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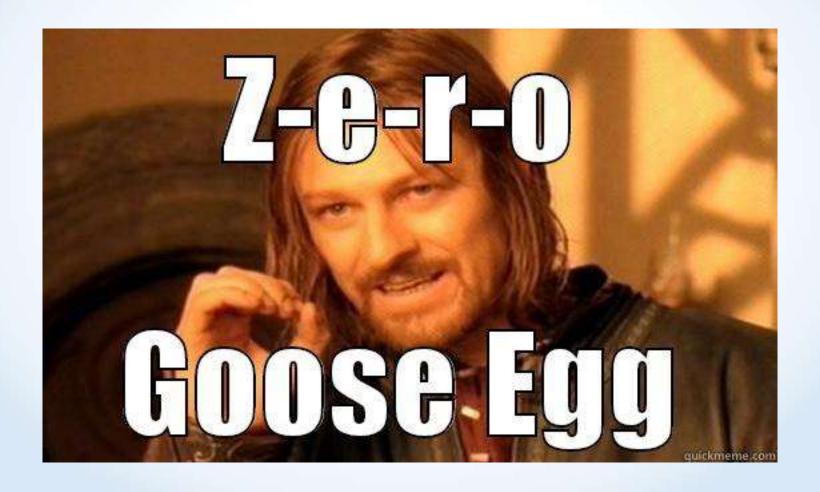
Division of Urology



Men's Health Summit January 18, 2020



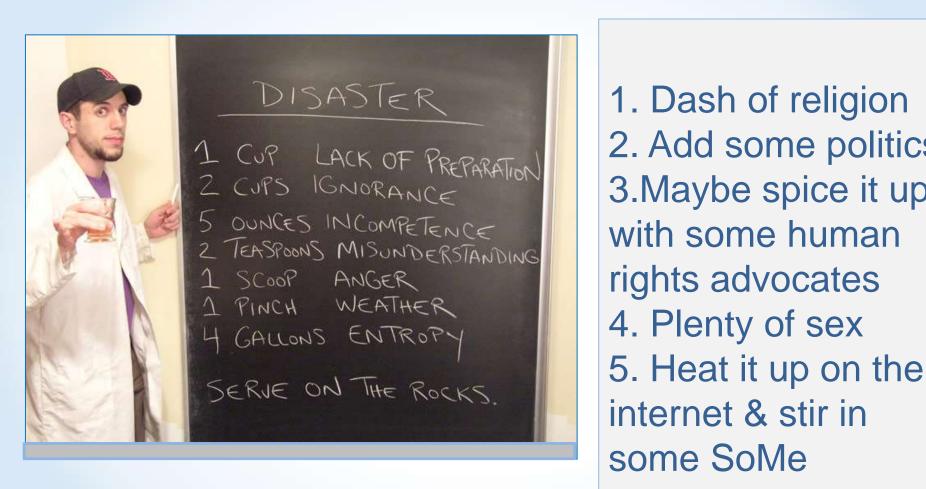
COI & Disclosures



Objectives

- 1. To understand the history of neonatal circumcision
- 2. To be updated on current guidelines related to circumcision
- 3. To be informed about current Men's Health controversies related to circumcision.





1. Dash of religion 2. Add some politics 3. Maybe spice it up with some human rights advocates 4. Plenty of sex

Division of Urology









Even in Israel, More and More Parents Choose Not to Circumcise Their Sons

What will the kids in school say – not to mention army buddies? What is healthier? Should such men be called Jews?

Netta Ahituv Jun 14, 2012 3:01 PM

Europe's Shudder at Circumcision

In a society where most men are circumcised, e.g., the U.S., it's hard to imagine the European attitude that circumcised men are trauma victims.

James McDonald | Oct 20, 2013 5:24 PM

No to Forced Circumcision

Civil courts need to send an important message that individual rights take precedence over religious customs, however widespread they are.

Haaretz Editorial | Nov 29, 2013 1:21 AM



Blame it on history... for which there is poor documentation!

- Belonging (like a tattoo)?
- Rite of passage ?
- Punish POWs?
- Hygiene?
- Bravery (pain endurance)?
- Blood sacrifice?
- Marginalize femininity & augment masculinity?
- Religious rite- Genesis 17:9-14 (Brit Milah); recommended by Mohammad but not a mention in Qur'an

Timeline of Circumcision

10,000 BCE: Aboriginal tribes introduce 6000 BCE: circumcision spreads circumcision as a puberty rite in Australia to Africa 600 BCE: Torah compiled; Circumcision 2300 BCE: Egyptian relief depicting. enforced as a sign of the covenant circumcision Jesus born & is circumcised 500 : Mohammed born "already circumcised." Muslims form the largest group of circumcised men 1716: Onania published giving rise to 1928: Thomas Gay recommends routine hysteria about masturbation and its circumcision to prevent phimosis & negative effects masturbation

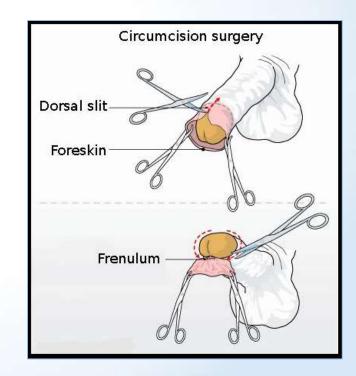
Circumcision.... A Medical Paradox



"Health" Circumcision

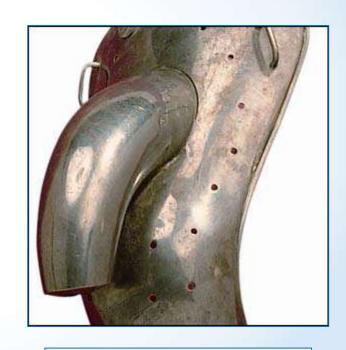
 Term arose in 19th C when most diseases were of unknown etiology

 Mid-Victorian attitude towards sex was that masturbation was sinful and debilitating



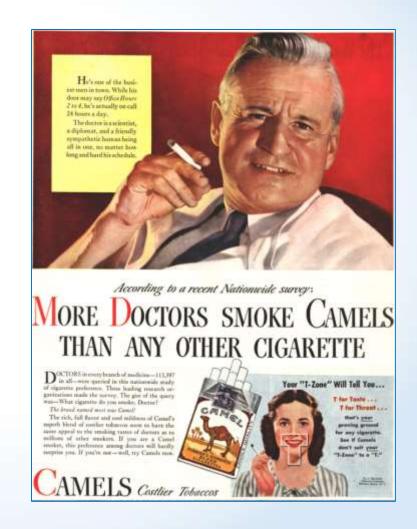
"Self Abuse" (19th C. term for Masturbation)

- Treatments ranged from: diet, moral exhortations, hydrotherapy & marriage to more drastic: surgery, frights, punishment & physical restraint
- More extreme measures: covering penis with plaster of Paris, leather, or rubber; cauterization; male chastity belts or spiked rings.... Castration!



Victorian era, anti-masturbation device





Dr. Lewis Sayre (1829-1900) "Columbus of the Penis"

- Prominent New York
 Orthopedic Surgeon
- Became president of the newly formed AMA & a founder of JAMA
- Invented Sayre's jacket for spinal curvature & revolutionized clubfoot treatment



Lewis Sayre

- 1870- reported on a 5 y.o. boy who could not straighten his legs & had inflamed genitals
 - Circumcised him & he was able to walk
 - Other cases followed & circumcision was touted as an orthopedic remedy!
- Extrapolated to suggest the foreskin was associated with a vast variety of diagnoses: gout, asthma, hernia, epilepsy, arthritis, rectal prolapse, kyphosis, TB....elephantiasis by others such as Dr. P.C Remondino

Peter Charles Remondino (1846-1926)

- Originally born in Turin (then the Piedmont area of the "Kingdom of Sardinia")
- Graduate of Jefferson Medical College
- Appointed "city physician in San Diego (1873)
- Published "National Popular Review" (1892-1896)
 - Promoted the healthfulness of San Diego climate
 - Advised invalids with pulmonary consumption (TB) to relocate to San Diego

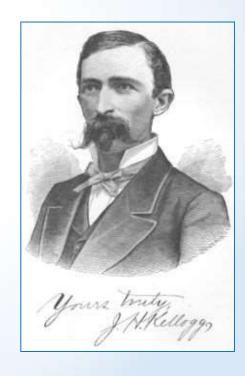


P.C. Remondino M. D.

- "Circumcision is like a substantial & well secured life annuity...it insures better health, greater capacity for labor, longer life, less nervousness, sickness, loss of time, & less doctor's bills."
- As late as 1930's, female circumcision (clitoridectomies, infibulations) was also endorsed for prevention of masturbation by the US "Orificial Surgical Society"
- The "key"- masturbation (the root of all evils from enuresis to intractable insanity & mental retardation) could be cured by circumcision

John Harvey Kellogg MD (1852-1943)

- Ran a sanitarium in Battle Creek, MI where he advocated holistic methods (nutrition, exercise... & plenty of enemas!)
 - Advocated vegetarianism
 - Seventh Day Adventist
 - Established American Medical Missionary College which became Illinois State University
 - Patented process for making peanut butter
 - Notable patients: President Taft, Henry Ford. Amelia Earhart, George Bernard Shaw, Thomas Edison, Roald Amundsen



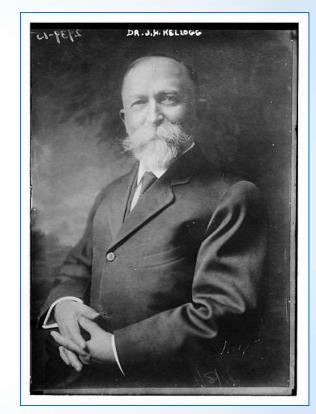
Kellogg & Views on Sexuality

- Advocate of sexual abstinence
 - Devoted large amounts of educational & medical work to discouraging sexual activity, on the basis of perceived dangers
 - Claims of masturbation-related deaths "such a victim literally dies by his own hand"
 - Advocated "corn flake" consumption to prevent masturbation & believed circumcision would also be effective



"Dangers" of Phimosis

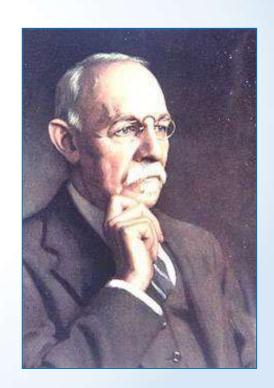
- "A remedy which is almost always successful in small boys is <u>circumcision</u>, especially when there is any degree of <u>phimosis</u>. The operation should be performed by a surgeon without administering an anesthetic, as the brief pain attending the operation will have a salutary effect upon the mind, especially if it be connected with the idea of punishment, as it may well be in some cases. The soreness which continues for several weeks interrupts the practice, and if it had not previously become too firmly fixed, it may be forgotten and not resumed."
- "In females, the author has found the application of pure <u>carbolic acid</u> [phenol] to the <u>clitoris</u> an excellent means of allaying the abnormal excitement."



Treatment for Self Abuse and Its Effects, 1888

Medicine & Beyond- Turn of the 20th Century

- Germ theory of disease:
 - Medically was associated with reduced surgical infections
 - Non medical public became suspicious of dirt
 & bodily secretions, including smegma
- Halstead introduced hypodermic cocaineminor surgeries could be performed without chloroform or general anesthesia
- Mechanically aided circumcision devices allowed safer, successful circumcision



Foreskin and Warfare

- "Time and money could have been saved had prophylactic circumcision been performed before the men were shipped overseas" and "Because keeping the foreskin clean was very difficult in the field, many soldiers with only a minimal tendency toward phimosis were likely to develop balanoposthitis [Patton].
 - Army urologists stated "Had these patients been circumcised before induction [into the Army] this total would have been close to zero".
- In the WW II, Australia sent urologists to circumcise all of its troops fighting in the North African campaign who were not already circumcised [Short, 2006].
- Sand was a problem for uncircumcised men during the Gulf War in Iraq ("Desert Storm") [Gardner, 1991; Schoen, 2007].



- 110,562 men were admitted to US army hospitals in WW II for paraphimosis & phimosis
- 22,709 patients were admitted for balanitis

Post WW II

- Lack of medical consensus & formation of NHS in UK removed infant circ from covered services
 - Mortality rate for infant circ in England & Wales, 1942-1947 was 1:6000 (16 deaths in that time period)
 - 20 more yrs before other Western English speaking countries (exception USA) adopted similar policies
- AAP, 1989 reversed long standing opinion that medical indications for routine infant circumcision were lacking
 - Cited new UTI data (Wiswell)

Proctor and Gamble: Pampers

"You may be surprised to learn that circumcision will not be painful to your baby because, at this early stage of development, the penis does not yet have functioning nerve endings."



Expectant Parents
Information Kit
(1982)

Rates of Complications After Newborn Circumcision in a Well-Baby Nursery, Special Care Nursery, and Neonatal Intensive Care Unit Clinical Pediatrica
2015, Vol. 54(12) 1185–1191
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DOI: 10.1177/0009922815573932
cgj.sagespib.com

SSAGE

Mythili Srinivasan, MD, PhD¹, Corrine Hamvas, MD¹, and Douglas Coplen, MD¹

Objective: To retrospectively, determine rates of complications in patients circumcised at a well-baby nursery, neonatal intensive care units (NICU), and special care nursery (SCN) from 2007-2012.

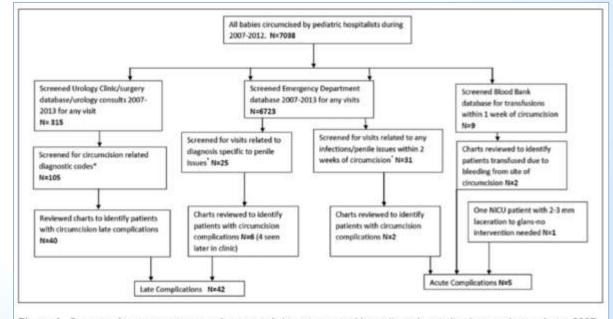


Figure 1. Screening for circumcision complications in babies circumcised by pediatric hospitalists/neonatologists during 2007-2012.

Table 2. Characteristics of Patients Transfused Within 24 Hours After Circumcision.

GA at Birth	Age at Circumcision (Days)	Significant History	Bleeding After Circumcision	Change in Hemoglobin	Intervention
36 weeks	91	Nonimmune hydrops, congenital chylothorax requiring chest tube for 46 days, bilateral grade I IVH with subependymal cyst formation, cholestasis	Bleeding after circumcision, required 6 sutures	HgB 10.9 the day before circumcision. HgB 8.2 after circumcision. PT, PTT, platelet counts normal	Received FFP and pRBC within 24 hours after circumcision
Term	19	Bilateral pneumothoraces at birth and respiratory distress. Multicystic dysplastic kidney, possible prune belly variant, bilateral grade V reflux	Bleeding after circumcision, resolved without sutures	HgB 11.7 on 16 days prior to circumcision. HgB 7.4 after circumcision. PT, PTT, platelet counts normal	Received pRBC within 24 hours after circumcision

Abbreviations: GA, gestational age; HgB, hemoglobin; IVH, intraventricular hemorrhage; PT, prothrombin time; PTT, partial thromboplastin time; FFP, fresh frozen plasma; pRBC, packed red blood cells.

Table 3. Late Complications of Circumcision: Urology Clinic Visits/Surgeries and ED Visits.

	Well-Baby Nursery (N = 5147)	NICU/SCN (N = 1891)
Complications needing a corrective procedure (total)	200	21
RC for redundant foreskin/adhesions	5	2
RC for entrapped penis	1	4
RC for redundant foreskin/sebaceous cyst	0	1
Division of skin bridges in operating room	0	6
Division of skin bridges in operating room and meatoplasty for meatal stenosis	t	0
Division of skin bridges in office	1	5
Recommended division of skin bridges-no follow up	1	1
Meatotomy for meatal stenosis	T.	2
Lysis of adhesions in office	1.	0
Complications needing medical management (total)	4	4
Redundant foreskin/adhesions treated with betamethasone	3	- 1
Entrapped penis treated with betamethasone	1	3
ED visits only ^a (total)	2	0
Redundant foreskin/balanitis treated with nystatin	1	0
Adhesions treated with betamethasone	Ĩ	0
Total	17	25

Abbreviations: ED, emergency department; NICU, neonatal intensive care unit; SCN, special care nursery; RC, revision circumcision. *Four patients seen in ED were subsequently seen in urology clinic and are listed under clinic visits and not under ED visits.

Conclusion:

The rate of complications of circumcisions performed by PH/neonatologist at our institution is low (0.67%). Most complications are minor and can be corrected with medical management or an outpatient surgical procedure. Babies circumcised in the NICU/SCN have increased odds of complication compared to babies in the well-baby nursery. In addition, Caucasian patients and patients with private insurance have increased odds of complications. Further studies are needed to identify risk factors that result in differences in rates of complications in these populations.

Rates of Adverse Events Associated With Male Circumcision in US Medical Settings, 2001 to 2010

JAMA Pediatrics July 2014 Volume 168, Number 7

Charbel El Bcheraoui, PhD; Xinjian Zhang, PhD; Christopher S. Cooper, MD; Charles E. Rose, PhD; Peter H. Kilmarx. MD: Robert T. Chen, MD. MA

OBJECTIVES Estimate incidence of MC-associated AEs & assess whether AE rates differed by age at circumcision using 2001- 2010 data from SDI Health, a large administrative claims data set, to conduct a retrospective cohort study.

RESULTS Records available for 1,400,920 MC, 93.3% as newborns. Of 41 possible MC AEs, 16 (39.0%) were probable. The incidence of total MC AEs was <0.5%. Rates of potentially serious MC AEs ranged from 0.76 (95%CI, 0.10-5.43)/million MCs for stricture of male genital organs to 703.23 (95%CI, 659.22-750.18)/ million MCs for repair of incomplete circumcision. Compared with boys circumcised <1 year, the incidences of probable AEs were <u>approximately 20-fold and 10-fold greater</u> for males circumcised at age 1-9 years and at 10 years or older, respectively.

CONCLUSIONS AND RELEVANCE Male circumcision had a low incidence of AEs overall, especially if the procedure was performed during the first year of life, but rose 10-fold to 20-fold when performed after infancy.



Canadian Urological Association guideline on the care of the normal foreskin and neonatal circumcision in Canadian infants



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Sumit Dave, Kourosh Afshar, Luis H. Braga, Peter Anderson

Complications of circumcision

- Complications for NC are underreported; the overall risk varies on the thoroughness of reporting and the duration of followup and ranges from 0.6–2%
- Post-circumcision bleeding is the most common complication of NC
- Though the majority of the complications for NC are minor, many complications require surgical intervention
- Risks of NC are operator-dependent and there is a lack of a defined and universal training model for physicians who intend to perform NC



Trends in Revision Circumcision at Pediatric Hospitals

Paul J. Kokorowski, MD, MPH¹, Jonathan C. Routh, MD, MPH⁴, Katherine Hubert^{2,3}, Dionne A. Graham, PhD⁵, and Caleb P. Nelson, MD, MPH²

**Clin Pediatr (Phila). 2013 August; 52(8): 699–706.

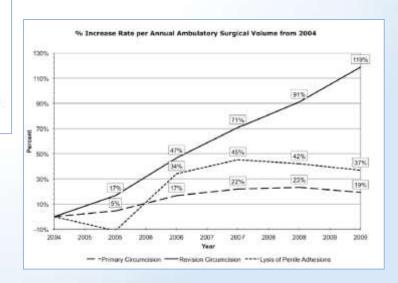
Abstract

Background—We sought to determine the incidence of revision circumcision at free-standing children's hospitals, and examine trends over time.

Methods—We searched the Pediatric Health Information Systems (PHIS) database to identify boys undergoing (revision circumcision (RC), primary non-newborn circumcision (PC) or lysis of penile adhesions (LPA)) from 2004–2009. Rates of RC procedures were calculated by dividing the incidence of procedures by the total male ambulatory surgical volume.

Results—We identified 34,568 patients of whom 5,632 underwent RC, 25,768 PC, and 3,168 LPA. The rate of RC increased 119%; significantly more than PC (19%; p<.001) or LPA (37%; p<.001). Urologists performed 76% of RC and 12% were performed in with other genitourinary procedures. Boys undergoing RC were predominately white (60%) and publicly insured (61%).

Conclusions — There was a disproportionate increased rate of RC performed at PHIS hospitals compared to PC or LPA. Wide variation exists in rate increases among hospitals.

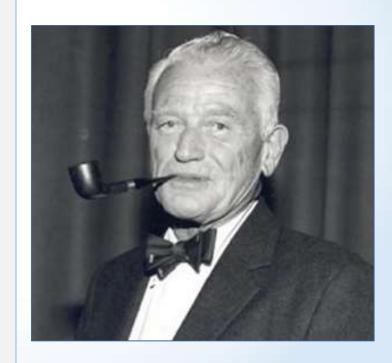


Willard E. Goodwin... on infant circumcision

 Only operation done on a penis by an obstetrician

 ... where wound care is done by a pediatrician &

 ... complications are taken care of by a Urologist!



ORIGINAL RESEARCH

CUAJ • July-August 2013 • Volume 7, Issues 7-8

Are physicians performing neonatal circumcisions well-trained?

Jorge DeMaria, MD, FRCSC;** Alym Abdulla, MD;* Julia Pemberton, MSc, PhD(c);* Ayman Raees, MD;* Luis H. Braga, MD, FRCSC**

'Division of Uralogy, Department of Surgery, McMaster Children's Hospital, Hamilton, ON; "Department of Surgery, McMaster University, Hamilton, ON



Conclusions: Our survey findings indicate that most physicians performing neonatal circumcisions in our community have received informal and unstructured training. This lack of formal instruction may explain the complications and unsatisfactory results witnessed in our pediatric urology practice. Many practitioners are not aware of the contraindications to neonatal circumcision and most non-surgeons perform the procedure without being able to handle common post-surgical complications. Based on our survey findings, we planned and carried out a formal training course to address these issues.

Backgound

- Motivation for neon. circ in Canada (Sauve 2008)
 - hygiene 44.4 %
 - "to be like daddy" 34.5 %
 - religious 17.5 %
 - others 6.6 %
- Patient population (denominator, estimated):
 - Toronto: population 2,600,000
 - Greater Toronto Area (GTA): 7,200,000
 - Birth rate GTA: 61,800/year= 30,000 boys/year
 - Neonatal circumcision rate Canada: 50%= 15,000 in GTA/year

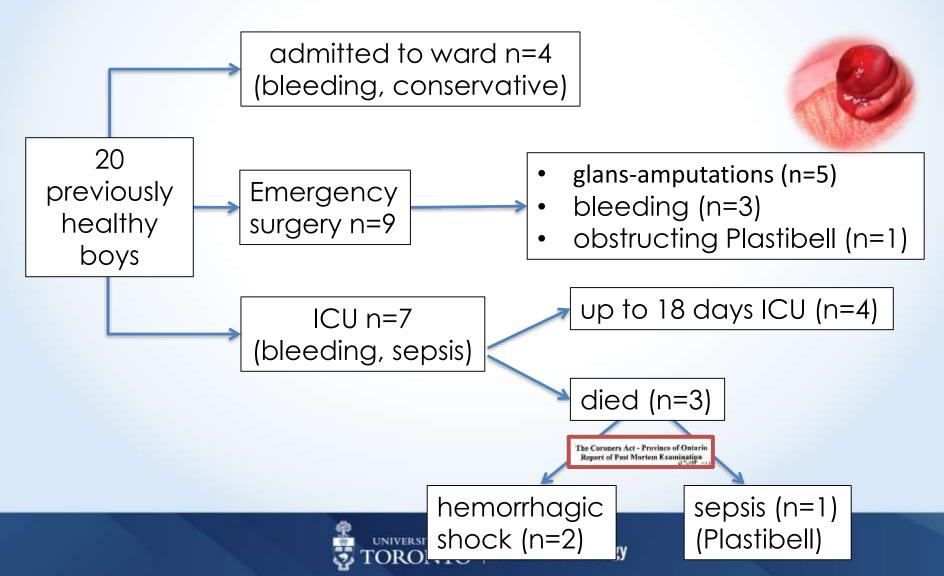
Sickkids- tertiary referral center for GTA/ Ontario in single payer system

Methods

Keyword search "circumcision"

- OR database/cross reference to OR schedules (7/2012-12/2013)
- EPC Database ER (2000-2013)
- ICU database, cross reference to charts (2000-2013)

Emergency admissions after neonatal circumcision 2000-2013



Conclusion

- Severe, catastrophic & <u>lethal</u> complications after neonatal circumcision are not restricted to procedures done in the developing world &/or by ritual providers
- They also occur when performed by trained personnel in a western country with universal access to state-of-the-art health care
- This fact must be kept in mind in when discussing the options related to neonatal circumcision

American Public Perception & Reality

- 1987- "concerns about the attitudes of peers & their sons' self concept in the future," rather than medical CONCERNS (Brown et al, Pediatrics 80(2): 215-9, 1987)
- 1999- "ease of hygiene (67%), ease of infant circumcision compared with adult circumcision (63%), medical benefit (41%), and father circumcised (37%))." (Tiemestra et al, *J Am Board of Fam Prac* 12(1): 16-20, 1999)
 - <u>Comment</u>: Medical benefits were cited more frequently in this study than in past studies, although medical issues remain secondary to hygiene and convenience
- 2001- "most important reason to circumcise or not circumcise the child was health reasons." (Adler et al, Pediatrics 107(2): E20, 2001)



Circumcision Policy Statement

AAP Task force on circumcision, Pediatrics, 2012

- "Evaluation of current evidence indicates that the health benefits of newborn male circumcision outweigh the risks and that the procedure's benefits justify access to this procedure for families who choose it."
- "The majority of severe or even catastrophic injuries are so infrequent as to be reported as case reports (and were therefore excluded from this literature review)."
- "Also, complication rates after an in-hospital procedure with trained personnel may be far different from those of in the developing world and/or by untrained ritual providers."



TECHNICAL REPORT

Male Circumcision

Evaluation of current evidence indicates that the health benefits of newborn male circumcision outweigh the risks furthermore, the benefits of newborn male circumcision justify access to this procedure for families who choose it. Specific benefits from male circumcision were identified for the prevention of urinary tract infections, acquisition of HIV, transmission of some sexually transmitted infections, and penile cancer. Male circumcision does not appear to adversely affect penile sexual function/sensitivity or sexual satisfaction. It is imperative that those providing circumcision are adequately trained and that both sterile techniques and effective pain management are used. Significant acute complications are rare. In general untrained providers who perform circumcisions have more complications than well-trained providers who perform the procedure, regardless of whether the former are physicians, nurses, or traditional religious providers.

Parents are entitled to factually correct, nonbiased information about circumcision and should receive this information from clinicians before conception or early in pregnancy, which is when parents typically make circumcision decision. Parents should determine what is in the best interest of their child. Physicians who counsel families about this decision should provide assistance by explaining the potential benefits and risks and ensuring that parents understand that circumcision is an elective procedure.





Newborn male circumcision

S Todd Sorokan, Jane C Finlay, Ann L Jefferies; Canadian Paediatric Society Fetus and Newborn Committee, Infectious Diseases and Immunization Committee Paediatr Child Health 2015;20(6):311-15

Abstract

The circumcision of newborn males in Canada has become a less frequent practice over the past few decades. This change has been significantly influenced by past recommendations from the Canadian Paediatric Society and the American Academy of Pediatrics, who both affirmed that the procedure was not medically indicated. Recent evidence suggesting the potential benefit of circumcision in preventing urinary tract infection and some sexually transmitted infections, including HIV, has prompted the Canadian Paediatric Society to review the current medical literature in this regard. While there may be a benefit for some boys in high-risk populations and circumstances where the procedure could be considered for disease reduction or treatment, the Canadian Paediatric Society does not recommend the routine circumcision of every newborn male.



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Circumcision and UTIs

- Circumcision decreases the risk of UTIs in infancy (Level 2a). The degree of risk reduction is dependent on whether males have a normal or abnormal urinary tract
- Normal urinary tract: Uncircumcised males have a higher 32% risk of UTI over the lifetime compared to a 9% risk in circumcised males
 - The overall risk of UTI in male infants is low (NNT to prevent 1 UTI= 111 NC) neonates)
 - Benefits of NC to prevent UTIs beyond infancy is not proven
- Abnormal urinary tract with hydronephrosis/vesicoureteric reflux/posterior urethral valves:
 - NC has a larger benefit in boys with posterior urethral valves and those with an obstructed megaureter (Level 3–4, Grade C)





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Circumcision and HIV

Circumcision decreases the risk of HIV transmission from female to male partners (Level 1A, Grade A). The protective affect demonstrated consistently in three African trials and several meta-analyses is a RR of 0.42–0.49 in circumcised males

- This effect size may not be applicable to Canada given the low HIV incidence/prevalence, differing modes of HIV transmission, and variable socioeconomic and healthcare facilities
- Male to male HIV transmission: Circumcision does not provide protection for men who have sex with men (Level 2a)
 - Male to female HIV transmission: Circumcision does not provide protection for female partners of infected male partners (Level 2a-b)





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Circumcision and HPV

- HPV prevalence in men: Decrease in HPV prevalence in the glans and coronal sulcus for some high-risk HPV serotypes after adult male circumcision (Level 1b)
- HPV clearance in men: Lack of convincing evidence that adult circumcision increases HPV clearance (Level 1b-2b)
- HPV incidence in men: No convincing evidence that male circumcision lowers HPV incidence in HIV positive or negative men (Level 1b-2b)
- HPV in female partners: Wale adult circumcision possibly lowers
 HPV prevalence and incidence in female partners (Level 1b-2b)
- Effects may not persist after NC into adulthood

HPV vaccination is a viable alternative to NC





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Circumcision and other STIs

- Non-ulcerative STIs: No significant evidence to support adult male circumcision decreases risk of non-ulcerative STIs (Level 2a-2b). Possible protective effect on preventing acquisition of Trichomonas infections (Level 2a-2b, Grade B)
- Weak evidence of partial protective effect of adult male circumcision against HSV-2 infections (Level 2a–2b)
- No definite evidence to support protective effect of adult male circumcision in acquisition of ulcerative STIs for female partners (Level 2–4, Grade C)





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Circumcision and penile cancer

Circumcision decreases the risk of penile cancer (Level 2-3)

- Phimosis is a significant risk factor for penile cancer. Treatment of phimosis, maintenance of foreskin hygiene in uncircumcised males, and safe sexual practices will decrease risk of penile cancer
- Given the relatively low risk of invasive penile cancer in males without phimosis and the effectiveness of other preventive strategies like HPV vaccination, condom usage and smoking cessation programs, universal NC cannot be justified as a preventive strategy for penile cancer (Grade B)





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Circumcision and sexual function

- There is no convincing evidence in the literature that circumcision affects sexual function in terms of penile/glans sensation and ejaculatory latency time (Level 3–4, Grade C)
- There is paucity of data on how NC impacts sexual function and penile sensation





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Summary of the benefits of circumcision

Benefit	Direction of evidence	Effect size	Level of evidence	GRADE quality	GRADE strength
Risk of UTI	Positive	0.07-0.023	Level 2	Low-quality	Weak
Risk of HIV	Positive	0.34-062	Level 1	High-quality	Strong
Risk of HPV prevalence	Positive	0.57-0.77	Level 1	Moderate- quality	Weak
Risk of HPV incidence	Unclear	NS	Level 2	Low-quality	Weak
Risk of HSV	Positive	0.36-0.91	Level 2	Moderate- quality	Weak
Risk of penile cancer	Positive	0.13-0.83	Level 2	Low-quality	Weak







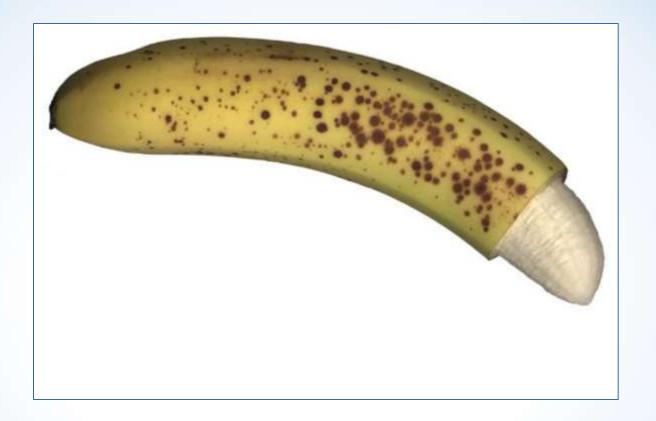
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Conclusions

- Universal NC is not recommended for Canadian male infants
- An individualized approach enlisting potential benefits and complications of NC should be discussed with parents contemplating NC for their male newborn child
- Adequate analgesia/anesthesia should be employed for all NC
- The normal male foreskin requires minimal physician intervention and pediatric urology referral should be reserved for older children (>5 years of age) and those with a history of recurrent UTIs or balanitis





"The risk of a wrong decision is preferable to the terror of indecision."

- Maimonides (1138-1204), Philosopher



Back to Willard E. Goodwin

"The controversy regarding circumcision is as silly as that surrounding the fate of a Cocker Spaniel's tail!"

