

Is Circumcision Healthy?

By ACSH Staff — October 1, 1997

Yes

by Dr. Edgar J. Schoen

"Circumcision is like a substantial and well-secured annuity; every year of life you draw the benefits. Parents cannot make a better paying investment for their little boys." An 1891 book on the medical aspects of neonatal (newborn) circumcision included this statement by Dr. P. C. Remondino, a prominent California physician of the era. Now, over a century later, a burgeoning body of peer-reviewed reports in the scientific literature confirms that circumcision is an important preventive health measure.

That circumcision is protective against penile cancer and local infection (balanoposthitis) has long been known. Remondino was also aware that uncircumcised men have a higher likelihood of contracting sexually transmitted diseases (STDs), particularly syphilis and chancroid, than have circumcised men. During World War II many U.S. recruits were circumcised to protect them against balanoposthitis. Such infection was a significant cause of active-duty loss among troops, particularly in the North African campaign (because of the combination of sand and poor hygiene). Military medics also felt that circumcision helped prevent STDs. In the past decade published studies have shown that the presence of a foreskin increases the risk of urinary tract infections (UTIs), which are most dangerous during infancy, and the risk of HIV infection.

The American Academy of Pediatrics (AAP) 1989 Task Force on Circumcision, which I chaired, was aware of the work of U.S. Army neonatologist Thomas Wiswell. Using the armed-forces database Wiswell had shown that significant UTIs were 10 to 20 times more common in uncircumcised infants than in circumcised infants. But the AAP Task Force felt that this finding remained to be proved. Since then, nine major published studies have substantiated that neonatal circumcision prevents serious UTIs in the first year of life. Moreover, studies have shown that uncircumcised Australian preschool boys and uncircumcised young men had a higher risk of UTI than their circumcised peers.

The mechanism by which the foreskin predisposes to UTI has been well described. Serious UTIs are caused by specific intestinal bacteria (particularly by a group called "fimbriated E. coli"). Electron micrography has shown that these tentacled germs have a strong tendency to stick to the moist, mucous underside of the foreskin. From this undersurface they move toward the tip of the penis, enter the urethra (the canal within the penis), and ascend the urinary tract. The resulting infection is most dangerous in the first year of life, when it can lead to scarring of the kidneys and can spread to the bloodstream, causing a potentially deadly generalized infection.

Tulane University urologist James Roberts, who helped identify the mechanism of UTIs in uncircumcised boys, has said that repeated, symptomless (continued on page 26) UTIs in

uncircumcised infants may, later in their lives, result in unexplained hypertension and diminishment of kidney function. But convincing long-term evidence of such results is lacking.

In the late 1980s studies from Nairobi, Kenya, first showed a link between the foreskin and HIV infection. According to reports of these studies published in 1989:

** Two factors increase the risk of HIV infection in heterosexual men exposed to HIV-infected female prostitutes: (1) a sore on the penis due to an STD (usually syphilis or chancroid), and (2) the presence of a foreskin.*

** Compared with circumcised men, uncircumcised men had 3 to 4 times the risk of becoming HIV-positive, and uncircumcised men with a penile sore had 7 times the risk.*

Several explanations have been proposed for the increase in risk. In the case of ulcerating STDs (e.g., syphilis and chancroid), HIV can enter through the open sore. In uncircumcised men the virus can enter through sexually induced tears in the foreskin. And there is evidence that special cells (Langerhans cells) in the foreskin facilitate HIV adherence.

In an important survey based on 22 epidemiological studies from 10 countries, a group led by Dr. David Moses of the University of Manitoba found that uncircumcised men had, on average, 4 times the risk of HIV infection compared to circumcised men. Most of the studies that served as the basis of Moses's survey had been conducted in African countries and other parts of the Third World, where AIDS is chiefly a heterosexual disease. But according to a report from Seattle, Washington, homosexual men are likewise at higher risk if they are uncircumcised.

Sub-Saharan Africa's "AIDS belt," which includes most East African countries, is home to only 2 percent of the world's population but has half the world's 16 million HIV cases. In the Third World, the primary transmitters of HIV are long-distance truck drivers who have, outside their villages, contracted the disease from prostitutes. Circumcision of men at high risk of HIV infection has been proposed to stem the raging AIDS epidemic in sub-Saharan Africa. Recently, scientists John and Pat Caldwell studied the factors in this epidemic. In a detailed article published in 1996 in *Scientific American*, the Caldwells concluded that lack of male circumcision was the one factor that correlated with rampant HIV transmission.

In India and other parts of Asia, HIV infection is becoming epidemic as a heterosexual disease transmitted by cross-country truck drivers. A recent *New England Journal of Medicine* editorial on this imminent epidemic stated that the spread of HIV appeared less rapid in those Asian countries in which circumcision is routine (e.g., the Philippines, Indonesia, and Bangladesh). Because of the compelling evidence linking the foreskin and HIV transmission, many physicians previously ambivalent about recommending universal neonatal circumcision have come to support it.

In view of the documented, significant medical benefits of circumcision, why is there reluctance and sometimes outright antipathy toward the measure? Below are some reasons.

** Evidence of such benefits, particularly concerning UTIs and HIV infection, has been published only since the early 1980s and has not been widely disseminated.*

** Most of the members of the committee that developed the AAP's early, antircumcision pronouncements in the 1970s were neonatologists specialists in diseases of newborns. Neonatologists are the physicians most apt to see any immediate complications of circumcision and least apt to see its health benefits, which are postneonatal.*

** Although after reviewing the current medical evidence the AAP (continued on page 28) reversed its early statements on circumcision, vociferous lay organizations continue to promulgate the outdated statements.*

** Pain, of course, is a valid concern. Skilled circumcisers generally perform the procedure in less than five minutes. (In my opinion, the operation should never last more than 10 minutes.) True adepts, including religious circumcisers (in Judaism, called mohels), generally perform the procedure in less than 2 minutes. When it is performed properly, the operation is simple, safe, and brief. But it is painful. And although infants heal quickly, they do feel and react to pain. Nevertheless, relief agents are available and should be used. Local anesthesia (dorsal penile nerve block) works well, as does ingesting a sugar solution (which stimulates secretion of endorphins). Initially, there was some apprehension about using local anesthesia in neonatal circumcision, but the safety and effectiveness of such use has been convincingly documented.*

** Antircumcision activists claim that the foreskin increases sexual pleasure. But data from recent studies suggest the contrary. According to a report from the National Health and Social Life Survey (NHSLs), published in 1997 in the Journal of the American Medical Association, sexual dysfunction was more common among uncircumcised men than among circumcised men, especially later in life. While nearly every type of sexual dysfunction was likelier for uncircumcised men, the likelihood of difficulty in getting or maintaining an erection was significantly higher than the likelihood of other types of dysfunction.*

** Sex appeal is another valid concern, but beauty is in the eye of the beholder. According to a study published in 1988, young, heterosexual, middle-class women in Iowa City preferred the circumcised penis over the uncircumcised penis by a margin of 3 to 1. Seventy-five percent of the 100 women said it looked sexier; 85 percent said it felt better; 92 percent said it stayed cleaner; and 77 percent said it seemed "more natural." (In her bestseller Operating Instructions, about her experience as a new mother, Anne LaMott stated that she had chosen circumcision for her newborn for reasons of hygiene and appearance. She said uncircumcised*

penises looked "sort of marsupial, or like little rodents stuck in garden hoses.")

Cultural, religious, and ethnic factors strongly affect the decision whether or not to request circumcision. Circumcision of members of observant Muslim and Jewish families is a religious rite. But some cultures Hispanic and Asian, for example do not embrace circumcision. In California, where 45 percent of newborns are Hispanic, the rate of circumcision is less than 50 percent. Circumcision has been on the decline there as the birth rate of Hispanics and Asians has increased. In the midwestern United States, where immigrants and minorities constitute a smaller proportion of the population, the circumcision rate is 75 to 80 percent. Educational factors are important as well. Of those men in the NHLS group whose mothers had not graduated from high school, 62 percent had been circumcised; but of those whose mothers had undergone further education, 85 percent had been circumcised.

Complications of neonatal circumcision are uncommon. Minor bleeding and infection occur in one out of every 300 to 500 cases and are easily controlled. Serious complications are rare and are usually related to poor surgical technique. In a survey of 500,000 neonatal circumcisions in New York State, researchers found that no deaths or penile amputations had resulted.

The lifetime health benefits of neonatal circumcision including the long-known benefits of genital-hygiene improvement and prevention of local infection and penile cancer far exceed the risks of the procedure. Circumcision prevents serious kidney infections, particularly in infancy; and there is strong evidence that it has a protective effect against some serious STDs, especially HIV infection, syphilis, and chancroid. A one-week-old circumcised boy has a significant health advantage over his uncircumcised contemporary. And being without a foreskin won't dent his sex life.

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No

by Dr. Robert S. Van Howe

Within 48 hours of birth the average American boy is taken from the warmth and security of his mother and strapped to a board. His foreskin the skin that covers the head of the penis (the glans), serves to protect the penis from irritation and infection, and has the highest density of specialized sensory nerves of that organ is torn from the glans. Then a bell-shaped device is lowered onto the fresh wound and a thumbscrewlike apparatus is applied. This is tightened until the foreskin is amputated. The discarded nerves would have enabled sensations of fine touch, temperature, and pleasure. All that remains is an open, throbbing wound with nerves that eventually will enable only sensations of deep pressure and pain.

During the operation, the infant's blood oxygen drops. His heart rate and cortisol level (a measure of stress) shoot up. His crying becomes high-pitched, such that one would observe only when a baby is in intense pain. Then he may completely dissociate (a response similar to severe posttraumatic stress disorder) and become quiet giving up because no one has rescued him. Immediate complications of the operation can include hemorrhage (sometimes fatal or requiring a

blood transfusion); minor infections; deadly infections such as meningitis, gangrene, and septicemia (blood poisoning); partial or complete amputation of the penis; urinary retention leading to renal failure; and rupture of the bladder or stomach. (continued on page 27)

The vast majority of neonatal circumcisions are performed without anesthesia. Using local anesthesia during the operation has been disappointing. Research has shown that local anesthesia does not prevent, but merely moderates, the cortisol elevation. Furthermore, local anesthesia does not affect postoperative pain, such as that due to the newborn's urinating and defecating into the open penile wound. In any case, the external application or injection of any local anesthetic involves risk to the patient.

After the operation the baby, exhausted and apprehensive, is returned to his mother. He has difficulty quieting down after disturbances. The time he spends in dreamless (non-REM) sleep is increased. He is less available for interaction with his mother. This hinders the establishment of breast-feeding and maternal bonding and thus leads to weight loss and jaundice. Once he has been brought home, the baby's risk of certain local skin problems penile infections, inflammation of the penile meatus (passage), and narrowing of the meatus, for example is higher than that of noncircumcised infants. Half the time, his glans will not be fully exposed and this will prompt further surgery.

The operation's psychological impact on newborns is largely unknown, but performing circumcision without an anesthetic has enabled studying the parameters of extreme pain in experiments that researchers would have been prohibited from performing on lab animals. Researchers who have studied such parameters in infants have concluded that newborns are more susceptible to painful stimuli than are older infants.

Recent research suggests that the operation may have long-lasting effects on the patient's perception of and sensitivity to painful stimuli. The main structures for memory are functional in newborns, and remembrance of pain may figure in pain perception later. For days after the surgery, the circumcised boy will experience a greater change in heart rate when his blood is drawn than will a noncircumcised boy. And regardless of whether an anesthetic was used during circumcision, he will cry louder and longer during inoculations months later.

Boys circumcised when they were five years old showed a decrease in IQ, feelings of insecurity and inferiority, sexual identification disturbances, regressiveness, an increase in self-aggression, and other psychological problems after the operation. The children perceived the operation as castration and perceived females as responsible for the act.

The adverse effects of circumcision on self-esteem and body image appear to increase with age, as circumcised men entering their forties and fifties are increasingly expressing dissatisfaction. Circumcised men report suffering from premature ejaculation, impotence, bleeding at the scar site during erections, desensitization of the glans, pubic hair on the shaft of the penis, painful intercourse, and decreased lubrication. While such evidence is largely anecdotal, the need for further research is clear.

In a recent University of Chicago study, researchers discovered that circumcised men engaged in masturbation and oral and anal sex more often than did noncircumcised men. This suggests that

they may be in search of greater direct stimulation than that afforded by coitus. The Committee on Bioethics of the American Academy of Pediatrics and the American Medical Association Council on Ethical and Judicial Affairs consider it unethical to perform nonemergency surgery on individuals who (continued on page 29) are unable to consent. Isn't it prudent to let the person with the foreskin decide whether to have it removed?

Circumcision was introduced as a routine medical practice a century ago to eradicate masturbation and all the illnesses then associated with masturbation, including epilepsy, hydrocephalus, idiocy, and paralysis. Circumcision is still promoted as a "health" measure and continues to fall short of its billing.

Advocates of circumcision claim that the operation prevents balanitis (inflammation of the head of the penis) and ensures genital hygiene. But not a single study reported in the medical literature supports these claims. On the contrary, studies indicate that balanitis affects circumcised and noncircumcised males equally. And it may not be coincidental that the United States, where 80 to 90 percent of the males are circumcised, has one of the highest rates of sexually transmitted diseases and HIV infection in the world: New findings suggest that circumcised men may be more at risk of contracting syphilis, gonorrhea, nongonococcal urethritis, chlamydia, genital warts, and genital herpes. Moreover, the results of combining the data from the 28 published studies comparing HIV status to circumcision indicate that circumcision puts a man at a significantly higher risk of HIV infection.

Penile cancer is more common in the United States than in Denmark, Japan, and Norway countries in which fewer than 2 percent of the men are circumcised. Research has repeatedly demonstrated that penile and cervical cancer result from viral (human papillomavirus) infection and smoking. Indeed, in 1996 officials of the American Cancer Society stated: "Perpetuating the mistaken belief that circumcision prevents cancer is inappropriate."

Whether urinary tract infections (UTIs) uncommon in boys overall are more common in noncircumcised boys is undetermined. The studies published to date that have suggested a higher incidence of UTI among the noncircumcised had methodological flaws: Confounding factors for example, hygiene habits, outpatient treatment, modes of urine collection, socioeconomic status, race, prematurity, and perinatal health were not taken into account. Any one of the confounding factors could explain the UTI-incidence difference a difference of less than 1 percent between circumcised and noncircumcised boys.

Four studies have shown an increase in UTI risk in circumcised boys during the first week after the operation. No studies have linked the foreskin to serious kidney disease. On the contrary, the data suggest that kidney problems are more likely in circumcised boys with UTIs than in noncircumcised boys with UTIs.

According to published cost-utility analyses, routine neonatal circumcision (a) is not cost-effective and (b) adversely affects general health. Neonatal circumcision and its aftereffects cost the United States \$500 million to \$800 million annually.

An objective examination of the published findings on circumcision in the scientific literature leads one to conclude that circumcision does more harm than good. The scientific community needs to

study properly the psychosexual, human-rights, and long-term medical impact of circumcision. Until the full range of harm is known, prudence demands a moratorium on the surgery.

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