

# PEDIATRICS®

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

## **Circumcision in the Time of HIV: When Is There Enough Evidence to Revise the American Academy of Pediatrics' Policy on Circumcision?**

Joseph D. Dickerman

*Pediatrics* 2007;119:1006-1007

DOI: 10.1542/peds.2007-0739

**This information is current as of May 13, 2007**

The online version of this article, along with updated information and services, is located on the World Wide Web at:

<http://www.pediatrics.org/cgi/content/full/119/5/1006>

PEDIATRICS is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since 1948. PEDIATRICS is owned, published, and trademarked by the American Academy of Pediatrics, 141 Northwest Point Boulevard, Elk Grove Village, Illinois, 60007. Copyright © 2007 by the American Academy of Pediatrics. All rights reserved. Print ISSN: 0031-4005. Online ISSN: 1098-4275.

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™



## Circumcision in the Time of HIV: When Is There Enough Evidence to Revise the American Academy of Pediatrics' Policy on Circumcision?

Joseph D. Dickerman, MD

Department of Pediatrics, University of Vermont College of Medicine, Burlington, Vermont

The author has indicated he has no financial relationships relevant to this article to disclose.

THERE HAVE BEEN 3 recent studies in Africa, involving >10 000 men, that have demonstrated a marked protective effect of male circumcision with respect to the acquisition of HIV infection.<sup>1-3</sup> The protective effect was 60% in each of the 3 trials. Furthermore, men who were circumcised were no more likely than uncircumcised men to engage in risky sexual behavior.<sup>2-4</sup> Commentaries<sup>5,6</sup> appearing in the same issue that published the 2 latest trials strongly affirm circumcision as a means of preventing HIV infection. Reviews of the literature<sup>7,8</sup> have concluded that there is substantial evidence to support the conclusion that circumcision significantly reduces the rate of HIV infection, and one review concluded that "male circumcision is the most compelling evidence-based preventive strategy to emerge since the results of mother-to-child transmission clinical trials."<sup>9</sup> In the United States in 2005 there were 1434 new cases of HIV infection in children and young adults 19 years of age or less<sup>10</sup> and 453 new cases of syphilis in the same age group,<sup>11</sup> whereas the prevalence of human papillomavirus infection among females 14 to 19 years of age who were surveyed in 2003-2004 was 24.5%.<sup>12</sup> Although HIV infection occurs much less frequently in the United States when compared with the developing world, it still represents a substantial problem.

Circumcision also protects against certain other sexually transmitted diseases (STDs). Authors of the first systematic review and meta-analysis of the association of male circumcision with ulcerative STDs (syphilis, chancroid, and genital herpes)<sup>13</sup> concluded that circumcised men are at lower risk of acquiring chancroid and syphilis than uncircumcised men. There is also compelling evidence that male circumcision protects against human papillomavirus infection and, hence, cervical<sup>14-19</sup> and penile cancer.<sup>20</sup>

The American Academy of Pediatrics (AAP) issued its most recent policy on newborn circumcision in 1999<sup>21</sup> and reaffirmed its conclusion in 2000<sup>22</sup> and 2005.<sup>23</sup> The

most recent statement concludes that although there are "potential medical benefits. . . these data are not sufficient to recommend routine neonatal circumcision."<sup>22</sup> As discussed in 2 commentaries critical of the AAP's policy,<sup>24,25</sup> the evidence for the beneficial effects of circumcision seem to have been underappreciated by the authors of the policy statement. The benefits include virtual elimination of penile cancer, as well as a marked decrease in balanoposthitis, phimosis, paraphimosis, and penile dermatosis.<sup>25</sup> It has also been pointed out that the AAP listed 6 evidence-based benefits and only one minor risk (a surgical complication rate of 0.2%-0.6%).<sup>25</sup>

There is little argument that circumcision reduces the incidence of urinary tract infection (UTI) in infants<sup>21,25,26</sup>; the only question involves the magnitude of its beneficial effect. Some suggest that this benefit only applies to boys at high risk of UTI,<sup>27</sup> whereas others point out that the cost/benefit ratio of preventing renal scarring, which may occur in 18% of boys who present with UTI, may make the procedure cost-effective.<sup>28</sup>

In 2004, our colleagues in obstetrics and gynecology stated that "a consensus is forming that circumcision offers protection against UTI, penile cancer, cervical cancer, genital ulcer disease, and HIV."<sup>26</sup> The authors of this article, as well as others,<sup>21</sup> discussed the various ways in which pain control during neonatal circumcision can be achieved and also concluded, as have others,<sup>25</sup> that there

**Abbreviations:** STD, sexually transmitted disease; AAP, American Academy of Pediatrics; UTI, urinary tract infection

Opinions expressed in these commentaries are those of the authors and not necessarily those of the American Academy of Pediatrics or its Committees.

[www.pediatrics.org/cgi/doi/10.1542/peds.2007-0739](http://www.pediatrics.org/cgi/doi/10.1542/peds.2007-0739)

doi:10.1542/peds.2007-0739

Accepted for publication Mar 13, 2007

Address correspondence to Joseph D. Dickerman, MD, Department of Pediatrics, University of Vermont College of Medicine, D201 Given Building, Burlington, VT 05405. E-mail: joseph.dickerman@uvm.edu

PEDIATRICS (ISSN Numbers: Print, 0031-4005; Online, 1098-4275). Copyright © 2007 by the American Academy of Pediatrics

is no increase in sexual dysfunction after circumcision. They further suggested<sup>26</sup> that even after parents are given the most current information on the risks and benefits of circumcision, their decision is often based on social, cultural, religious, and racial factors, as well as the circumcision status of the father. It was also opined that “some of the medical literature about the procedure suffers from authors who put the fury of debate above the science.”<sup>26</sup> I suspect that, rather than using evidence-based data, some in the medical community who oppose neonatal circumcision use similar factors on which to base their opinions. Parents should always have the right to choose whether to have their neonate circumcised. However, they must be presented with accurate, unbiased, evidence-based data. A revised AAP policy that reflects the recent findings described above would provide health care professionals and parents with an appropriate tool to allow them to arrive at an informed decision.

It is very disturbing to note that the prevalence of circumcision has declined in the United States from 91% in the 1970s to 83% in the 1980s. From 1999–2000, it was 79%.<sup>7</sup> In this age without an AIDS vaccine when many individuals, especially teenagers, practice risky sexual behavior and a significant number of people do not use condoms because of religious beliefs, lack of appropriate education, inability to afford them, or difficulty in acquiring them, circumcision may offer the best method for protection against certain STDs, especially HIV.

I firmly believe that there is now sufficient, new information to prompt a revised AAP policy statement regarding neonatal circumcision, considering the very significant beneficial effects and the very minor risks associated with the procedure.

## REFERENCES

1. Auvert B, Taljaard D, Lagarde E, Sobngwi-Tambekou J, Sitta R, Puren A. Randomized, controlled intervention trial of male circumcision for reduction of HIV infection risk: the ANRS 1265 Trial [published correction appears in *PLoS Med.* 2006;3:e298]. *PLoS Med.* 2005;2:e298
2. Bailey RC, Moses S, Parker CB, et al. Male circumcision for HIV prevention in young men in Kisumu, Kenya: a randomised controlled trial. *Lancet.* 2007;369:643–656
3. Gray RH, Kigozi G, Serwadda D, et al. Male circumcision for HIV prevention in men in Rakai, Uganda: a randomised trial. *Lancet.* 2007;369:657–666
4. Agot KE, Kiarie JN, Nguyen HQ, Odhiambo JO, Onyango TM, Weiss NS. Male circumcision in Siaya and Bondo districts, Kenya: prospective cohort study to assess behavioral disinhibition following circumcision. *J Acquir Immune Defic Syndr.* 2007;44:66–70
5. Newer approaches to HIV prevention. *Lancet.* 2007;369:615
6. Newell ML, Barnighausen T. Male circumcision to cut HIV risk in the general population. *Lancet.* 2007;369:617–619
7. Quinn T. Circumcision and HIV transmission. *Curr Opin Infect Dis.* 2007;20:33–38
8. Weiss H. Male circumcision as a preventive measure against HIV and other sexually transmitted diseases. *Curr Opin Infect Dis.* 2007;20:66–72
9. Sawires SR, Dworkin SL, Fiamma A, Peacock D, Szekeres G, Coates TJ. Male circumcision and HIV/AIDS: challenges and opportunities. *Lancet.* 2007;369:708–713
10. Department of Health and Human Services, Centers for Disease Control and Prevention. Basic statistics: HIV/AIDS cases by age. Available at: [www.cdc.gov/hiv/topics/surveillance/basic.htm#hivaidstage](http://www.cdc.gov/hiv/topics/surveillance/basic.htm#hivaidstage). Accessed February 1, 2007
11. Department of Health and Human Services, Centers for Disease Control and Prevention. Table 31. Primary and secondary syphilis—reported cases and rates per 100,000 population by age group and sex: United States, 2001–2005. Available at: [www.cdc.gov/std/stats/Tables/Table31.htm](http://www.cdc.gov/std/stats/Tables/Table31.htm). Accessed February 1, 2007
12. Dunne EF, Unger ER, Sternberg M, et al. Prevalence of HPV Infection Among Females in the United States. *JAMA.* 2007;297:813–819
13. Weiss HA, Thomas SL, Munabi SK, Hayes RJ. Male circumcision and risk of syphilis, chancroid, and genital herpes: a systematic review and meta-analysis. *Sex Transm Infect.* 2006;82:101–110; discussion 110
14. Castellsague X, Bosch FX, Munoz N, et al. Male circumcision, penile human papillomavirus infection, and cervical cancer in female partners. *N Engl J Med.* 2002;346:1105–1112
15. Svare EI, Kjaer SK, Worm AM, Osterlind A, Meijer CJ, van den Brule AJ. Risk factors for genital HPV DNA in men resemble those found in women: a study of male attendees at a Danish STD clinic. *Sex Transm Infect.* 2002;78:215–218
16. Baldwin SB, Wallace DR, Papenfuss MR, Abrahamsen M, Vaught LC, Giuliano AR. Condom use and other factors affecting penile human papillomavirus detection in men attending a sexually transmitted disease clinic. *Sex Transm Dis.* 2004;31:601–607
17. Gray R, Wawer M, Thoma M, et al. Mother-to-child transmission and HIV in women [abstract]. Available at: [www.retroconference.org/2006/Abstracts/25977.htm](http://www.retroconference.org/2006/Abstracts/25977.htm). Accessed February 1, 2007
18. Vaccarella S, Lazcano-Ponce E, Castro-Garduno JA, et al. Prevalence and determinants of human papillomavirus infection in men attending vasectomy clinics in Mexico. *Int J Cancer.* 2006;119:1934–1939
19. Drain PK, Halperin DT, Hughes JP, Klausner JD, Bailey RC. Male circumcision, religion, and infectious diseases: an ecologic analysis of 118 developing countries. *BMC Infect Dis.* 2006;6:172
20. Maden C, Sherman KJ, Beckmann AM, et al. History of circumcision, medical conditions, and sexual activity and risk of penile cancer. *J Natl Cancer Inst.* 1993;85:19–24
21. American Academy of Pediatrics, Task Force on Circumcision. Circumcision policy statement. *Pediatrics.* 1999;103:686–693
22. Lannon CM, Bailey A, Fleischman A, Shoemaker C, Swanson J. Circumcision debate: Task Force on Circumcision, 1999–2000. *Pediatrics.* 2000;105:641–642
23. American Academy of Pediatrics. AAP publications retired and reaffirmed. *Pediatrics.* 2005;116:796
24. Schoen EJ, Wiswell TE, Moses S. New policy on circumcision: cause for concern. *Pediatrics.* 2000;105:620–623
25. Schoen EJ. Ignoring evidence of circumcision benefits. *Pediatrics.* 2006;118:385–387
26. Alanis MC, Lucidi RS. Neonatal circumcision: a review of the world’s oldest and most controversial operation. *Obstet Gynecol Surv.* 2004;59:379–395
27. Singh-Grewal D, Macdessi J, Craig J. Circumcision for the prevention of urinary tract infection in boys: a systematic review of randomised trials and observational studies. *Arch Dis Child.* 2005;90:853–858
28. Malone PS. Circumcision for preventing urinary tract infection in boys: European view. *Arch Dis Child.* 2005;90:773–774

**Circumcision in the Time of HIV: When Is There Enough Evidence to Revise the American Academy of Pediatrics' Policy on Circumcision?**

Joseph D. Dickerman

*Pediatrics* 2007;119:1006-1007

DOI: 10.1542/peds.2007-0739

**This information is current as of May 13, 2007**

<b>Updated Information &amp; Services</b>	including high-resolution figures, can be found at: <a href="http://www.pediatrics.org/cgi/content/full/119/5/1006">http://www.pediatrics.org/cgi/content/full/119/5/1006</a>
<b>References</b>	This article cites 25 articles, 12 of which you can access for free at: <a href="http://www.pediatrics.org/cgi/content/full/119/5/1006#BIBL">http://www.pediatrics.org/cgi/content/full/119/5/1006#BIBL</a>
<b>Post-Publication Peer Reviews (P<sup>3</sup>Rs)</b>	One P <sup>3</sup> R has been posted to this article: <a href="http://www.pediatrics.org/cgi/eletters/119/5/1006">http://www.pediatrics.org/cgi/eletters/119/5/1006</a>
<b>Subspecialty Collections</b>	This article, along with others on similar topics, appears in the following collection(s): <b>Office Practice</b> <a href="http://www.pediatrics.org/cgi/collection/office_practice">http://www.pediatrics.org/cgi/collection/office_practice</a>
<b>Permissions &amp; Licensing</b>	Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at: <a href="http://www.pediatrics.org/misc/Permissions.shtml">http://www.pediatrics.org/misc/Permissions.shtml</a>
<b>Reprints</b>	Information about ordering reprints can be found online: <a href="http://www.pediatrics.org/misc/reprints.shtml">http://www.pediatrics.org/misc/reprints.shtml</a>

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

