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Bile Duct Cancer Causes, Risk Factors, and Prevention

Learn about the risk factors for bile duct 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 bile duct cancer.

- [Bile Duct Risk Factors](#)
- [What Causes Bile Duct Cancer?](#)

Prevention

There's no way to completely prevent cancer. But there are things you can do that might help lower your risk. Learn more.

- [Can Bile Duct Cancer Be Prevented?](#)

Risk Factors for Bile Duct Cancer

Researchers have found risk factors that make a person more likely to develop bile duct cancer.

- [What is a risk factor?](#)
- [Certain diseases of the liver or bile ducts](#)
- [Inflammatory bowel disease](#)
- [Older age](#)
- [Ethnicity and geography](#)
- [Obesity](#)
- [Non-alcoholic fatty liver disease](#)
- [Exposure to Thorotrast](#)
- [Family history](#)
- [Diabetes](#)
- [Alcohol](#)
- [Other possible risk factors](#)

What is a risk factor?

A risk factor is anything that affects your chance of getting a disease like cancer. Different cancers have different risk factors. Some risk factors, like smoking, can be changed. Others, like a person's age or family history, can't be changed.

But having a risk factor, or even many risk factors, does not mean that a person will get the disease. And many people who get the disease have few or no known risk factors.

Certain diseases of the liver or bile ducts

People who have chronic (long-standing) inflammation of the bile ducts have an increased risk of developing bile duct cancer. Certain conditions of the liver or bile ducts can cause this, these include:

- **Primary sclerosing cholangitis (PSC)**, a condition in which inflammation of the bile ducts (cholangitis) leads to the formation of scar tissue (sclerosis). People with PSC have an increased risk of bile duct cancer. The cause of the inflammation is not usually known. Many people with this disease also have inflammation of the large intestine, called **ulcerative colitis**.
- **Bile duct stones**, which are a lot like but much smaller than gallstones, can also cause inflammation that increases the risk of bile duct cancer.
- **Choledochal cyst disease**, a rare condition some people are born with. It causes bile-filled sacs along the bile ducts. (Choledochal means having to do with the common bile duct.) If not treated, the bile sitting in these sacs causes inflammation

of the duct walls. The cells of the duct wall often have areas of pre-cancerous changes, which, over time, can progress to bile duct cancer.

- **Liver fluke infections**, which occur in some Asian countries when people eat raw or poorly cooked fish that are infected with these tiny parasite worms. In humans, these flukes live in the bile ducts and can cause bile duct cancer. There are several types of liver flukes. The ones most closely related to bile duct cancer risk are *Clonorchis sinensis* and *Opisthorchis viverrini*. Liver fluke infection is rare in the US, but it can affect people who travel to Asia.
- **Abnormalities where the bile duct and pancreatic duct normally meet** which can allow digestive juices from the pancreas to reflux (flow back) into the bile ducts. This backward flow keeps the bile from moving through the bile ducts the way it should. People with these abnormalities are at higher risk of bile duct cancer.
- **Cirrhosis**, which is damage to the liver caused by scar tissue. It's caused by irritants like alcohol and diseases like hepatitis. Studies have found it raises the risk of bile duct cancer.
- **Infection with hepatitis B virus or hepatitis C virus** which increases the risk of intrahepatic bile duct cancers. This may be at least in part because long-term infections with these viruses can also lead to cirrhosis.

Other rare diseases of the liver and bile duct that may increase the risk of developing bile duct cancer include **polycystic liver disease** and **Caroli syndrome** (a dilation of the intrahepatic bile ducts present at birth).

Inflammatory bowel disease

Inflammatory bowel disease includes ulcerative colitis and Crohn's disease. People with these diseases have an increased risk of bile duct cancer.

Older age

Older people are more likely than younger people to get bile duct cancer. Most people diagnosed with bile duct cancer are in their 60s or 70s.

Ethnicity and geography

In the US, the risk of bile duct cancer is highest among Hispanic Americans. Worldwide, bile duct cancer is much more common in Southeast Asia and China, largely because of the high rate of infection with liver flukes in these areas.

Obesity

Being [overweight or obese](#)¹ can increase the risk of cancers of the gallbladder and bile ducts. This could be because obesity increases the risk of gallstones and bile duct stones, as well as the risk of non-alcoholic fatty liver disease. But there may be other ways that being overweight can lead to bile duct cancers, such as changes in certain hormones.

Non-alcoholic fatty liver disease

Non-alcoholic fatty liver disease is the build-up of extra fat in the liver cells that's not caused by alcohol. Overweight is also associated with the risk of non-alcoholic fatty liver disease.

Studies have found other factors that might increase the risk of bile duct cancer, but the links are not as clear. These include:

- [Smoking](#)³
- Chronic pancreatitis (long-term inflammation of the pancreas)
Infection with [HIV](#)⁴ (the virus that causes AIDS)

What Causes Bile Duct Cancer?

We usually look like our parents because they are the source of our DNA. But DNA affects more than how we look. Some people inherit DNA mutations from their parents that greatly increase their risk for certain cancers. But inherited gene mutations are not thought to cause very many bile duct cancers.

Gene mutations related to bile duct cancers are usually acquired during life rather than being inherited. For example, acquired changes in the *TP53* tumor suppressor gene are found in most bile duct cancers. Other genes that may play a role in bile duct cancers include *KRAS*, cancers

Can Bile Duct Cancer Be Prevented?

Getting to and staying at a healthy weight is one important way a person may reduce their risk of bile duct cancer, as well as many other types of cancer. The American Cancer Society recommends that people try to stay at a [healthy weight](#)¹, keep [physically active](#)², and follow a [healthy eating pattern](#)³ that includes plenty of fruits, vegetables, and whole grains, and that limits or avoids red and processed meats, sugary drinks, and highly processed foods. To learn more, see the [American Cancer Society Guidelines for Diet and Physical Activity for Cancer Prevention](#)⁴.

Other ways that people might be able to reduce their risk of bile duct cancer include:

- Get vaccinated against the hepatitis B virus (HBV) to prevent infection with this virus and the cirrhosis it can cause.
- Take precautions to avoid blood-borne or sexually transmitted infections like HBV and other viruses (like hepatitis C virus) to help prevent cirrhosis.
- Treat hepatitis infections (such as B and C) to help prevent cirrhosis.
- Avoid or limit [alcohol](#)⁵. If you do drink, have no more than 1 drink per day for women or 2 drinks per day for men.
- [Quit \(or don't start\) smoking](#)⁶.
- Protect yourself against exposure to certain chemicals (see [Risk Factors for Bile Duct Cancer](#)).

Hyperlinks

1. www.cancer.org/cancer/risk-prevention/diet-physical-activity/take-control-your-weight.html
 2. www.cancer.org/cancer/risk-prevention/diet-physical-activity/get-active.html
 3. www.cancer.org/cancer/risk-prevention/diet-physical-activity/eat-healthy.html
 4. www.cancer.org/cancer/risk-prevention/diet-physical-activity/acs-guidelines-nutrition-physical-activity-cancer-prevention.html
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