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Penile Cancer Causes, Risk Factors, and Prevention

Learn about the risk factors for penile cancer and what you might be able to do to help lower your risk.

Risk Factors

A risk factor is anything that affects your chance of getting a disease such as cancer. Learn more about the risk factors for penile cancer.

- [Risk Factors for Penile Cancer](#)
- [What Causes Penile Cancer?](#)

Prevention

There's no way to prevent penile cancer for sure. But there are things you can do that might help lower your risk.

- [Can Penile Cancer Be Prevented?](#)
-

Risk Factors for Penile Cancer

- [Human papillomavirus \(HPV\) infection](#)
- [Not being circumcised](#)

HPV.

To learn a lot more, see our [HPV¹](#) section.

Not being circumcised

Circumcision removes all (or part) of the foreskin. This procedure is most often done in infants, but it can be done later in life, too. Men who were circumcised as children may have a much lower chance of getting penile cancer than those who were not. In fact, some experts say that circumcision as an infant prevents this cancer. The same protective effect is not seen if circumcision is done as an adult.

The reason for the lower risk in circumcised men is not entirely clear, but it may be related to other known risk factors. For example, men who are circumcised can't develop the condition called phimosis,

Sometimes secretions can build up underneath an intact foreskin. If the area under the foreskin isn't cleaned well, these secretions build up enough to become a thick, sometimes smelly substance called **smegma**. Smegma is more common in men with phimosis, but can occur in anyone with a foreskin if the foreskin isn't retracted regularly to clean the head of the penis.

In the past some experts were concerned that smegma might contain compounds that can cause cancer. Most experts now believe that smegma itself probably doesn't cause penile cancer. But it can irritate and inflame the penis, which can increase the risk of cancer. It might also make it harder to see very early cancers.

Smoking and other tobacco use

Men who [smoke](#)² and/or use other forms of tobacco are more likely to develop penile cancer. Tobacco users who have HPV infections have an even higher risk. Tobacco use exposes your body to many cancer-causing chemicals. These harmful substances are inhaled into the lungs, where they are absorbed into the blood, or they're absorbed through mouth tissues into the blood. They can travel in the bloodstream throughout the body to cause cancer in many different areas. Researchers believe that these substances damage genes in cells of the penis, which can lead to penile cancer.

UV light treatment of psoriasis

Men who have a skin disease called psoriasis are sometimes treated with drugs called **psoralens** and then an ultraviolet A (UVA) light source. This is called **PUVA**therapy. Men who have had this treatment have been found to have a higher rate of penile cancer. To help lower this risk, men being treated with PUVA now have their genitals covered during treatment.

Age

The risk of penile cancer goes up with age. In the US, the average age of a man when he is diagnosed is about 68. About 4 out of 5 penile cancers are diagnosed in men over age 55.

AIDS

Men with AIDS have a higher risk of penile cancer. This higher risk seems to be linked to their weakened immune system, which is a result of this disease. But it might also be

linked to other risk factors that men with [HIV \(the virus that causes AIDS\)](#)³ are more likely to have. For example, men with HIV are more likely to smoke and be infected with HPV.

Hyperlinks

1. www.cancer.org/cancer/risk-prevention/hpv.html
 2. www.cancer.org/cancer/risk-prevention/tobacco.html
-



What Causes Penile Cancer?

The exact cause of most penile cancers is not known. But scientists have found that it's linked with a number of other conditions. Research is being done around the world to learn more about how these **risk factors** might cause cells of the penis to become cancer.

For instance, research has shown that normal cells control themselves by making substances called **tumor suppressor gene products** to keep them from growing too fast and becoming cancers. Two proteins (E6 and E7) made by high-risk types of [human papillomavirus \(HPV\)](#)¹ can block the way tumor suppressor gene products work in cells. This allows the cells to start growing out of control, which might make them more likely to become cancer.

Tobacco use has been linked to penile cancer. It creates cancer-causing chemicals that spread throughout the body and can damage the DNA inside cells, such as the cells of the penis. DNA is the chemical in our cells that makes up our genes. (Genes control how our cells grow and divide.) When DNA damage affects the genes that control cell growth, it can lead to cancer.

See [Genetics and Cancer](#)² to learn more about the complex link between genes and cancer.

Hyperlinks

1. www.cancer.org/cancer/risk-prevention/hpv.html
2. www.cancer.org/cancer/risk-prevention/genetics.html
3. www.cancer.org/cancer/types/penile-cancer/references.html

References

[See all references for Penile Cancer](#)

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National Cancer Institute. Penile Cancer Treatment (PDQ®)—Patient Version. May 4, 2018. Accessed at www.cancer.gov/types/penile/patient/penile-treatment-pdq on May 25, 2018.

StatPearls. Engelsjerd JS, LaGrange CA. Cancer, Penile. Accessed at www.ncbi.nlm-nih.gov.proxy.library.emory.edu/books/NBK499930/ on May 25, 2018.

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Can Penile Cancer Be Prevented?

- [Circumcision](#)
- [Genital hygiene](#)
- [HPV infection](#)
- [Tobacco use](#)

The large variations in penile cancer rates throughout the world suggest that many penile cancers can be prevented. The best way to reduce the risk of penile cancer is to avoid known risk factors. (See Risk Factors for Penile Cancer.) But some men with penile cancer have no known avoidable risk factors, so it's not possible to prevent this disease completely..

Circumcision

In the past, circumcision (removing the foreskin on the penis) was suggested as a way to lower penile cancer risk. This was based on studies that reported much lower penile cancer rates among circumcised men than among uncircumcised men. But in some studies, the protective effect of circumcision wasn't seen after factors like smegma and phimosis were taken into account. Still, some experts have said that circumcision prevents penile cancer.

In the US, the risk of penile cancer is low even among uncircumcised men. Men who aren't circumcised can help lower their risk of penile cancer by practicing good genital hygiene.

Genital hygiene

Perhaps the most important factor in preventing penile cancer in uncircumcised men is good genital hygiene. Uncircumcised men need to pull back (retract) the foreskin and clean the entire penis. If the foreskin is constricted and hard to retract (this is called

phimosis), a doctor may be able to prescribe a cream or ointment that can make it easier to do so. If this doesn't work the doctor may cut the skin of the foreskin in a procedure called a **dorsal slit** to make retraction easier.

HPV infection

StatPearls. Engelsjerd JS, LaGrange CA. Cancer, Penile. Accessed at www.ncbi.nlm.nih.gov.proxy.library.emory.edu/books/NBK499930/ on May 25, 2018.

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