DRAFT Discussion paper

DOES THE NEW TESTAMENT

EXTINGUISH THE NEED FOR

CIRCUMCISION?

APPENDIX 3:

Medical Benefits from Circumcision
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from Circ-Online

Circumcision has historically been a topic of emotive and often irrational debate. At least part of the reason is that a sex organ is involved. (Compare, for example, ear piercing.) During the past two decades the medical profession have tended to advise parents not to circumcise their baby boys. In fact there have even been reports of harrassment by medical professionals of new mothers, especially those belonging to religious groups that practice circumcision, in an attempt to stop them having this procedure carried out. Such attitudes are a far cry from the situation years ago when baby boys were circumcised routinely in Australia. But over the past 20 years the rate has declined to as low as 10%.

However, a reversal of this trend is starting to occur. In the light of an increasing volume of medical scientific evidence (many publications cited below) pointing to the benefits of neonatal circumcision a new policy statement was formulated by a working party of the Australian College of Paediatrics in August 1995 and adopted by the College in May 1996 [2] . In this document medical practitioners are now urged to fully inform parents of the benefits of having their male children circumcised. Similar recommendations were made recently by the Canadian Paediatric Society who also conducted an evaluation of the literature, although concluded that the benefits and harms were very evenly balanced. As discussed below the American College of Pediatrics has moved far closer to an advocacy position.

In the present article I would like to focus principally on the protection afforded by circumcision against infections, including sexually transmitted diseases (STDs). I might add that I am a university academic who teaches medical and science students and who does medical research, including that involving genital cancer virology. I am not Jewish, nor a medical practitioner or lawyer, so have no religious bias or medico-legal concerns that might get in the way of a rational discussion of this issue.

The increased risk of infection may be a consequence of the fact that the foreskin presents the penis with a larger surface area, the moist skin under it represents a thinner epidermal barrier than the drier, more cornified skin of the circumcised penis, the presence of a prepuce is likely to result in greater microtrauma during sexual intercourse and, as one might expect, the warm, moist mucosal environment under the foreskin favours growth of micro-organisms.

In the 1950s and 60s 90% of boys in the USA and Australia were circumcised soon after birth. The major benefits at that time were seen as improved lifetime genital hygiene, elimination of phimosis (inability to retract the foreskin) and prevention of penile cancer. The trend not to circumcise started about 20 years ago, after the American Academy of Paediatrics Committee for the Newborn stated, in 1971, that there are ?no valid medical indications for circumcision?. In 1975 this was modified to ?no absolute valid ... ?, which remained in the 1983 statement, but in 1989 it changed significantly to ?New evidence has suggested possible medical benefits ...? [49] .

Dr Edgar Schoen, Chairman of the Task Force on Circumcision of the American Academy of Pediatrics, has stated that the benefits of routine circumcision of newborns as a preventative health measure far exceed the risks of the procedure [48] . During the period 1985-92 there was an increase in the frequency of postnewborn circumcision and during that time Schoen points out that the association of lack of circumcision and urinary tract infection has moved from ?suggestive? to ?conclusive? [48] . At the same time associations with other infectious agents, including HIV, have been demonstrated. In fact he goes on to say that ?Current newborn circumcision may be

considered a preventative health measure *analogous to immunization* in that side effects and complications are immediate and usually minor, but benefits accrue for a lifetime? [48] .

Benefits included: a decrease in physical problems such as phimosis [36] , reduction in balanitis (inflammation of the glans, the head of the penis) [17] , reduced urinary tract infections, fewer problems with erections at puberty, decreased sexually transmitted diseases (STDs), elimination of penile cancer in middle-aged men and, in addition, in older men, a decrease in urological problems and infections [reviewed in: 2, 18, 30, 44, 47, 49]. Therefore the benefits are different at different ages.

Neonatologists only see the problems of the operation itself. However, urologists who deal with the problems of uncircumcised men cannot understand why all newborns are not circumcised [47, 48] . The demand for circumcision later in childhood has increased, but, with age, problems, such as anaesthetic risk, are higher. Thus Schoen states ?Current evidence concerning the life-time medical benefit of newborn circumcision favours an affirmative choice? [48] .

In a letter written by Dr Schoen to Dr Terry Russell in Brisbane in 1994 Schoen derides an organization known as ?NOCIRC? for their use of ?distortions, anecdotes and testimonials to try to influence professional and legislative bodies and the public, stating that in the past few years they have become increasingly desperate and outrageous as the medical literature has documented the benefits. For example they have compared circumcision with female genital mutilation, which is equivalent to cutting off the penis. In 1993 the rate of circumcision had risen to 80% in the USA and Schoen suggests that ?Perhaps NOCIRC has decided to export their ?message? to Australia since their efforts are proving increasingly futile in the US?. He also noted that when Chairman of the Task Force his committee was bombarded with inaccurate and misleading communications from this group. Another of these groups is ?UNCIRC?, which promotes procedures to reverse circumcision, by, for example, stretching the loose skin on the shaft of the retracted penis. Claimed benefits of ?increased sensitivity? in reality appear to be a result of the friction of the foreskin, whether intact or newly created, on the moist or sweaty glans and undersurface of the prepuce in the unaroused state and would obviously in the ?re-uncircumcised? penis have nothing to do with an increase in touch receptors. The sensitivity during sexual intercourse is in fact identical, according to men circumcised as adults.

Another respected authority is Dr Tom Wiswell, who states ?As a pediatrician and neonatologist, I am a child advocate and try to do what is best for children. For many years I was an outspoken opponent of circumcision ... I have gradually changed my opinion? [56, 57] . This ability to keep an open mind on the issue and to make a sound judgement on the balance of all available information is to his credit ? he did change his mind!

The complication rates of having or not having the procedure have been examined. Amongst 136,000 boys born in US army hospitals between 1980 and 1985, 100,000 were circumcised and 193 (0.19%) had complications, with no deaths [58] . Of the 36,000 who were not circumcised the complication rate was 0.24% and there were 2 deaths [58] . In 1989 of the 11,000 circumcisions performed at New York?s Sloane Hospital, only 6 led to complications, none of which were fatal [44] . Also no adverse psychological aftermath has been demonstrated [46] . Cortisol levels have registered an increase during and shortly after the procedure, indicating that the baby is not unaware of the procedure in its unanaesthetized state and one has to weigh up the need to inflict this short term pain in the context of a lifetime of gain from prevention or reduction of subsequent problems. Anaesthetic creams and other means appear to be at least partially effective in reducing trauma and some babies show no signs of distress at all when the procedure is performed without anaesthetic.

The proponents of not circumcising nevertheless stress that lifelong penile hygiene is required. This acknowledges that something harmful or unpleasant is happening under the prepuce. Moreover, a study of British schoolboys found that penile hygiene does not exist [44] . Furthermore, Dr Terry Russell, writing in the *Medical Observer* states ?What man after a night of passion is going to perform penile hygiene before rolling over and snoring the night away (with pathogenic

organisms multiplying in the warm moist environment under the prepuce)? [44] .

The reasons for circumcision, at least in a survey carried out as part of a study at Sydney Hospital, were: 3% for religious reasons, 1-2% for medical, with the remainder presumably being ?to be like dad? or a preference of one or both parents for whatever reason [16] . The actual proportion of men who were circumcised when examined at this clinic was 62%. Of those studied, 95% were Caucasian, with younger men just as likely to be circumcised as older men. In Adelaide a similar proportion has been noted, with 55% of younger men being circumcised. In Britain, however, the rate is only 7-10%, much like Europe, and in the USA, as indicated above, the rate of circumcision has always been high [16] .

Neonatal urinary tract infections

A study by Wiswell of 400,000 newborns over the period 1975-84 found that the uncircumcised had an 11-fold higher incidence of urinary tract infections (UTIs) [58] . During this decade the frequency of circumcision in the USA decreased from 84% to 74% and this decrease was associated with an increase in rate of UTI [61] . UTI was lower in circumcised, but higher in uncircumcised. In a 1982 series 95% of UTI cases were in uncircumcised [60] . A study by Roberts in 1986 found that 4% of uncircumcised boys got UTI, compared with 0.4% of girls and 0.2% of circumcised boys [42] . This indicated a 20-fold higher risk for uncircumcised boys. In a 1993 study by Wiswell of 200,000 infants born between 1985 and 1990, 1000 got UTI in their first year of life [59] . The number was equal for boys and girls, but was 10-times higher for uncircumcised boys. Of these 23% had bacteraemia. The infection can travel up the urinary tract to affect the kidney and higher rate of problems such as pyelonephritis is seen in uncircumcised children [43, 52] . These and other reports [e.g., 21, 43, 52] all point to the benefits of circumcision in reducing UTI.

Indeed, Wiswell performed a meta-analysis of all 9 previous studies and found that every one indicated an increase in UTI in the uncircumcised [59] . The average was 12-fold higher and the range was 5 to 89-fold, with 95% confidence intervals of 11-14 [59] . Meta-analyses by others have reached similar conclusions. Other studies, including one of men with an average age of 30 years, have indicated that circumcision also reduces UTI in adulthood [51] . The fact that the bacterium *E. coli* , which is pathogenic to the urinary tract, has been shown to be capable of adhering to the foreskin, satisfies one of the criteria for causality [52, 62, and refs in 18]. Since the absolute risk of UTI in uncircumcised boys is approx. 1 in 25 (0.05) and in circumcised boys is 1 in 500 (0.002), the absolute risk reduction is 0.048. Thus 20 baby boys need to be circumcised to prevent one UTI. However, the potential seriousness and pain of UTI, which can in rare cases even lead to death, should weigh heavily on the minds of parents. The complications of UTI that can lead to death are: kidney failure, meningitis and infection of bone marrow. The data thus show that much suffering has resulted from leaving the foreskin intact. Lifelong genital hygiene in an attempt to reduce such infections is also part of the price that would have to be paid if the foreskin were to be retained. However, given the difficulty in keeping bacteria at bay in this part of the body [38, 48] , not performing circumcision would appear to be far less effective than having it done in the first instance [48] .

Sexually-transmitted diseases

Early studies showed higher rates of gonococcal and nonspecific urethritis in uncircumcised men [39, 48] . Recent studies have yielded similar findings. In addition, the earlier work showed higher chancroid, syphilis, papillomavirus and herpes [53] . However, there were methodological problems with the design of these studies, leading to criticisms. As a result there is still no overwhelming agreement. In 1947 a study of 1300 consecutive patients in a Canadian Army unit showed that being uncircumcised was associated with a 9-fold higher risk of syphilis and 3-times more gonorrhea [55] . At the University of Western Australia a 1983 study showed twice as much herpes and gonorrhea, 5-times more candidiasis and 5-fold greater incidence of syphilis [39] . In South Australia a study in 1992 showed that uncircumcised men had more chlamidia (odds ratio 1.3) and gonoccocal infections (odds ratio 2.1). Similarly in 1988 a study in Seattle of 2,800 heterosexual men reported higher syphilis and gonnorrhea in uncircumcised men, but no difference in herpes,

chlamidia and non-specific urethritis (NSU). Like this report, a study in 1994 in the USA, found higher gonnorhea and syphilis, but no difference in other common STDs [12] . In the same year Dr Basil Donovan and associates reported the results of a study of 300 consecutive heterosexual male patients attending Sydney STD Centre at Sydney Hospital [16] . They found no difference in genital herpes, seropositivity for HSV-2, genital warts and NSU. As mentioned above, 62% were circumcised and the two groups had a similar age, number of partners and education. Gonorrhea, syphilis and hepatitis B were too uncommon in this Sydney study for them to conclude anything about these. Thus on the bulk of evidence it would seem that at least some STDs may be more common in the uncircumcised, but this conclusion is by no means absolute and the incidence may be influenced by factors such as the degree of genital hygiene, availability of running water and socioeconomic group being studied.

Cancer of the penis

The incidence of penile cancer in the USA is 1 per 100,000 men per year (i.e., 750-1000 cases annually) and mortality rate is 25-33% [27, 31] . It represents approximately 1% of all malignancies in men in the USA. This data has to be viewed, moreover, in the context of the high proportion of circumcised men in the USA, especially in older age groups, and the age group affected, where older men represent only a portion of the total male population. In a study in Melbourne published in *Australasian Radiology* in 1990, although 60% of affected men were over 60 years of age, 40% were under 60 [45] . In 5 major series in the USA since 1932, not one man with penile cancer had been circumcised neonatally [31] , i.e., this disease only occurs in uncircumcised men and, less commonly, in those circumcised after the newborn period. The proportion of penile malignancies as a fraction of total cancers in uncircumcised men would thus be considerable. The predicted life-time risk has been estimated as 1 in 600 in the USA and 1 in 900 in Denmark [27] . In under-developed countries the incidence is higher: approx. 3-6 cases per 100,000 per year [27] .

The so-called ?high-risk? papillomavirus types 16 and 18 (HPV 16/18) are found in a large proportion of cases and there is good reason to suspect that they are involved in the causation of this cancer, as is true for most cases of cervical cancer (see below). HPV 16 and 18 are, moreover, more common in uncircumcised males [35] . These types of HPV produce flat warts that are normally only visible by application of dilute acetic acid (vinegar) to the penis and the data on high-risk HPVs should not be confused with the incidence figures for genital warts, which although large and readily visible, are caused by the relatively benign HPV types 6 and 11. Other factors, such as poor hygiene and other STDs have been suspected as contributing to penile cancer as well [8, 31] .

In Australia between 1960 and 1966 there were 78 deaths from cancer of the penis and 2 from circumcision. (Circumcision fatalities these days are virtually unknown.) At the Peter McCallum Cancer Institute 102 cases of penile cancer were seen between 1954 and 1984, with twice as many in the latter decade compared with the first. Moreover, several authors have linked the rising incidence of penile cancer to a decrease in the number of neonatal circumcisions [13, 45] . It would thus seem that ?prevention by circumcision in infancy is the best policy?.

Cervical cancer in female partners of uncircumcised men

A number of studies have documented higher rates of cervical cancer in women who have had one or more male sexual partners who were uncircumcised. These studies have to be looked at critically, however, to see to what extent cultural and other influences might be contributing in groups with different circumcision practices. In a study of 5000 cervical and 300 penile cancer cases in Madras between 1982 and 1990 the incidence was low amongst Muslim women, when compared with Hindu and Christian, and was not seen at all in Muslim men [22] . In a case-control study of 1107 Indian women with cervical cancer, sex with uncircumcised men or those circumcised after the age of 1 year was reported in 1993 to be associated with a 4-fold higher risk of cervical cancer, after controlling for factors such as age, age of first intercourse and education [1] . Another study published in 1993 concerning various types of cancer in the Valley of Kashmir concluded that universal male circumcision in the majority community was responsible for the low

rate of cervical cancer compared with the rest of India [14] . In Israel, a 1994 report of 4 groups of women aged 17-60 found that gynaecologically healthy Moshav residents had no HPV 16/18, whereas healthy Kibbutz residents had a 1.8% incidence [24] . Amongst those with gynaecological complaints HPV 16/18 was found in 9% of Jewish and 12% of non-Jewish women. HPV types 16 and 18 cause penile intraepithelial neoplasia (PIN) and a study published in the *New England Journal of Medicine* in 1987 found that women with cervical cancer were more likely to have partners with PIN, the male equivalent of cervical intraepithelial neoplasia (CIN) [6] . Thus the epidemic of cervical cancer in Australia, and indeed most countries in the world, would appear to be due at least in part to the uncircumcised male and would therefore be expected to get even worse as the large proportion that were born in the past 10-20 years and not circumcised reach sexual maturity.

AIDS virus

In the USA the estimated risk of HIV per heterosexual exposure is 1 in 10,000 to 1 in 100,000. If one partner is HIV positive and otherwise healthy then a single act of unprotected vaginal sex carries a 1 in 300 risk for a woman and as low as a 1 in 1000 risk for a man [9] . (The rates are very much higher for unprotected anal sex and intravenous injection). In Africa, however, the rate of HIV infection is up to 10% in some cities. (A possible reason for this big difference will be discussed later.) In Nairobi it was first noticed that among 340 men being treated for STDs they were 3-times as likely to be HIV positive if they had genital ulcers or were uncircumcised (11% of these men had HIV) [50] . Subsequently another report showed that amongst 409 African ethnic groups spread over 37 countries the geographical distribution of circumcision practices indicated a correlation of lack of circumcision and high incidence of AIDS [7] . In 1990 Moses in *International Journal of Epidemiology* reported that amongst 700 African societies involving 140 locations and 41 countries there was a considerably lower incidence of HIV in those localities where circumcision was practiced [33, 34] . Truck drivers, who generally exhibit more frequent prostitute contact, have shown a higher rate of HIV if uncircumcised. Interestingly, in a West African setting, men who were circumcised but had residual foreskin were more likely to be HIV-2 positive than those in whom circumcision was complete [40] .

Of 26 cross-sectional studies, 18 have reported statistically significant association [e.g., 15, 23, 25, 54], by univariate and multivariate analysis, between the presence of the foreskin and HIV infection, and 4 reported a trend. The findings have, moreover, led various workers such as Moses and Caldwell to propose that circumcision be used as an important intervention strategy in order to reduce AIDS [9, 19, 23, 26, 32-34].

Perhaps the most interesting study of the risk of HIV infection imposed by having a foreskin is that by Cameron, Plummer and associates published as a large article in *Lancet* in 1989 [10] . This had the advantage of being prospective. It was conducted in Nairobi. These workers followed HIV negative men until they became infected. The men were visiting prostitutes, numbering approx. 1000, amongst whom there had been an explosive increase in the incidence of HIV from 4% in 1981 to 85% in 1986. These men were thus at high risk of exposure to HIV, as well as other STDs. From March to December 1987, 422 men were enrolled into the study. Of these, 51% had presented with genital ulcer disease (89% chancroid, 4% syphilis, 5% herpes) and the other 49% with urethritis (68% being gonorrhea). 12% were initially positive for HIV-1. Amongst the whole group, 27% were not circumcised. They were followed up each 2 weeks for 3 months and then monthly until March 1988. During this time 8% of 293 men seroconverted (i.e., 24 men), the mean time being 8 weeks. These displayed greater prostitute contact per month (risk ratio = 3), more presented with genital ulcers (risk ratio = 8; P <0.001) and more were uncircumcised (risk ratio = 10; P <0.001). Logistic regression analysis indicated that the risk of seroconversion was independently associated with being uncircumcised (risk ratio = 8.2; P <0.0001), genital ulcers (risk ratio = 4.7; P = 0.02) and regular prostitute contact (risk ratio = 3.2; P = 0.02). The cumulative frequency of seroconversion was 18% and was only 2% for men with no risk factors, compared to 53% for men with both risk factors. Only one circumcised man with no ulcer seroconverted. Thus 98% of seroconversion was associated with either or both cofactors. In 65% there appeared to be additive synergy, the reason being that ulcers increase infectivity for HIV. This involves increased

viral shedding in the female genital tract of women with ulcers, where HIV-1 has been isolated from surface ulcers in the genital tract of HIV-1 infected women.

It has been suggested that the foreskin could physically trap HIV-infected vaginal secretions and provide a more hospitable environment for the infectious innoculum. Also, the increased surface area, traumatic physical disruption during intercourse and inflammation of the glans penis (balanitis) could aid in recruitment of target cells for HIV-1. The port of entry could potentially be the glans, subprepuce and/or urethra. In a circumcised penis the dry, cornified skin may prevent entry and account for the findings.

In this African study the rate of transmission of HIV following a single exposure was 13% (i.e., very much higher than in the USA). It was suggested that concomitant STDs, particularly chancroid [9] , may be a big risk factor, but there could be other explanations as well. Studies in the USA have not been as conclusive. Some studies have shown a higher incidence in uncircumcised men. Others do not. In New York City, for example, no correlation was found, but the patients were mainly intravenous drug users and homosexuals, so that any existing effect may have been obscured. A study in Miami, however, of heterosexual couples did find a higher incidence in men who were uncircumcised, and, in Seattle homosexual men were twice as likely to be HIV positive if they were uncircumcised [28] .

The reason for the big difference in apparent rate of transmission of HIV in Africa and Asia, where heterosexual exposure has led to a rapid spread through these populations and is the main method of transmission, compared with the very slow rate of penetration into the heterosexual community in the USA and Australia, now appears to be related at least in part to a difference in the type of HIV-1 itself [29] . In 1995 an article in *Nature Medicine* discussed findings concerning marked differences in the properties of different HIV-1 subtypes in different geographical locations [37] . A class of HIV-1 termed ?clade E? is prevalent in Asia and differs from the ?clade B? found in developed countries in being highly capable of infecting Langerhans cells found in the foreskin, so accounting for its ready transmission across mucosal membranes. The Langerhans cells are part of the immune system and in turn carry the HIV to the T-cells, whose numbers are severely depleted as a key feature of AIDS. The arrival of the Asian strain in Australia was reported in Nov 1995 and has the potential to utilise the uncircumcised male as a vehicle for rapid spread through the heterosexual community of this country in a similar manner as it has done in Asia. It could thus be a time-bomb about to go off and should be a major concern for health officials.

To summarize:

Lack of circumcision:

- Is the biggest risk factor for heterosexually-acquired AIDS virus infection in men (8-times higher risk by itself, and even higher when lesions from STDs are added in).
- Is responsible for a 12-fold higher risk of urinary tract infections.
- Carries a higher risk of death in the first year of life (from complications of urinary tract infections: kidney failure, meningitis and infection of bone marrow).
- One in ~600-900 uncircumcised men will die from cancer of the penis or require at least partial penile amputation as a result. (In contrast, penile cancer *never* occurs in men circumcised at birth). (Data from studies in the USA, Denmark and Australia, which are not to be confused with the often quoted, but misleading, annual incidence figures of 1 in 100,000).
- Often leads to balanitis (inflammation of the glans), phimosis (inability to retract the foreskin) and paraphimosis (constriction of the penis by a tight foreskin). Up to 18% of uncircumcised boys will develop one of these by 8 years of age, whereas all are unknown in the circumcised.
- Means problems that may result in a need for circumcision late in life: complication risk = 1 in 100 (compared with 1 in 1000 in the newborn).
- Is associated with higher incidence of cervical cancer in the female partners of uncircumcised men.

There is no evidence of any long-term psychological harm arising from circumcision. The risk of damage to the penis is extremely rare and avoidable by using a competent, experienced doctor. Surgical methods use a procedure that protects the penis during excision of the foreskin. As an alternative, for those who might prefer it, a device (PlastiBell) is in use that clamps the foreskin, which then falls off after a few days, and so eliminates the need to actually cut the foreskin off [20] . For some, cultural or religious beliefs dictate the method.

Sociological aspects

Finally, a brief mention of other findings relating to circumcision in the setting of Australia.

In a survey of circumcised vs uncircumcised men and their partners that was conducted by Sydney scientist James Badger [4, 5] (who regards himself as neutral on the issue of circumcision) it was found that:

- 18% of uncircumcised males underwent circumcision later in life anyway.
- 21% of uncircumcised men who didn't, nevertheless wished they were circumcised. (There were also almost as many men who wished they hadn?t been circumcised and it could be that at least some men of either category may have been seeking a scapegoat for their sexual or other problems. In addition, this would no doubt be yet another thing parents could be blamed for by their children, whatever their decision was when the child was born.)
- No difference in sexual performance (consistent with Masters & Johnson).
- Slightly higher sexual activity in circumcised men.
- No difference in frequency of sexual intercourse for older uncircumcised vs. circumcised men.
- Men circumcised as adults were very pleased with the result. The local pain when they awoke from the anaesthetic was quickly relieved by pain killers (needed only for one day), and all had returned to normal sexual relations within 2 weeks, with *no decrease in sensitivity* of the penis and claims of 'better sex'. (Badger?s findings are, moreover, consistent with every discussion I have ever had with men circumcised as adults. The only case to the contrary was a testimonial in a letter I received in the mail from a member of UNCIRC.)
- Women with circumcised lovers were more likely to reach a simultaneous climax.
- Women with uncircumcised lovers were 3 times as likely to fail to reach orgasm. (These data could, however, possibly reflect behaviours of uncircumcised males that might belong to lower socio-economic classes and/or ethnic groups whose attitudes may differ from groups in which circumcision is more common.)
- Circumcision was favoured by women for appearance and hygiene. (Furthermore, some women were nauseated by the smell of the uncircumcised penis, where, as mentioned above bacteria and other micro-organisms proliferate under the foreskin.)
- The uncircumcised penis was found by women to be easier to elicit orgasm by hand.
- The circumcised penis was favoured by women for oral sex.

Why are human males born with a foreskin?

The foreskin probably protected the head of the penis from long grass, shrubbery, etc when humans wore no clothes, where evolutionarily our basic physiology and psychology are little different than our cave-dwelling ancestors. However, Dr Guy Cox from The University of Sydney has recently supplemented this suggestion with a novel idea, namely that the foreskin could be the male equivalent of the hymen, and served as an impediment to sexual intercourse during adolescence [11] . The ritual removal of the foreskin in diverse human traditional cultures, ranging from Muslims to Aboriginal Australians, is a sign of civilization in that human society acquired the ability to control through education and religion the age at which sexual intercourse could begin. Food for thought and discussion!

Conclusion

The information available today will assist medical practitioners, health workers and parents by making advice and choices concerning circumcision much more informed. Although there are benefits to be had at any age, they are greater the younger the child. Issues of ?informed consent? may be analogous to those parents have to consider for other medical procedures, such as whether or not to immunize their child. The question to be answered is ?do the benefits outweigh the risks?. When considering each factor in isolation there could be some difficulty in choosing. However, when viewed as a whole, in my opinion the answer to whether to circumcise a male baby is ?yes?. Nevertheless, everybody needs to weigh up all of the pros and cons for themselves and make their own best decision. I trust that the information I have provided in this article will help in the decision-making process.

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APPENDIX 4

Commentary
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http://www.circumcisioninfo.com/
The New Enemies of Circumcision

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AMONG THE practices that have characterizedthe Jewish people over the millennia, surely none has been observed more widely, or more faithfully, than circumcision. The Book of Genesis, dating the origin of this practice to the time of the first patriarch, interprets it as the sign of God's eternal and indefectible covenant not only with Abraham but with the special people that will be descended from him. In this theology, circumcision, itself a divine commandment (*mitzvah*), is emblematic of the Jews' fidelity to the God who formed them as a people and gave them the Torah.

It is hardly surprising, therefore, that even in modern times, Jews across the denominational spectrum have continued to have the procedure performed on their sons on the eighth day of life, just as the Torah prescribes. What may be more surprising is the durability of circumcision among those Jews for whom traditional theology is *un*acceptable. All sorts of other practices bearing the warrant of tradition--Sabbath, dietary laws, daily prayer--have fallen by the wayside, but circumcision, known in Hebrew as *brit milah* (sometimes simply *brit* or, in Ashkenazi pronunciation, *bris*), endures. Remarking on this, no lesser a critic of Jewish traditionalism than Baruch Spinoza could see in circumcision the key to Jewish survival. "So important" is it, wrote this excommunicated Jew in the 17th century, "that I could persuade myself that it alone would preserve the nation forever."

To be sure, in the United States at least, the practice of circumcision is hardly limited to Jews (or traditional Muslims): performed on male babies in hospitals as a routine medical procedure, it has become, rather, a widespread fact of life. And this is precisely what gives resonance to the recent rise of a serious backlash movement to put a stop to it. Today, attacks on circumcision are not only increasing but becoming increasingly harsh. A veritable alphabet soup of activist organizations has sprung up, including BUFF (Brothers United for Future Foreskins), UNCIRC (UNCircumcising Information and Resources Center), NOHARMM (the National Organization to Halt the Abuse and Routine Mutilation of Males), and NORM (the National Organization of Restoring Men) and its predecessor, RECAP (Recover a Penis). In many cases, these organizations are not content to limit their efforts to public persuasion but seek nothing less than to make the practice a criminal offense.

Nor is the heightened visibility of such organizations--they are the subject of a sympathetic article, "The Foreskin Saga," by John Sedgwick in the February *GQ*-- the only sign of the times. In a bitterly ironic comment on Spinoza's dictum, the anti-circumcision movement today comprises not only non-Jews (among whom there is a long and on the whole dishonorable history of belittlement of *brit milah*) but also Jews--even some Jews bearing rabbinical ordination. Although actual criminalization of the procedure may seem a remote prospect, the growth of sentiment opposing it is thus a phenomenon worthy of attention. As for the existence of a Jewish wing in the anticircumcision movement, it reveals fault lines within contemporary Jewry that affect a good deal more than the fate of one *mitzvah*.

THE STORY of circumcision in cross-cultural perspective has now been comprehensively and

readably surveyed by David L. Gollaher, a historian of medicine and an opponent of the practice. [1] Early on, Gollaher announces his own position: "While there are many understandable religious, cultural, and aesthetic reasons men or parents might choose circumcision, it lacks a persuasive medical basis." The bulk of the book that follows is devoted to telling how a surgical procedure once restricted to the ritual life of a despised minority came, in 19th-century America, to be widely advocated and increasingly performed for its health benefits--benefits that Gollaher now believes to be largely spurious.

The tale begins in 1870, when Lewis A. Sayre, then the nation's leading orthopedist, thought he had discovered that circumcision cured some mysterious and strangely resistant cases of paralysis of the legs and hips in boys. Soon Sayre published his remarkable findings, now claiming that removal of the foreskin remedied more ailments than paralysis alone: "Many of the cases of irritable children, with restless sleep, and bad digestion, which are often attributed to worms, is [*sic*] solely due to the irritation of the nervous system caused by an adherent or constricted prepuce."

The connection drawn by Sayre was less outlandish than it might seem, at least for those times. As Gollaher explains, "most educated doctors" in the latter third of the 19th century subscribed to a theory of "reflex neurosis," according to which "a minor agitation or blockage in one part of the body might manifest itself in a seemingly unrelated area." (For a counterpart today, think of the theory of acupuncture.) The key thing was to find the source of the irritation, and the foreskin, an apparently unnecessary appendage and one relatively easily removed at birth, became a prime suspect in men (just as, in women, Gollaher explains, "the best cure for female ënervousness'--a catchall diagnosis for anything from insomnia to depression--was [thought to be] clitoridectomy").

Other practices and theories of the time helped in the spread of circumcision. One was the germ theory of disease, powerfully advanced by the discoveries of Koch and Pasteur. Another was the growing cult of personal hygiene. An uncircumcised penis is more difficult to keep clean as it releases smegma, "thick sebaceous secretions that collect beneath the foreskin" and that would come to be labeled "infectious." The rise of interest in circumcision thus coincided with a moment in American history when "scrubbing with soap became a routine for millions of citizens." As a sign of "social and cultural refinement," indeed, circumcision became a new norm among white, middle-class Gentiles, helping to separate them, in Gollaher's words, from "recent immigrants, African Americans, the poor, and others at the margins of respectable society." [2]

Circumcision also played a role in another concern of late-19th-century physicians and moralists: masturbation, a practice to which were attributed such diverse conditions as paralysis (again), tuberculosis, and convulsions. In some instances, circumcision was prescribed not only to diminish the pleasure but also to punish, by inflicting pain on the source of a boy's ill-gotten delights. Thus, John Harvey Kellogg of the famed Battle Creek Sanitarium recommended circumcision "without administering an anesthetic, as the pain attending the operation will have a salutary effect upon the mind, especially if connected with the idea of punishment." Some prominent Jewish physicians jumped on this particular bandwagon, claiming that "circumcision served to immunize Jewish boys and men against the bad habit of masturbation." It was one of those rare occasions in modern times when the new science and traditional morals seemed to coincide.

SURVEYING THE range of *current* opinion on themedical effects of circumcision, Gollaher pronounces the evidence "stunningly contradictory." So at odds is the literature concerning both "the immediate risks and complications of the surgery itself" and "the effect circumcision may have on a male's propensity to suffer a variety of disorders later on" that over the last 30 years the American Academy of Pediatrics has twice reversed its position on the matter. In 1971 it "officially concluded that there were no medical grounds for routine infant circumcision," then recanted the decision in 1985, but reconfirmed it in 1999.

There is, however, a reason for the indecisiveness. Although many alleged medical benefits have now been debunked, some, as Gollaher reluctantly concedes, still command considerable empirical support.

Well-established, for instance, is the effectiveness of the procedure against cancer of the penis, phimosis (a narrowing of the opening of the foreskin), and balanitis (an inflammation usually associated with phimosis). In the case of sexually transmitted disease (STD, the new name for venereal disease), the evidence in favor of a prophylactic effect is again formidable, especially against syphilis and gonorrhea. According to a recent study from Seattle cited by Gollaher, "the odds of an uncircumcised man's being infected [with syphilis] were four times greater than for his circumcised counterpart"; for gonorrhea, the odds dropped to 1.6 times but were "certainly still significant." Ever on the lookout for qualifying factors in his favor, Gollaher pounces on "the fact that the Seattle study only included men who chose testing or treatment at a public-health clinic--a high-risk population."

When it comes to HIV, the best-known disease often associated with sexual activity, the case for circumcision would again seem strong. The prestigious *New England Journal of Medicine* reported in 1997 that "[m]ale circumcision consistently shows a protective effect against HIV infection," while a study in another journal found that "men with foreskins were 2.22 times more likely to be infected with HIV than those without." Again, Gollaher seeks to undermine the seemingly obvious conclusion by wondering "whether the circumcised practice different hygiene, engage in different sexual behaviors, or even eat different foods than the uncircumcised."

Similarly with urinary tract infection (UTI). A former Army pediatrician named Thomas Wiswell, who had once been of the opinion that routine circumcision was not medically indicated, changed his mind after examining the records of military hospitals: these demonstrated that "as the circumcision rate dropped, the number of UTI cases in boys skyrocketed." Other studies in this country and Australia report analogous findings. Although Gollaher has a hard time countering such dramatic results, he gives it the old college try, first by conjecturing that some of the infected boys really were circumcised after all and then by questioning whether the gains of circumcision were worth the cost of painful surgery, itself occasionally a source of infection.

HERE WE come to one heart of the anticircumcision argument. In the minds of activists like Gollaher, whatever the marginal benefits of the procedure, they are more than offset by the pain experienced by the infant boy. Whereas earlier medical literature often denied or minimized this pain, more recent studies--using, Gollaher tells us, such indications as "infants' heart rates, breathing, intensity and duration of crying, consolability, sociability . . . motor activity, flexion of fingers and toes, and sleep patterns"--conclude that it "is simply too severe to be relieved by a mild analgesic."

Of course, even if one were to concede the evidence of "severe" pain, one might still think it worth undergoing for the sake of prevention. In some instances--when a boy is at risk of renal infection because of urinary reflux, or a young man is at increased risk of AIDS because of a predisposition to engage in sodomy--it is not hard to imagine parents wishing they had put their son through the operation before tragedy struck. But no such ambiguities exist for David Gollaher, who, by the end of his book, having altogether dropped the stance of the dispassionate observer, has come to liken routine medical circumcision to female genital mutilation (FGM), thus equating a common and very safe procedure that reputable researchers have shown to have prophylactic effects against a variety of genital ailments with a rare procedure whose side effects include (in his own words) "hemorrhage and shock . . . clitoral cysts, labial adhesions, recurrent urinary tract infections, renal scarring and kidney dysfunction, and sterility, and, as intended, loss of sexual feeling."

Given his partisanship, it is perhaps no surprise that Gollaher utters not a word of criticism of any of the organizations, however outrÈ, that have been formed to abolish circumcision or to reverse its effects surgically by means of foreskin restoration (a medically controversial procedure dating

back to Greco-Roman times and described by Gollaher in some detail). By contrast, he has real difficulty acknowledging any positive case at all on the other side. When controlled, double-blind studies speak in favor of circumcision, he immediately suspects bias, while the most outlandish claims for the negative effects of circumcision pass without critical scrutiny or interrogation. One such claim, by a writer named Ronald Goldman, attributes to the procedure American men's putative "ëavoidance of intimacy in male-female relationships' (which partly explains high divorce rates), disregard for women's sexuality, and, most alarming, a pandemic of violence manifest in America's high rates of assault, rape, and murder." What double-blind study generated *those* conclusions?

THIS BRINGS us back to Gollaher's profession ofsympathy at the beginning of his book for the "many understandable" reasons that some people--meaning mostly Jews--"might choose circumcision." Here, too, his handling of the issues hardly inspires confidence; quite the contrary.

Gollaher prefaces his discussion of *brit milah* in Judaism with a review of circumcision in Egypt, speculating (as have many before him) that Moses was the conduit between the two cultures. About Egyptian circumcision itself he writes that it was intended to enhance "physical vitality" and "to cleanse the body's natural flow"--goals familiar enough from modern America but, as it happens, light years away from the predominating rationales of ancient Judaism. By thus attributing the origins of Jewish circumcision to primitive concerns about hygiene, Gollaher not only downplays classical Jewish theology but subtly enables himself to turn today's medical ambivalence about the practice against the Jewish *mitzvah* as well.

He also turns Moses himself against it. "Moses was not circumcised while he lived in Pharaoh's household," Gollaher writes confidently, and adds, citing a talmudic text, "Strangely enough, he would remain uncircumcised throughout his long life." It is true that the Bible never mentions Moses' circumcision (or that of almost any other figure), and some practitioners of Pentateuchal criticism do attribute the norm of circumcision to a late source. But long before the birth of the great lawgiver, as the biblical narrative has it, the norm had already come to Abraham, along with an insistence that the rite be performed on the eighth day. As for Gollaher's invocation of the Talmud, nowhere in rabbinic literature is it suggested that Moses was uncircumcised. (It was for neglecting to circumcise his *son* that Moses was punished in the text cited by Gollaher.)

More troubling than any of this is Gollaher's use of a 17th-century account by the English author Samuel Purchas of the alleged habit among Jews of kidnapping, circumcising, and crucifying a Christian boy every year around Easter. "Was there," he writes in mock innocence, "any basis for Purchas's tale?" And, almost incredibly, he continues:

Certainly there are indications of bizarre practices, as in the [18th-century] *Anglia Judaica* account, "the famous Trial of Jacob of Norwich, and Accomplices for Stealing away, and Circumcising, a Christian child." In this case, court testimony confirms that a five-year-old boy was abducted while playing in the street, and spirited away to Jacob Norwich's [*sic*] house. There his captors blindfolded him and cut off his foreskin. Subsequently, they played a strange game, burying the severed foreskin in a basin filled with dry sand then "blowing the Sand with their Mouths, till they found it again." The winner of the contest declared the boy a Jew. Somehow the boy was returned home and his kidnappers were brought to trial, where his guardians told the court that "by some art or other" the circumcision had been reversed and the boy's foreskin restored.

If nothing else, this last detail, about the restoration of the boy's foreskin "by some art or other," ought to have raised a doubt--even in David Gollaher's mind--as to the ability of such "court testimony" to confirm anything other than the virulence of anti-Jewish prejudice in premodern Europe. To take this account as an "indication of bizarre practices" that might lend credibility to Purchas's version of the infamous medieval blood libel is historiographic impudence of the lowest order. Is the case against routine medical circumcision so weak that its proponents need

to resurrect hoary anti-Semitic libels to make their point?

FOR THE Jews of ancient and medieval times, inany event, differing opinions as to the prophylactic effects of circumcision would have elicited little or no interest. They practiced circumcision not out of hygienic concerns but out of obedience to the *mitzvot* of the Torah. And the same can be said of most traditionalist Jews today, who observe *brit milah* for the same reason that they observe the Sabbath, the dietary laws, and the laws of daily prayer or marital purity. What is more, as I noted at the outset, to their numbers could be added, at least until now, the mass of Jews who have continued to practice this rite long after their taste for other points of traditional law has diminished or disappeared.

This is not to say that circumcision has always gone unquestioned among modern Jews. In mid-19th-century Germany, for instance, the Society for the Friends of Reform pronounced the ancient rite obsolete, only to retreat before a firestorm of opposition that included many of their fellow Reformers. In the United States, the issue came up in 1885 at a rabbinical conference in Pittsburgh at which were set forth the principles of Reform Judaism.

Whereas some German Reformers had spoken out against circumcision in general, the controversy at Pittsburgh was limited to the case of adult proselytes: Kaufmann Kohler, a leading figure in the movement, pronounced the requirement of circumcision in this case "a barbarous cruelty which disfigures and disgraces our ancestral heirlooms and our holy mission as priests among mankind . . . a national remnant of savage African life." But once again the anticircumcision party was doomed. For just as the rabbis gathered at Pittsburgh were declaring as a general principle that "[w]e reject all [ceremonies] as are not adapted to the views and habits of modern civilization," modern civilization, at least in its American guise, was discovering (or imagining) the enormous hygienic benefits of circumcision. And so, in an ironic reversal of the accustomed pattern in these matters, the Jewish impulse toward acculturation weighed in favor of retaining, rather than rejecting, an ancient ritual.[3]

But now that both scientific opinion and the cultural mood are shifting to some degree, we see the surfacing of an increasingly vocal opposition to circumcision that is itself explicitly Jewish. Thus, the same Ronald Goldman from whom I quoted earlier has recently brought out a work entitled *Questioning Circumcision: A Jewish Perspective*.[4] Where David Gollaher sees the practice as backward and medically unnecessary, Goldman, a psychologist, sees it as much worse: a positively demonic force that has caused all manner of devastation to the Jewish people collectively as well as to the unfortunate individuals on whom it has been performed, and whose abolition is essential to the recovery of their psychic health.

Brit milah, according to Goldman, "is an enormous obstacle to the development of basic trust between mother and child." Since the mother has permitted her baby son to be, in effect, mutilated, the son naturally hates her--and, through her, all other Jewish women as well. Hence "the high rate of intermarriage" in today's Jewish community, which is itself but a reflection of the "widespread anger in Jewish men toward Jewish women." Not only that, but when young Jewish men do marry, they are more likely to engage in "spousal abuse . . . a serious problem across the United States and Israel."

IF GOLDMAN'S arguments tend to refute themselves by their absurdity--he does not scruple to explain why is it only in the last generation or two that a millennia-old practice has suddenly led to intermarriage, or offer evidence that uncircumcised Jewish men are less likely to intermarry or to engage in spousal abuse--a much more serious and respectable assault appears in *Covenant of Blood: Circumcision and Gender in Rabbinic Judaism*.[5] This is a survey of the whole history of circumcision in Judaism by Lawrence A. Hoffman, a distinguished scholar of liturgy at the Hebrew Union College-Jewish Institute of Religion, the Reform seminary in New York.

Unlike Goldman, Hoffman is a religious insider as well as a generally thoughtful scholar. But for him, too, the *mitzvah* of *brit milah* is all but irredeemably tainted, and for not dissimilar reasons. As one whose entire view of Jewish tradition is informed by what he is proud to call his "commitment to feminism," Hoffman is appalled by the "blatant sexist implications" of this ritual. But his case against it is grounded in what appears at least to be a scrupulous reading of classical Jewish texts, and so demands a closer look.

In the earliest biblical traditions, before circumcision was interpreted as a sign of the Abrahamic covenant, it functioned, Hoffman tells us, as a fertility rite. (His principal evidence here is a law in Leviticus that employs the Hebrew word for "foreskin" to characterize the first three annual crops of a fruit tree, which must not be eaten. "Analogous to pruning fruit trees," he writes, "circumcision provides a prophylactic against barrenness.") Only later, in the stratum of Pentateuchal tradition that critical scholars call P--for "Priestly"--does circumcision become "no mere arbitrary sign but an iconic representation of that for which it stands": namely, membership in the highly fertile nation to come forth from Abraham's loins. In the process, however, Jewish tradition took a huge step in the direction of the misogyny and sexism that have historically characterized it: "A covenant made with Abraham, but not with Sarah, is sealed with a sign that is itself an iconic reminder that being male, not female, is what matters." And that made the covenant doubly divisive, demarcating male from female even as it demarcated Jew from non-Jew.

Bad as this was, the talmudic rabbis only worsened it. For them, the key thing about circumcision was the salvific effect of the blood shed in the procedure. But this was specifically male blood, in contradistinction to the female blood of menstruation, which the rabbis saw as a ritual *contaminant*. Hence another "blatantly sexist" implication: male blood saves, female blood pollutes.

What to say about all this? There is, to begin with, no reason to believe that the law of the fruit tree in Leviticus is connected with fertility or, for that matter, with pruning, and similarly unwarranted is the inference that circumcision was intended to promote fertility. (The use of the term "foreskin" to denote the first three crops most likely relates to the young, new character of the fruit.) If we must have an "iconic" interpretation, then the rite is better seen as an icon of endogamy, which is how it functions in the story of Shechem and Dinah in Genesis 34.

As for Hoffman's notion that the Priestly source downgrades the status of women and likens them to foreigners, this illustrates only his readiness to adopt feminist readings on the flimsiest evidence. In the pre-Priestly sources that critical scholars isolate, the promise to Abraham (there called "Abram") and the covenant with him designate no specific woman as the mother of the great nation that he is to father. It is only with the Priestly reformulation that Sarai, now renamed "Sarah" (apparently meaning "princess"), is designated as the matriarch--despite the laws of nature, since she has been barren all her life and is now eighty-nine years old. Hoffman, in other words, has his chronology, and hence his logic, exactly backward.

Nor does the Priestly source declare "an outright war on the matrilineal system," as Hoffman imagines. Whether there really was such a system is open to doubt. But in any case it is in the Priestly and no earlier source that the chosen people are said to come from *both* Abraham and Sarah, and not from Abraham alone. Hoffman also misses the fact that the covenant is with the nation collectively and not with Israelites as individuals, and that circumcision symbolizes but does not effectuate this covenant. To say, as he does in a nearby passage, that women are party to the covenant "only in a secondary way" is like saying that American citizenship applies only to those who fly the stars and stripes on their flagpoles, everyone else being a second-class citizen.

Finally, the idea that the saving power of the blood of circumcision is biased against women, whose menstrual blood is a ritual pollutant, is itself biased and surprisingly ignorant. The rabbinic concept probably has its origin in biblical sacrifice, where, as here, a knife is deliberately wielded

in fulfillment of a religious intention. In the case of menstruation, no knife is used, and blood is not drawn but expelled involuntarily. To apply the sacrificial concepts to menstruation would have been singularly inapposite (even if the Bible had not already defined the latter as a ritual contaminant). If there were an equivalent surgical procedure for women and the rabbis failed to deem the blood salvific, Hoffman might have a case. As it is, he is simply playing fast and loose with the data.

DO ANY of these arguments matter? They do if the anticircumcision campaign, in both its general and its Jewish guises, continues to gain momentum, and Jews find themselves casting about for reasons to maintain their allegiance to the practice. Even thoroughgoing traditionalists may find their lives more difficult as the anticircumcision movement makes headway in the general culture. In the worst case, should the activists' claim that circumcision violates the Universal Declaration of Human Rights carry the day, the practice could become illegal, and Jews (and Muslims) who persisted in their traditionalism, as many would surely do, might find themselves the targets of state action. Minimally, one could predict some hard-fought battles over the implications of the First Amendment guarantee of freedom of religion.

Because American Jews live in one of the few countries in which hygienic circumcision is widely practiced, they easily forget the role that contempt for the practice has played in the history of anti-Semitism. David Gollaher predicts that routine circumcision for medical reasons will soon "go the way of routine bloodletting"; if it does, *brit milah* will recover its function as a demarcation of Jews from Gentiles--the sign of the covenant of Abraham. Some might reasonably regard this as a good thing; but history has also shown that the sharper the demarcation between groups, the more vulnerable is the smaller and weaker group. The whiff of anti-Semitism (and/or Jewish self-hate) that one occasionally picks up in the literature of the anti-circumcision movement may be a harbinger of much stronger odors to come.

And then there are the less traditionalist or nontraditionalist or antitraditionalist Jews, for many of whom obedience to the commandments is subordinate to individual choice and subjective experience. What recourse will *they* have? An article that appeared a few years ago in the *Northern California Jewish Bulletin*, quoting the co-chairman of the *brit milah* board of Reform Judaism, suggests the scope of the problem:

There are people who find [*brit milah*] a profoundly meaningful way of connecting with the Jewish people and there are those who don't. . . . People have to fulfill their inner sense.

The only thing this sentiment, so quintessentially of the moment, neglects to acknowledge is that people's "inner sense" is itself inextricably connected with the culture in which they find themselves. Should that larger culture come to judge *brit milah* to be not only medically unnecessary but also brutalizing and mutilating, the number of Jews who find the practice "profoundly meaningful" will assuredly diminish, and the abhorrence of it expressed by some early Reform leaders will return with a vengeance.

Nor is there any assurance that liberal Jews inclined to follow their "inner sense" and violate the *mitzvah* will be persuaded otherwise by their rabbis. Lawrence Hoffman tells of a study group that he held with fifteen rabbis, male and female:

As we went around the room, several of these young rabbis related the case of their own son's circumcision, about which, it turns out, they frequently harbored intense rage--rage at themselves for allowing it to happen, and in some cases rage at the *mohel* [ritual circumciser] who had done it and botched the job.

This experience, Hoffman adds, was not anomalous. In an article not long afterward in the journal of his profession, a Reform rabbi asked:

What about my son's needs? As he struggled in pain, had I somehow abandoned him for the

sake of the ceremony? What kept me from aborting the ceremony on his behalf?

THAT QUESTIONS like these are being asked(and implicitly regarded as unanswerable) by ordained religious leaders indicates the depth of the spiritual and moral void in which nontraditionalist Jews are being invited to find their bearings. Whatever private doubts they may have of their own, moreover, are unlikely to be stilled by half-measures like the one proposed by Lawrence Hoffman, who follows his highly negative analysis of the practice with an illogical vote to retain it anyway, while fiddling with the ceremony so that the operation "takes a backseat to the liturgy, thereby emphasizing the theological notion of covenant and playing down the actual procedure." As anybody knows who has ever attended a *brit milah*, the liturgy and the ensuing celebratory meal are already far more prominent and lengthier than the actual operation, which is over in minutes and viewed by very few of those present. But all the liturgy in the world will not disguise the fact that the child is a boy, not a girl (or a genderless humanoid), and that what is taking place is an operation and not simply a verbal affirmation of some abstract, disembodied theology.

Another haven for Jews fleeing a newly stigmatized practice might be something along the lines of Ronald Goldman's much bolder proposal to replace both the operation *and* its liturgy with a ceremony that he calls the "Bris Shalom." This is actually an anticircumcision ritual in disguise, in which biblical verses are cleverly misinterpreted to speak against the very practice for which the "Bris Shalom" is a substitute. But Goldman's ceremony does have one virtue: it poses very starkly the underlying clash of values that separates the anticircumcision ethos (as it might be called) from classical Judaism, and it thereby helps inadvertently to expose the ground on which any forthright defense of the practice must stand.

In Goldman's transvalued ritual, one line in particular, to be pronounced by the parents, stands out: "This child, created in Your image, is whole, complete, and perfect."

That man is created in the image of God is, indeed, a powerful biblical idea, affirmed more than once in the Book of Genesis. It is also a sentiment that could conceivably be invoked against the notion that all men should be circumcised. But the Jewish ceremony that the "Bris Shalom" opposes takes as its model not Adam but Abraham--not, that is, the father of universal humanity but the father of the Jewish people. And when Abraham is enjoined in Genesis (as Adam never is) to be "whole," "complete," or "perfect," that injunction is, in fact, closely connected to circumcision. To put it in a nutshell: a man can be a whole person without being circumcised, but he is not yet a whole Jew. Or: Adam intact is Abraham in need of perfection.

Precisely this distinction between Adamic and Abrahamic humanity is crucial to Jewish thought. "A philosopher," an ancient midrash reports,

asked Rabbi Hoshaya, "If circumcision is so precious, why was it not given to Adam?" Replied the sage: "Whatever was created in the first six days of creation requires that something more be done to it: mustard needs sweetening, lupine needs sweetening, wheat needs grinding, and man, too, needs to be perfected."

The rabbi's response is consonant with the broad currents of rabbinic theology. To the Bible and the ancient rabbis alike, *brit milah* is not a personal option for Jewish boys. It is a *mitzvah*, a religious act commanded by God as part of His gracious offer to bring the Jewish people close to Him in holiness. To say that a Jewish child will decide whether to fulfill the *mitzvah* himself upon reaching adulthood--"The only persons who may consent to medically unnecessary procedures upon themselves are the individuals who have reached the age of consent," goes the Declaration of the First International Symposium on Circumcision--is like saying that he will at the same point decide what his mother tongue will be.

THE TENETS of rabbinic theology are directed in the first instance, of course, to Jews. But they also have something to say to the culture at large, and not only concerning circumcision. For this

is a theology that in general sees human beings as born with a powerful appetite for evil, one that must be restrained, retrained, and redirected by a challenging and unending process of subordination to God's covenantal will. It is therefore, by definition, diametrically opposed to the Romantic affirmation of natural man and his raw instincts, and to that liberal psychology in which personal choice is sacrosanct, "experience" is the goal, and the traditional virtues of sacrifice, discipline, and obedience are slighted or neglected.

In this key regard, classical Judaism takes its place unmistakably on one side of the struggle over the long-term effects of contemporary liberal culture. Where that culture speaks in terms of human rights and the supremacy of personal choice, the ancient sources of Judaism speak powerfully of human duties (and of more duties for Jews than for Gentiles). Where it tends to endorse the voluntary character of identity, classical Judaism speaks of an inherited membership in a people from whom the individual is not free to resign. Where many today celebrate being whole ("intact"), classical Judaism pursues holiness, and always prefers the moral to the aesthetic. Where liberalism has embraced the interchangeability of sexual roles, Jewish sources see men and women as different by nature and by the plan of nature's divine Author. Where much of contemporary American culture now places the highest valuation on pleasure, especially sexual pleasure, and on the avoidance of any sort of pain, the classical Jewish texts value the willingness to suffer for a worthy cause, speak of the sanctity of marriage, and elevate self-control over self-expression.

In light of these radical disparities, it begins to seem no accident that circumcision, the very sign of the covenant between the Jews and their God, should have become the latest front in the battle over the Jewish future in America, or that the values at stake in this battle should turn out to include not only those of contemporary Judaism but, mutatis mutandis, those of contemporary America as well, a society undergoing a painful sorting-through of its own moral and cultural dispositions. For the sake of all parties concerned, and quite aside from the fate of specific medical procedures, one can only hope that victory in this struggle goes to the values that once were much more common in America than they have become, and that firmly underlie the theory and practice of *brit milah*.

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1 *Circumcision: A History of the World's Most Controversial Surgery*. Basic Books, 272 pp., $25.00.

2 Ironically, the one group of recent immigrants who had practiced the procedure from time immemorial was still under attack for it. "By the 1880's," Gohaller writes, "as more and more Gentile physicians recommended and performed the operation as a neonatal routine, they [also] began to attack *brit milah* as primitive, unsanitary, and dangerous."

3 To be sure, the rationale no longer lay in the Torah but in something more changeable, namely, scientific opinion. That may be why not all leaders of American Reform were impressed with it. "A sanitary prophylaxis against what?" asked Emil Hirsch at Pittsburgh. "And why not take vaccination also under our religious sanction?"

4 Vanguard, 133 pp., $11.95.

5 University of Chicago Press, 256 pp., $42.50.

APPENDIX 5

http://www.circinfo.net/

BENEFITS OF CIRCUMCISION

MEDICAL, HEALTH and SEXUAL

The purpose of this site is to provide a balanced up-to-date review of scientific studies on circumcision that have been published mainly in reputable international medical and scientific journals after a formal, critical refereeing process by experts in the field. 256 References are cited. Most can be found by the reader in any medical library. The message they convey is quite clear. Unfortunately, the topic of circumcision has been made unnecessarily controversial because of emotive propaganda and opinions placed on the internet by extremist anti-circumcision organizations. It is the intention of the present overview to provide sound information that should be of assistance to parents, medical professionals and others who wish to be informed. The author is a full professor in the medical faculty of a major university and has over 30 years of scientific research experience.

CONTENTS

? Circ'd as adults - Not circ'd - Circ'd early in life - Parents speak - Other
? Humor
? (Website Design by Billie the Dot Com Artist)

WHAT IS CIRCUMCISION?

Circumcision is the removal of a fold of skin (the foreskin) that covers the head (glans) of the un-erect penis. The amount of this skin varies from virtually none, to a considerable amount that droops down from the end of the flaccid penis. Thus, in some men, during an erection, the head of the penis peeks out from the loose foreskin that surrounds it, but in men with a lot of foreskin the head of the penis remains covered, either partially or completely. A recent questionairre-based survey conducted by Badger in Sydney, Australia found that among men with a foreskin it not only covered the glans of the penis when flaccid, but 67% had extra skin hanging off the end, in 15% it covered the glans, in another 15% it half covered it, and in 4% the glans was bare. In the erect state these numbers were 15% extra skin, 22% still covered, 32% half covered, and 41% glans bare. Racial differences exist. For example, in Malaysia, New Guinea, Sri Lanka and southern India the foreskin is very long and ends in a narrow extension that acts like a muzzle. This is an impediment to sexual intercourse, so that circumcision facilitates procreation for these men. A short prepuce that rarely covers the glans completely is seen in Whites of the northern Mediterranean and many Asians (Chinese and Japanese). In uncircumcised males the head of the penis is pink. This becomes more apparent when the head of the penis emerges during an erection, giving the overall penis a "two-toned" look. In male babies the foreskin is lightly attached to the penis underneath it, much like the skin on an orange, and comes free over the course of the first few years of life. A variety of methods are, moreover, used to remove the foreskin, and the amount eliminated also varies. More on this later.

HOME

WHO DOES IT?

Circumcision is one of the most common medical procedures in the world. It is also one of the oldest, and one of the simplest. The fact that it is still popular must mean that there is something in it! In the USA, which has the greatest medical knowledge and medical expertise in the world, 60-90% of males are circumcised (> 1 million newborns per year [147, 206]. Those who are not circumcised are mainly from cultures in which it is unfamiliar (e.g., Hispanic, as well as many European and Asian). Globally approx. 25% of men are circumcised [141]. Such a high rate for elective surgery involving the genitalia suggests important net benefits. Moreover, in most western countries circumcision, where practiced, tends to be a family tradition that has nothing to do with religion. With the rise in information from medical research in recent years, informed parents are learning more and more of the lifelong benefits that circumcision can convey to the health and well-being of their children, and are insisting on this simple procedure. In majority populations of the Middle East and in peoples derived from there, such as Jews and Muslims, circumcision is a mandatory part of their religion. However, on the other side of the world in Australia, aboriginals also practice circumcision. So did the Aztecs. Why is this? A common theme in each case is that these diverse races and cultures have traditionally inhabited a hot and often arid sandy environment, where the heat and sand getting under the foreskin would be expected to cause considerable irritation. Ritual removal has been the outcome, irrespective of whether this was a "command from God" or just plain common sense, that when embedded in the religion or culture over millennia lost its original health-related significance. Interestingly, in some places, such as Madagascar, circumcision is 100% regardless of religion, and the reason is actually dictated by the women, who maintain that circumcised sex is "longer, stronger and cleaner". All of this is good

"dinner party" conversation. However, sociology is a muddy area to trek in to, so this review tries to steer clear of issues like this, as well as religion, as far as possible.

HOME

THE CIRCUMCISION DEBATE

Historically circumcision has been a topic of emotive and often irrational debate. At least part of the reason is that a sex organ is involved. (Compare, for example, ear piercing.) In the USA circumcision has always been common amongst the majority Anglo-Celtic Whites and also amongst Afro-American Blacks. Australia similarly conducted routine circumcision of all newborn boys. In both countries a down-turn took place after the mid-1970s, but is now rising again as the medical and health benefits are becoming better known.

The misinformation that produced the downtrend is still embedded in the consciousness of some medical practitioners who hail from the 70s. In fact there have even been reports of harassment by medical professionals (such as less well-informed midwives, nurses and doctors) of new mothers, especially those that can be more readily identified because they belong to religious groups that practice circumcision, in an attempt to stop them having this procedure carried out.

HOME

POSITION STATEMENTS BY NATIONAL PEDIATRIC BODIES

Through the 1990s and into the new millenium a reversal of the downtrend began. In the light of an increasing volume of medical scientific evidence pointing to the benefits of neonatal circumcision, the pediatric professional bodies of various countries have reviewed the evidence and formulated recent policy statements. The reports have to be read in their entirety to be fully comprehended. Isolated quotes taken from these by anti-circ groups is a problem. What is stated in the details of the various reports is much like what is presented in the present review of the medical literature. The latest statements of the American Association of Pediatrics in 1999 [7], the Canadian Paediatric Society [54] and the Australian College of Paediatrics in August 1995 and adopted by the College in May 1996 [11] provide information on the benefits and possibility of rare or minor risks. These fall short of drawing an obvious conclusion from the evidence they present, i.e., that circumcision is the best choice for lifetime health and sexual well-being. The hesitancy is undoubtedly a consequence of the sensitivity of this issue, as well as medico-legal caution and the recognition of the hysteria that this subject can provoke because of the diversity of opinion in the community, where anti-circ groups tend to bombard such professional bodies in an attempt to "win" their political cause. More on this is in the section "Anti-circumcision lobby groups".

Instead, the statements of these professional bodies urge medical practitioners to fully inform parents of the benefits and minor, rare risks of having their male children circumcised. Thus publicly they give the impression that the benefits and harms were very evenly balanced [64]. However, well-informed medical practitioners only have to read the statements in full to be able to draw their own conclusion. Recognized authorities in the USA in particular strongly advocate circumcision of all newborn boys. More details of their statements appear later.

HOME

WHY THE FORESKIN INCREASES INFECTION RISK

It has been suggested [31] that the increased risk of infection in the uncircumcised may be a consequence of the following:

? The foreskin presents the penis with a larger surface area.

? The moist inner lining of the foreskin represents a thinner epidermal barrier than the more cornified outer surface of the foreskin and the rest of the penis, including the glans of both circumcised and uncircumcised penis, which have been found recently to have the same amount of keratin (i.e., similar skin thickness and protection from invasion of microorganisms) [210]. This means that the inner lining is a potential entry point into the body for viruses and bacteria. (A photograph of a histological section illustrates this later, in the section on the AIDS virus.)
? The presence of a prepuce is likely to result in greater microtrauma during sexual intercourse, thereby permitting an entry point into the bloodstream for infectious agents.
? The warm, moist mucosal environment under the foreskin favours growth of micro-organisms (discussed later). This "preputial sac" has even been referred to by Dr Gerald Weiss, an American surgeon, as a 'cesspool for infection' [230], as its unfortunate anatomy wrapped around the end of the penis results in accumulation of secretions, excretions (urine), dead cells and growths of bacteria. Parents are told not to retract the foreskin of male infants, which makes cleaning difficult. Even if optimal cleansing is performed there is no evidence that it confers protection [243, 244].

HOME

HISTORY AND RECENT TRENDS

Ritualistic circumcision has been practiced in West Africa for over 5000 years and in the Middle East for 3000 years or more [228].

A trend not to circumcise started in the mid-to-late 1970s, after the American Academy of Paediatrics (AAP) Committee for the Newborn stated, in 1971, that there are "no valid medical indications for circumcision" [38]. However, in 1975 this was modified to "no absolute valid ..." [216], which remained in the 1983 statement, but in 1989 it changed significantly to "New evidence has suggested possible medical benefits" [4]. The latest statement, in 1999 [7,119], summarized the vast array of benefits, but fell short of stating the obvious from the literature survey in recommending circumcision. As mentioned above this is quite understandable, given medico-legal worries in the face of very hostile, politically active anti-circ groups. Interestingly, a joint response by the previous Chair of the AAP Taskforce and others more expert than those on the recent Taskforce rebutted the 1999 statement [192]. Others also levelled valid criticisms [20,113]. The various statements highlight the information that follows in the present web review. It is clear that providing a scientific and balanced statement by a pediatric body is difficult in the face of minority lobby groups whose agenda tends to be a political one rather than medical or scientific. This is not to detract from the clear scientific weaknesses in the 1999 AAP Statement and their pamphlet [20, 192].

Dr Edgar Schoen, Chairman of the 1989 Task Force on Circumcision of the American Academy of Pediatrics, has stated that the benefits of routine circumcision of newborns as a preventative health measure far exceed the risks of the procedure [188]. He has continued to this day to campaign for public education of the benefits of circumcision. During the period 1985-92 there was an increase in the frequency of post-newborn circumcision (to over 80% in one study [248]) and during that same time Schoen points out that the association of lack of circumcision and urinary tract infection (UTI) has moved from "suggestive" to "conclusive" [188]. Moreover, this period heralded the finding of associations with other infectious agents, including HIV. In fact he goes on to say that "Current newborn circumcision may be considered a preventative health measure analogous to immunization in that side effects and complications are immediate and usually minor, but benefits accrue for a lifetime" [188].

Some of the health benefits were:

? Decrease in physical problems involving a tight foreskin [153].
? Lower incidence of inflammation of the head of the penis [56, 59, 62].
? Reduced urinary tract infections.
? Fewer problems with erections, especially at puberty.

? Decrease in certain sexually transmitted diseases (STDs) such as HIV.
? Elimination of invasive penile cancer.
? Decrease in urological problems and infections [reviewed in 4, 11, 64, 115, 182, 186].

Therefore the benefits are different as the human male progresses through life. Each of these benefits will be reviewed in more detail in this website.

HOME

DIFFERENT SPECIALISTS SEE DIFFERENT THINGS

Neonatologists see only newborns and thus only see the problems of the operation itself performed on infants. In fact such problems occur in only a minor proportion of baby boys, and generally because of poor technique by an inexperienced operator. However, urologists who see and have to treat the problems of uncircumcised men of all ages cannot understand why all newborns are not circumcised [186, 188]. Other health care workers in hospitals and aged care homes also have adverse comments concerning the uncircumcised penises they see and have to deal with, problems with catheters for urinary drainage, and the deranged reactions of elderly men with dementia when attempts are made to wash the genital area. The demand for circumcision later in childhood has increased, but, with age, there is an inevitable increase in worry to the boy or man in the lead-up to having this done, usually a more visible scar is left, and the cost can be 10-times as great. Such considerations, coupled with the advantages of early circumcision, led Schoen to state "Current evidence concerning the life-time medical benefit of newborn circumcision favours an affirmative choice" [188].

HOME

BENEFITS OUTWEIGH THE RISKS

Dr Tom Wiswell, a respected authority in the USA was a strong opponent, but then switched camps as a result of his own research findings and the findings of others. This is what he has to say: "As a pediatrician and neonatologist, I am a child advocate and try to do what is best for children. For many years I was an outspoken opponent of circumcision ... I have gradually changed my opinion" [240, 241]. This ability to keep an open mind on the issue and to make a sound judgement on the balance of all available information is to his credit ... he did change his mind!

Wiswell looked at the complication rates of having or not having circumcision performed in a study of 136,000 boys born in US army hospitals between 1980 and 1985. 100,000 were circumcised and 193 (0.19%) had complications, mostly minor, with no deaths, but of the 36,000 who were not circumcised the problems were more than ten-times higher and there were 2 deaths [248]. A study by others found that of the 11,000 circumcisions performed at New York's Sloane Hospital in 1989, only 6 led to complications, none of which were fatal [182]. An early survey saw only one death amongst 566,483 baby boys circumcised in New York between 1939 and 1951 [147]. (There are no deaths today in developed countries.)

Problems involving the penis are encountered relatively frequently in pediatric practice [118]. A retrospective study of boys aged 4 months to 12 years found uncircumcised boys exhibited significantly greater frequency of penile problems (14% vs 6%; $P < 0.001$) and medical visits for penile problems (10% vs 5%; $P < 0.05$) compared with those who were circumcised. In infants born in Washington State from 1987-96, 0.2% had a complication arising from their circumcision, i.e., 1 in every 476 circumcisions [36]. It was concluded that 6 urinary tract infections could be prevented for every circumcision complication, and 2 complications can be expected for every penile cancer prevented [36].

HOME

PAIN AND MEMORY

No adverse psychological aftermath has been demonstrated [185]. A longitudinal study in the UK, beginning in 1946, involving over 5000 individuals followed from birth to age 27 found no difference in developmental and behavioural indices between circumcised and uncircumcised males [32]. Long term psychological, emotional, and sexual impediments from circumcision are anecdotal [141,236] and can be discounted. It must be recognized that there are many painful experiences encountered by the child before, during and after birth [134]. Circumcision, if performed without anaesthetic is one of these. Cortisol levels, heart rate and respiration have registered an increase during and shortly after the procedure [211, 213], indicating that the baby is not unaware of having had something painful done in instances when circumcision has been carried out without anaesthesia. It is therefore generally advised that local anesthetic be used for all circumcisions on infants (more on anesthesia later). The response is variable and, even without anesthetic, some babies show no signs of distress at all. Most do, however, and this may be contributed by the restraining procedure, as well as the surgery itself. In the past doctors and parents had to weigh up the need to inflict this short-term pain in the context of a lifetime of gain from prevention or reduction of subsequent problems. Use of anesthetic for circumcision makes it virtually pain-free.

HOME

PENILE HYGIENE

The proponents of not circumcising nevertheless stress that lifelong penile hygiene is required. This acknowledges that something harmful or unpleasant is happening under the prepuce. Studies of middle class British [97, 182] and Scandanavian [157] schoolboys concluded that penile hygiene, as such, is at best poor and at worst non-existent. Furthermore, Dr Terry Russell, an Australian medical practitioner and circumcision expert states "What man after a night of passion is going to perform penile hygiene before rolling over and snoring the night away (with pathogenic organisms multiplying in the warm moist environment under the prepuce)" [182]. The bacteria start multiplying again immediately after washing and contribute, along with skin secretions, to the whitish film, termed 'smegma', that is found under the foreskin. Bacteria give off an offensive odour. Men differ in their sensitivity to this smell and some shower several times a day as a result. Some uncircumcised men, and/or their partners, find the stench so unpleasant that the smell has caused these men to seek a circumcision on this basis alone. Penile hygiene is often difficult to achieve and attempting a very high degree of hygiene in uncircumcised men can result in new dermatological problems. For mothers and fathers, it is far easier to maintain cleanliness of their son's penis if it is circumcised. If their son isn't the messages are confusing: should they clean under the foreskin or leave it alone?

Anti-circ activists make unusual claims about the smegma and even claim there are glands under the foreskin that secrete pheromones important in sexual attraction. There is no support for such claims and all of their statements should be regarded as fantasies unless proved otherwise by credible scientific evidence. The wet tip of an uncircumcised penis could permit quicker penetration. However, the requirements of the modern woman generally differ somewhat from this kind of sex, which might have had some benefit for primitive humans who may have wanted to complete the sex act quickly to minimize the time they were vulnerable to predators.

WHAT MOTIVATES PARENTS TO GET THEIR BABY BOY CIRCUMCISED

The reasons for circumcision, at least in a survey carried out as part of a study at Sydney Hospital, were: 3% for religious reasons, 1-2% for medical, with the remainder suggested by the researchers as "to be like dad" or a preference of one or both parents for whatever reason [53]. The main reason may have more to do with hygiene and appearance, as will be discussed later in the section on socio-sexual aspects.

RATE OF CIRCUMCISION

USA: In the USA the rate of circumcision has always been high, although differs in different regions. The rates are recorded by the Centre for Disease Control's National Center for Health Statistics (NCHS) [147]. Since only those circumcisions recorded are included in the statistics, these are minimum estimates, and are more useful for determining trends rather than absolute rates. The recorded rate in 1999 was 64.3%, which compares with 65.3% 20 years earlier in 1997. For Whites there was no change (65.8 vs 65.5%). For Blacks it rose from 57.9% to 64.4%. The rates recorded in the north-east region were steady at 70%, while rates rose in the mid-west (80%) and South (70%). For the western region rates have been falling due to the influx of Hispanics (50% of all births, so diluting out the overall rate in California to 35%). Since Whites were not subdivided into Non-Hispanic and Hispanic the overall statistics show an increase in circumcision rate for Non-Hispanic Whites. In the West individual hospital data shows the rate for Non-Hispanic Whites is in fact 75-80%. Interestingly, for the next generation of Hispanics, 29% of boys are circumcised (San Francisco General Hospital data). Importantly, as noted, the actual rates are higher than indicated by this data. Since these data represent only the numbers reported, whereas not all are: under-reporting being more than 10% in one large study [74]. Even when they are supposed to be, they are often not listed on the medical record face sheet used in NCHS surveys, so that when the oversights were corrected in one study, infant circumcision rate increased from 75% to **89%** [151]. The rates differ for different ethnic groups. Whites of Anglo-Celtic derivation have high rates, as do Blacks. In Hispanics the rate is close to zero, circumcision not being a part of their culture. Thus high Hispanic populations will contribute to an overall lower rate for a particular region. In La Canada Hospital, Los Angeles, in which 71% of patients are upper-income whites, 83% of parents chose circumcision for their sons [1]. In comparison the Children's Hospital, LA, which serves primarily Hispanics, reported only 16% being circumcised [1]. The lower rates amongst non-Jewish European immigrants also contributes to a reduction in the overall rate for the entire USA.

Canada:

The rate in that country varies markedly between different regions. Even in the same province, Ontario, for example, the rate between different districts ranges from 2% to 70%, with a mean of around **50%** . (Data from Ontario Ministry of Health and Statistics Canada, and Institute for Clinical Evaluative Sciences.)

Australia:

In the study in Sydney referred to earlier [53] the proportion of men who were circumcised when examined at this clinic was **62%** . Of those studied, 95% were white, with younger men just as likely to be circumcised as older men. In Adelaide, South Australia, a similar proportion has been noted, with 55% of younger men being circumcised. Medicare statistics based on rebate claims for circumcision show 16-19% of infant boys are circumcised [136]. The actual number circumcised is thus upwards of this lower limit. As well the many circumcisions performed after the newborn period contribute to the overall rate of approx. 50%.

Britain:

Much like continental Europe, the rate is only 7-10% for boys aged less than 15 years [176]. However, in a study in adults, conducted in London, of 305 men with a mean age of 42 years (range 4-93), **48%** were circumcised [128]. A survey published in a book "Sexual Behavior in Britain" (Penguin) gives the following rates by age group in the UK: 16-24 years: **12.5%** (n = 1874); 15-34: **15.9%** (n = 2111); 35-44: **26.4%** (n = 2049). Newborn circumcision was dropped by the

British NHS in 1949 in response to the famous physician Douglas Gairdner who was opposed to it, noting 16 deaths annually, although these were from the general anesthetics employed back then, NOT the circumcision itself.

Africa, Asia, India, Pakistan:

In these regions the rates vary according to religion and culture, with rates approaching 100% amongst Muslims and certain tribes, and low rates amongst some other groups and nations. Hindus for example do not usually circumcise.

HOME

PHYSICAL PROBLEMS

These were more than twice as frequent in uncircumcised boys [71]

Phimosis (inability to retract the foreskin) is normal in very young boys, but is gone by age 3 in 90%. If still present after age 6 it is regarded as a problem and affects 2-10% of uncircumcised males. The narrow foreskin opening causes urinary obstruction that can be partial or complete. Backward pressure to the kidney may impede its function and lead to high blood pressure, which is associated with increased risk of heart attack and stroke. Phimosis also increases risk of penile cancer (discussed later) and treatment by complete circumcision to prevent this outcome is advocated [14].

Paraphimosis (where the retracted foreskin cannot be brought back again over the glans) is a very painful problem, relieved by circumcision or slitting the dorsal surface of the foreskin.

Zipper injury In uncircumcised boys the foreskin can become accidentally entrapped in zippers, resulting in pain, trauma, swelling and scarring of this appendage. Foreskin accidents in men can also occur.

Elderly men In elderly men, infections and pain from balanoposthitis, phimosis and paraphimosis are seen and carers report problems in achieving optimal hygiene in uncircumcised men. The need for an appliance for urinary drainage in quadraplegics and in senile men is facilitated if they are circumcised. Nursing home staff have particular difficulty performing their duty of washing the genital area of uncircumcised elderly men, particularly with the onset of dementia. Such men can react violently towards staff or family during attempts to wash under the foreskin. This is an under-recognized problem and far from the mind of a parent or neonatologist when considering circumcision for an infant and information on the gerontological perspective should also be given [69].

Bathroom 'splatter' Boys and men who are not circumcised can be a source of irritation if they do not retract the foreskin when they urinate, as 'splatter' will occur. Although not a medical problem, it is a source of annoyance for other people (such as a parent or partner) if it is they who have the job of cleaning the bathroom.

The foreskin problems referred to above also mean intercourse is painful.

Another condition, **Frenular chordee** , results from an unusually thick and often tight frenulum and prevents the foreskin from fully retracting, being present in a quarter of all uncircumcised males [78]. The frenulum then tears during intercourse or masturbation. Since scar tissue is generally more fragile and less elastic than normal tissue, the tear often re-occurs causing pain, bleeding and is an impediment to sexual activity. This problem can be solved by excising the frenulum during a circumcision. Frenoplasty (removing just the tight frenulum) is also possible.

Psychological sequelae Follow-up 5 years later of 117 boys circumcised for phimosis, balanitis scarring of the prepuce, or ballooning when urinating found that 95% expressed complete satisfaction and the only psychological effect was slight shyness in the school change-room in 9% of boys in this Swedish study [207, 208]. The study showed that parents had nothing to fear for their son's psychological well-being from circumcision.

HOME

INFLAMMATORY DERMATOSES

To paediatric surgeons, the most obvious medical reasons for circumcision are **balanitis** (inflammation of the glans) and **posthitis** (inflammation of the foreskin). Both are very painful conditions. The latter is limited to uncircumcised males. Balanitis is seen in 11-13% of uncircumcised men, but in only 2% of those who are circumcised [62,110]. In uncircumcised diabetic men it is 35% [110]. In boys the incidence of balanitis is twice as high in those who are uncircumcised [70,86]. In babies, balanitis is caused by soiled diapers, playing and sitting in dirty areas, antibiotic therapy, as well as yeast and other micro-organisms. Balanitis caused by the group A haemolytic variety of Streptococcus is present exclusively in uncircumcised boys [155]. Mycobacterium smegmatis has been implicated in plasma cell (Zoon) balanitis [57]. Typical symptoms include erythrema (100%), swelling (91%), discharge (73%), dysuria (13%), bleeding (2%) and ulceration (1%) [110]. **Balanoposthitis** (inflammation of the foreskin and glans) is common in uncircumcised diabetic men, owing to a weakened shrunken penis [62] and such men also have more intercourse problems. Diabetes is common, inherited and rising in incidence, so this, as well as a family history of this disease may add to considerations about whether to circumcise at birth.

Most cases of inflammatory dermatoses are diagnosed in uncircumcised men (overall odds ratio 3.2). Thus circumcision is protective [128]. The disorders include psoriasis, penile infections, lichen sclerosus, lichen planus, schorrheic dermatitis, and Zoon balanitis (referred to above). All patients with Zoon balanitis, bowenoid papulosis, and nonspecific balanoposthitis were uncircumcised. Lichen sclerosis is found in 4-19% of all foreskins [54]. In older patients progressive Lichen sclerosis or other inflammatory changes lead to phimosis [14]. For a more extensive account on diseases of the penis see [57, 110]

HOME

URINARY TRACT INFECTIONS

The association of lack of circumcision with infections of the urinary tract is unequivocal. Most of the evidence has emerged over the past 20 years.

In 1982 it was reported that 95% of UTIs in boys aged 5 days to 8 months were in uncircumcised infants [75]. This was confirmed by Wiswell [249] and a few years later Wiswell and colleagues found that in 5261 infants born at one US Army hospital, 4% of UTI cases were in uncircumcised males, but only 0.2% in those who were circumcised [250]. This relatively captive population in Hawaii was said to be more reliable than the rate reported for hospital admissions [246]. Wiswell then went on to examine the records for 427,698 infants (219,755 boys) born in US Armed Forces hospitals from 1975-79 and found that the uncircumcised had an 11-fold higher incidence of UTIs [247]. During this decade the frequency of circumcision in the USA decreased from 84% to 74% and this decrease was associated with an increase in rate of UTI [251]. Reviews by others in the mid-80s concluded there was a lower incidence in circumcised boys [125, 177]. The rate in girls was stable during the period it was increasing in boys, in whom circumcision was in a decline. In a 1993 study by Wiswell of 209,399 infants born between 1985 and 1990 in US Army hospitals worldwide, 1046 (496 boys) got UTI in their first year of life [253]. The number was equal for boys and girls, but was 10 times higher for uncircumcised boys. Among the uncircumcised boys younger than 3 months, 23% had bacteremia, caused by the same organism responsible for the UTI.

In a study of 14,893 male infants aged < 1 year who had been delivered during 1996 at Kaiser Permanente hospitals in Northern California, with 65% circumcised, 86% of the UTIs occurred in the uncircumcised boys [191, 192]. The mean cost of management in the boys was US$1111, being twice that of girls (US$542), reflecting a higher rate of hospital admission in uncircumcised males with UTI (27%) compared with females (7.5%). Mean age at admission also differed: 2.5 months for uncircumcised boys vs 6.5 months for girls. Total cost was 10-times higher for uncircumcised boys vs girls ($155,628 vs $15,466). There were 132 episodes of UTI in uncircumcised males, but only 22 in those who had been circumcised. Hospital admissions were 38 vs 4, respectively. Incidence during the first year of life was 2.2% in uncircumcised boys and just 0.22% in circumcised (odds ratio = 9:1). The incidence in the girls was 2%. In a commentary to this article, Wiswell points out that half of infants with acute pyelonephritis get renal scarring that then goes on to pedispose to serious, life threatening conditions later in life, meaning also a large, ongoing cost [246]. UTIs are thus far from benign disorders of infancy. Moreover, the AAP Subcommittee on Urinary Tract Infections recommends a urine culture for any child under 2 with unexplained fever.

It should be noted that these studies gave figures for infants admitted to hospital for UTI, so that the actual rate would undoubtedly have been higher.

The infection can travel up the urinary tract to affect the kidney and a higher rate of problems such as pyelonephritis and renal scarring (seen in 7.5% [173]) is reported in uncircumcised children [180, 209]. These and other reports [e.g., 42, 75, 85, 180, 197, 209] all point to the benefits of circumcision in reducing UTI.

Wiswell performed a meta-analysis of all 9 studies that had been published up until 1992 and found that every one had observed an increase in UTI in the uncircumcised [248]. The average was 12-fold higher and the range was 5- to 89-fold, with 95% confidence intervals of 11-14 [248]. Meta-analyses by others have reached similar conclusions.

A large study in Canada of equal numbers of neonatally circumcised and uncircumcised boys saw rates of UTI and hospital admissions for UTI that were 4-fold higher in the uncircumcised [217]. In Australia, a relatively small study in Sydney involving boys under 5 years of age (mean 6 months) found that 6% of uncircumcised boys got a UTI, but only 1% of circumcised [41].

The benefit appears to extend beyond childhood and into adult life. In a study of men aged, on average, 30 years, and matched for race, age and sexual activity, the circumcised had a lower rate of UTI [203].

The fact that fimbriated strains of the bacterium Escherichia coli which are pathogenic to the urinary tract and pyelonephritogenic, have been shown to be capable of adhering to the foreskin, satisfies one of the criteria for causality [71, 77, 98, 99, 209, 251, 252]. Thus in infancy and childhood the prepuce becomes colonized with bacteria. Fimbriated strains of Proteus mirabilis , non-fimbriated Pseudomonas , as well as species of Klebsiella and Serratia also bind closely to the mucosal surface of the foreskin within the first few days of life [71, 77, 251]. Circumcision prevents such colonization and subsequent ascending infection of the urinary tract [177].

A recent report found that swabs taken of the periurethral area (the region of the penis where urine is discharged) in 46 circumcised and 125 uncircumcised healthy males (mean age = 27; range = 2 to 54 years) showed a predominance of Gram positive cocci in both groups, facultative Gram negative rods in 17% of uncircumcised males, but in only 4% of circumcised (P = 0.01). Streptococci, strict anaerobes (bacteria that can grow without oxygen) and genital mycoplasms (bacteria that lack a cell wall) were found almost exclusively in uncircumcised males over the age of 15 years (82% of the study group) [196]. Since these organisms are common inhabitants of the female genital tract, acquisition via sexual transmission was suggested. These latter categories of bacteria, unlike the Gram positive cocci, are potential pathogens capable of causing UTIs. It was speculated that when Gram negative organisms are the only colonizers of the preputial space they

achieve higher concentrations and that the quantitative difference may contribute to the development of UTI. The findings of this study provide a microbiological basis for the observed higher risk of UTI in uncircumcised adult men. The authors also concluded that their results pointed to a role for the prepuce as a reservoir for sexually transmitted organisms [196]. Another study, conducted in Dublin, involving swabs from the periurethral area, found that antibiotic prophylaxis in boys with vesicoureteral reflux was not effective in reducing the bacterial colonization of the prepuce, and recommended circumcision to reduce UTIs [35]. Vesicoureteral reflux increases risk of UTI, putting those boys in great danger from renal damage [66]. Salmonella typhimurium has also been found (in a 10 month old boy) and circumcision not only prevented further UTI, but also the spread of this organism to the general public [202].

Since the absolute risk of UTI in uncircumcised boys is approx. 1 in 25 (0.05) and in circumcised boys is 1 in 500 (0.002), the absolute risk reduction is 0.048. Thus 20 baby boys need to be circumcised to prevent one UTI. However, the potential seriousness and pain of UTI, which can in rare cases even lead to death, should weigh heavily on the minds of parents. Obtaining a midstream urine sample for culture from a circumcised boy is easy [19]. However, valid urine samples from uncircumcised boys requires invasive techniques such as urethral catheterization and suprapubic bladder catheterization [19]. The complications of UTI that can lead to death are: kidney failure, meningitis and infection of bone marrow. The data thus show that much suffering has resulted from leaving the foreskin intact. Lifelong genital hygiene in an attempt to reduce such infections is also part of the price that would have to be paid if the foreskin were to be retained. However, given the difficulty in keeping bacteria at bay in this part of the body [157, 188], not performing circumcision would appear to be far less effective than having it done in the first instance [180].

HOME

SEXUALLY-TRANSMITTED DISEASES

Ulcerative STDs (chancroid, syphillis) are associated with lack of circumcision, as seen in over 11 studies (for review see [141]). For other STDs the overall picture indicates greater prevalence in uncircumcised men, but there studies that show no difference (reviewed in [141])

One of the earliest large studies, reported in 1947, involved 1,300 consecutive patients in a Canadian Army unit. This showed that being uncircumcised was associated with a 9-fold higher risk of syphilis and 3-times more gonorrhea [238]. Work in the mid-70s showed higher chancroid, syphilis, papillomavirus and herpes in uncircumcised men [214]. At the University of Western Australia a 1983 study showed twice as much herpes and gonorrhea, 5-times more candidiasis and 5-fold greater incidence of syphilis [160]. Others have reported higher rates of nongonococcal urethritis in uncircumcised men [201].

In South Australia, a study in 1992 showed that uncircumcised men had more chlamidia (odds ratio 1.3) and gonoccocal infections (odds ratio 2.1). Similarly in 1988 a study in Seattle of 2,800 heterosexual men reported higher syphilis and gonorrhea in uncircumcised men, but no difference in herpes, chlamidia and non-specific urethritis (NSU). Like this report, a study in 1994 in the USA, found higher gonorrhea and syphilis, but no difference in other common STDs [34]. In the same year Dr Basil Donovan and associates reported the results of a study of 300 consecutive heterosexual male patients attending Sydney STD Centre at Sydney Hospital [53]. They found no difference in genital herpes, NSU, seropositivity for HSV-2 and genital warts (i.e., the benign, so-called 'low-risk' human papillomavirus types 6 and 11, which are visible on physical examination, unlike the 'high-risk' types 16 and 18, which are not). As mentioned earlier, 62% were circumcised and the two groups had a similar age, number of partners and education. Gonorrhea, syphilis and hepatitis B were too uncommon in this Sydney study for them to conclude anything about these other STDs. Similar findings were obtained in the National Health and Social Life Survey in the USA, which asked about gonorrhea, syphilis, chlamidia, nongonoccocal urethritis, herpes and HIV (a virus more often acquired intravenously in heterosexual i.v. drug-using men in the USA) [120],

although some under-reporting by uncircumcised men was likely as they tended to be less educated. Also, circumcision at birth was assumed, so that the number who sought circumcision later in life for problems, such as STDs and/or other infections, and therefore had switched group, was not taken into account. In a cross-sectional and cohort study from a multicentre controlled trial involving 2021 men in the USA from 1993 to 1996, and using multiple logistic regression to compare STD risk among circumcised and uncircumcised men adjusted for potentially confounding factors, uncircumcised men were significantly more likely to have gonorrhea in the multivariate analysis adjusted for age, race and site (odds ratio 1.3 and 1.6 for each respective study) [50]. this was also the case for syphilis (odds ratios 1.4 and 1.5), but not chlamydia.

Design aspects of a number of the studies have been criticized. As a result there is still no overwhelming agreement. Nevertheless, on the bulk of evidence, it would seem that at least some STDs could be more common in the uncircumcised. This conclusion is, however, by no means absolute in Western settings, and the incidence may be influenced by factors such as the degree of genital hygiene, availability of running water and socioeconomic group being studied. In some more recent studies in developed nations, in which hygiene is good, little difference was apparent.

HOME

CANCER OF THE PENIS

Incidence

The incidence of squamous cell carcinoma of the penis in the USA is 1 per 100,000 men per year [43] (i.e., 750-1000 cases annually). Mortality rate is 25-33% [109, 127]. Statistics on the American Cancer Society web page [8] show 1300 cases annually with 220 fatalities (1997 data). Penile cancer represents approximately 0.1-1% of all malignancies in men in the USA and other western countries. Neonatal circumcision virtually abolishes the risk [168, 189]. The rate data in the USA has to be viewed, moreover, in the context of the high proportion of circumcised men in the USA, especially in older age groups, and the age group affected (mean age at presentation = 60 years), where older men represent only a portion of the total male population. Thus the incidence of 1 in 100,000 men per year of life translates to 75 in 100,000 during each man's lifetime (assuming an average life expectancy of 75 years). However, penile cancer occurs almost entirely in uncircumcised men. If we assume that these represent 30% of males in the USA, the chance an uncircumcised man will get it would be (very approximately) 75 per 30,000 = 1 in 400. Perhaps not surprisingly this accords with the incidence that is actually seen (see below).

In 5 major series in the USA since 1932 [253], not one man with invasive penile cancer had been circumcised neonatally [127], i.e., this disease is almost completely confined to uncircumcised men. It is very much less common in circumcised men. In fact penile cancer is so rare in a circumcised man, that when it does occur it can even be the subject of a published case report [100]. The finite residual risk appears to be greater in those circumcised after the newborn period.

Lifetime risk in the total population of circumcised men is only 1 in 50,000 to 1 in 12,000,000 [242, 243]. In a study of 213 cases in California only 2 of 89 men with of invasive penile cancer was circumcised in infancy, so that uncircumcised men were stated to have 22 times the risk [192]. Of 118 with the localized, and thus more easily curable, variety of penile cancer, namely carcinoma in situ (which is not lethal), only 16 had been circumcised as newborns, i.e., incidence was 3-fold higher in the uncircumcised [127, 192].

Overall there were 50,000 cases of penile cancer in the USA from 1930 to 1990 and these resulted in 10,000 deaths. Only 10 of these cases were in circumcised men [187], and these had been circumcised later in life. The predicted lifetime risk for an uncircumcised man has been estimated as 1 in 600 in the USA and 1 in 900 in Denmark [109]. In Denmark (circumcision rate = 2%), penile cancer has been decreasing steadily [68] in parallel with an increase in indoor bathrooms. Urban unmarried men were more likely to get it. Since the rate of penile cancer in Denmark is lower than

in the USA other factors besides circumcision are also at work in these climatically, genetically and culturally different countries. The statistics for Denmark have been used by anti-circ advocates to draw a sweeping and fallacious conclusion about lack of circumcision per se in penile cancer. The Danish themselves have concluded that although their uncircumcised men are at lower risk, this is only 1 in 900 as opposed to 1 in 600 in the USA, as stated above [109]. A study in Spain concluded that "circumcision should be performed in childhood [as a] prophylactic [to penile cancer] [183].

In underdeveloped countries the incidence is higher: approx. 3-10 cases per 100,000 per year [109]. In those underdeveloped countries where circumcision is not routinely practiced it can be ten times more common than in developed countries, representing 11% to 12% of all male cancers [146]. In Uganda and some other African countries it is the most common malignancy in males, leading to calls for greater circumcision in that country [51]. Enormous differences are, moreover, seen in third world nations such as Nigeria (circumcised; low rate) when compared with Uganda, Puerto Rico [255] and Brazil [224], where most males are uncircumcised.

In Australia , figures from the New South Wales Cancer Council show 28 cases per year (including one in a child), with 5 deaths (1993 figures), which is similar to the 1 in 100,000 figure above and applies to a population in which the majority of the older men are circumcised. The rate could be set to escalate, however, as more of the males who were not circumcised during the period after the mid 1970s reach the ages when this cancer generally begins to present.

In Israel , where almost all males are circumcised, the rate of penile cancer is extremely low: 0.1 per 100,000, i.e., is 1/10th that of Denmark [255].

Cause

The so-called 'high-risk' human papillomavirus types 16 and 18 (HPV 16/18) are found in a large proportion of cases and there is good reason to suspect that they are involved in the causation of penile cancer [133], i.e, the same virus is responsible as is the case for most, if not all, cases of cervical cancer in women (see below). HPV 16 and 18 are, moreover, more common in uncircumcised males [110, 149]. These high-risk types of HPV produce flat warts that are normally only visible by application of dilute acetic acid (vinegar) to the penis. The majority of infections are subclinical, being more prevalent in uncircumcised men with balanoposthitis [110]. The data on high-risk HPVs should not be confused with the incidence figures for genital warts, which are large and readily visible, and are caused by the relatively benign HPV types 6 and 11 [104]. Smegma (found only under the foreskin) was implicated in an early study [168]. Itis not clear, however, what component was responsible, and could have been HPV present in the smegma. Interestingly, 93% of men whose female partner was positive for early signs of cervical cancer (cervical intra-epithelial neoplasia, CIN) had the male equivalent, penile intra-epithelial neoplasia (PIN) [13]. This reflects the fact that the disease, via HPV, is sexually transmitted. Oncogenic HPV was present in 75% of patients with PIN grade I, 93% with PIN grade II and 100% of PIN grade III, which is one step before penile cancer itself [13]. Moreover, the rate of PIN was 10% in uncircumcised men cf. only 6% in circumcised men [13]. Phimosis is strongly associated with invasive penile carcinoma (adjusted odds ratio = 16) [219]. Other factors, such as smoking, poor hygiene and other STDs have also been suspected as contributing to penile cancer as well [20, 127], but it would seem that lack of circumcision is the primary prerequisite, with such other factors adding to the risk in the uncircumcised man. Indeed, there is no scientific evidence that improved penile hygiene is effective in reducing the risk in an uncircumcised man [141].

Treatment

Complete or partial surgical amputation is the traditional treatment. Radiation is an alternative (or additional) therapy and in early-stage disease can preserve function of the organ. In a retrospective study in Switzerland of 41 consecutive patients with non-metastatic invasive carcinoma of the penis 44% underwent surgery (to remove all or part of the penis, as well as lymph

nodes in one third), followed by radiation therapy (in three-quarters) and the rest (56%) had just radiation therapy [256]. Over the median 70 months of follow-up 63% relapsed. For all patients 5-year survival rate was 57% and 10-year survival was 38%. Local relapse rate was lower in those who underwent surgery. However, there was no difference in survival when compared with radiation therapy, either alone, or in conjunction with salvage surgery. The psychosexual implications to a man are, understandably, not inconsequential [154].

Cost

Financial considerations are, moreover, not inconsiderable. In the USA it was estimated that the cost for treatment and lost earnings in a man of 50 with cancer, even in 1980, was $103,000 [82]. The amount today is very much higher.

Deaths from penile cancer vs. circumcision

In Australia between 1960 and 1966 there were 78 deaths from cancer of the penis and 2 from circumcision. (Circumcision fatalities today are virtually unknown.) At the Peter McCallum Cancer Institute 102 cases of penile cancer were seen between 1954 and 1984, with twice as many in the latter decade compared with the first [184]. Moreover, several authors have linked the rising incidence of penile cancer to a decrease in the number of neonatal circumcisions [44, 184]. It would thus seem that "prevention by circumcision in infancy is the best policy". Indeed it would be an unusual parent who did not want to ensure their child was completely protected by this simple procedure.

HOME

PROSTATE CANCER

Prostate cancer accounts for 27% of new cancers in males and 7% of deaths [148]. Uncircumcised men have twice the incidence of prostate cancer compared with circumcised [10, 61], and this cancer is rare amongst Jews [3]. No association has been seen between rate of prostate cancer and rate of cervical cancer in different geographic localities [179]. However, in a study of 20,243 men in Finland, infection with HPV18 was associated with a 2.6-fold increase in risk of prostate cancer ($P < 0.005$) [48]. For HPV16 the increased risk was 2.4-fold.

HOME

CERVICAL CANCER IN FEMALE PARTNERS OF UNCIRCUMCISED MEN

A number of studies have documented higher rates of cervical cancer in women who have had one or more male sexual partners who were uncircumcised. These studies have to be looked at critically, however, to see to what extent cultural and other influences might be contributing within groups that have different circumcision practices. Of interest in studies conducted in India and Pakistan, premarital sex is uncommon in the various religious groups in these and surrounding countries, where in general Muslims are circumcised and Hindus are not. In a study of 5000 cervical and 300 penile cancer cases in Madras between 1982 and 1990 the incidence was low amongst Muslim women, when compared with Hindu and Christian, and was not seen at all in Muslim men [72]. In a case-control study of 1107 Indian women with cervical cancer, sex with uncircumcised men or those circumcised after the age of 1 year was reported in 1993 to be associated with a 4-fold higher risk of cervical cancer. This figure was, moreover, obtained after controlling for factors such as age, age of first intercourse and education [2]. Another study published in 1993 concerning various types of cancer in the Valley of Kashmir concluded that universal male circumcision in the majority community was responsible for the low rate of cervical cancer compared with the rest of India [45]. In Israel, a 1994 report of 4 groups of women aged 17-60 found that Moshav residents with no gynaecological complaints had no HPV 16/18 and healthy Kibbutz residents had a 1.8% incidence [93]. Amongst those who had a gynaecological complaint

HPV 16/18 was found in 9% of Jewish and 12% of non-Jewish women. Thus the causative agent (high-risk HPV) can be found in Jewish women, where the lifestyle and contact with non-Jewish men (some of whom may be uncircumcised) would likely have been higher in the Kibbutz dwellers. The source of this (circumcised vs. uncircumcised partners) was not explored.

So-called 'high-risk' HPV types 16, 18 and some rarer forms are responsible for virtually every case of cervical cancer [164, 225, 226]. These same high-risk HPVs also cause penile intra-epithelial neoplasia (PIN), which is the precursor to penile cancer and is the male equivalent of cervical intra-epithelial neoplasia (CIN), which is the precursor to cervical cancer. In a study published in the New England Journal of Medicine in 1987 it was found that women with cervical cancer were more likely to have partners with PIN [21]. A study in 1994 found that in women with CIN, PIN was present in the male partner in 93% of cases [13]. This is consistent with the known sexual transmission of this cancer-causing virus. The abnormality termed CIN may progress to cancer or, more often, it will go away. Thus co-factors are suspected. Interestingly, smegma (the film of bacteria, secretions and other material under the foreskin), obtained from human and horse has been shown to be capable of producing cervical cancer in mice in one study [165], but not in another [175]. Differences in exposure time in each study could account for this difference.

In 2002, a large, well-designed multinational study by the International Agency for Research on Cancer published in the New England Journal of Medicine has irrefutably implicated the foreskin in cervical cancer [35a]. This involved 1913 couples in 5 global locations in Europe, Asia and South America. Penile HPV was found in 20% of uncircumcised, but only 5% of circumcised men (odds ratio = 0.37). The women were more 5.6 times more likely to have cervical cancer if their partner was uncircumcised. Penile HPV infection was associated with a 4-fold increase in the risk of cervical HPV infection in the female partner, and cervical HPV infection was associated with a 77-fold increase in the risk of cervical cancer. In an accompanying editorial it was suggested that "reduction in risk among female partners of circumcised as compared with uncircumcised men may well be more substantial than reported" in this study [1a]. This may be because skin-to-skin contact that does not extend to sexual intercourse with the uncircumcised penis could infect the woman. Indeed, condom use had NO protective effect! Genital HPV types can in fact infect skin throughout the genital region. Interestingly, the uncircumcised men washed their genitals more often after intercourse, but the circumcised men had better penile hygiene, when examined by a physician. So why are uncircumcised men much more highly infected? One suggested reason was that the more delicate, easily-infected, mucosal lining of their foreskin is pulled back during intercourse, and so is wholly exposed to vaginal secretions of an infected woman, so infecting them, and increasing risk of infection to any future woman the uncircumcised man has sex with.

Thus the epidemic of cervical cancer worldwide would appear to be contributed, at least in part, by the uncircumcised male. In countries that have experienced a downturn in circumcision rate one might therefore expected to see the incidence of cervical cancer get even worse. This could apply particularly in regions where neonatal circumcision decreased in the late 1970s and 1980s, meaning men that were born then and not circumcised will now have reached sexual maturity and be increasingly putting at risk women today.

HOME

HIV: THE AIDS VIRUS

HIV infection is via the foreskin

Over 50 million people are infected with HIV. Half of these are men, most of whom have been infected through their penises [210]. Over 70% of these infections have arisen from vaginal intercourse [96]. How then does HIV enter a man's body in this way? Epidemiological data from more than 40 studies (discussed below) shows that HIV is much more common in uncircumcised, as opposed to circumcised, heterosexual men [66]. A wealth of evidence indicates that male

circumcision protects against HIV infection, as acknowledged in the major journals Science [95] and Nature [232].

During heterosexual intercourse the foreskin is pulled back down the shaft of the penis, meaning that the whole of its inner surface is exposed to vaginal secretions [210]. An early suggestion that attempted to explain the higher HIV infection in uncircumcised men was that the foreskin could physically trap HIV-infected vaginal secretions and provide a more hospitable environment for the infectious inoculum [33]. It was also suggested that the increased surface area, traumatic physical disruption during intercourse and inflammation of the glans penis (balanitis) could aid in recruitment of target cells for HIV-1. Initial thoughts were that the port of entry could potentially be the glans, sub-prepuce and/or urethra. It was suggested that in a circumcised penis the drier, more keratinized skin covering the penis may prevent entry. However, more recent studies showed that the glans of the circumcised and uncircumcised penis were in fact identical in histological appearance, having exactly the same amount of protective keratin [210]. In contrast, the inner lining of the foreskin is a mucosal epithelium and lacks a protective keratin layer [17; see picture below taken, with permission, from 17]. The foreskin's inner epithelium thus resembles histologically the lining of the nasal passages and vagina. All such mucosal epithelia are major targets for infection by micro-organisms (colds, flu, STDs, etc). The inner lining of the adult foreskin is rich in Langerhans cells and other immune-system cells. The mucosal inner lining of the adult foreskin is rich in Langerhans cells and other immune-system cells (22.4, 11.5 and 2.4% of total cell population is represented by CD4+ T cells, Langerhans cells and macrophages) [161a]. (This contrasts with the neonate, where the foreskin is deficient in such cells [229], the proportion being instead 4.9, 6.2 and 0.3%, respectively [161a]). The respective percentages for immune-system cells in the cervical mucosa are: 6.2, 1.5 and 1.4% [161a]. In the external layer of the foreskin, which is like the rest of the penis, the proportions are very much lower: 2.1, 1.3 and 0.7%, respectively [161a]. Although the urethra is also a mucosal surface, it lacks Langerhans cells, so is not likely to be a common site of HIV infection [133]. The immune cells of the inner lining of the foreskin help fight bacteria and viruses that accumulate under it. However, in the case of HIV, they act as a "Trojan horse' and in fact serve as portals for uptake of HIV into the body. This has been shown by direct experimentation [17, 23, 161a]. Punch biopsies were taken from fresh foreskin obtained immediately after circumcision of an adult male. Cultures were made of cells from the external surface (which resembles the rest of the penis) and from the inner mucosal surface of the foreskin. Live HIV tagged with a fluorescent marker was then applied. Within minutes the HIV entered the Langerhans cells [see picture above - obtained, with permission, from 17 {similar images can be seen in 161a}]. No uptake occurred for cultured epithelium of the keratinized outer surface of the foreskin, i.e., the part that resembles the skin of the circumcised penis. The mean number of HIV copies per 1000 cells (determined by quantitative PCR) one day after infection was 301 for the mucosal inner foreskin, but was undetectable in the outer, external, foreskin [161a]. For cervical biopsies mean HIV copy number was 30, showing that the mucosal inner foreskin is 10-times more susceptible to HIV infection than the cervix [161a]. Also, the HIV receptor CCR5 was especially prevalent on foreskin tissue cells [161a]. This biological work thus nicely confirms the epidemiological evidence below. It is furthermore supported by experiments in which SIV (the monkey equivalent of HIV) has been applied to foreskin of monkeys, that then became infected [137]. The monkey work also showed infected Langerhans cells. Antigen presenting cells in the mucosa of the inner foreskin [92] are a primary target for HIV infection in men [210]. The foreskin is thus the weak point that allows HIV to infect men during heterosexual intercourse with an infected partner. A circumcised man with a healthy penis is thus very unlikely to get infected. However, ulcerations or abrasions on the penis will allow infection and a circumcised man with these will continue to be at risk of HIV, as well as some other STDs. Thus condom use is strongly advocated in an attempt to make absolutely sure that infection will not occur. Condoms are not, however, a panacea, and a man with a foreskin can still be infected even if using a condom during intercourse, if infected fluids come into contact with the inner foreskin, for example during foreplay.

Risk per exposure

In the USA the overall estimated risk of HIV infection per heterosexual exposure, when HIV status is unknown, is less than 1 in 100,000 [31, 159]. based on data from Kenya, if one partner is HIV

positive and otherwise healthy then a single act of unprotected vaginal sex carries a 1 in 300 risk for a woman and as low as a 1 in 1000 risk for a man [31]. (The rates are very much higher for unprotected anal sex and intravenous injection.) This data does not take into account circumcision status.

In Europe (13 centres from 9 countries) the rate is higher than in the USA (3 in 10,000) [54].

In Nairobi, Africa the rate is 1 in 1000 in the absence [83] and 1 in 6 in the presence [33] of genital ulcers.

In Asia, a study of young military conscripts in Northern Thailand , a country with low circumcision rates, and where the men were having regular contact with female sex workers the rate was 1 in 18 to 1 in 32 [131].

A recent overview of all of these various studies found that in developing countries the rate of female-to-male HIV transmission was 341 times higher than in developed countries [152]. (This compared with a male-to-female rate 2.9-fold higher in developing countries.) Among couples in the West, female-to-male transmission was 11% [130]. For male-to-female it was 23%. In Africa, however, female-to-male was 73% [87] and male-to-female was 60% in one study [87, 120]. In another, in rural Uganda, female-to-male transmission (12 per 100 person years) was identical to male-to-female transmission [170]. After consideration of all of the factors, lack of circumcision was highlighted as a major driving force behind the AIDS epidemic [152].

HOME

Epidemiological research

Africa:

Africa would appear to be where HIV first appeared in the human species and Africa has the highest rate of HIV infection in the world. In some African populations the rate is 30-40%. The male, who is more likely to be promiscuous than the female, is the major source of infection in the majority of women, who only have that one partner [67]. They may then pass on the virus to their children during pregnancy and breastfeeding. Men should therefore be the target for intervention strategies aimed at combating the disease.

One of the earliest and most interesting studies of the risk of HIV infection imposed by having a foreskin is that by Cameron, Plummer and associates published as a large article in Lancet in 1989 [32]. It was conducted in Nairobi. Rather than look at the existing infection rate in each group, these workers followed HIV negative men until they became infected. The men were visiting prostitutes, numbering approx. 1000, amongst whom there had been an explosive increase in the incidence of HIV from 4% in 1981 to 85% in 1986. These men were thus at high risk of exposure to HIV, as well as other STDs. From March to December 1987, 422 men were enrolled into the study. Of these, 51% had presented with genital ulcer disease (89% chancroid, 4% syphilis, 5% herpes) and the other 49% with urethritis (68% being gonorrhea). 12% were initially positive for HIV-1. Amongst the whole group, 27% were not circumcised. The men were followed up each 2 weeks for 3 months and then monthly until March 1988. During this time 8% of 293 men seroconverted (i.e., 24 men), the mean time being 8 weeks. These displayed greater prostitute contact per month (risk ratio = 3), more presented with genital ulcers (risk ratio = 8; $P < 0.001$) and more were uncircumcised (risk ratio = 10; $P < 0.001$). Logistic regression analysis indicated that the risk of seroconversion was independently associated with being uncircumcised (risk ratio = 8.2; $P < 0.0001$), genital ulcers (risk ratio = 4.7; $P = 0.02$) and regular prostitute contact (risk ratio = 3.2; $P = 0.02$). The cumulative frequency of seroconversion was 18% and was only 2% for men with no risk factors, compared to 53% for men with both risk factors. Only one circumcised man with no ulcer seroconverted. Thus 98% of seroconversion was associated with either or both cofactors. In 65% there appeared to be additive synergy, the reason being that ulcers increase infectivity for HIV.

This involves increased viral shedding in the female genital tract of women with ulcers, where HIV-1 has been isolated from surface ulcers in the genital tract of HIV-1 infected women. In this African study the rate of transmission of HIV following a single exposure was 13% (i.e., very much higher than in the USA). It was suggested that concomitant STDs, particularly chancroid [31], may be a big risk factor, but there could be other explanations as well. In uncircumcised males the highly vascular frenulum is particularly susceptible to tearing or other damage during intercourse, and is also a frequent site of lesions produced by other STDs [210]. The risk of HIV infection is thus further reduced by circumcision, which therefore reduces the synergy that normally exists between HIV and other STDs [179, 210].

HOME

An earlier study in Nairobi was the first to notice that among 340 men being treated for STDs there was a 3-fold higher rate of positivity for HIV if they had genital ulcers or were uncircumcised (11% of these men had HIV) [199]. Subsequently another report showed that amongst 409 African ethnic groups spread over 37 countries the geographical distribution of circumcision practices indicated a correlation of lack of circumcision and high incidence of AIDS [25]. In 1990 Moses in the International Journal of Epidemiology reported that amongst 700 African societies involving 140 locations and 41 countries there was a considerably lower incidence of HIV in those localities where circumcision was practiced [142, 144]. Truck drivers, who generally exhibit more frequent prostitute contact, have shown a higher rate of HIV if uncircumcised [172]. Interestingly, in a West African setting, men who were circumcised but had residual foreskin were more likely to be HIV-2 positive than those in whom circumcision was complete [162]. Of 33 cross-sectional studies to the mid 1990s, 22 reported statistically significant association [e.g., 46, 47, 91, 94, 169, 220], by uni-variate and multi-variate analysis, between the presence of the foreskin and HIV infection (4 of these were from the USA). 5 reported a trend (including 1 of the studies in the USA) [140, 144]. Of the 6 that saw no difference 4 were from Rwanda and 2 from Tanzania. In an editorial review in 1994 of 26 studies it was pointed out that more work was needed in order to reduce potential biases in some of the previous data [46]. Studies since then that did control for such potential confounding factors, have confirmed that there was indeed a significantly lower HIV prevalence among circumcised men [122, 220]. Hazard rate ratio for being uncircumcised in one of these was 4.0 [122]. Many of the earlier studies were more recently re-evaluated and those that were negative are now consistent with the majority of studies, i.e., ALL studies show lower HIV in circumcised populations. In this large systematic meta-analysis published in 2000 [231], 27 studies were examined, with 21 showing reduced risk in circumcised men. In 15 that were adjusted for potential confounding factors the association with circumcision was 0.42 (i.e., uncircumcised were 2.4 fold higher). The difference was highest in men at high risk, circumcised being 0.27 vs uncircumcised (i.e., was 3.7 fold higher for uncircumcised). The authors concluded that safe services for circumcision should be provided as an AIDS prevention strategy in parts of Africa where men are not traditionally circumcised.

HOME

In addition to the many case-control studies there have been 5 prospective studies, 2 from Kenya and 1 from Tanzania reporting statistically significant association. The increased risk in the significant studies ranged from 1.5 to 9.6. Later adjustment of the data for other factors showed all studies were significant in demonstrating higher HIV in uncircumcised men [231]. Women are at higher risk if their partner is uncircumcised. A study in Dar es Salaam, Tanzania, where most men are circumcised, noted that married women, with one sex partner, had a 4-fold higher relative risk of HIV if their husband was uncircumcised [101]. In most of these studies circumcision status was self-reported. However, physical examination in one study showed that 33% of men who said they were circumcised were in fact not circumcised [150]. Amongst Muslims, 26% were not circumcised. Moreover, clinical reports of circumcision status can also be inaccurate, especially if the clinician was a woman, as reported in a US study of White, Black and Hispanic males [49]. Thus the residual HIV infection amongst so-called circumcised groups could quite likely be to a large extent from this residue of uncircumcised men, i.e., the estimated protective effect from being circumcised could really be far greater than the statistics above. The conclusive findings emerging from the

large number of studies have, moreover, led various workers, Moses and Caldwell included, to propose that circumcision be used as an important intervention strategy in order to reduce AIDS [31, 65, 91, 107, 129, 142, 144]. Such advice has been taken up, with newspaper advertisements from clinics in Tanzania, western Kenya, Rwanda, Uganda and other parts of Africa offering this service to protect against AIDS [80]. Young men are opting for circumcision and tribal elders are changing the edicts of their culture by now allowing circumcision in order to prevent AIDS [80, 150]. In traditionally noncircumcising cultures, circumcision rate has increased to 23% overall with a mean age of having it done of 17.4 years, and the rate is even higher (57%) in those who had at least 8 years of education [150]. Health is cited as the reason. This work shows that circumcision can be readily adapted into a culture. It would also appear that circumcision is most effective as a preventative measure against HIV infection if it is performed prior to puberty [106].

HOME

The possibility of an absolute protective effect in an otherwise healthy penis is suggested by a large study published in the prestigious New England Journal of Medicine in 2000 [170]. This involved 415 heterosexual couples in which only one partner (228 men and 187 women) was HIV-positive. ¬Ý It followed them prospectively for 30 months. The incidence of seroconversion was 17 per 100 person-years among the 137 uncircumcised male partners. However, among the 50 circumcised men with a HIV-infected female partner , not one seroconverted, i.e., none became infected , even though they were having regular unprotected sex with an infected woman. The effect was apparent in circumcised non-Muslim men as well as Muslims (who wash after intercourse), suggesting behaviors arising from religion were not involved [76]. Moreover, the protection was seen only when circumcision had been performed prior to puberty [76]. A commentary to this article highlighted the need to explore circumcision in reducing the spread of AIDS [37]. Frequency of sexual intercourse has also been excluded. In a study of 188 circumcised and 177 uncircumcised men in Mbale, Uganda, non-Muslim circumcised men engaged in more risk-taking behaviors, such as drinking alcohol in conjunction with sex, sex with women on the first day of meeting, sex in exchange for money or gifts, pain on urination, penile discharge, earlier sexual debut (16 vs 17), more extramarital sex partners in the previous year (1.1 vs 0.6), and more nonwet sex [18]. (The latter, which is also practiced in Haiti, the Dominican Republic and to a certain extent in the USA, in an uncircumcised man can cause bleeding of the foreskin and frenulum, so increasing infection risk [79].) Muslims had a lower risk profile regarding all of these factors, except for being less likely to have used a condom ever or during the previous sexual encounter (odds ratio 0.3). This highlights the fact that the foreskin itself confers an increased risk of HIV infection. Overall, rough estimates are that circumcision has prevented more than 10 million HIV infections so far in Africa and Asia [66]. Worldwide this figure will obviously be greater.

Asia:

Like Africa there are regional and ethnic differences in circumcision practice. Again, like Africa, HIV prevalence follows the foreskin. Rate is low where circumcision is high: e.g., Philippines (0.06% of adults), Bangladesh (0.03%), Indonesia (0.05%). In contrast the rate is 10-50 times higher in countries where most males are uncircumcised: e.g., Thailand (2.2%), India (1.8%) and Cambodia (2.4%) [80]. A huge increase in infections is expected in such Asian countries over the next decade [80]. Moreover the outbreak of HIV in central China in 2000 arising from use of contaminated needles to buy and on-sell blood from people there is set to spread HIV via heterosexual transmission. The leadership of this, the biggest country in the world, is well placed to reduce such a disaster by institution of a circumcision policy.

USA:

Studies in the USA have not been as conclusive. Some studies have shown a higher incidence in uncircumcised men [235]. In one study in New York City, however, no significant correlation was found, but the patients were mainly intravenous drug users and homosexuals, so that any existing effect may have been obscured. A study in Miami of heterosexual couples did find a higher

incidence in men who were uncircumcised. In studies of heterosexual men risk ratios of 2.9 and 3.5 were reported [103, 141, 215]. A study in Seattle of homosexual men found they were twice as likely to be HIV positive if uncircumcised [111].

Rapidity of spread

The sorts of health problems faced by the 'third-world', coupled with a lack of circumcision may account for the rapid spread of HIV through Asia [234]. The reason for the big difference in apparent rate of transmission of HIV in Africa and Asia, where heterosexual exposure has led to a rapid spread through these populations and is the main method of transmission, compared with the very slow rate of penetration into the heterosexual community in the USA and Australia, could be related at least in part to a difference in the type of HIV-1 itself [112]. In 1995 an article in Nature Medicine discussed findings concerning marked differences in the properties of different HIV-1 subtypes in different geographical locations [156]. A class of HIV-1 termed 'clade E' is prevalent in Asia and differs from the 'clade B' found in developed countries in being more highly capable of infecting Langerhans cells found in the foreskin, so accounting for its ready transmission across mucosal membranes. The Langerhans cells are part of the immune system and in turn carry the HIV to the T-cells, whose numbers are then severely depleted by the virus as a key feature of AIDS. The arrival of the Asian strain in Australia was reported in Nov 1995 and has the potential to utilize the uncircumcised male as a vehicle. More vigorous promotion of circumcision should help curtail any potential epidemic.

HOME

Condoms

Sexual transmission of HIV and other STDs should be reduced by use of barrier protection such as condoms. A feared AIDS epidemic resulted in media campaigns starting in the 1980s aimed at increased condom use. In a 1996 survey of American college students only 60% had used condoms in the previous 6 months and < 50% definitely intended to use them in them in the next month [24]. Amongst a general US population sample, 62% of adults in 1996 reported using condoms at previous intercourse outside of an ongoing relationship [9]. In a review in the Lancet condom use was similarly reported as 55% [52]. Thus half of the sexually-active population of western countries are not using condoms. Indeed, the message of condom campaigns can easily be forgotten, especially in the young, in whom passion will over-ride compliance on occasions. Young people represent the most sexually promiscuous, at-risk group. They are at an age when risk-taking behaviour is prevalent (cf. smoking in young people vis-a-vis the anti-smoking campaign, dangerous driving, alcohol and drug taking, etc). In the case of HIV too, this will have tragic consequences. Many young people do not use condoms and openly scoff at the idea, despite the health warnings. Indeed it may be a sign of machismo to the young adult. Indeed the well-known 3 "I"s are represented in their behavior of being "infertile", "immortal", and "immune" . Thus education is only part of the answer and where an additional simple procedure is available to reduce the risk, then logic dictates that it should be used. The result will be many lives saved.

Even when used, the method of condom use if often incorrect. Condoms may break during intercourse. There can also be strong cultural and esthetic objections to their use. Also, application of a condom to a circumcised penis is easier than to a penis with a foreskin.

In the prospective study referred to earlier of circumcised and uncircumcised men whose female partner was infected condoms were made available continuously [170]. However, in discussing this study it was pointed out that 89% of the men never used condoms and condom use did not appear to influence the overall rate of transmission of HIV [210]. Only circumcision status did. Circumcision removes the tissue that is the entry point for HIV. Unless a condom is used during all sex play then the risk remains of contact between the inner lining of the foreskin and HIV-laden secretions, sperm (in the case of homosexual sex), cells or tissues of an infected sex partner.

SOCIO-SEXUAL ASPECTS

Perhaps the first, albeit small and restricted, but interesting survey of circumcised vs uncircumcised men and their partners was conducted by Sydney scientist James Badger [15, 16] (who regards himself as neutral on the issue of circumcision). It involved responses to a questionnaire placed in clinics of the Family Planning Association in Sydney. This led to 180 participants (79 male, 101 female) who were aged 15-60. The women were mainly (50%) in the 20-30 year-old age group cf. 25% of the men, more of whom (33%) were aged 30-40. It found that:

? 18% of uncircumcised males underwent circumcision later in life anyway.
? 21% of uncircumcised men who didn't, nevertheless wished they were circumcised. (There were also almost as many men who wished they hadn't been circumcised and it could be that at least some men of either category may have been seeking a scapegoat for their sexual or other problems. In addition, this would no doubt be yet another thing children could "blame" their parents for, whatever the decision was when their child was born.)
? No difference in sexual performance (consistent with Masters & Johnson).
? Slightly higher sexual activity in circumcised men.
? No difference in frequency of sexual intercourse for older uncircumcised vs. circumcised men.
? Men who were circumcised as adults were very pleased with the result. The local pain when they awoke from the anaesthetic was quickly relieved by pain killers (needed only for one day), and all had returned to normal sexual relations within 2 weeks, with no decrease in sensitivity of the penis and claims of "better sex". (Badger's findings are, moreover, consistent with every discussion the author has ever had with men circumcised as adults, as well as an enormous number of email messages received from many such men. The only cases to the contrary were a testimonial in a letter sent to the author from a member of UNCIRC and a very brief email message that didn't say why.)
? Women with circumcised lovers were more likely to reach a simultaneous climax - 29% vs. 17% of the study population grouped across the orgasmic spectrum of boxes for ticking labelled 'together', 'man first', 'man after' and 'never come'; some ticked more than one box. (Could this involve mental factors? ... Could it be that more circumcised men have a better technique? ... Or could other factors be involved?)
? Women who failed to reach an orgasm were 3 times more likely to have an uncircumcised lover. (These data could, however, possibly reflect behaviours of uncircumcised males that might belong to lower socio-economic classes and/or ethnic groups whose attitudes concerning sex and women may differ from the better-educated groups in whom circumcision is more common.)
? A circumcised penis was favoured by women for appearance and hygiene. (Furthermore, some women were nauseated by the smell of the uncircumcised penis, where, as mentioned earlier, bacteria and other micro-organisms proliferate under the foreskin.)
? An uncircumcised penis was found by women to be easier to elicit orgasm by hand.
? An circumcised penis was favoured by women for oral sex (fellatio).

A survey of 5000 men aged 16-49 (78% circumcised, 19% not, 3% "don't know") was subsequently conducted by Badger. This was open to all, and so included men who were anti-circumcision activists and those who were not. Circumcision was at birth in 72%, before puberty in 12% and after puberty in 16%. Of those who said someone else decided for them that they should be circumcised, only 16% said they were unhappy to be circumcised; 46% were happy and 38% didn't care. Overall only 11% said they would not circumcise any son(s).

These findings are consistent with later studies. In a survey of new mothers in the USA, hygiene and appearance were the two major reasons for choosing to have their newborn son circumcised [237]. There was a strong correlation between their son's circumcision status and the woman's ideal male partner's circumcision status for intercourse. Thus by being circumcised they thought that their sons would likewise be more attractive to a future sexual partner (with the implication that they would be at an advantage in passing on their, and therefore the mother's, genes to the subsequent generation). Their own preference thus affected their choice for their sons. 92% said

the circumcised penis was cleaner, 90% said it looked 'sexier', 85% it felt nicer to touch and 55% smelled more pleasant. Even women who had only ever had uncircumcised partners preferred the look of the circumcised penis. Only 2% preferred an uncircumcised penis for fellatio, with 82% preferring the circumcised variety. Preference for intercourse for circ. vs uncirc. was 71% vs 6%, respectively; manual stimulation, 75% vs 5%; visual appeal, 76% vs 4%. What then is sexier about a circumcised penis? Quite likely it is that the glans is exposed in both the erect and un-erect state.

In Africa, women preferred men who were circumcised because they considered they were at less risk of STD [128]. The foreskin was also regarded as a source of a bad smell and men too thought it was cleaner. Increased sexual pleasure to both partners was also stated [150].

Many surveys have been carried out by women's and men's magazines over the years and all report a preference by women for a man with a circumcised penis. One in Sydney by Men's Health (July 2001 issue) found that only 16% of women preferred the uncircumcised penis. 46% preferred the circumcised, 31% didn't care (6% had never seen an uncircumcised penis and 1% had not seen a circumcised penis).

A survey by anti-circ activists of female members of their anti-circumcision organization, not surprisingly, found the opposite. Moreover, apart from the fact that it was not published in a proper scientific journal, bias arising from the seriously flawed study design causes it to lack credibility.

In the visual arts, for scenes involving the naked male it is quite plausible that American producers of erotic films and publishers of photographic works choose circumcised men, or at least uncircumcised men whose foreskin is smooth and free from loose, wrinkled skin, as the latter lacks visual appeal, especially to those who are not used to seeing an uncircumcised penis. Societal attitudes, at least in the USA, are reflected in the entertainment industry, such as TV shows. With apologies for introducing anecdotal material, a few examples are nonetheless potentially illuminating and amusing to many. For example, the character 'Elaine', in an episode of the TV sitcom 'Seinfeld' stated that "[the uncircumcised penis] looks like an alien!" Similarly in an episode of 'Sex in the City', also set in New York, one character recoiled in shock on seeing her new boyfriend was uncircumcised. It was clear that the quite sexually experienced 30-something women in this show were unused to the foreskin, describing it as resembling a Shar Pei (a dog breed with excessive rolls of skin). The new boyfriend's status had been bothering him anyway so he got circumcised, and liked his new look and sex so much he dumped the new girlfriend so he "could take the doggy for a walk", i.e to try it out on other women around town. The moral: "You can take the Shar Pei out of the penis, but you can't take the dog out of the man". In the TV cartoon series 'South Park' the boys were alarmed to hear a new baby was going to be circumcised, thinking the penis was going to be cut off. Later when told it made the penis bigger they all wanted it. (Being set in America's heartland it is certain they already were circumcised (and didn't know what it was) - that is if one can apply this kind of rationale.) These illustrations involve of course actors or characters who are following a script, and is therefore not scientific by any means, but do reflect thinking and behaviors in these US settings.

Interestingly, in other cultures, for example in Africa, women from tribes that do not practice circumcision report deriving greater sexual pleasure from circumcised men [141].

As far as performance during sex is concerned, the National Health and Social Life Survey (NHSLS) of over 1400 men in the USA found that uncircumcised men were more likely to experience sexual dysfunctions [121]. This was slight at younger ages, but became quite significant later in life and included finding it twice as difficult to achieve or maintain an erection. It was also discovered that circumcised men engaged in a more elaborate set of sexual practices. Not surprisingly, in view of the findings above, circumcised men received more fellatio. However, they also masturbated more, a finding that, ironically, contradicts the apparent wisdom in Victorian times that circumcision would reduce the urge to masturbate. (Contrary to anti-circ. propaganda, circumcision was not used to reduce masturbation in that era, but rather to prevent smegma and itching, so stopping males scratching their genitalia, which co-incidentally sometimes led to

arousal.) As noted in other studies, circumcision rates were greatest among whites and those who were better educated, reflecting their exposure to and ability to evaluate and respond to scientific information about circumcision. There was little difference between different religious groups.

The foreskin contains sensory nerve receptors as are prevalent over the rest of the penis. There is no scientific evidence that the extra complement of these in uncircumcised men leads to greater sexual pleasure. Uncircumcised men often complain that their penis is too sensitive, leading to pain, and seek circumcision to relieve this. Diminishing sensitivity is in fact desired by many men and women in order to prolong the sex act by preventing premature ejaculation [29]. Orgasm, the culmination of the sex act, is not related to the foreskin. It should also be added that anecdote needs to be translated into science, however, and more research is required in this contentious area.

In Britain a class distinction is associated with circumcision. The Royal Family and the upper classes are circumcised and the lower classes less so. Queen Victoria believed her family descended from King David (of the Biblical Old Testament) and sanctioned circumcision. Prince Charles was circumcised by a mohel (a rabbi who specializes in circumcision). Princess Diana decided that Princes William and Harry would go uncircumcised. The NHSLS in the USA saw greatest rates among whites and the better educated. There was little difference between different religious groups. Some ancient cultures and some even today practice infibulation (drawing a ring or similar device through the prepuce or otherwise occluding it for the principal purpose of making coition impossible) [195]. This is the opposite of circumcision. It was, moreover, espoused in Europe and Britain in previous centuries as a way of reducing population growth amongst the poor and to prevent masturbation [195]. Times have changed fortunately for most.

Consistent with the accounts above of men circumcised as adults, clinical and neurological testing has not detected any difference in penile sensitivity between men of each category [129a]. Sexual pleasure also appears to be the same.

Two US studies published in 2002 both found similar or greater sexual satisfaction in men circumcised as adults [37a, 65a]. The mean age of the men in each study was 37 and 42, respectively. In the smaller survey [37a] there was no difference in sexual drive, erection, ejaculation, problem assessment or satisfaction compared with what the men recalled sex being like prior to foreskin removal. Penile sensitivity was the same, consistent with Masters & Johnson, who found no difference by neurological testing of the ventral and dorsal surfaces, as well as the glans [129a]. They state that their study was prompted by reports by proponents of "foreskin restoration", in particular the "disparity between the mythology and medical reality of circumcision regarding male sexuality" [37a]. In the other study, of 123 men [65a], 62% of men said they were satisfied with having been circumcised (they liked their new look) and 50% reported benefits. There was no change in sexual activity. Penile sensitivity, although not tested directly, was thought by the men to be slightly lower (but not statistically so), which may have contributed to their claims of better sex. Some men thought erectile function was slightly less (category scores: 12.3 vs 11.1, P = 0.05), which is the opposite of the very much larger National Health and Social Life Survey [121]. Moreover, the authors point out that this would have to be confirmed by duplex Doppler ultrasound before a definitive conclusion could be made. Both the men and their partners preferred the appearance of the penis after it had been circumcised. As in other studies [121] oral sex became more frequent, but there was no change in anal sex or masturbation [65a]. Their partners were also more likely to initiate sex with them.

HOME

THE PROCEDURE ITSELF

Circumcision of the neonate

There is no evidence of any long-term psychological harm arising from circumcision. The risk of damage to the penis is extremely rare and avoidable by using a competent, experienced doctor. Unfortunately, because it is such a simple, low-risk procedure, it had been the practice to assign this job to junior medical staff and nurses, with occasional devastating results. Parents or patients need to have some re-assurance about the competence of the operator. Also the teaching of circumcision to medical students and practitioners needs to be given greater attention because it is performed so commonly and needs to be done well. A model to teach interns has, moreover, been produced [58]. Surgical methods often use a procedure that protects the penis during excision of the foreskin. The most commonly used devices are the GOMCO clamp, MOGEN clamp and PlastiBell. Pictures of these can be found in ref [118], which also discusses the procedure, as well as contraindications.The latter clamps the foreskin, which then falls off after a few days, and so eliminates the need to actually cut the foreskin off [73]. the type of clamp used affects the time taken for the procedure, being on average 81 seconds for the Mogen clamp and 209 seconds for the Gomco clamp [114]. However, some of these more elaborate methods take up to 15-30 min to perform and therefore expose the baby to a greater period of discomfort. A circumcision is completed in 15-30 seconds by a competent practitioner using methods that are part of traditional cultures. Interestingly, strict sterile conditions were reported not to be necessary to prevent infection in ritual neonatal circumcision in Israel [145]. Also, rather than tightly strapping the baby down, swaddling and a pacifier has been suggested [84, 242-244]. A special padded, 'physiological' restraint chair has moreover been devised and shown to reduce distress scores by more than 50% [205]. Dr Tom Wiswell and other experts strongly advocate the neonatal period as being the best time to perform circumcision, pointing out that the child will not need ligatures or general anaesthesia, nor additional hospitalization [242-244]. Without an anaesthetic the child experiences pain and pain is also present for from a few up to a maximum of 12-24 hours afterwards. The child does not, however, have any long-term memory of having been circumcised. A greater responsiveness to subsequent injection for routine immunization may suggest, however, that the baby could remember for a short time [213]. Anesthesia is therefore advocated (see below). Complication rate is very low (0.2%), as is cost (discussed later).

Children

For children aged 4 months to 15 years a general anaesthetic is generally used and this carries a small risk. Also, ligatures are usually needed. Recently, excellent cosmetic results were reported for all of 346 patients aged 14 to 38 months using electro-surgery, which presents a bloodless operative field [163]. Metal of any kind (such as the Gomco clamp) has to of course be avoided in this procedure. Even better, gentle tissue dissection with simultaneous hemostasis was achieved using an ultrasound dissection scalpel for circumcision [63]. Circumcision later obviously requires a separate (occasionally overnight) visit to hospital. Rate of complications is also greater, but still low (1.7%). The incidence of penile adhesions decreases with age, however, but at any age they resolve spontaneously [166]. Pain sometimes can last for days afterwards and those older than 1-2 years may remember. Cost is also much greater than for neonatal circumcision.

Adults

In adults circumcision is more expensive, but can be performed on an outpatient basis (so reducing costs), sometimes with local anaesthetic (so reducing anaesthetists charges), and pain can last for up to a week or so, during which time absence from work is required. Some however report no pain, just minor discomfort from the stitches. Vasectomy by men previously circumcised as adults (and who can thus attest to the difference) is said to be much more painful.

Thus when considering when is the best time, it would appear that circumcision in the newborn period is safe and technically easy. It is also cheap, as discussed in the next section, as well as providing the maximum lifetime benefit.

HOME

ANESTHESIA

Infants experience pain [167] and anaesthesia for circumcision is recommended [132, 171]. Neonates exhibit low pain scores compared with older infants [221]. Dorsal penile nerve block [108] represents 85% of anaesthetic use in the USA [228] and is effective [90], even in low birth weight infants [88]. Ring block, which had initially been used for post-circumcision analgesia [28], is simpler, and extremely effective [81, 116]. In fact this method may be the best. Further technical information can be found in ref [178]. Pain from the infiltration of a local anaesthetic is short-lived and significantly less than the pain from an un-anaesthetized circumcision [117]. EMLA cream (5% lidocaine/prilocaine; Astra) [213, 241-244] reduces pain during circumcision [211, 213], and blood sampling in newborn babies [173], but is less effective than the others [30, 116]. rises in met-hemoglobin 3.5 to 13 hours after application of EMLA cream are well below potentially harmful levels [27, 123]. Epicutaneous 5% lidocaine-prilocaine is more effective than 30% lidocaine [254]. Pacifiers, especially with glucose or sucrose, are also effective (pain score = 1 as opposed to 7 with placebo) [34]. Infants circumcised with the Mogen clamp and combined anesthesia (lidocaine dorsal penile nerve block, lidocaine-prilocaine, acetaminophen, and sugar-coated gauze dipped in grape juice), with 55 seconds taken for the procedure, showed substantially less pain than those circumcised with the Gomco clamp and lidocaine-prilocaine (EMLA) cream, which took 577 seconds for the procedure [212]. a simple, effective procedure has been described by Russell in brisbane, Australia [181]. this involves applying EMLA cream thickly to the distal penis 2 hours prior to the procedure. the penis is wrapped in cling-wrap to keep the cream in contact with the penis, but with the end left open to allow for urination. The Plastibell device is then used. The baby did not cry. In those aged less than 7 months 99% fed immediately afterwards, 96% settled rapidly, 97% had no disturbance of sleep pattern, 93% had little or no apparent pain, and 96% had no pain or difficulty when urinating. TNone required stronger post-operative analgesia than paracetemol. Postponing circumcision until the child is suitable for general anesthesia was strongly rejected [181]. Total pain control can of course be achieved by a general anaesthetic. This can be given routinely for very young children, and if done in a children's hospital there is virtually no risk. However, because the operation is so trivial, local anaesthesia is all that is required.

For a minority of people the way the circumcision is performed will obviously be dictated by their cultural or religious beliefs. It is, moreover, acknowledged that for Jews the traditional bris might be less traumatic than common institutional approaches [117]. Jewish Mohelim take 10 seconds, with 1 second for excision, and 60 seconds on average for crying; since there is no crushing of tissue the pain is claimed to be not as severe as techniques used by doctors [198].

Despite the benefits of anaesthesia, many male newborn circumcisions in North America do not involve anaesthetics and this can be as much as 64-96% in some regions [218, 233]. In the USA 84% of pediatric, 80% of family practice and 60% of obstetric programs teach anaesthesia/analgesia techniques [89]. "Given the overwhelming evidence that neonatal circumcision is painful and the evidence of safe and effective anaesthesia/analgesia methods, residency training in neonatal circumcision should include instruction of pain relief techniques" [89].

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COST

Circumcision is amongst the 40 most frequently performed surgical procedures, occurring more commonly than tooth extraction [12]. For example, in 1992-1993, 14,604 neonatal circumcisions were performed in Australia at a cost to Medicare of A$380,000. Interestingly, in 1985 the Federal Minister for Health removed the rebate for newborn circumcision from the Medical Benefits Schedule in response to the (now outmoded) 1983 recommendations of the National Health & Medical Research Council (NHMRC) of Australia. It was then quickly restored after a public outcry. The scheduled fee is only about A$36 for a neonatal circumcision [135]. Many doctors consider that the fee should be higher in Australia, as such a low rebate has the potential to cause some

doctors to discourage it because of the low return relative to other procedures. For age 6 months to 10 years it is $84, and over 10 years is $117 or $145.

In the USA, a neonatal circumcision will cost US$89-204, being cheaper in the mid-west and more expensive on the east coast. On average the amount per circumcision across all ages versus mean lifetime medical costs in those not circumcised works out about the same [124]. In this analysis it was stated that if the rate of surgical complications from circumcision was less than 0.6% or if risk of penile problems in uncircumcised males exceeded 17% (cf. the then current baseline of 14%) then circumcision would be preferred on a cost and lifespan basis [124].

Everyone has a right to ensure a healthy penis. Many who seek a doctor to circumcise them or their child may be doing so because of a medical problem. However, most merely want what is best, be it prevention of future problems or esthetics. These are all valid reasons for requesting circumcision. A medical complaint, even if minor, should help reduce the overall cost by providing a return on a claim to a health insurance provider, if not covered by the health system of the country in which it is done.

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HOW DO I FIND SOMEONE TO DO IT?

For neonates, most obstetricians will perform a circumcision as part of the overall service to their patient, the mother. Failing that, there are many pediatric surgeons who do circumcisions. There are also clinics where circumcision is one of the major, if not the exclusive, activity. Many other doctors, including general practitioners will do it. However, level of expertise and practice (frequency of carrying out the procedure) should be an important consideration by parents in seeking someone good. Circumcision is very simple technically, but despite this has to be done by someone who knows what they are doing.

For adults a urological surgeon will often be the person to consult with, or a general surgeon. You will need a referral from any local doctor. Again, being so simple, there may be other doctors who are not surgeons who can do it. So to find someone, think about who you might ask first from your own knowledge and contacts. It could be your local doctor. There are also men's health centres/clinics that specialize in such male-specific matters, and are used to handling enormous numbers of enquiries from men who want to get circumcised. So if you are an uncircumcised male and think this is what you want ,don't be shy! ... Ask!

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WHOSE RESPONSIBILITY?

It is argued by opponents of circumcision that the male himself should be allowed to make the decision about whether he does or does not want to be circumcised. However, there are problems with this argument, not the least of which is the fact that the greatest benefits accrue the earlier in life the procedure is performed. If left till later ages the individual has already been exposed to the risk of urinary tract infections, the physical problems and carries a residual risk of penile cancer. Moreover, it would take a very street-wise, outgoing, adolescent male to make this decision and undertake the process of ensuring that it was done. Most males in the late teens and 20s, not to mention many men of any age, are reticent to confront such issues, even if they hold private convictions and preferences about their penis. Moreover, despite having problems with this part of their anatomy, many will suffer in silence rather than seek medical advice or treatment. Really though parental responsibility must over-ride arguments based on 'the rights of the child'. Think what would happen if we allowed children to reach the age of legal consent in relation to, for example, immunization, whether they should or should not be educated, etc, etc. A period of great benefit would have been lost, to the potential detriment of the person concerned. Parents have the legal right to authorize surgical procedures in the best interests of their children [6, 60]. For them to

make this decision medical practitioners are obliged to disclose to them fully and objectively ALL information relating to circumcision. This includes benefits and risks, prognosis and alternative methods. Unfortunately, in a recent survey in California 40% of parents believed they had not been provided with enough information [1]. Parents of those children who were left uncircumcised said that no medical provider discussed circumcision with them, as opposed to 15% of parents of children who were circumcised. Twice as many parents (27% of uncircumcised vs 14% of circumcised boys) were unhappy with their initial decision, i.e., twice as many in retrospect would have wanted their child to have been circumcised had they known more.

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RISKS

Having described the benefits, let's look at the risks. As listed in [241-243], these are:

? Excessive bleeding: Occurs in 1 in 1000. This is treated with pressure or locally-acting agents, but 1 in 4000 may require a ligature and 1 in 20,000 need a blood transfusion because they have a previously unrecognized bleeding disorder. Hemophilia in the family is of course a contra-indication for circumcision.
? Infection: Local infections occur in 1 in 100-1000 and are easily treated with local antibiotics. Systemic infections may appear in 1 in 4,000 and require intravenous or intramuscular injection of antibiotics.
? Subsequent surgery: Needed for 1 in 1000 because of skin bridges, or removal of too much or too little foreskin. Repair of injury to penis or glans required for 1 in 15,000. Loss of entire penis: 1 in 1,000,0000, and is avoidable by ensuring the practitioner performing the procedure is competent. Injuries (rare) can be repaired [18] and in the infinitely remote instance of loss of the penis it can be reattached surgically [158].
? Local anaesthetic: The only risk is when the type of anaesthetic used is a dorsal penile nerve block, with 1 in 4 having a small bruise at the injection site. This will disappear.
? Death : Data in the records show that between 1954 and 1989, during which time 50,000,000 circumcisions were performed in the USA there were only 3 deaths. (But there were 11,000 from penile cancer, a disease essentially confined to the uncircumcised [243].)

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WHY ARE HUMAN MALES BORN WITH A FORESKIN?

One function of the foreskin was probably to protect the head of the penis from long grass, shrubbery, etc when humans wore no clothes, where evolutionarily our basic physiology and psychology are little different than our savhana-wandering or cave-dwelling ancestors tens to hundreds of thousands of years ago. Also, the moist tip would facilitate quick penetration of a female, where lengthy foreplay and intercourse would be a survival disadvantage, since the risk to the copulators from predators and human enemies would be greater the longer they were engaged in sex.

Dr Guy Cox from The University of Sydney has suggested that the foreskin could in fact be the male equivalent of the hymen, and served as an impediment to sexual intercourse in adolescent primeval humans before the advent in our species of civilization and cultures [40]. Way back then Cox says the foreskin would have reduced 'successful' sexual acts in those too young to adequately care for any offspring that might arise. With civilization, control of the sexual behaviour of the young by society made the physical mechanism redundant and society introduced circumcision to free the individual from the impediment of having a foreskin. Interestingly, the physical difficulties experienced by the uncircumcised may explain why the word for uncircumcised in Hebrew means 'obstruction' or 'to impede', so explaining the Biblical term 'uncircumcised heart' when referring to obstructionism.

WHAT CAUSED MANY CULTURES TO RITUALLY REMOVE IT?

There are several theories and each may have elements of truth. As mentioned above, according to Cox, the ritual removal of the foreskin in diverse human traditional cultures, ranging from Muslims to Aboriginal Australians could be a sign of civilization in that human society acquired the ability to control, through education and religion, the age at which sexual intercourse could begin.

Another compelling explanation involves the ritualization of circumcision's prophylactic effects, especially as many different human groups and cultures that live in desert or other hot environments have adopted it as part of their customs. Infections, initiated by the aggravation of dirt and sand, are not uncommon under such conditions and have even crippled whole armies, where it is difficult to achieve sanitation during prolonged battle. Historically it was not uncommon for soldiers to be circumcised in preparation for active service. The Judeo-Muslim practice of circumcision quite likely had its origin in Egyptian civilization, where there is evidence of a circumcised mummy at the time the Hebrews inhabited Egypt [174], as well as illustrations of the operation itself and of circumcised Pharoahs, dating back to 3000 BC [230]. One possible reason the Egyptians could have circumcised themselves and their slaves might have been to prevent schistosomal infection [230]. Urinary tract obstruction and hematuria are common in localities such as the Nile Valley that are inhabited by the blood fluke, Schistosoma haematobium . The foreskin would undoubtedly possess the adverse ability of being able to hold water infected with the cercaria stage of the life cycle of this parasite and so facilitate its entry into the body. The perpetuation of the procedure by the Jews may have subsequently been driven by a desire to maintain cleanliness in an arid, sandy desert environment. Such considerations could also explain why it is practiced in multiple other cultures that live in such conditions. In each instance, the original practical reason became lost as the ritual persisted as a religious rite in many of the various cultures of the world. In the Muslim religion circumcision is performed over a wide range of ages in childhood.

Below and in the 'About the Author' page are photographs of a group of Masai boys in their early teens that the author came across in Kenya in 1989 dressed in their dark circumcision robes, with white feathers as headwear, and white painted facial decoration that stood out against their very black skin. Each wore a pendant that was the razor blade used in their circumcision. The ceremony that they had gone through is a special part of their tribal culture and was very important to these boys, who were proud to show that they were now 'men'. (Of course, use of a razor and lack of sterile procedure, etc is far from ideal and is not to be encouraged.)

In other cultures circumcision is associated with preparation for marriage and as a sign of entry into manhood. Australian Aboriginals circumcise a boy when he reaches puberty in a ceremony that is part of 'men's business'. In Southern East Timor, men are traditionally circumcised at 20 or so years of age in preparation for marriage, but the man is then expected to have sex with at least 3 or 4 women before getting married. In Tonga, boys are circumcised at age 7-9 in hospital without anesthetic, pain being seen as part of transition to manhood. This is fully funded by the government of Tonga. In the Philippines circumcision, generally carried out at age 12-14, is part of a coming-of-age ritual, again without anesthetic. In Madagasgar, where all men are circumcised regardless of religion, the reason is that women say that sex with a circumcised man is longer, stronger, better for them and cleaner, so the men are more likely to get sex by being circumcised.

In China many men are circumcised as adults because of problems with their foreskin. In SE Asians such as Japanese, Chinese and Vietnamese the foreskin tends to be short and the custom is to wear it pulled back after puberty. As a result the head is drier and less prone to problems in hot, humid conditions. This may explain why circumcision is not common. Other cultures living in a hot climate, including the Incas and Aztecs of Central and South America, practiced circumcision. Because scar tissue is more visible on Asian skin than Caucasian, Chinese and Japanese doctors make a cut around the base of the penis rather than the foreskin itself. The skin is pulled back to expose the glans, then stitched into place.

Interestingly, in Japan, circumcision has become a fashion amongst young men. The procedure is currently being promoted by way of articles and advertisements in the vast array of 'girlie', sex magazines read by young males. The message is that it improves hygiene and attractiveness to women.

There are many fascinating historical aspects involving circumcision or lack thereof. For example, some argue that the latter may have precipitated the French Revolution. Marie Antoinette, 12th daughter of the Emporer and Emporess of Austria, much hated by France, married the future Louis XVI in 1770 at the age of 14. By 18, still immature and lacking in intellectual interests, she became queen. Louis XVI suffered from phimosis (tight foreskin) that prevented successful intercourse. As a result Antoinette was deprived of the responsibilities of motherhood, which might have matured her. She indulged in lavish amusements, balls, plays and receptions that pandered to her childish fantasies, even building a model dairy farm "dolls house" at Trianon. Her enemies accused her of bankrupting France. In a secret visit to France her brother, Emperor Joseph II, reprimanded her and also persuaded Louis to get circumcised. This was 8 years after their marriage. Although she subsequently bore 3 children, the damage had been done. The rest is history, the Revolution took place, and both were executed in 1793.

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TO SUMMARIZE:

Lack of circumcision:

? Is responsible for a 12-fold higher risk of urinary tract infections. Risk = 1 in 20.
? Confers a higher risk of death in the first year of life (from complications of urinary tract infections: viz. kidney failure, meningitis and infection of bone marrow).
? One in ~400-900 uncircumcised men will get cancer of the penis. A quarter of these will die from it and the rest will require at least partial penile amputation as a result. (In contrast, invasive penile cancer never occurs or is infinitesimally rare in men circumcised at birth.) (Data from studies in the USA, Denmark and Australia, which are not to be confused with the often quoted, but misleading, annual incidence figures of 1 in 100,000).
? Is associated with balanitis (inflammation of the glans), posthitis (inflammation of the foreskin), phimosis (inability to retract the foreskin) and paraphimosis (constriction of the penis by a tight foreskin). Up to 18% of uncircumcised boys will develop one of these by 8 years of age, whereas all are unknown in the circumcised. Risk of balanoposthitis = 1 in 6. Obstruction to urine flow = 1 in 10-50.
? Means increased risk of problems that may necessitate circumcision later in life. Also, the cost can be 10 times higher for an adult.
? Is the biggest risk factor for heterosexually-acquired AIDS virus infection in men. 8-times higher risk by itself, and even higher when lesions from STDs are added in. Risk per exposure = 1 in 300.
? Is associated with higher incidence of cervical cancer in the female partners of uncircumcised men.

Getting circumcised will result in:

? Having to go through a very minor surgical procedure that carries with it small risks.
? Improved hygiene.
? Much lower risk of urinary tract infections.
? Much lower chance of acquiring AIDS heterosexually.
? Virtually complete elimination of the risk of invasive penile cancer.
? More favourable hygiene for the man and his sexual partner.
? Better sexual function on average.
? A penis that is regarded by most as being more attractive.

CONCLUSION

It is hoped that this review will prove informative to medical practitioners and health workers and thereby enhance the quality of information that is conveyed to parents of male children and to adult men. It should also prove to have educational value to others, especially the parents of boys, but also adult men, whether circumcised or not. It is hoped that as a result of reading the information presented here the choice that has to be made concerning circumcision, especially of male infants, will be a much more informed one. Although there are benefits to be had at any age, they are greater the younger the male. Issues of 'informed consent' may be analogous to those parents have to consider for other medical procedures, such as whether or not to immunize their child. The question to be answered is 'do the benefits outweigh the risks'. When considering each factor in isolation there could be some difficulty in choosing. However, when viewed as a whole, in the opinion of the author, the answer to whether to circumcise a male baby is 'YES'. Nevertheless, everybody needs to weigh up all of the pros and cons for themselves and make their own best decision. Hopefully the information provided here will help in the decision-making process.

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From: "Wendy Sherman" < >
Subject: circumsion and AIDS

I just happened to catch a fascinating program on The Learning Channel and thought I would pass on what I learned:

With the high incidence of HIV in Africa, many studies were done trying to determine what factors were involved. It was found that:
Being uncurcumcised increased the rate of infection by 60%. Fifty men who were circumcised, living with an infected partner, did not get
the virus.
Uncircumcised men were 3 times more likely to get the virus.

It has been discovered the the langerhan (?) cells in the foreskin, normally take cells from minor infections directly to the immune system which then destroys it. With HIV, it uses the same route, effectively hijacking the system. The HIV then begins to attack the immune system, eventually destroying it.

I have seen, as I grew in knowledge, that God does not give a commandment without a reason. He told us not to eat pork or shell fish and later it was found that these were harmful to us. He told us to keep His Sabbath so that we would rest and refresh our bodies, recharge our batteries. He told us to let our fields rest one year in seven so that they would not become depleted.

Yes, I know what was said about circumcision in the NT. I know that we have thought that this was an outdated symbolic gesture between God and the chosen people. I know that we were to be circumcised of the heart and I am not questioning the involvement of the heart. I just find it very interesting that doing what God commanded His people to do gives protection from this dread disease. As a second issue, aren't we the chosen people?

A great number of African men and boys are breaking with tradition and being circumcised.

As I said, this is very interesting news to me and news that we are not hearing in main stream media.

Wendy

I just did a quick check on the web regarding the speculation that circumcision would limit masturbation as suggested by HWA.

I can see that Herbert probably made this a part of his six month's study in the late 1920s, and kept the notes to put in his later books. :-) The kind of medical books that were likely in the Portland Library at the time would give him the concept he would later include.

Syd noted the word "Onania" in an earlier post. The first definition of that these days is what I mentioned... a form of birth control. But perhaps he was specifically referring to the second definition, masturbation. (As I understand it, the theory that led to this definition was that Onan would "relieve himself" on the ground before he ever went in to his brother's

wife. This seems a stretch to me, but whatever...) So that's the definition used in this excerpt from a website.

"The earliest major work we can identify espousing this point of view is Onania: Or The Heinous Sin of Self-Pollution, And All Its Frightening Consequences In Both Sexes Considered. This classic work identified masturbation as a religious sin with dire psychological consequences in the forms of both physical and mental diseases, most particularly masturbatory insanity, which science would late reclassify as hysteria. By 1750 Onania had seen 19 editions, some 38,000 copies in all of the major European languages, and was one of the most widely read scientific, medical works of its day.

This `mania with Onania' continued. In 1758, a Swiss, Dr. Samuel Tissot, published a strictly medical approach to the problem. He argued that masturbation weakened the mind and the body, caused physical and mental ills including masturbatory insanity, again, hysteria, neurotic behavior, adolescent rebellion, frigidity, epilepsy, wars and other medical ills, including also, no doubt, that inarguable evidence of pure animality, hair on the palms of one's hands. Dr. Tissot endorsed circumcision as the effective prophylactic against these ills.

In 1858, the medical community went on record endorsing the clitoridectomy to avert frigidity, to prevent hysteria, and to make women generally more sexually responsive. In 1891, the President of the Royal College of Surgeons reiterated the position in On Circumcision as Preventative of Masturbation. In 1893, this position was further reinforced by Circumcision, Its Advantages And How to Perform It. And in 1905 Dr. Tissot's classic was reissued, still the definitive work on the subject."

BTW... as I understand it, one of the main reasons Ellen G White gave for establishing vegetarianism in the SDA church was that eating meat encouraged masturbation and excessive sex drive. She wrote a whole long article on the topic, which is available on the web.

What I don't understand is the statistics of all this. Most studies I've seen, even in the heyday of automatic circumcision of male infants in the US of the 1950s, put the incidence of masturbation among young males pretty much at the 90%+ range. So it sure looks to me like the operation didn't do its job.

Pam

[Non-text portions of this message have been removed]

I've read some on the subject of circumcision from Jewish sources. It is the moyle way to use a kind of plate with a slot in it which the foreskin is drawn, then sliced off. Once at the hospital after our daughter was born I had the opportunity to watch as a baby boy as circumcised and it was with one of these plates. It seemed to me a very difficult delicate scary thing to do.

Another thing which HWA advocated was circumcising on the eight day when there are more white blood cells I believe.

The British royal family's males are circumcised by a moyle I reads in the Jewish books. The whole subject was of interest to me when we had our child with my wife who is Jewish reformed. I was going to hire a moyle and discuss HWA's concept with him but, as it turned out we had a daughter-Rod