy statements several times with the current recommendation being that the benefits outweigh the risks , but they do not recommend it routinely .

An association between circumcision and reduced heterosexual HIV infection rates was suggested in 1986 . Experimental evidence was needed to establish a causal relationship , so three randomized controlled trials were commissioned as a means to reduce the effect of any confounding factors . Trials took place in South Africa , Kenya and Uganda . All three trials were stopped early by their monitoring boards on ethical grounds , because those in the circumcised group had a lower rate of HIV contraction than the control group . Subsequently , the World Health Organization promoted circumcision in high @-@ risk populations as part of an overall program to reduce the spread of HIV , although some have challenged the validity of the African randomized controlled trials , prompting a number of researchers to question the effectiveness of circumcision as an HIV prevention strategy . The Male Circumcision Clearinghouse website was formed in 2009 by WHO , UNAIDS , FHI and AVAC to provide current evidence @-@ based guidance , information and resources to support the delivery of safe male circumcision services in countries that choose to scale up the procedure as one component of comprehensive HIV prevention services .

= = Society and culture = =

= = = Cultures and religions = = =

In some cultures , males are generally required to be circumcised shortly after birth , during childhood or around puberty as part of a rite of passage . Circumcision is commonly practiced in the

Jewish and Islamic faiths .

===== Judaism =====

Circumcision is very important to most branches of Judaism , with over 90 % of adherents having the procedure performed as a religious obligation . The basis for its observance is found in the Torah of the Hebrew Bible , in Genesis chapter 17 , in which a covenant of circumcision is made with Abraham and his descendants . Jewish circumcision is part of the brit milah ritual , to be performed by a specialist ritual circumciser (a mohel) on the eighth day of a newborn son 's life (with certain exceptions for poor health) . Jewish law requires that the circumcision leave the glans bare when the penis is flaccid . Converts to Conservative and Orthodox Judaism must also be circumcised ; those who are already circumcised undergo a symbolic circumcision ritual . Circumcision is not required by Judaism for one to be considered Jewish , but some adherents foresee serious negative spiritual consequences if it is neglected .

According to traditional Jewish law , in the absence of a grown free Jewish male expert , a woman , a slave , or a child , that has the required skills , is also authorized to perform the circumcision , provided that she or he is Jewish . However , most streams of non @-@ Orthodox Judaism allow female mohels , called mohalot (Hebrew : ????????? , plural of ????????? mohelet , feminine of mohel) , without restriction . In 1984 , Deborah Cohen became the first certified Reform mohelet ; she was certified by the Berit Mila program of Reform Judaism .

Some contemporary Jews choose not to circumcise their sons . They are assisted by a small number of Reform and Reconstructionist rabbis , and have developed a welcoming ceremony that they call the brit shalom (" Covenant [of] Peace ") for such children , also accepted by Humanistic Judaism .

This ceremony of brit shalom is not officially approved of by the Reform or Reconstructionist rabbinical organizations , who make the recommendation that male infants should be circumcised , though the issue of converts remains controversial and circumcision of converts is not mandatory in either movement .

===== Islam =====

Although there is some debate within Islam over whether it is a religious requirement , circumcision (called khitan) is practiced nearly universally by Muslim males . Islam bases its practice of circumcision on the Genesis 17 narrative , the same Biblical chapter referred to by Jews . The procedure is not explicitly mentioned in the Quran , however it is a tradition established by Islam 's prophet Muhammad directly (following Abraham) , and so its practice is considered a sunnah (prophet 's tradition) and is very important in Islam . For Muslims , circumcision is also a matter of cleanliness , purification and control over one 's baser self (nafs) . There is no agreement across the many Islamic communities about the age at which circumcision should be performed . It may be done from soon after birth up to about age 15 ; most often it is performed at around six to seven years of age . The timing can correspond with the boy 's completion of his recitation of the whole Quran , with a coming @-@ of @-@ age event such as taking on the responsibility of daily prayer or betrothal . Circumcision may be celebrated with an associated family or community event . Circumcision is recommended for , but is not required of , converts to Islam .

===== Christianity =====

The New Testament chapter Acts 15 records that Christianity does not require circumcision ; Christianity does not forbid it either . The Catholic Church currently maintains a neutral position on the practice of non @-@ religious circumcision , although in 1442 it banned the practice of religious circumcision in the 11th Council of Florence . Coptic Christians practice circumcision as a rite of passage . The Ethiopian Orthodox Church calls for circumcision , with near @-@ universal prevalence among Orthodox men in Ethiopia . In South Africa , some Christian churches disapprove

of the practice , while others require it of their members .

== = = African cultures == = =

Certain African cultural groups , such as the Yoruba and Igbo of Nigeria , customarily circumcise their infant sons . The procedure is also practiced by some cultural groups or individual family lines in the Sudan , Zaire , Uganda and in southern Africa . For some of these groups , circumcision appears to be purely cultural , done with no particular religious significance or intention to distinguish members of a group . For others , circumcision might be done for purification , or it may be interpreted as a mark of subjugation . Among these groups , even when circumcision is done for reasons of tradition , it is often done in hospitals . It is not clear how many deaths and injuries result from traditional circumcisions which occur outside of hospitals .

== = = Australian cultures == = =

Some Australian Aborigines use circumcision as a test of bravery and self @-@ control as a part of a rite of passage into manhood , which results in full societal and ceremonial membership . It may be accompanied by body scarification and the removal of teeth , and may be followed later by penile subincision . Circumcision is one of many trials and ceremonies required before a youth is considered to have become knowledgeable enough to maintain and pass on the cultural traditions . During these trials , the maturing youth bonds in solidarity with the men . Circumcision is also strongly associated with a man 's family , and it is part of the process required to prepare a man to take a wife and produce his own family .

== = Filipino culture == =

In the Philippines , circumcision known as " tuli " is sometimes viewed as a rite of passage . About 93 % of Filipino men are circumcised .

== = Ethical and legal issues == =

There is a long @-@ running and vigorous debate over ethical concerns regarding circumcision , particularly neonatal circumcision for reasons other than intended direct medical benefit . There are three parties involved in the decision to circumcise a minor : the minor as the patient , the parents (or other guardians) and the physician . The physician is bound under the ethical principles of beneficence (promoting well @-@ being) and non @-@ maleficence (" first , do no harm ") , and so is charged with the responsibility to promote the best interests of the patient while minimizing unnecessary harms . Those involved must weigh the factors of what is in the best interest of the minor against the potential harms of the procedure .

With a newborn involved , the decision is made more complex due to the principles of respect for autonomy and consent , as a newborn cannot understand or engage in a logical discussion of his own values and best interests . A mentally more mature child can understand the issues involved to some degree , and the physician and parents may elicit input from the child and weigh it appropriately in the decision @-@ making process , although the law may not treat such input as legally informative . Ethicists and legal theorists also state that it is questionable for parents to make a decision for the child that precludes the child from making a different decision for himself later . Such a question can be raised for the decision by the parents either to circumcise or not to circumcise the child .

Generally , circumcision on a minor is not ethically controversial or legally questionable when there is a clear and pressing medical indication for which it is the accepted best practice to resolve . Where circumcision is the chosen intervention , the physician has an ethical responsibility to ensure the procedure is performed competently and safely to minimize potential harms . Worldwide , most legal jurisdictions do not have specific laws concerning the circumcision of males , but infant

circumcision is considered legal under the existing laws in countries such as Australia , Canada , New Zealand , the United Kingdom , and the United States . A few countries have passed legislation on the procedure : Germany allows non @-@ therapeutic circumcision , while routine neonatal circumcision is illegal in Finland , and non @-@ religious routine circumcision is illegal in South Africa and Sweden .

Throughout society , circumcision is often considered for reasons other than medical need . Public health advocates of circumcision consider it to have a net benefit , and therefore feel that increasing the circumcision rate is an ethical imperative . They recommend performing the procedure during the neonatal period , when it is less expensive and has a lower risk of complications . While studies show there is a modest epidemiological benefit to circumcision , critics argue that the number of circumcisions that would have be performed would yield an overall negative public health outcome due to the resulting number of complications or other negative effects (such as pain) . Pinto (2012) writes " sober proponents and detractors of circumcision agree that there is no overwhelming medical evidence to support either side . " This type of cost @-@ benefit analysis is highly dependent on the kinds and frequencies of health problems in the population under discussion and how circumcision affects those health problems .

Parents are assumed to have the child 's best interests in mind . Ethically , it is imperative that the medical practitioner inform the parents about the benefits and risks of the procedure and obtain informed consent before performing it . Practically , however , many parents come to a decision about circumcising the child before he is born , and a discussion of the benefits and risks of the procedure with a physician has not been shown to have a significant effect on the decision . Some parents request to have their newborn or older child circumcised for non @-@ therapeutic reasons , such as the parents ' desires to adhere to family tradition , cultural norms or religious beliefs . In considering such a request , the physician may consider (in addition to any potential medical benefits and harms) such non @-@ medical factors in determining the child 's best interests and may ethically perform the procedure . Equally , without a clear medical benefit relative to the potential harms , a physician may take the ethical position that non @-@ medical factors do not contribute enough as benefits to outweigh the potential harms and refuse to perform the procedure . Medical organization such as the British Medical Association state that their member physicians are not obliged to perform the procedure in such situations .

The German Academy for Pediatric and Adolescent Medicine (Deutsche Akademie für Kinder- und Jugendmedizin e.V. , DAKJ) recommend against routine non @-@ medical infant circumcision .

== Economic considerations ==

The cost @-@ effectiveness of circumcision has been studied to determine whether a policy of circumcising all newborns or a policy of promoting and providing inexpensive or free access to circumcision for all adult men who choose it would result in lower overall societal healthcare costs . As HIV / AIDS is an incurable disease that is expensive to manage , significant effort has been spent studying the cost @-@ effectiveness of circumcision to reduce its spread in parts of Africa that have a relatively high infection rate and low circumcision prevalence . Several analyses have concluded that circumcision programs for adult men in Africa are cost @-@ effective and in some cases are cost @-@ saving . In Rwanda , circumcision has been found to be cost @-@ effective across a wide range of age groups from newborn to adult , with the greatest savings achieved when the procedure is performed in the newborn period due to the lower cost per procedure and greater timeframe for HIV infection protection . Circumcision for the prevention of HIV transmission in adults has also been found to be cost @-@ effective in South Africa , Kenya and Uganda , with cost savings estimated in the billions of US dollars over 20 years . Hankins et al . (2011) estimated that a \$ 1 @. @ 5 billion investment in circumcision for adults in 13 high @-@ priority African countries would yield \$ 16 @. @ 5 billion in savings .

The overall cost @-@ effectiveness of neonatal circumcision has also been studied in the United States , which has a different cost setting from Africa in areas such as public health infrastructure , availability of medications , and medical technology and the willingness to use it . A study by the

CDC suggests that newborn circumcision would be societally cost @-@ effective in the United States based on circumcision 's efficacy against the heterosexual transmission of HIV alone , without considering any other cost benefits . The American Academy of Pediatrics (2012) recommends that neonatal circumcision in the United States be covered by third @-@ party payers such as Medicaid and insurance . A 2014 review that considered reported benefits of circumcision such as reduced risks from HIV , HPV , and HSV @-@ 2 stated that circumcision is cost effective in both the United States and Africa and may result in health care savings . However , A 2014 literature review found that there are significant gaps in the current literature on male and female sexual health that need to be addressed for the literature to be applicable to North American populations .