

International Coalition for Genital Integrity

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We recognize the inherent right of all human beings to an intact body. Without sexual, racial, or religious prejudice, we affirm this basic human right.

Position Paper on Neonatal Circumcision and Genital Integrity

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Introduction

Over the past twenty-five years, the incidence of non-medically indicated newborn male circumcisions in the United States has dropped 35 percent, as emerging evidence of minimal therapeutic benefits has placed this previously routine practice under increasing scrutiny. New studies suggesting useful roles for the prepuce are likely to further reduce the US circumcision rates.

In view of the current evidence, the ICGI recommends that physicians discuss with all new parents the pain and potential harms of circumcision in order to discourage its routine use.

Epidemiology

Neonatal circumcision is an elective procedure, 1 and the United States is alone in the world with its high rate of non-religious, infant circumcision. 2 Along with the rise in hospital births, the rate of infant, non-therapeutic circumcision in the United States began to rapidly increase prior to World War II—from 34 percent in 1932 to 64 percent in 1942. 3 By 1960, over 80 percent of infant boys were being circumcised shortly after birth reaching a high of 85 percent in 1979. 4 In the early 80s the rate began decreasing, with 57 percent of newborn males circumcised in US hospitals in 2005, ranging from 78 percent in the Midwest to 31 percent in the Western states. 5

Elective non-therapeutic neonatal circumcision surgery is uncommon in non-English-speaking nations. Within most English-speaking nations, the rates have declined in recent decades. For example, Canada's rate declined from 48 percent in 1962⁷ to 9 percent in 2005, Australia's from 69 percent in the 1960s to 13 percent in 2006¹⁰ and New Zealand's from about 95 percent in the 1940s to less than one percent in 1995. The United Kingdom's incidence dropped abruptly after World War II to 0.4%, and continues to be reported as negligible.

English-speaking countries, including Australia, Canada, ¹⁴ New Zealand, and Great Britain, ¹⁵ which formerly covered circumcision with their national health plans have either phased it out or are in the process of doing so. Parents are less likely to choose circumcision when it is not covered by insurance. ^{16,17,18}

Post-neonatal circumcision is rarely performed in the United States; it is estimated that less than one percent of boys require post-neonatal circumcision for medical indications.¹⁹

The Prepuce

The prepuce has been found to be much more complex, functional, and sexually significant than previously thought. The male prepuce (foreskin) is a specialized tissue structure composed of muscle, nerves, blood vessels, dermis, and mucosa. ²⁰

The prepuce is a continuation of the shaft skin of the penis to a distal point at which it folds inward upon itself and continues proximally to the coronal sulcus of the glans penis, where it is attached. Blood flow and nerves proceed from both attachments. The outer epithelium is keratinized but the inner surface is mucosal, with the mucocutaneous boundary occurring just inside the preputial orifice. The prepuce is tethered to the penis on the ventral aspect by the highly innervated frenulum—one of the most sensitive parts of the penis.²¹

Penile skin, including the prepuce, is not attached to the underlying tissue and is free to glide smoothly and axially. This *gliding action* facilitates vaginal intromission by reducing friction and preventing loss of vaginal lubricants. The one-way valve action, inherent in the shape of a circumcised glans, removes lubricants from the vaginal walls on the outstroke.²³

The prepuce includes a sheath of muscle tissue that is a continuation of the dartos muscle—smooth muscle with elastic fibers²⁴—and is sometimes called the *peripenic* muscle.²⁵ The peripenic muscle keeps the prepuce tight around the tip of the glans by forming a whorl at

the orifice.²⁶ The foreskin contains an estimated 240 feet of nerves, including branches of the dorsal nerve and perineal nerve, encapsulated Vater-Pacinian cells, Merkel's cells, nocioceptors, numerous specialized erotogenic nerve endings of several types, and thousands of coiled fine-touch mechanoreceptors called Meissner's corpuscles—one of the most important sensory components of the penis.²⁷ In contrast, the glans penis is comparatively insensitive.²⁸

The *foreskin lips* (distal prepuce) are the most sensitive portions of the penis, while the glans is the least sensitive.²⁹ Just inside the tip of the prepuce, near the mucocutaneous boundary, is the *ridged band*.^{30,31} This highly vascularized area of ridged mucosa incorporates Meissner corpuscles at the ridge's apexes.^{32,33} The most sensitive portions of the penis—distal prepuce, ridged band, inner prepuce, and frenulum—are routinely removed by circumcision, reducing its sensitivity seventy-five percent.³⁴

The prepuce has hygienic and immunological functions, a sphincter action of the preputial orifice that keeps contaminants away from the urethra, and a rich blood supply for providing ample leukocytes to prevent infection. ³⁵

The foreskin at birth might be much longer than the immature penile shaft. This *apparent* excess length is not "redundant," and, in most males, it resolves during puberty.

In summary, the prepuce is the most sexually sensitive part of the penis, and unless indicated, the prepuce should be retained.

Limited Benefits of Circumcision

The claimed benefits from circumcision are generally prophylactic including prevention of urinary tract infections, cervical cancer in the female sexual partner, penile cancer, and sexually transmitted diseases in adult life. However, studies do not support the benefits from circumcision as being universal or cost-effective.

Urinary tract infections (UTIs). In the 1980s, male circumcision was hypothesized to

prevent UTIs.³⁶ UTIs in young males are not common (5.6 per 1000 person-years) and the difference between genitally intact and circumcised boys is much less than previously thought; 195 circumcisions would be needed to prevent one hospital admission for UTI before age 1.³⁷

Male infants account for 75 percent of urinary tract infections (UTIs) among infants less than 3 months of age, and comprise 11 percent of UTIs in infants between 3 to 8 months of age.³⁸ One study reviewed a 5-year period of US military hospital records and found that 0.14 percent of 80,274 circumcised infants and 1.4 percent of 27,319 uncircumcised infants developed a UTI.³⁹ Although an uncircumcised infant has been estimated to have 3 to 20 times the risk of developing a UTI compared to a circumcised infant, the absolute risk increase is about 1 percent.⁴⁰

A 2005 systematic review found that prevention of UTIs does not support circumcision of boys and recommended circumcision only for boys who are at high risk of a UTI.⁴¹

Concern that UTIs might lead to end stage renal disease (ESRD)⁴² appears to be ill-founded, since only one case in which a UTI might have been a contributing factor was found among 102 children with ESRD, ⁴³ and other studies found UTIs to rarely be a contributing factor. ^{44,45,46} If effective at preventing UTIs, one-half million circumcisions would be necessary to prevent one case of ESRD. ⁴⁷

All of the studies reviewed failed to control for forced foreskin retractions, which causes skin tearing, ^{48,49} and disables the foreskin's natural protective function of sealing the meatus, urethra, and glans from pathogens. ^{50,51,52} Unless controlled for, researchers cannot know if they are measuring UTIs being caused from the lack of circumcision or from other causes.

Although the incidence of neonatal circumcision has declined significantly in certain nations, no increase in UTI has been reported. Proper hygiene⁵³ and breastfeeding are

recommended methods of reducing risk of UTIs in infants. ^{54,55} Administering antibiotics, the standard of care for girls, should be extended to boys rather than attempting prophylaxis via circumcision.

Penile cancer. The lifetime risk of penile cancer for men in the United States is presently 1 in 1735. While it was once believed that circumcision prevented penile cancer, later studies have shown that the presence of a normal intact foreskin is not a risk factor for penile cancer.

Penile cancer is a rare disease occurring mostly in elderly men. In 1932, male circumcision was claimed to prevent penile cancer, ⁵⁷ however protection was not complete, as penile cancer still occurs in circumcised men. ^{58,59} Infection of human DNA with human papilloma virus DNA appears to be the causative factor for penile cancer in about half of the cases. ^{60,61} The most consistently found risk factors are smoking ^{62,63,64,65,66} and patho–logical phimosis (non-retractile foreskin) in sexually active adult males. ^{67,68,69,70,71,72,73,74,75,76,77,78,79}, ^{80,81,82,83,84,85,86,87,88}

Evidence is mounting that balanitis xerotica obliterans, a skin disease of unknown etiology, ⁸⁹ which causes pathologic phimosis, might be linked to penile cancer. ^{90,91,92,93,94,95,96,97,98,99,100,} 101,102,103,104,105,106,107

Two studies have found that in the absence of phimosis, a normal intact foreskin is not a risk factor for penile cancer. ^{108,109} Denmark, Norway, Finland, and Japan, where male circumcision is rare, all have lower rates of penile cancer than the United States, where most men are circumcised. ^{110,111,112,113,114}

For circumcision to be cost-effective in preventing penile cancer, 1 out of every 10 men would have to develop penile cancer in their lifetime. In fact, the lifetime risk of penile cancer for men in the United States is presently 1 in 1735. Infant circumcision for penile cancer prophylaxis is ineffective.

Cervical cancer. In 1954, one study suggested that male circumcision prevented cervical cancer in their partners. However, the researcher agreed that methodologies employed were poorly designed, and further research revealed that lack of male circumcision is not associated with cervical cancer. Societal cancer. 125,126,127,128,129,130,131,132,133 The current understanding is that most cervical cancer is caused by infection with human papilloma virus (HPV) DNA, and is potentiated by smoking, a new vaccine to prevent HPV infection provides an effective medical preventative for cervical cancer.

Prostate Cancer. Circumcision was once thought to be linked to prostate cancer, however higher PSA levels are not associated with circumcision status. ¹³⁶

Smegma. Smegma, a substance normally produced by the prepuce was once widely believed to cause penile, cervical, and prostate cancer. Assertions that smegma is carcinogenic proved to be false, especially in light of the discovery of the carcinogenic property of the human papillomavirus. ¹³⁷

Non-HIV sexually transmitted diseases (STDs). Although current studies at various STD clinics have produced conflicting data on this issue, ^{138,139,140} cross-sectional surveys clearly do not support circumcision as prophylactic measure and might more accurately represent the general population. ^{141,142,143} Systematic reviews of the medical literature support this. ^{144,145,146}

Human immunodeficiency virus (HIV).

Note: Several recent research reports from Africa have credited circumcision with resistance to HIV infection, which may dangerously mislead American parents and physicians into considering circumcising newborn infants. Other research reports that circumcision is not a factor, or may actually spread infections. The epidemiology of the disease is vastly different between the two continents and conclusions valid in one area may not be in another.

In Africa. Several studies have been carried out in Africa showing a protective effect from circumcision. ^{147,148,149,150} However, a systematic review of these studies found numerous confounding factors, and concluded that there is insufficient evidence to support male circumcision to control HIV female-to-male transmission. ¹⁵¹

Three randomized controlled trials (the earliest study has been criticized as flawed ^{152,153,154,155,156,157}) reported that male circumcision appears to reduce the rapidity of female-to-male transmission, ^{158,159,160} but ignore other forms of transmission ¹⁶¹ and known cofactors ¹⁶²

A factor not controlled for in any known study to date is the common practice in parts of Africa of employing herbs as vaginal drying agents in female partners, which results in microlacerations and vaginal abrasions, facilitating HIV transmission to both men and women. ^{163,164,165}

A 2007 African study demonstrates that male and female circumcisions are, in themselves, major transmission vectors for HIV. Circumcised virgins were three times more likely to become infected than intact virgins. ¹⁶⁶ Unhygienic health care—including circumcision— is associated with HIV transmission. ^{167,168} Not enough is yet known about the prevalence of physical complications of male circumcision in Africa, which makes planning for any circumcision programs premature. ¹⁶⁹

The male prepuce contains an abundance of langerhans cells, which produce *Langerin*, a natural barrier to infections including HIV. ¹⁷⁰

In the Americas. A study in Brazil showed no association between circumcision status and HIV transmission. ¹⁷¹ As in Brazil, ¹⁷² most North American HIV infections are not transmitted by heterosexual contact.

Reinforcing that position, a 2004 study concluded that circumcision was not a factor in the spread of HIV among US servicemen. ¹⁷³ The

simple observation that, while three-fourths of American men are circumcised, the overall US HIV infection rate is among the highest in any developed country adds credence to the study's findings.¹⁷⁴

Since HIV infection is associated with sexual behavior, some AIDS researchers believe that behavioral interventions hold the most hope in the long term. ¹⁷⁵

The cost-effectiveness of mass circumcision as a public health measure is not likely to be effective considering the unknown complication rate of the procedure. Yaccine development, permanent injury to the penis, and potential human rights violations, need to be taken into account before initiating circumcision programs. Prophylactic interventions on children are considered legally unethical when contraction of the disease in question can be reasonably avoided through appropriate adult behavioral choices. 177

Indications for circumcision. The indications for non-neonatal circumcision include excision of gangrenous, necrotic, frostbitten, or trauma-damaged tissue, and the debulking of tumors.

In summary, the use of circumcision to prevent penile cancer, cervical cancer, or UTIs is not justified and more effective less costly methods of preventing these diseases are available. Circumcision's claim in preventing sexually transmitted diseases, including HIV, is inconclusive.

The role of circumcision in preventing HIV in Africa should be viewed with skepticism because condoms are more effective and less expensive. 1825 condoms, a 22 year supply for the average male, can be purchased for the cost of one circumcision in Africa. 178,179,180,181 Even if circumcision is performed, consistent condom use is recommended, questioning the value circumcision adds. There are also serious translational issues of applying such a program outside the research setting, including higher complication rates and an increased risk of HIV from the surgery itself. Randomized control trials

published to date have had only short periods of follow-up and have several unresolved sources of bias.

The role of circumcision in preventing HIV in the United States has already been demonstrated: it failed to prevent the United States from having one of the highest rates of HIV in developed countries.

Benefits of Genital Integrity

Benefits to the infant boy from possessing an intact penis include: protection of the patient's legal right to bodily integrity, ¹⁸² conservation of the protective foreskin, ^{183,184} avoidance of post-surgical complications, ¹⁸⁵ avoidance of persistent pain and trauma, ¹⁸⁶ shielding of the urethra from feces and E. coli, ¹⁸⁷ improved protection from *Staphylococcus aureus* infection in the newborn nursery (especially the increasingly present methicillin-resistant type), ^{188,189} ease of breastfeeding initiation, ¹⁹⁰ with the multiple health and developmental benefits it provides, ^{191,192,193} and provision of normal moisture and emollients to the mucosa of the glans penis and inner foreskin. ¹⁹⁴ Intact infants do not require care of a circumcision wound in the perinatal period, and do not have heightened pain responses. ¹⁹⁵ Financial benefits include earlier post-birth hospital discharge and a reduction of healthcare costs. ^{196,197}

About 4 per 10,000 intact boys per year will develop pathological phimosis in adolescence, while the risk of post-circumcision phimosis is 100 per 10,000. 199

Adult benefits of non-circumcision include: conservation of the protective foreskin, its immunological functions, and normal sexual function; ²⁰⁰ preservation of preputial tissue to sufficiently accommodate full tumescence, facilitation of intromission, ²⁰¹ preservation of the foreskin's gliding action with resulting vaginal lubricant retention and decreased vaginal abrasion. ^{202,203} Another benefit is a reduced incidence of benign prostatic hyperplasia in adults. ²⁰⁴ Preservation of the foreskin is advised

for possible future use as skin grafts such as for hypospadias repair, ²⁰⁵ urethral reconstruction, ^{206,207} and to treat syndactyly. ^{208,209}

Perhaps the most important benefit of genital integrity—from a wellbeing perspective—is the ability to enjoy the motile foreskin, which contains nearly three-fourths of the penis's fine-touch neuroreceptor sensitivity. ^{210,211}

Complications, Risks, and Disadvantages of Circumcision

Male circumcision has immediate, postoperative, and long-term complications, risks, consequences, and disadvantages. Reports of circumcision-related complications vary, from 0.06 percent²¹² to 55 percent²¹³—reflecting a wide range of criteria and methods used.

Operative complications and risks.

Immediate operative risks include hemorrhage, infection, surgical mishap, and death.²¹⁴ Complications include penile denudation,²¹⁵ injury to the glans, including accidental amputation,²¹⁶ total ablation of the penis,²¹⁷ and injury to the urethra resulting in fistula.²¹⁸ A major operative (and postoperative) disadvantage is pain, described in a separate section below. Infections may include necrotizing fasciitis,²¹⁹ necrotizing pneumonia,²²⁰ staphylococcal scalded skin syndrome,²²¹ meningitis,²²² septicemia,²²³ and staphylococcal pneumonia with empyema.²²⁴

Post-operative risks. Post-operative risks include meatal ulceration, ^{225,226} meatal stenosis, ^{227,228} adhesions, and iatrogenic phimosis. ^{229,230} Approximately five to eight percent of circumcised boys develop meatal stenosis that requires surgical correction. ^{231,232,233,234} One to two percent of boys undergo re-circumcision, either due to post-circumcision phimosis or insufficient skin being removed. ^{235,236,237,238}

Virulent community-acquired methicillinresistant *Staphylococcus aureus* (MRSA) is an emerging risk factor.²³⁹ Hospital acquired MRSA has been increasingly observed in circumcised male infants.^{240,241,242} About 100 boys die each year in the United States from circumcision-related causes, ²⁴³ such as infection or hemorrhage leading to exsanguination and hypovolemic shock. ^{244,245,246,247,248} The primary obstacle to obtaining an accurate estimate of the incidence of death from circumcision is the underreporting of circumcision as a cause or contributor to death. Incomplete and inaccurate death certificates for pediatric deaths are a common phenomenon. ²⁴⁹

Long-term complications, risks, and disadvantages. Circumcision removes large quantities of skin and mucosa from the penis, 250 which can lead to painful erections. 251 Circumcision can cause a degradation of erectile function in circumcised males 252,253,254 and ejaculation delay. 255,256,257 Other studies suggest that circumcision is linked to premature ejaculation. Heightened pain responses detected by staff at the time of the 4-month or 6-month vaccinations have led to suggestions of an infant analog of post-traumatic stress disorder (PTSD) resulting from circumcision-related trauma. 259,260

Risks and Disadvantages of Genital Integrity

Risks include a possible increased chance of urinary tract infection before age 1,²⁶¹ paraphimosis, which is rare,²⁶² and a somewhat higher incidence of candidiasis as an adult.²⁶³

Cost-Effectiveness and Medical Utility

Circumcision costs are much higher than the \$150-270 million previously reported.²⁶⁴ In addition to the direct medical and hospital fees, there are other less apparent costs of circumcision. For example, hospital stays of circumcised boys average about six hours longer, resulting in increased billing.²⁶⁵

A cost-utility analysis investigating circumcision-related factors in 2004 estimated \$828 lifetime costs per man with uncomplicated circumcision. About 1.2 million circumcisions are performed annually in the United States.

Applying medical inflation rates²⁶⁷ to the study's estimate results in immediate and future healthcare costs exceeding \$1.25 billion. The study also showed that circumcised men experience an average loss of 5.8 well-days throughout their lifetime. The costs of circumcision must be weighed against any possible beneficial effects using other criteria.^{268,269} Circumcision complications and subsequent repairs increase these costs.

In summary, neonatal non-therapeutic circumcision consumes substantial medical resources and might impair the health and wellbeing of a significant fraction of those who are circumcised

Pain Control

Newborn humans have much greater neurological function than previously believed. All neuroanatomical structures necessary for pain perception and memory are present in the newborn infant. Memory commences before birth and is quite active after birth. Pain control for neonatal circumcision pain can no longer be considered optional. Medical ethics requires the treatment of pain in newborns, infants, and children. Pain control for neonatal circumcision pain can no longer be considered optional. Medical ethics requires the treatment of pain in newborns, infants, and children.

Newborns have stress responses three to five times greater than those of adults. 276 Infants circumcised without pain control experience dramatically increased levels of serum cortisol,^{277,278} increased heart rate,²⁷⁹ decreased transcutaneous pO₂, ^{280,281} and interference with postoperative sleep states. ²⁸² Infants circumcised with topical and local anesthetics also experience increased levels of serum cortisol, increased heart rate, and decreased transcutaneous pO₂; however these responses were blunted; it is believed that newborns experience noxious stimuli as more painful than older children and adults because of the novelty of the stimuli and because of the lack of adequate development of descending inhibitory tracts in the spinal cord that help in diminishing pain signals. 283,284

Life-threatening events that have been reported associated with neonatal circumcision include myocardial injury, ²⁸⁵ pneumothorax, ²⁸⁶ and gastric rupture. ²⁸⁷ Episodes of vomiting and apnea have also been reported. ^{288,289}

Newborns should be given the same consideration for the choice of anesthetics and analgesia as for older patients. Local and topical anesthetics have been shown to provide inadequate pain relief for circumcisions performed in older males, so the procedure is usually performed under general anesthesia.

Circumcised boys vaccinated at their 4-month or 6-month examinations had a heightened response to pain compared to girls and non-circumcised boys, suggesting that their circumcision had a lasting effect on their behavior ^{292,293}

Infants have different pain pathways than adults, ²⁹⁴ and brain plasticity is highest in the late prenatal and neonatal periods. ²⁹⁵ Animal studies reveal an alteration of neurological structures caused by intense pain in the perinatal period, as well as alteration of the normal development of spinal sensory connections. ²⁹⁶ Developing neonatal nervous systems in humans are even more vulnerable to injury than the adult nervous system. Intensely painful experiences in the perinatal period likely cause alterations of neurological structures ²⁹⁷ that can become permanent if induced shortly after birth. ²⁹⁸

Pain control methods for circumcision of the newborn are only partially effective. Current recommendations for pain control in infants include the following in combination: ^{299,300}

- An appropriate penile clamp (Mogen clamp preferred over Gomco). 301
- Application of eutectic mixture of lidocaine and prilocaine (EMLA) to the site.
- A dorsal penile nerve block, ring block, or caudal block, using plain or buffered lidocaine.

- A pacifier with sucrose.
- Acetaminophen for postoperative pain. 302

Each of these recommendations has significant limitations: EMLA does not provide full anesthesia to the multi-layered foreskin. While the Mogen clamp is believed to be less painful than other options, it offers less protection against injury to the glans. ³⁰³ Sucrose solutions are not effective severe-pain control agents. 304 Dorsal penile nerve block provides only partial pain relief in 70 percent of subjects, and no relief in 30 percent. 305,306 Caudal block is less safe than penile nerve block and often induces vomiting, but no studies have considered it use for neonatal circumcision.³⁰⁷ Acetaminophen alone is not considered effective for postoperative pain in adults and is probably even less effective in children. General anesthesia would provide the best pain relief, but carries additional risks in infants less than six months of age.

In summary, the plasticity of the newborn neurological system under painful stimuli renders this period a poor time in which to carry out painful procedures. When circumcision is medically necessary, a ring block, of the available methods of local anesthesia, appears to provide the most pain relief.

Foreskin Care

The increasing popularity of genital integrity means physicians are seeing more patients with an intact foreskin. From 1981³⁰⁸ to the present day, ^{309,310} surveys of physicians revealed that many were not taught the basics of foreskin care, including proper hygiene practices, differentiation between pathological and physiological phimosis, the timeline for normal retraction, and that the foreskin should never be forcibly retracted.

In most boys, the foreskin is normally fused by the balano-preputial lamina to the underlying glans at birth. ³¹¹ The foreskin's fusion with the glans then slowly dissolves, allowing it to become retractile, a process that might take up to eighteen years. ³¹² If the foreskin is not retractile before puberty, the increase of adolescent

hormones normally completes the process. In addition to the dissolution of this fusion, the preputial opening gradually widens to allow the foreskin to pass over the glans. Most foreskins are non-retractable at birth; 6.5 percent are retractable by age 3–4 years, and the mean age of first, natural foreskin retraction is 10.4 years. About one percent of foreskins never fully retract but this is not problematic. 16.317

The foreskin should *not* be retracted because it might be painful and may lead to permanent injury and scarring. ^{318,319} Premature foreskin retraction can tear the balano-preputial lamina, split the foreskin or preputial orifice, lead to acquired phimosis, or cause paraphimosis. Foreskin retraction on well-baby examinations is *never* indicated. ³²⁰ *The first person to retract the foreskin should be the boy himself.* ³²¹

Caregivers should wash only the outside of the foreskin with warm water. Washing with soap might sting and sometimes causes a non-specific or contact dermatitis. When the foreskin becomes retractable, the boy can be taught how to wash himself regularly, i.e., retract, rinse with warm water, and replace. The foreskin should be returned to its forward, protective position after washing.

Slight reddening of the foreskin during the diaper stage is common and likely indicates that the foreskin is protecting the glans from ammonia in soiled diapers. Swimming pool chlorine, bubble bath soaps, and laundry additives may also lead to preputial inflammation or dermatitis, easily treatable with bacterial replacement therapy (liquid acidophilus culture applied six times a day for three days).

Boys with intact foreskins may go through a transient period in which the foreskin balloons during urination. Ballooning indicates that separation of the foreskin from the glans is occurring, the foreskin has retained its normal elasticity, and the penis is developing normally. There is no indication that ballooning is harmful or pathological. 323 Additionally boys in the 3-4 year age range sometimes report discomfort while

urinating, often the result of the prepuce separating from the glans. This condition is transient and temporary, and will resolve when preputial separation is complete.

The most usual foreskin-related complaints are balanoposthitis, phimosis, and non-retractability.

Balanoposthitis is an inflammation that has many causes, not all of which are infection. The incidence of balanoposthitis is low, usually less than two percent annually. ^{324,325,326,327,328,329} The practitioner must determine the cause before an appropriate treatment can be prescribed. A history, physical examination, culture, and biopsy are helpful in diagnosing the type of balanoposthitis. ³³⁰ The British *National Guideline on the Management of Balanitis* may be helpful. ³³¹ While in the past circumcision was sometimes recommended to prevent recurrent balanoposthitis, with accurate diagnosis and careful selection of the treatment modality, balanoposthitis is unlikely to recur.

Many primary care physicians have difficulty distinguishing pathological phimosis from physiological phimosis (normal, non-retractable foreskin) and unnecessary surgical referrals often result. 332,333 Pathological phimosis—more accurately termed preputial stenosis—occurs in less than one percent of males. ³³⁴A non-retractile foreskin is a common concern of parents. In the vast majority of cases, parental education on the normal development of foreskin retractability. plus reassurance, is advised. If treatment is deemed necessary, topical steroid ointment has been shown to be effective in accelerating development of retractability in 65-95 percent of cases and is becoming the standard medical treatment. Preputioplasty to widen the opening, well-proven in Europe, 339,340 is preferential to circumcision, because it provides less trauma and pain, easier recovery, and preservation of the foreskin.³⁴¹

Balanitis xerotica obliterans (BXO) causes pathological phimosis.³⁴² BXO is the same disease as lichen sclerosus et atrophicus (LSA),³⁴³

but BXO is the name traditionally applied when LSA occurs in male genitals and can occur in both males and females. BXO can affect males of any age, but rarely before the age of five, and is distinguished by a ring of whitish indurated skin at the tip of the foreskin. 344 It affects 0.6 percent of boys by their fifteenth birthday. Traditionally BXO has been regarded as an absolute indication for circumcision; however, more recent evidence suggests that topical steroid ointment might be effective. 346,347

In summary, to properly care for the increasing numbers of boys with an intact foreskin, physicians must refrain from (and warn against) forced retraction, as well as be familiar with the normal preputial developmental timeline in order to educate parents on proper hygienic practices.

Legal Issues

US courts describe the right to bodily integrity as fundamental.³⁴⁸ Male circumcision excises healthy skin, nerves, and mucosa from the penis; as such it has been considered as a violation of the patient's right to self-determination and bodily integrity.^{349,350}

Technically surgery can be considered to be battery unless valid consent is obtained. 351,352 Since children are considered legally incompetent, consent for a circumcision must be obtained by proxy, usually from a parent or guardian. The power of a surrogate to consent to non-therapeutic excision of healthy tissue from a child has been questioned by legal commentators, 354,355 but no court has yet ruled on this issue. There are no laws or court decisions that establish a parental right to authorize a medically-unnecessary, non-therapeutic surgery.

In 1996, Congress enacted a law to prohibit female genital mutilation, including female circumcision and excision of the female prepuce, unless medically indicated.³⁵⁷ Legal commentators argue that similar protection should be extended to males, as required under the "equal protection" clause of the 14th

Amendment of the US Constitution. 358,359 Barring the medical necessity of an intervention, the child's right to bodily integrity has been consistently found by courts to outweigh any parental discretionary rights. 360 Parents may consent only to those interventions for which the benefits outweigh the short- and long-term costs and is determined to be in the child's best interests. 361 Since parents may consent only to interventions that are in the child's best interests, a physician who agrees to undertake a circumcision must obtain informed consent from the surrogates—and only after providing all pertinent information and explaining alternative treatment options, including noncircumcision 362,363,364

Three courts, two in England^{365,366} and one in the United States,³⁶⁷ have considered non-therapeutic male circumcision in relation to the best interests of the child. All courts have found non-therapeutic circumcision *not* to be in the best interests of the child concerned.

Parents are not always in agreement about circumcision; sometimes resulting in lawsuits. Requiring consent from *both* parents prior to undertaking any controversial procedure on a child is prudent, ³⁶⁸ a precaution already in effect in England ³⁶⁹ and Canada. ³⁷⁰

In most states a patient reaching the age of majority may bring legal action to recover damages for injuries suffered in childhood.³⁷¹ Lawsuits regarding infant circumcision have already occurred.³⁷² Patient records should be retained until well after the time limit for bringing a suit has expired.³⁷³

Another concern is that neonatal circumcision fails to meet the Centers for Medicare and Medicaid Services requirements for reimbursement.³⁷⁴

In summary, considering that potential adverse effects of circumcision substantially outweigh any putative benefits, it seems wisest for physicians to question requests for this surgery, and to provide parents with the essential

medical and legal information about this procedure.

Medical Ethics

When a parent presents a child for a surgical procedure, the child, not the parent, is the patient. Medical professionals' duties and responsibilities are to the patient, in whose best interests they must act. 375,376,377,378

The medical ethics of non-therapeutic child circumcision have been questioned by many professional societies, ^{379,380} and medical societies in Canada and Great Britain have issued ethics statements concerning the non-therapeutic circumcision of male children. The British Medical Association states, "It is essential that doctors perform male circumcision only where this is demonstrably in the best interests of the child."³⁸¹ The College of Physicians and Surgeons of British Columbia concludes, "You are not obliged to act upon a request to circumcise an infant."³⁸² The Norwegian Council on Medical Ethics reports that non-therapeutic circumcision of male children is inconsistent with important principles of medical ethics.³⁸³

International human rights law recognizes that children enjoy two sets of human rightsgeneral human rights enjoyed by everyone³⁸⁴ and special human rights enjoyed by minor children due to their legal incompetence and need for protection.³⁸⁵ General human rights applicable to non-therapeutic child circumcision include the right to protection from inhumane or degrading treatment, the right to security of the person, 386 and protection from all forms of physical or mental violence, injury, abuse, maltreatment or exploitation, including sexual abuse.³⁸⁷ The right to protection from traditional practices prejudicial to the health of children³⁸⁸ applies to the circumcision of male children, discriminating against, and depriving them of their human rights. 389

The *Principles of Medical Ethics* (2001) of the American Medical Association is widely

accepted in the United States. Some principles relevant to child circumcision are:

- A physician shall, while caring for a patient, regard responsibility to the patient as paramount.³⁹⁰
- A physician shall respect human dignity and rights.
- A physician shall, in the provision of appropriate patient care, except in emergencies, be free to choose whom to serve.

The bioethics committees of many medical societies declare that medical professionals must keep the needs and rights of the patient paramount. They have a duty to render competent care based on what the patient needs, not what someone else expresses, regardless of their good intentions. Similarly, parents are required to act in the best interests of the child in their care, and in concert with the attending physician. The ethics of nontherapeutic circumcision may be tested against the four cardinal principles of medical ethics: beneficence, non-maleficence, justice, and autonomy.

Beneficence—As of 2006, about 55 percent of boys in the United States are being circumcised. There is no evidence to show that circumcised boys enjoy better health than non-circumcised boys; a cost-utility analysis found that non-circumcision is more likely to provide the highest state of health and wellbeing. ³⁹⁸

Non-maleficence—Male circumcision permanently and irreversibly removes protective, sexually sensitive tissue. In addition, circumcision has a wide variety of complications, ranging from the trivial to long-term to life-threatening.

Justice—Non-therapeutic circumcision removes substantial amounts of functional tissue—a serious violation of the patient's right to bodily integrity. The argument that circumcision might help a child fit

into a peer group is specious, since the same argument could be made for non-circumcision. Because circumcision rates have dropped to nearly 50 percent, there is no assurance with what group a boy will later be affiliated. And, only 3 per 1000 adult males elect to have themselves circumcised, making arguments for cultural desirability moot.

The argument that prophylactic interventions protect the populace and may be permitted on these grounds is also unfounded, because safer and more costeffective measures are available for all of the purported benefits of circumcision. This is also underscored by the high prevalence of HIV, STDs, cervical cancer, and penile cancer still recorded in the United States, where about three-fourths of the male population is circumcised.

Autonomy—Surrogate consent is necessary in the event of medical necessity, but non-therapeutic circumcisions by definition are never medically necessary. In such cases, deferral of the operation until the child can decide for himself has been advocated as an appropriate response to this issue.⁴⁰¹

Compliance with international human rights law. The ethical duty to respect the human rights of the patient has resulted in two consensus statements on medical ethics from international bodies. These statements were issued by bioethics experts to insure that medical practice is consistent with international human rights law.

Article 20 of the Council of Europe's European Convention on Human Rights and Biomedicine (1997) provides:

No organ or tissue removal may be carried out on a person who does not have the capacity to consent under Article 5.

Article 8 of the UNESCO *Universal Declaration on Bioethics and Human Rights* (2005) states:

Individuals and groups of special vulnerability should be protected and the personal integrity of such individuals respected.

Non-therapeutic child circumcision is prohibited under each of these international bioethics instruments.

Conscientious objection. Except in an emergency, a doctor has a right to choose whom he will serve. 402 Conscientious objection is a recognized right of physicians, 403,404 who may refuse to perform a non-therapeutic circumcision for any reason, including medical, legal, human rights, ethical, moral, and/or religious; however, they are expected to explain their reasons for refusal. 405,406 Since circumcision has been deemed "not essential to the child's current wellbeing" and there is no ethical duty to perform circumcisions, residency training programs should not require physicians in training to perform circumcisions.

Likewise, physicians in training should not be discriminated against if they are unwilling to participate in circumcisions. Medical students and residents are often required to perform circumcisions as part of their training. They should have the option to decline this on the grounds of conscientious objection, and medical schools and teaching hospitals should honor such requests, just as other conscientious objections are being honored for personal beliefs or religious reasons.

In summary, the advent of human rights law has profoundly influenced contemporary medical ethics. No medical school or residency program should require that physicians in training perform circumcisions. Since a non-therapeutic circumcision is not a medical treatment, there is no duty or obligation for physicians to refer the parents to another physician. 408,409,410

Summary

The foreskin is a multifunctional structure that has physiological value and is worthy of retention.

Considerable cultural controversy surrounds neonatal circumcision, including medical, legal, and ethical considerations. Non-therapeutic circumcision of male children has been shown to be ineffective at improving health, and as such, it falls outside acceptable standards of care. This places physicians in a precarious position when they are expected to perform the surgery.

Medicalization of circumcision, beginning over one-hundred forty years ago, has resulted in a *circumcision cycle* where "American parents have been conditioned to request it, that physicians perform it, and that insurance companies pay for it, helps to reinforce the aura of legitimacy surrounding circumcision."

The International Coalition for Genital Integrity recommends against circumcising infants. Appropriate physician action includes not initiating circumcision discussions, because infant circumcision is not indicated and non-therapeutic. However, since many parents—and other physicians such as pediatricians and obstetricians—are not yet aware of these facts, physicians should provide information during prenatal care appointments explaining that the benefits do not outweigh the risks, according to our current understanding, and that the procedure is not recommended for infants. Physicians should provide specific information on the potential harm and disadvantages of circumcision, including requesting that the parents witness a circumcision, either live or on video.

Finally, physicians should provide all parents with verbal and written information on the care of the intact penis.

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