

Kidney Cancer - Risk Factors and Prevention [1]

This section has been reviewed and approved by the [Cancer.Net Editorial Board](#) [2], 06/2014

ON THIS PAGE: You will find out more about the factors that increase the chance of developing this type of cancer. To see other pages, use the menu on the side of your screen.

A risk factor is anything that increases a person's chance of developing cancer. Although risk factors often influence the development of cancer, most do not directly cause cancer. Some people with several risk factors never develop cancer, while others with no known risk factors do. However, knowing your risk factors and talking about them with your doctor may help you make more informed lifestyle and health care choices.

The following factors may raise a person's risk of developing kidney cancer:

Smoking [3]. Smoking doubles the risk of developing kidney cancer and is believed to cause about 30% of kidney cancers in men and approximately 25% in women.

Gender. Men are two to three times more likely to develop kidney cancer than women.

Race. Black people have higher rates of kidney cancer.

Age. Kidney cancer is typically found in adults and is usually diagnosed between the ages of 50 and 70.

Nutrition [4] and **weight** [5]. Research has often shown a link between kidney cancer and obesity, which is generally caused by many years of eating a high-fat diet.

High blood pressure. Men with high blood pressure, also called hypertension, may be more likely to develop kidney cancer.

Overuse of certain medications. Painkillers containing phenacetin, once popular in over-the-counter medications, have been banned in the United States since 1983 because of their link to kidney cancer. Diuretics and analgesic pain pills, such as aspirin, acetaminophen, and ibuprofen, have also been linked to kidney cancer.

Exposure to cadmium. Some studies have shown a connection between exposure to the metallic element cadmium and kidney cancer. Working with batteries, paints, or welding materials may increase a person's risk as well. This risk is even higher for smokers who have been

exposed to cadmium.

Long-term dialysis. Patients having dialysis (see the [Overview](#) [6] section) for a long time may develop cancerous cysts in their kidneys. These growths are usually found early and can often be removed before the cancer spreads.

Family history of kidney cancer. People who have first-degree relatives (parents, brothers, sisters, or children) with kidney cancer have an increased risk of developing the disease. This risk increases if a number of family members have been diagnosed with kidney cancer, including grandparents, aunts, uncles, nieces, nephews, grandchildren, and cousins, and if these family members were diagnosed before the age of 50, had cancer in both kidneys, and/or had more than one tumor in the same kidney. If you are concerned kidney cancer may run in your family, it is important to get an accurate [family history](#) [7] and share the results with your doctor. By understanding your family history, you and your doctor can take steps to reduce your risk and be proactive about your health.

Specific genetic disorders. Although kidney cancer can run in families, inherited kidney cancers are uncommon, occurring about 5% of the time. Only a few specific genes that increase the risk of developing kidney cancer have been found, and many are linked to specific genetic syndromes. Most of these conditions are associated with a specific type of kidney cancer.

Finding a specific genetic syndrome in a family can help a person and his or her doctor develop an appropriate cancer screening plan and, in some cases, help determine the best treatment options. Only [genetic testing](#) [8] can determine whether a person has a genetic mutation. Most experts strongly recommend that people considering genetic testing first talk with a [genetic counselor](#) [9]. A genetic counselor is an expert trained to explain the risks and benefits of genetic testing.

Genetic conditions that increase a person's risk of developing kidney cancer include:

- [Von Hippel-Lindau syndrome \(VHL\)](#) [10]. People with VHL have an increased risk of developing several types of tumors. Most of these tumors are benign. However, 40% of people with this disorder develop kidney cancer, most often a specific type called clear cell kidney cancer.
- [Hereditary non-VHL clear cell renal cell carcinoma](#) [11]. Hereditary non-VHL clear cell renal cell carcinoma is a genetic condition that increases a person's risk of developing clear cell renal cell carcinoma (CCRCC). A family may have hereditary non-VHL CCRCC if more than one family member has been diagnosed with CCRCC.
- [Hereditary papillary renal cell carcinoma \(HPRCC\)](#) [12]. HPRCC is a genetic condition that increases the risk of type 1 papillary renal cell carcinoma. People who have HPRCC have an increased risk of developing more than one kidney tumor and tumors on both kidneys. HPRCC is suspected when two or more close relatives have been diagnosed with type 1 papillary renal cell carcinoma.
- [Birt-Hogg-Dubé syndrome \(BHD\)](#) [13]. BHD is a rare genetic condition associated with multiple noncancerous skin tumors, lung cysts, and an increased risk of noncancerous and cancerous kidney tumors, specifically a rare type called chromophobe or a slow-growing type called oncocytoma that rarely spreads. People with BHD may also develop clear cell or papillary kidney cancer.

- Hereditary leiomyomatosis and renal cell carcinoma (HLRCC) [14]. HLRCC is associated with an increased risk of developing type 2 papillary renal cell carcinoma and skin nodules called leiomyomata that are found mainly on the arms, legs, chest, and back. Women with HLRCC often develop uterine fibroids known as leiomyomas or, less commonly, leiomyosarcoma.
- Tuberous sclerosis complex (TSC) [15]. TSC is a genetic condition associated with changes in the skin, brain, kidney, and heart. People with TSC also have an increased risk of developing kidney cancer.

Other genetic conditions may be associated with an increased risk of kidney cancer, and research to find other genetic causes of kidney cancer is ongoing.

Research also continues to look into other factors that cause kidney cancer and what people can do to lower their personal risk. Not enough is known about kidney cancer to determine exactly how to prevent it. However, there are some steps people can take to lower their risk, such as quitting smoking, lowering blood pressure, controlling body weight, and eating a diet high in fruits and vegetables and low in fat. Talk with your doctor if you have concerns about your personal risk of developing this type of cancer.

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Links:

[1] <http://www.cancer.net/cancer-types/kidney-cancer/risk-factors-and-prevention>

[2] <http://www.cancer.net/about-us>

[3] <http://www.cancer.net/node/25002>

[4] <http://www.cancer.net/node/24965>

[5] <http://www.cancer.net/node/25008>

[6] <http://www.cancer.net/node/18969>

[7] <http://www.cancer.net/node/30761>

[8] <http://www.cancer.net/node/24895>

[9] <http://www.cancer.net/node/24907>

[10] <http://www.cancer.net/node/19322>

[11] <http://www.cancer.net/node/18854>

[12] <http://www.cancer.net/node/18927>

[13] <http://www.cancer.net/node/18519>

[14] <http://www.cancer.net/node/18924>

[15] <http://www.cancer.net/node/19686>