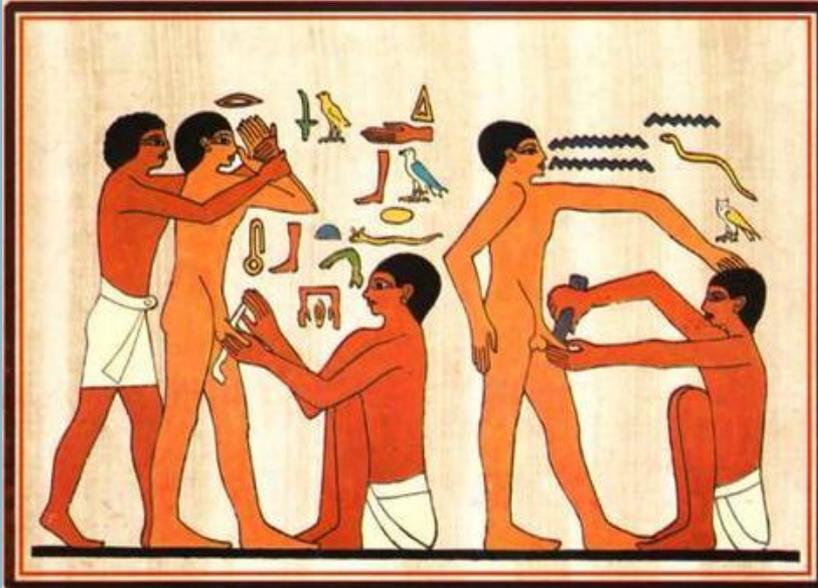




# Circumcision Studies

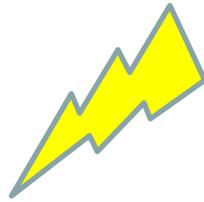
Dr. Trần Quốc Việt  
Department of General Surgery  
Pediatric Hospital 2

# History of Circumcision



- Ancient Egypt - performed to improve male hygiene and for purification
- Judaism, Islam – Religious reasons and cleanliness
- Africa and Australia - Rite of passage into manhood
- The United States is the only country in the developed world : majority of male infants are circumcised for nonreligious reasons (Up-to-date 2013)





# PEDIATRICS<sup>®</sup>

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

## **Male Circumcision**

### **TASK FORCE ON CIRCUMCISION**

Pediatrics 2012;130:e756; originally published online August 27,  
2012;

# STATEMENT OF THE ISSUE

**AAP 1999:** Despite of health benefits of circumcision, but did not deem the procedure to be a medical necessity for the well-being of the child.

**2007, AAP** formed a Task Force charged with reviewing current evidence on male circumcision and updating the policy

**AAP 2012**



# DATABASES

**TABLE 2** Results from Medline, Cochrane Database, and Embase Search for 1995–2010

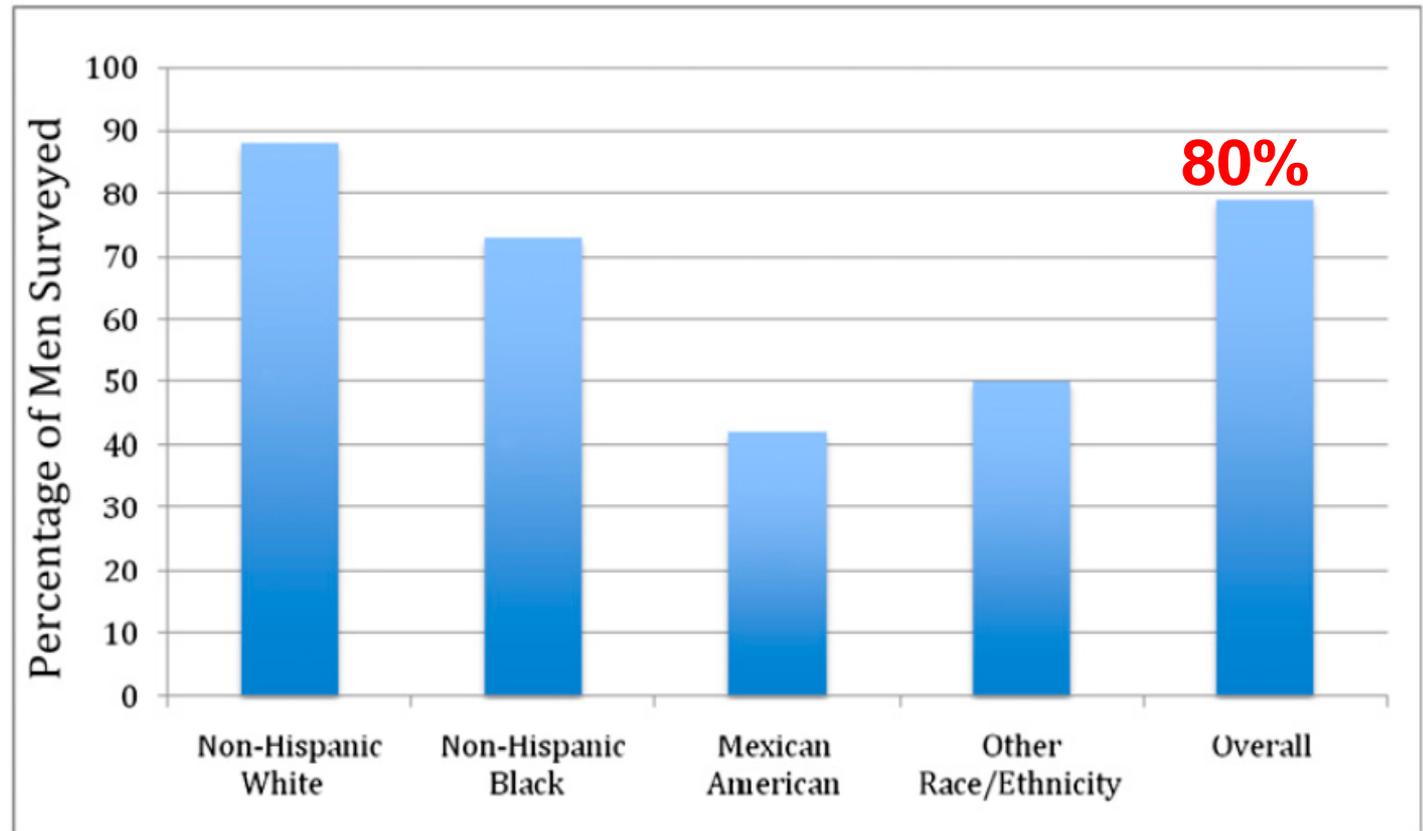
Clinical Topic Area <sup>a</sup>	No. of Articles Included
HIV/STI	231
Procedure and complications	219
UTI	53
Pain management	159
Penile dermatoses	107
Penile hygiene	76
Phimosis	64
Parental decision-making	60
Carcinoma (penile)	58
Carcinoma (cervical)	3
Sexual satisfaction	1

<sup>a</sup> Does not include nonclinical areas such as ethics and financing.

**TABLE 3** Evidence Levels

Level	Definition
1	RCTs or meta-analyses of multiple clinical trials with substantial treatment effects
2	RCTs with smaller or less significant treatment effects
3	Prospective, controlled, nonrandomized, cohort studies
4	Historic, nonrandomized, cohort or case-control studies
5	Case series: patients compiled in serial fashion, lacking a control group (excluded from review)
6	Animal studies or mechanical model studies (excluded from review)
7	Extrapolations from existing data collected for other purposes, theoretical analyses (excluded from review)
8	Rational conjecture (common sense); common practices accepted before evidence-based guidelines (excluded from review)

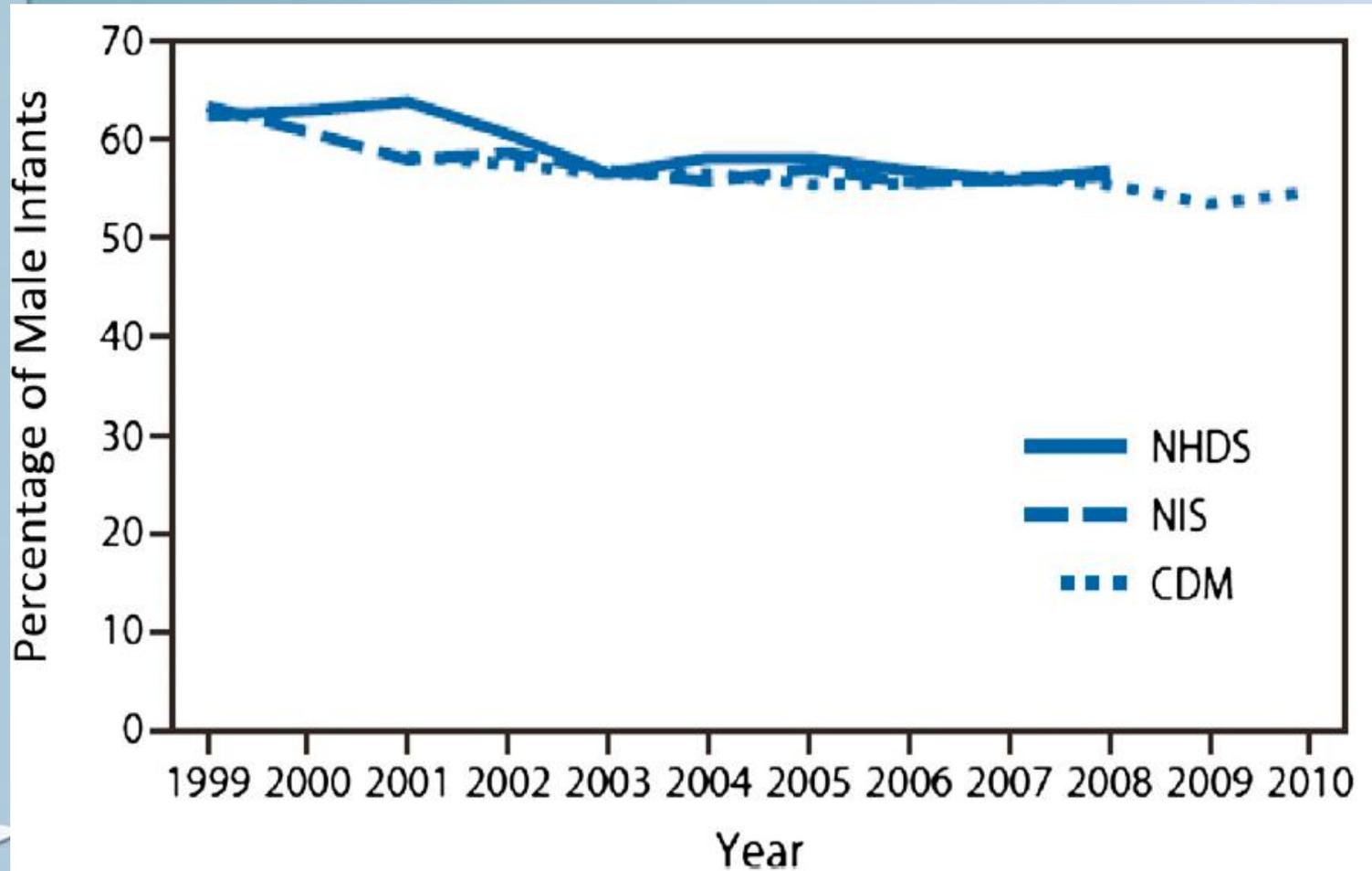
# EPIDEMIOLOGY IN U.S.



**FIGURE 2**

Prevalence of male circumcision, according to self-report; United States, 1999–2004.<sup>5</sup>

# INCIDENCE



**FIGURE 1**

Incidence of in-hospital newborn male circumcision, according to data source; United States, 1999–2010.<sup>2,3</sup>

# INCIDENCE

**TABLE 1** Multivariate Cox Proportional Hazards Regression of Selected Factors Associated With Circumcision Among Male Newborn Delivery Hospitalizations, United States, 1998–2005<sup>2</sup>

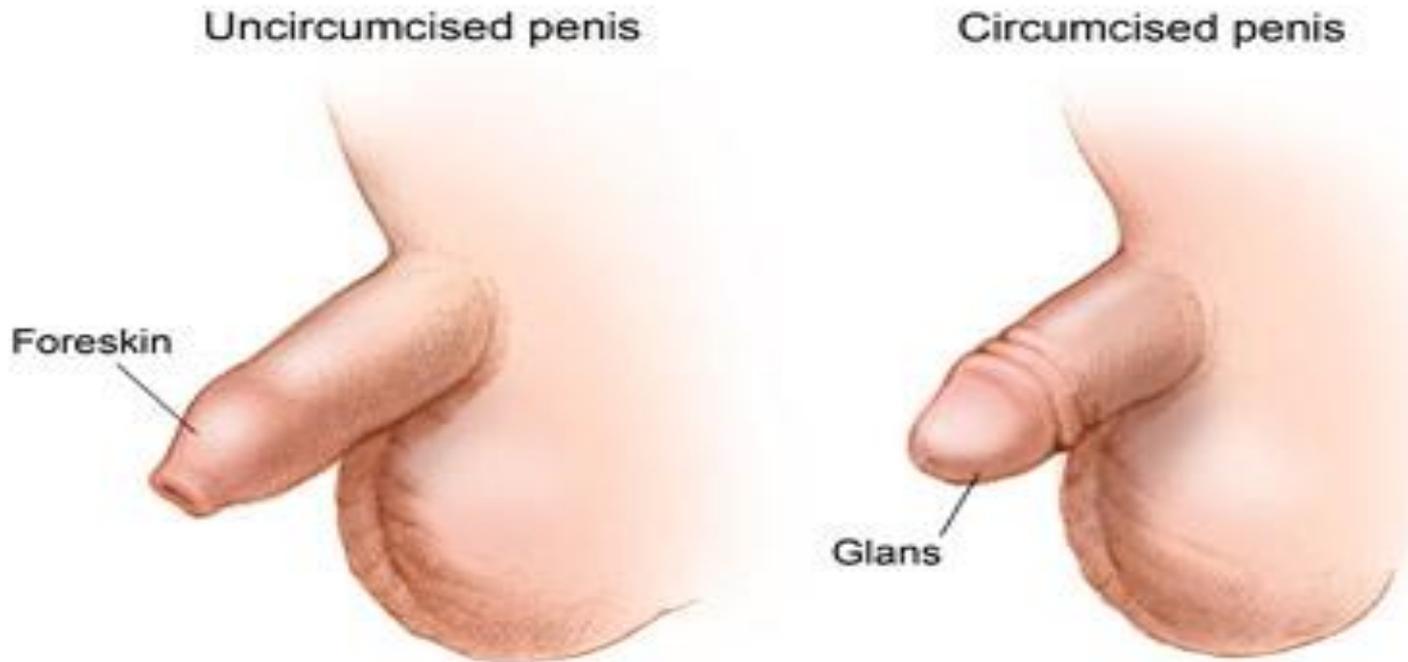
Characteristic	Weighted % of Male Infant Circumcisions	Adjusted Prevalence Rate Ratios (95% CI)
<b>Hospital region</b>		
Midwest	74	3.53 (3.23–3.87)
Northeast	67	2.90 (2.64–3.18)
South	61	2.80 (2.56–3.07)
West	30	1.00
<b>Payer</b>		
Private	67	1.76 (1.70–1.82)
Public	45	1.00
<b>Hospital location</b>		
Urban	66	1.29 (1.24–1.34)
Rural	56	1.00
<b>Newborn health status</b>		
Term, healthy	61	1.22 (1.20–1.23)
Not term, healthy	54	1.00

Male Circumcision and Diseases,  
Morbidities,  
and Sexual Function/ Satisfaction

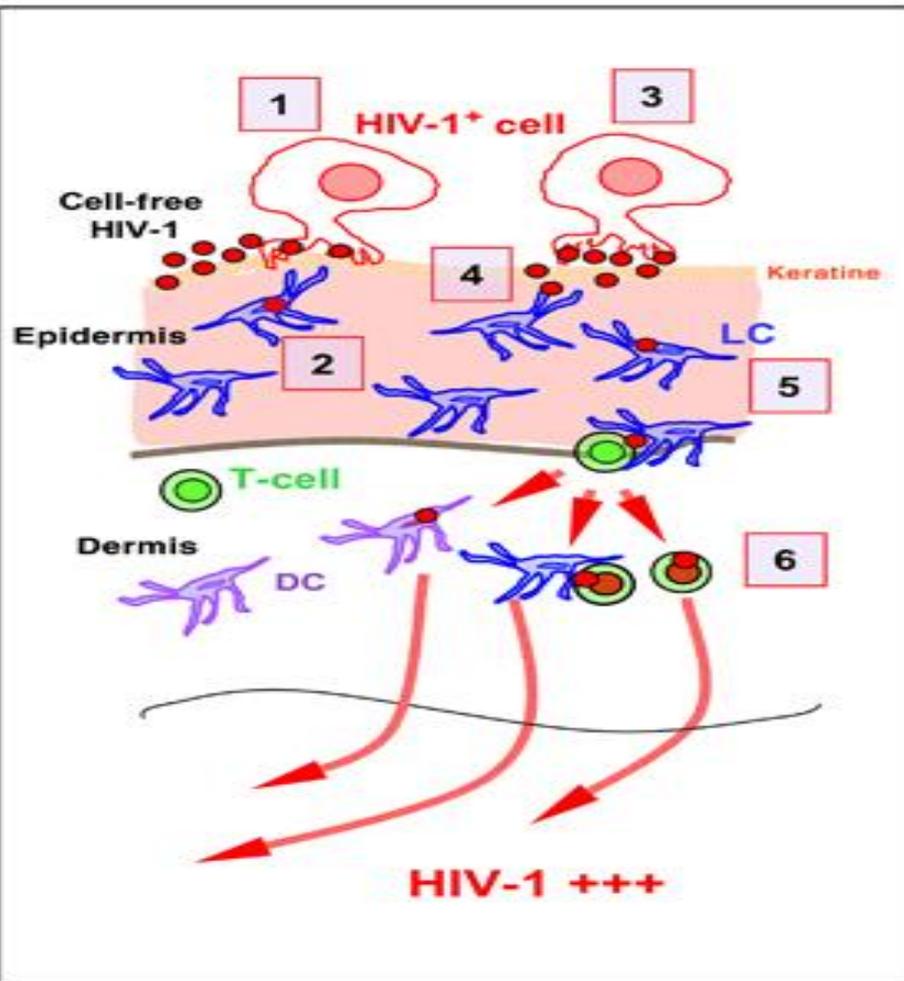


# STIs, Including HIV

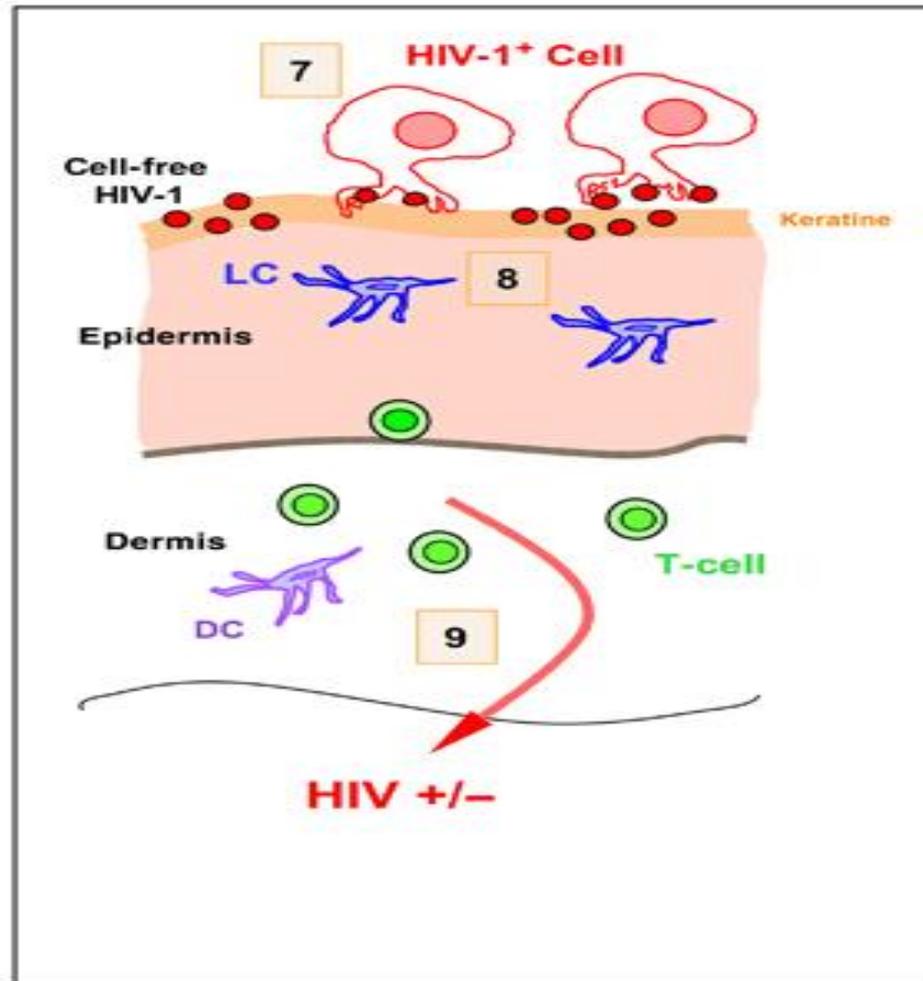
- Preputial space : “trap” pathogens, secretions and  
→ survival and replication.
- Uncircumcised penis become keratinized  
→ more susceptible to irritation/infection



### Inner foreskin



### Outer foreskin

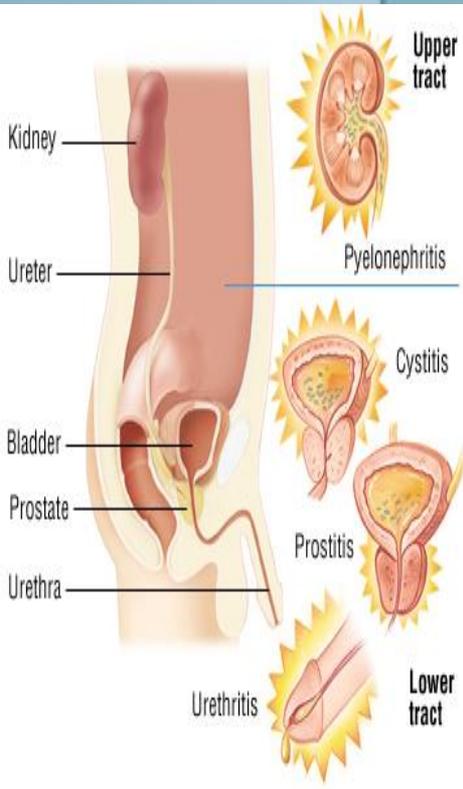


# Reduction in STDs.

- 40% to 60% for male circumcision in reducing the risk of HIV acquisition among heterosexual males in areas with high HIV (Africa)
- CDC : newborn circumcision performed to prevent HIV infection is cost-effective. All parents of newborn males should be given the choice of circumcision.
- Male circumcision is associated with a lower prevalence of HPV infection, and HSV-2 transmission (good evidence, RCT)
- Others STDs : less strong, non significant (Siphyllis, gonorrhea, or chlamydia)



# Decrease in UTI's



Circumcised <2 age less UTI than Uncircumsied (good evidence,2 well-conducted meta-analyses and a cohort study)

The risk of UTI is 3 to 10 fold lower in circumcised infants  
The absolute risk of UTI is small (1%) in male infants; the number needed to circumcise approximately 100, to prevent 1 UTI.

- A decreased prevalence uropathogens in the periurethral area 3 weeks after circumcision (fair)



# Decreased cancer of the penis

- Squamous cell cancer of the penis is very rare, less than 1 per 100,000 males
- Phimosis significantly elevated risk of invasive cancer (OR 11.4). Intact prepuce and no phimosis (OR: 0.5).
- Having to do 909 circumcisions to prevent 1 penile cancer event (good evidence)
- circumcised men have a lower prevalence of oncogenic (high-risk) and nononcogenic (low-risk) HPV when compared with uncircumcised men
- Must perform circumcision in infancy or the protective cancer benefit is lost.



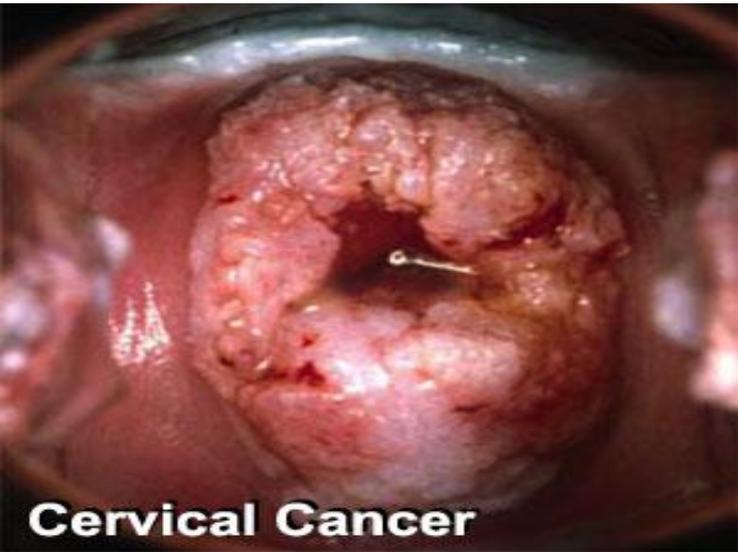
# Reduction in penile inflammation and retractile disorders



- Meatitis and balanitis are less common in circumcised men
- Decrease in phimosis and paraphimosis & in surgical procedures needed to correct these



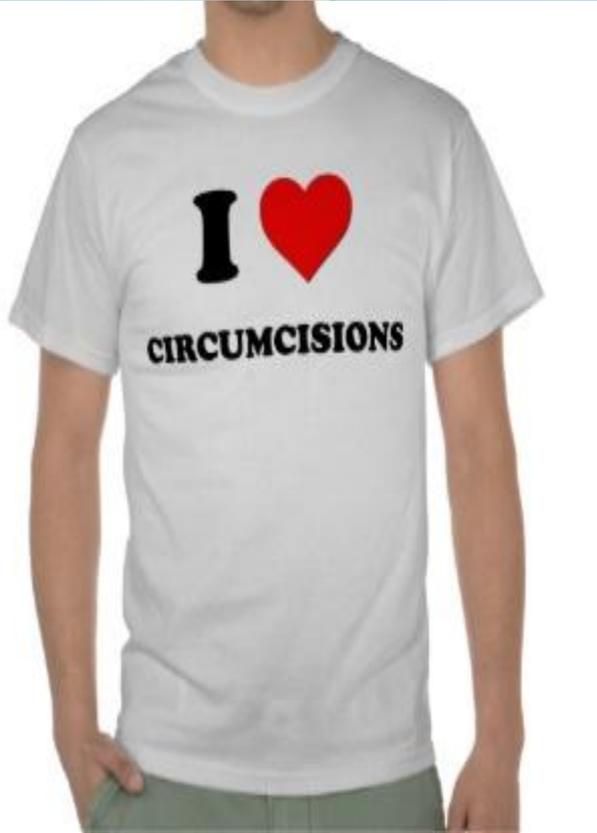
# Cervical cancer in female partners



- Leading cause of death for women in developing countries; more than 80% deaths
- Uncircumcised men may be more likely to acquire and transmit HPV to their partners
- The overall rate of cervical cancer for women who currently had circumcised male partners was not significantly decreased



# Sexual sensation and satisfaction



- No statistically significant differences
- Circumcised men reported significantly **less pain** on intercourse than uncircumcised men (Ugandan 5000).



# Complications

- Bleeding : the most common (0.08% - 0.18%), Infection (0.06%), Penile injury (0.04%).
- Late complications :
  - Excessive residual skin (incomplete circumcision),
  - Excessive skin removal,
  - Adhesions (natural and vascularized skin bridges),
  - Meatal stenosis,
  - Burried penis.
  - ...



# Major Complications

- Glans or penile amputation
- Transmission of HSV after mouth-to-penis contact by a mohel (jewish ritual circumcisers)
- MRS infection,
- Urethral cutaneous fistula,
- Glans ischemia,
- Death.



# Parental decision-making

- Correct, nonbiased information about circumcision before conception and early in pregnancy

The potential benefits and risks, and by ensuring that they understand the elective nature of the procedure.

Weigh the health benefits and risks in light of their own religious, cultural, and personal preferences



# Parental Decision-Making

Circumcision	RATE
health/ medical benefits	36,9% - 67%
Social concerns	22,8% - 37%
Religious requirements	11% - 19%

*In 4 cross-sectional studies (fair evidence)*

- The decision of circumcision is frequently made early in the pregnancy and even before conception.
- Financial barriers to the circumcision decision (fair)



# The Procedure



- 3 Major Methods :
  - GOMCO clamp,
  - Plastibell device,
  - Mogen clamp

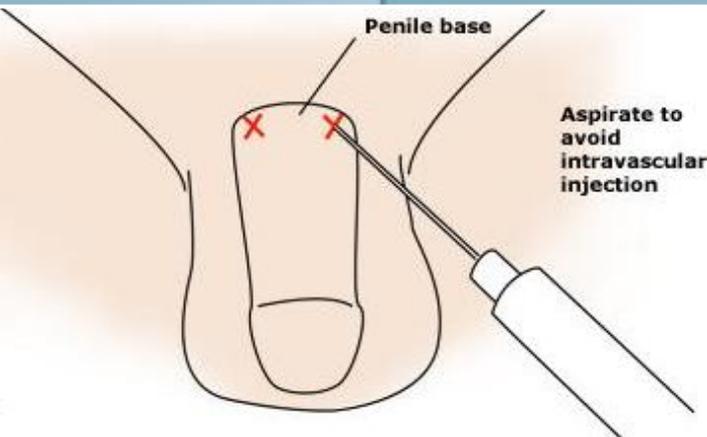
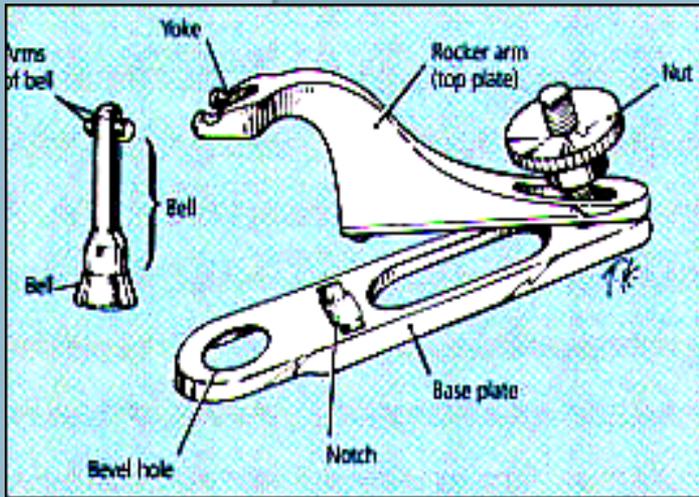
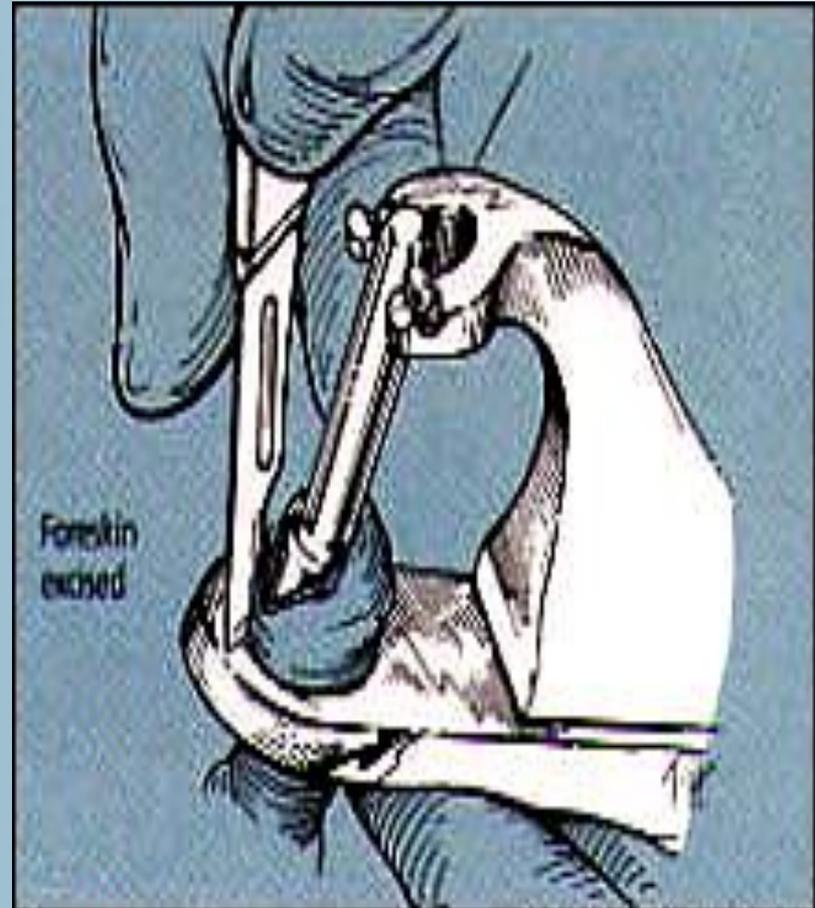


Diagram of dorsal nerve block

# The Gomco clamp

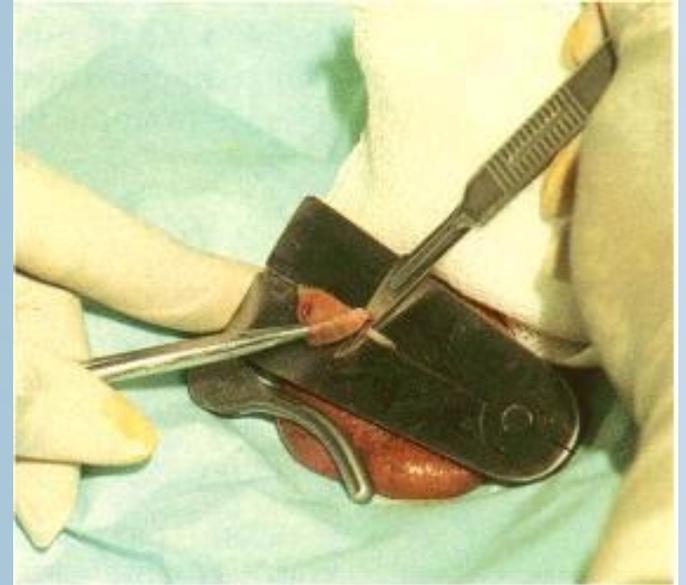


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# Mogen Clamp



# Plastibell Technique



- Introduced in the mid 1950s
- Has the advantage of continuing hemostasis after the procedure is over, as the suture remains in place for a few days.
- Disadvantage is that there is a foreign body at the site, which could become dislodged or infected.

# Recommendations

- The health benefits of newborn male circumcision outweigh the risks, and the benefits of newborn male circumcision justify access to this procedure for those families who choose it.
- Elective circumcision should be performed only if the infant's condition is stable and healthy



# THANKS FOR YOUR ATTENTION!

