

Patient information: Circumcision in baby boys-(resource-©December 2011 – UpToDate)

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CIRCUMCISION OVERVIEW — Circumcision in the male is the removal of the foreskin of the penis. The practice of circumcision dates to ancient times. In ancient Egypt, prior to biblical times, circumcision was performed to improve male hygiene. Later, routine circumcision of male infants was part of the Abrahamic covenants with Jehovah, giving rise to religious circumcisions that continue to this day in the Jewish and Muslim faiths.

Western culture has advocated circumcision of male infants as a preventive health measure, at times without any scientific rationale. In the early 1900s, for example, circumcision was suggested as a way to prevent masturbation and tuberculosis.

Currently, the United States is the only country in the developed world where the majority of male infants are circumcised for non-religious reasons. Circumcision rates in the United States vary according to geographic area, socioeconomic status, religious affiliation, insurance coverage, hospital type, and racial and ethnic group. In the United States, it is estimated that between 80 and 85 percent of males are circumcised. Up to 20 percent of men who are not circumcised during the newborn periods will be circumcised sometime later in life.

NORMAL PENILE DEVELOPMENT AND HYGIENE — At birth, the foreskin, sometimes called the prepuce, is firmly attached to the end of the penis, an area known as the glans. Over time, the foreskin separates from the glans, forming a space between the skin and the glans. The separation occurs during the first few years of life, and is complete in about 95 percent of boys by age four. Forcibly retracting the foreskin while it is still attached to the glans could cause injury.

Care of an uncircumcised penis — The foreskin should never be forcibly pulled back when there is resistance.

The uncircumcised penis is generally easy to keep clean. Parents of an infant should gently wash the genital area while bathing. Later, when the foreskin is fully retractable, boys should be taught the importance of washing beneath the foreskin on a regular basis. The foreskin should be dried before pulling it forward.

BENEFITS OF CIRCUMCISION — There are several benefits to newborn circumcision. However, lifestyle choices (eg, number of sexual partners or smoking) are probably much more important risk factors for sexually transmitted disease, penile problems, and cancer than not being circumcised.

Reduction in urinary tract infection — Urinary tract infections (UTIs) are uncommon in males; the greatest risk is in male infants less than one year old. All studies have shown that uncircumcised boys have an increased risk of UTI. Although uncircumcised males appear to be at a higher risk, UTI is uncommon in both circumcised and uncircumcised male infants.

Cancer — Cancer of the penis is rare, but uncircumcised men appear to be at an increased risk for developing the disease. Good hygiene may reduce or negate this risk. In addition, several other variables are associated with an increased risk of penile cancer, including: smoking; genital warts; penile rash or tear; and multiple sexual partners.

Cervical cancer is more common in women whose male sexual partners are not circumcised.

Penile problems — Uncircumcised males may be at increased risk for swelling of the opening at the tip of the penis or of the glans itself, although these problems can rarely occur in circumcised men. Uncircumcised boys who retract the foreskin while bathing are less likely to experience problems with swelling.

Infection — Studies suggest that circumcision helps decrease the risk of acquiring some sexually transmitted diseases (STDs), such as trichomonas, human papillomavirus, and HIV. It is important to note, however, that many circumcised men acquire these diseases. Circumcision may lower the risk of acquiring a STD, but it does not eliminate it.

Hygiene — In the uncircumcised male, the space between the foreskin and the glans must be cleaned regularly. (See '[Care of an uncircumcised penis](#)' above.) Proponents of circumcision argue that it is difficult for uncircumcised boys and men to maintain proper hygiene, although this theory has not been well studied.

ADVERSE EFFECTS OF CIRCUMCISION — Parents considering circumcision for a newborn should talk with their child's healthcare provider or obstetrical provider about any concerns they have regarding the potential risks of circumcision.

Procedural risks — The rate of complications related to circumcision is about 2 to 5 per 1000 cases. Most problems are minor. The most common complications of male circumcision are bleeding and local infection. Infection is usually mild and resolves with local treatment. In very rare cases, more serious complications occur, such as accidental

amputation of the glans or life threatening infection. If insufficient foreskin is removed, the penis may appear to be uncircumcised. This can be treated by reoperation.

Other considerations — The prepuce contains specialized sensory tissue that is removed during circumcision. Some experts feel that the end of the penis becomes less sensitive when the foreskin is removed and that sexual sensation may be decreased. However, most circumcised males do not describe psychological trauma or decreased sexual function or desire as a result of the procedure.

Children who are circumcised are at slight risk for scarring of the urethral opening, which is called meatal stenosis. This manifests itself after toilet training and is characterized by an upward deflection of the urinary stream and the child having to push his penis between his legs to aim properly. This can be easily repaired by surgically excising the small amount of scar tissue. In uncircumcised children, the foreskin protects the urethral opening, so they are not at risk of developing meatal stenosis.

Parents should be aware that some health plans do not cover the cost of circumcision because they consider it to be a cosmetic procedure without a proven health benefit. Parents should call their health plan directly to find out if the procedure is covered.

PAIN CONTROL DURING CIRCUMCISION — Studies in newborns have shown that signs of stress occur during the circumcision procedure. These include crying, increased heart rate, and increased blood pressure. Although these responses may be related in part to the infant being restrained, it is reasonable to assume that they are also an indication that the newborn is experiencing pain.

Parents should discuss what pain control measures will be used before their child is circumcised. The American Academy of Pediatrics recommends that all infants undergoing circumcision have adequate pain control during and after the procedure [1]. The American College of Obstetricians and Gynecologists supports the conclusions of the AAP and also states that pain control (eg, anesthetic cream or injectable local anesthetic) should be provided. Swaddling, oral sugar solutions, or acetaminophen may be given as well, but should not be used as the primary method of pain relief.

CIRCUMCISION PREPARATION AND PROCEDURE — Before circumcision, the doctor who will perform the procedure should review the informed consent. This is a discussion of the reasons for circumcision, the benefits, risks, and alternatives, and ensures that the parents understand what will happen during the procedure. The nurse or doctor will verify that:

- The infant is at least 12 hours old (preferably 24 hours old) and in good health

- The infant has urinated at least once since birth
- The infant has not eaten for at least one hour prior to circumcision

There are a few situations that may cause a circumcision to be delayed. Babies that are born prematurely need to wait until they are ready to be discharged from the hospital before they can undergo circumcision. Babies who are born with a defect of the penis (eg, hypospadias, which causes the urethral meatus (where urine exits the penis) to be in an abnormal location) may need to delay circumcision. If there is a family history of bleeding disorders, the baby's doctor may recommend waiting until the risk of bleeding can be determined.

Technique — The infant is placed in a restraint The penis and an area of skin around the base of the penis are thoroughly cleaned.

There are several techniques for performing circumcision; the choice of which technique is used depends upon the physician's preference and experience. The three major methods of circumcision are the GOMCO clamp, the Plastibell device, and the Mogen clamp. The procedure takes about 15 to 30 minutes.

Post-procedure care — After the circumcision is completed, a petroleum jelly (Vaseline®) gauze dressing is usually applied This gauze should be removed and replaced with every diaper change for 24 hours. The circumcision site should be cleaned with warm water and a cotton ball once or twice a day. The infant should urinate within 12 hours of the procedure.

After the first 24 hours, petroleum jelly (Vaseline®) should be applied directly to the penis for three to five days. This helps keep the area clean and keeps the wound site from adhering to the diaper. At first, the penis will appear red In a few days, a soft yellow scab will develop. This is normal and will go away in a few days. During this process, parents should watch for worsening redness, swelling, bleeding (larger than a quarter-size on the diaper) or drainage that does not go away. Any of these signs requires an immediate call to the infant's healthcare provider.

Usually the penis needs no further care once it has healed.

PUBLIC AND PROFESSIONAL OPINIONS ON CIRCUMCISION — There are many opinions about the risks and benefits of circumcision. Feelings and beliefs are strong on both sides of the argument. Opponents claim that the procedure causes psychological damage, reduces sexual pleasure, and they object to the infant's lack of choice in the matter. Those favoring the procedure cite health benefits such as those noted above.

In general, expert groups acknowledge the benefits of circumcision but do not recommend the procedure for all newborns.

- The Canadian Paediatric Society issued a clinical practice guideline in 1996, which stated, "The overall evidence of the benefits and harms of circumcision is so evenly balanced that it does not support recommending circumcision as a routine procedure for newborns."
- In 1999, the American Academy of Pediatrics established a task force to evaluate the medical research, ethics, and other issues related to male infant circumcision and concluded that "existing scientific evidence demonstrates potential medical benefits of newborn male circumcision, but the data was not sufficient to recommend routine neonatal circumcision. To make an informed choice, parents of all male infants should be given accurate and unbiased information and be provided the opportunity to discuss this decision."

This conclusion has been endorsed by the AAP every year since 1999, and officially reaffirmed in 2005. The full text of this report is available at <http://aappolicy.aappublications.org/cgi/content/full/pediatrics;103/3/686>.

Because of new scientific evidence, the AAP has appointed another task force to evaluate the medical implications of circumcision. The new statement is currently being drafted.

- The American College of Obstetricians and Gynecologists supports the conclusions of the AAP and also states that pain control (eg, anesthetic cream or injectable local anesthetic) should be provided. Swaddling, oral sugar solutions, or acetaminophen may be given as well, but should not be used as the primary method of pain relief.

MAKING A DECISION ABOUT CIRCUMCISION — Making the decision to circumcise an infant can be difficult for some parents. A father may be concerned that his son's penis appear similar to himself or to other men. Parents may be concerned about the risks versus the benefits of the procedure. Other parents have no difficulty making a decision because of cultural or religious rules that require circumcision.

A decision is best made before the baby is born, although a parent should feel comfortable discussing their questions or concerns with their healthcare provider after the child's birth. The procedure can be performed at the hospital before the mother and baby are discharged, or can be performed as an outpatient procedure with local anesthesia as late as 12 months after birth. After 12 months, the procedure usually requires general anesthesia.

WHERE TO GET MORE INFORMATION — Your child's healthcare provider is the best source of information for questions and concerns related to your child's medical problem.

The following organizations also provide reliable health information.

- National Library of Medicine

(www.nlm.nih.gov/medlineplus/circumcision.html, available in many languages)

- American Academy of Pediatrics, Care of the Uncircumcised Penis

(www.cirp.org/library/normal/aap/)

- The Mayo Clinic

(<http://www.mayoclinic.com/health/circumcision/MY01023>)

[1-4]

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