

# Circumcision HelpDesk™



## **Foreskin Problems** *and the answer to them*

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# Foreskin Problems *and the answer to them*

## **Introduction**

It is not widely appreciated that at least 20% of all boys who are left uncircumcised at birth will suffer from conditions (e.g. phimosis, frenulum breve and repeated inflammations) that justify circumcision before adulthood – although many, and their parents, think these problems are normal and fail to seek the medical help they need.

Furthermore, up to 10% of uncircumcised males reaching adulthood will, at some time later in their lives, require circumcision for medical reasons, sometimes as an emergency at an inconvenient time!

Clearly not everyone will suffer from problems as a consequence of having a foreskin, but the incidence is high enough to warrant taking precautions to prevent them – just as we normally vaccinate children against diseases that many of them will never actually encounter. We do this on the basis that “prevention is better than cure”. Regrettably far too few parents (and even doctors) appreciate that the same adage should be applied to penile problems, especially as there is a very simple preventative in circumcision, which some have described as a ‘surgical vaccine’.

To understand the problems better we need to start with some questions and answers about the anatomy of the male penis.

## **Penile Anatomy**

### **What is the glans?**

The glans (note the spelling, it is not a gland) is the acorn shaped end of the penis proper. The urethra (the tube through which urine is passed) opens at the tip of the glans (an opening called the meatus). In the uncircumcised male the glans (and its meatus) is covered by the foreskin and thus not seen much of the time.

### **What is the foreskin?**

The foreskin is that part of the skin of the uncircumcised penis which covers any part of the glans, together with any skin which extends beyond the tip of the glans.

It is a double layer of skin, rather like the cuff of a shirt. The outer layer is continuous with, and indistinguishable from, the skin over the shaft. At the tip there is a small ring of muscle that holds the tip lightly closed (to prevent dirt, etc. from entering) but normally not tightly enough to prevent expansion and free retraction over the rim of the glans. The skin turns inwards here and changes texture to become much thinner and more prone to damage (this type of skin is called mucous membrane). The mucous membrane continues to just behind the glans where it turns forwards again and becomes the covering of the glans itself.

### **Why do we have a foreskin?**

All male mammals have a form of foreskin, although for most it is more a sheath for the full penis rather than simply a covering for the glans alone, as in humans.

The human foreskin has a minor part to play in the early development of the penis in the womb as the embryo differentiates into a male and the two sides of the genital bud fuse together.

However, the major reason for it was that when early mankind lived and hunted naked in scrubland it was absolutely necessary to protect the glans from being torn by bushes, etc. as men went about normal daily life, especially whilst hunting.

Furthermore, it makes the glans extremely sensitive to ordinary, everyday touch and thus encourages very swift climax and ejaculation during intercourse (what we would today call 'premature ejaculation'). This used to be necessary to avoid long sex sessions during which the man and woman could easily become prey to wild animals.

In modern life we wear clothing and live mainly in towns and cities. We also like sex to be more leisurely. Under these conditions there is no longer any need for the foreskin and indeed it can be counter-productive, making the man reach his orgasm too fast and reducing sexual pleasure for both partners.

### **What is the frenulum?**

The frenulum is a slightly elastic 'cord' which links the under side of the glans to the inner layer of the foreskin. Its sole purpose is to *assist* the foreskin to return to covering the glans as an erection subsides. One should note that it includes a significant vein that will bleed profusely if torn during sexual activities.

### **Why do we have a frenulum?**

As we have just seen when discussing the role of the foreskin, it used to be necessary for the foreskin to be rapidly returned to covering the glans after sex to protect it against damage from the surrounding flora. This was the job of the frenulum.

Now that we generally expect sex to be more leisurely, and the glans doesn't have to be rapidly covered again, the frenulum no longer has any essential function – it is easy to manually return the foreskin at leisure.

### **What is the coronal sulcus?**

The sulcus is the sort of 'groove' around the penis immediately behind the rim (or corona) of the glans. The frenulum lies across the under side of the sulcus. The sulcus exists because the rim of the glans is flared out from the general diameter of the penis to give better contact with the vagina during intercourse, and thus increase pleasure for both participants, but especially for the woman.

Unfortunately, the sulcus collects much of any waste material that is under the foreskin and holds it in a more difficult position in respect of cleaning. Only when the foreskin is fully retracted, or removed, can the sulcus be properly viewed and cleaned.

## **The 'Normal' Foreskin**

Foreskins, along with many other body parts, vary greatly from one person to another as well as through different stages of life. It is therefore difficult to describe any particular foreskin as 'normal'.

However there are some characteristics that apply to the majority of teen and adult foreskins and thus give us as close an approximation to 'normal' as possible. These are:

- The foreskin is not affected by any form of inflammation, scarring or irritation.
- When the penis is flaccid, the foreskin covers the entire glans with only a small, loosely closed overhang, or just reaches the end of the glans, leaving a view of the meatus.
- The foreskin can be fully, freely and painlessly retracted whether one is flaccid or erect.

## ***Some Problems Caused by the Foreskin***

A totally waste material called smegma (formed from used and surplus body oils, shed skin cells, dirt, etc.) is continuously produced under the foreskin and becomes trapped there. Fresh oils are constantly required to allow the foreskin to slide freely over the glans. The excess and used oils become waste. Skin cells are constantly shed from all over our body but elsewhere they simply get rubbed off by clothing as we move around.

This waste needs to be physically removed by washing with soap and water at least daily. Note that as smegma is oil based it cannot be completely removed by water alone and so soap is essential. If not removed, smegma attracts harmful bacteria and fungal (yeast) spores which colonise the waste as a source of nutrients. The result is emission of nasty odours and eventually serious infections.

Some of these infections show up fairly rapidly as inflammation and irritation under the foreskin (balanitis or balanoposthitis). Others pass up the urethra to the bladder and show as urinary tract infections (UTIs) with discomfort in urinating. A few don't show until old age when cancer of the penis can develop. (Note that penile cancer is almost unknown in males who were circumcised in infancy.)

A less common, but more devastating, problem is the development of lichen sclerosus et atrophicus (LS, – but also known as balanitis xerotica obliterans or BXO) which leaves an unsightly white scarring of the glans. It is most common in the presence of phimosis and the foreskin must be removed as part of the cure.

If the foreskin is not (or cannot be) retracted for urination then in addition to the smegma, the glans and inner foreskin become coated with urine which also attracts bacteria, when not washed away regularly, and thus adds to the bad smells and risk of infection. The problem is seriously compounded if the male is diabetic as there are excess sugars in the urine, which provide more nutrients for the bacteria to live on.

The most common reason for failing to wash away the waste daily is a combination of inability to freely and fully retract the foreskin for washing and lack of education from parents in the need for scrupulous daily hygiene of the penis. Incorrect advice online to use only water and no soap on the penis compounds the problem.

A non-retractable foreskin can also cause significant problems during intercourse; making insertion difficult or seriously reducing stimulation and pleasure – especially for the female partner who may never reach her orgasm, which is very unfair on her!

## ***More Details of the Problems***

### **What is phimosis?**

Phimosis is very simply medically defined as having a foreskin which is too tight.

In an infant or young child the foreskin is linked to the glans by thin strands called synechia, but more commonly called adhesions. These prevent the foreskin from being retracted at all. This is *not* phimosis. The synechia normally dissolve by about 5 years old, and certainly should be gone by 8.

During this period of infancy the foreskin is considered to be too tight if urine cannot escape as fast as it is being fed into the foreskin from the bladder. Phimosis thus causes the foreskin to balloon out during urination. It can be very painful for the boy and has the serious effect of putting a back pressure on the immature bladder and kidneys which can easily be damaged for life. Infant phimosis like this *must* be dealt with quickly to avoid permanent and life threatening kidney damage. There is only one reliable and complete cure – which is to remove the faulty foreskin by circumcision.

By 8 years old the boy's foreskin should have fully released and should be able to be freely retracted (whether flaccid or erect). Parents should check this before allowing him to bath or shower unsupervised. Any remaining synechia can easily be broken down by a doctor using a blunt probe.

A normal foreskin will be able to be retracted to expose the whole glans and the coronal sulcus behind it. From this age onwards phimosis refers to a foreskin which is too tight to freely pass over the rim of the glans whether one is flaccid or erect.

If detected early enough it may sometimes be possible to gently stretch the foreskin wider (often with the aid of cortico-steroid creams) to cure the phimosis. However if severe, or left until puberty is well advanced, stretching is likely to simply tear the thin inner layer and make matters worse as it heals to inelastic scar tissue. The foreskin will also often simply return to its natural tighter state once stretching exercises are ceased. At this point the only sure and guaranteed permanent cure is circumcision.

A few boys are surprised to find that they could freely retract their foreskin before puberty but it becomes unretractable during and beyond puberty. This “puberty induced phimosis” can afflict any boy, but most often afflicts those with a long foreskin as the overhanging end of it has nothing to encourage it to widen as the glans enlarges through puberty.

Phimosis is, overall, a developmental abnormality which needs simple surgery to guarantee permanent correction for hygiene and a good sex life.

### **What is paraphimosis?**

Paraphimosis is the condition in which the foreskin, having been retracted over the rim of the glans, tightens behind the glans as it becomes engorged and cannot be replaced to cover the glans when the erection subsides. In this condition it restricts the free flow of blood to and from the glans which remains at least partially engorged. The reduction in oxygen supply to the glans can cause gangrene, leading to the death of the glans.

Paraphimosis is a medical emergency and *must* be resolved rapidly to avoid loss of, or serious damage to, the glans. This most often requires an urgent visit to the hospital emergency room (A & E in the UK).

### **What is frenulum breve?**

In some cases the frenulum fails to develop enough and remains too short and tight to allow full and painless retraction of the foreskin. This condition is called frenulum breve (short frenulum).

Frenulum breve can cause problems during intercourse as it can distort the glans downwards on erection. This makes insertion difficult and possibly painful for one's partner. Semen will also be deposited in a less favourable part of the vagina, making conception harder.

A further problem is that during the thrusting of intercourse the foreskin can be forced right back and cause the frenulum to rip with painful, very bloody and highly embarrassing consequences.

### **What are posthitis, balanitis and balanoposthitis?**

Posthitis is the medical term for inflammation of the foreskin. Balanitis is inflammation of the glans. Balanoposthitis is inflammation of both the glans and foreskin, although often the term balanitis is used to cover any of these conditions.

### **What is lichen sclerosus et atrophicus (also called BXO)?**

Lichen Sclerosus et Atrophicus (LS, – formerly called Balanitis Xerotica Obliterans, or BXO) is a serious, auto-immune form of balanitis resulting in extreme scarring of the glans (and sometimes the foreskin too). In common with all auto-immune conditions, it is difficult to treat because the body's natural defence mechanisms are working against the patient's best interests.

Lichen Sclerosus et Atrophicus is almost exclusive to uncircumcised males, particularly in the presence of phimosis. It may occur at any age.

Treatment with steroid creams and ointments reduces inflammation and a strong steroid used regularly for approximately three months may enable the skin to return to normal. However if, as is usually the case, the condition has been left untreated for a long period of time, it significantly changes the skin and steroid cream is likely to be less effective; circumcision then becomes essential.

Circumcision, by allowing the glans to thoroughly dry out, is almost always effective in combination with the steroid creams. A radically tight style is desirable to ensure total and permanent exposure of the glans.

### **What is the effect of foreskin on sexual satisfaction?**

The glans, and especially its rim, is the sexually most sensitive part of the entire penis. During intercourse it is supposed to make direct contact with the vagina to give and receive maximum stimulation – and hence pleasure. When the foreskin remains covering the rim of the glans it severely masks much of the required stimulation and hence seriously reduces pleasure for both parties.

The male may still stimulate his glans enough through his foreskin (as he most likely usually does during masturbation) but his partner receives little stimulation and may not even reach her orgasm – which is very unfair on her!

## **Can there be other sexual problems?**

A tight foreskin, which is not retracted before insertion for intercourse, can be forced back over the rim of the glans during the natural thrusting of sex. This can cause the foreskin to tear with painful, very bloody and highly embarrassing consequences.

## ***Let's Quantify some of the Problems***

The lifetime risk of urinary tract infections (UTIs), and consequent risk of renal complications, in uncircumcised men is 1 in 3. When UTIs are suffered in infancy the risk of permanent kidney damage is increased 10-fold.

Phimosis affects 1 in 10 uncircumcised adult men and up to 1 in 5 infants, children and teenage boys. Phimosis in infancy makes passing urine difficult and painful for the infant who often cries in severe pain each time he urinates, with the foreskin ballooning out alarmingly. This then puts a back pressure on the immature bladder and kidneys which can be permanently damaged.

One in 10 uncircumcised men suffer from inflammation of the glans and/or foreskin (balanitis) at some time in their lives. This rises to 1 in 3 if the uncircumcised man is diabetic, adding to their other severe problems.

As a result of having a foreskin, one in 1,000 uncircumcised men get penile cancer, which often requires penile amputation or disfiguring surgery leading to impaired penile function.

A foreskin increases by approximately 3-fold the risk of acquiring HIV/AIDS during sex with an infected partner. HIV easily enters via the vulnerable inner lining of the foreskin of an otherwise healthy uncircumcised penis, but can also infect via sores anywhere on the penis (caused for example by genital herpes, balanitis, inflammation or trauma).

Significant studies suggest that uncircumcised men have a 15-50% increase in risk of prostate cancer, which affects 1 in 6 men over their lifetimes.

A woman is at greater risk of cervical cancer (which is caused by the human papillomavirus) if her male partner is uncircumcised. If he has had no more than two previous partners she is at twice the risk. If he has had 6 or more sexual partners her risk is 5-times higher.

When her male partner has a foreskin there is a 2-fold increase in a woman's risk of genital herpes and bacterial vaginosis and a 5-fold increase in the risk of being infected by chlamydia, thus increasing her risk of infertility, pelvic inflammatory disease, and ectopic pregnancy.

## ***What is the Answer***

Great civilisations and primitive tribes all over the world have intrinsically known for millennia that the answer to all the problems of a foreskin is to remove it in the simple, safe, external procedure of circumcision. Although the procedure is probably even older, the earliest documented example of circumcision is to be found in a bas relief in the tomb of Ankmahor at Saqqara in Egypt, dating from around 2350 BC – see picture opposite.



Although cloaked in religious prescription, the underlying reason for circumcision being required in the Jewish and Moslem faiths is its proven lifelong health benefits.

### **What is circumcision?**

Circumcision is the removal of the foreskin from the male penis. Ideally, and in most cases, the frenulum is also removed to ensure that frenulum breve cannot cause any further problems.

It is a simple, safe, and common external procedure that can be easily and quickly done at any age under local anaesthetic in a doctor's office or specialist clinic. However it is easiest and best performed in early infancy (8 days to 3 months), when it greatly reduces the risk of dangerous infant urinary tract infections (UTIs), and doesn't interrupt the child's usual routine.

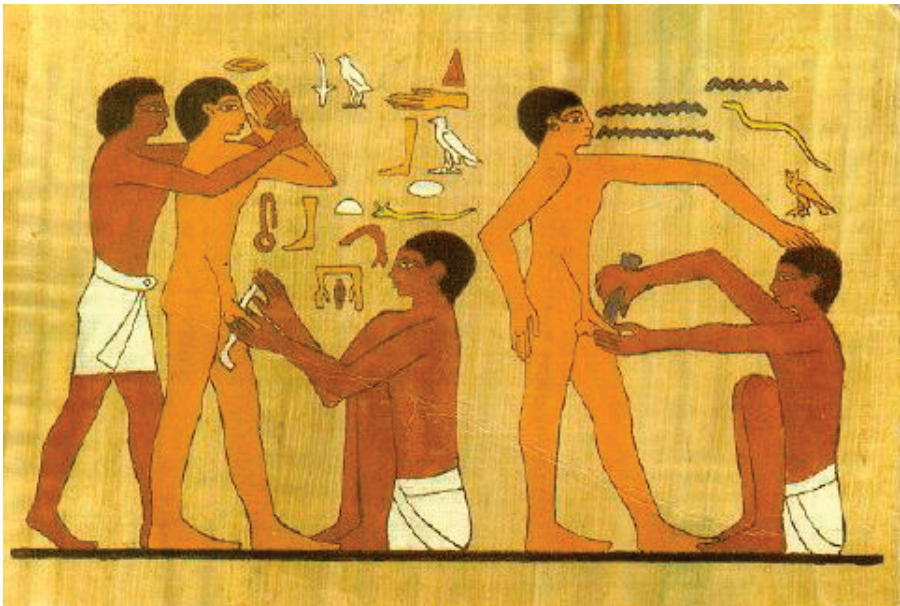
Circumcision not only totally prevents (or cures) phimosis, frenulum breve, paraphimosis and balanoposthitis but has been proven to provide up to 60% reduction in the risk of ever catching each of several STIs (including chlamydia and heterosexually acquired HIV/AIDS).

The risks of circumcision are exceedingly low and usually very minor. There are no drawback to being circumcised.

### **Overall Benefits of Circumcision**

***The lifetime benefits to a male of being circumcised exceed minor risks by over 100 to 1!***

***Male circumcision also provides a substantial benefit to public health and the individual well-being of women.***

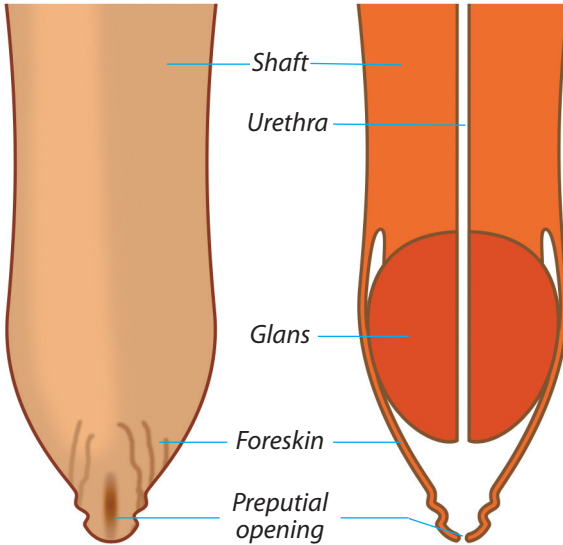


# Genital Anatomy

## Circumcised and Uncircumcised Teen and Adult Penises

Uncircumcised penis with foreskin intact

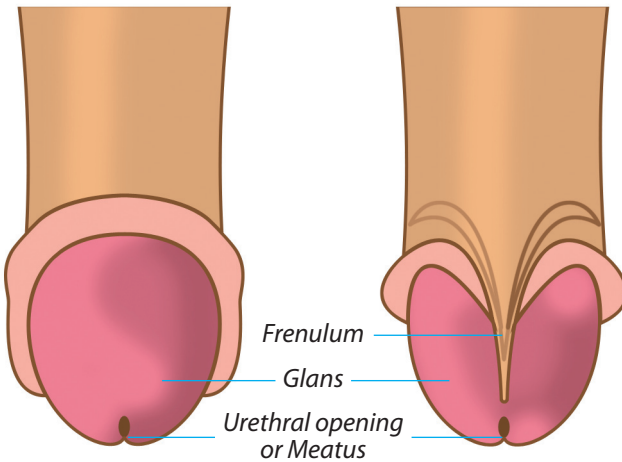
Section through an uncircumcised penis



Uncircumcised penis with foreskin retracted

From above

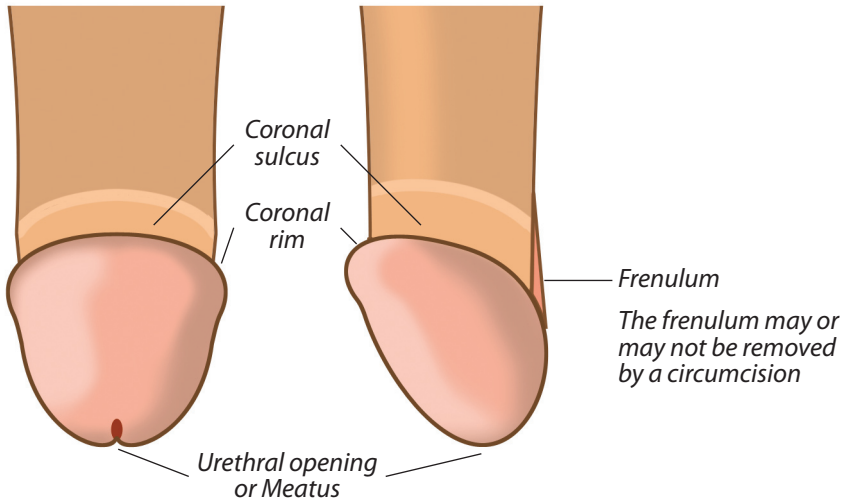
From below



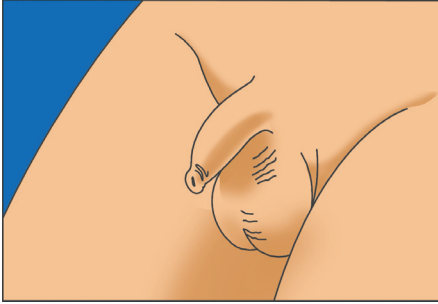
**Circumcised penis**

*From above*

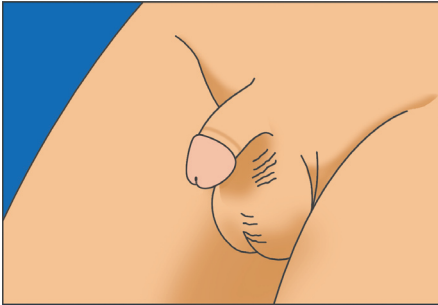
*From the side*



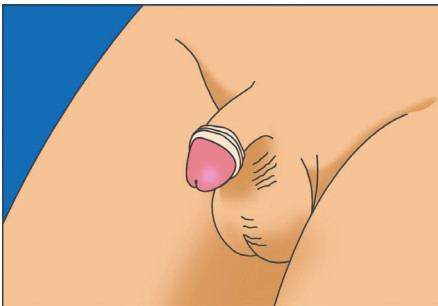
## The penis in infants and young boys



Uncircumcised penis  
(with foreskin in the normal position  
covering the glans)



Circumcised penis  
(with foreskin removed, permanently  
exposing the glans)



Uncircumcised penis  
(with foreskin retracted to expose the glans  
– note the bunching behind the glans)







