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Rise Of The Cancer-Causing Bugs: Researchers Say Dental PLAQUE Could Be Behind Mystery Rise Of Aggressive Colon Tumors – As Separate Study Links Strep Throat To Stomach Cancers

A mysterious increase in aggressive colon and stomach cancers may be partly caused by bacteria, according to two new studies.

Experts are baffled by the surprising increase in colon and rectal tumors over the past two decades, which are affecting more and more young people.

Theories for the rise include the increase in the number of people on diets high in junk food and rising obesity rates. But now researchers at the Fred Hutchinson Cancer Center in Seattle have discovered that *Fusobacterium nucleatum*, which lives in dental plaque, could explain why some colon tumors are so difficult to treat.

Half of all CRC tumors – the most aggressive and deadly type – contained the bacteria, which can travel from the mouth to the intestines through swallowing.

Meanwhile, Chinese and Singaporean scientists showed in a study this week that bacteria normally found in the throat, mouth and vagina, called *Streptococcus anginosus*, can promote the growth of stomach cancer.

S. anginosus colonizes mucous membranes in the nose and mouth and can cause abscesses, tissue infections such as flesh-eating diseases, infections in the lining of the heart, and joint infections.



Bowel cancer can cause you to have blood in your poop, a change in bowel habits, or a lump in your bowel that can cause blockages. Some people also suffer from weight loss as a result of these symptoms

The researchers hope their discoveries will lead to improved cancer treatments that target the bacterial microbiome in the gut and clear out the creeping bacteria.

Researchers at the cancer center conducted laboratory research to see how the bacterium *Fusobacterium nucleatum* affects the environment in which tumor cells can grow.

They isolated the bacterial strains from cancer patients from North America and Europe. They also studied the genetic makeup of the bacterium in more detail.

Samples from patients with cancer were analyzed to determine the presence of the bacteria, with DNA extracted from tissue samples and genetic sequencing techniques used to identify the species.

They then analyzed the abundance of bacteria in stool samples from people with and without colon cancer to assess a possible link between the bacteria colonizing the body and fueling the disease.

Researchers found that about 50 percent of cancer cases had a specific subtype of the bacteria present in tumor tissue, although the researchers did not specify how advanced the stages of those cancers were.

They found this microbe in higher numbers in stool samples from patients with colorectal cancer compared to stool samples from healthy people.

They found that cancer treatments that target both the bacteria in the body and the tumor cells could improve patient outcomes.

The researchers said the bacteria could be causing the increase in cancer cases among young people, although they cannot say for sure as many of their test subjects were over 50.

But co-lead author Dr. Susan Bullman said the findings “raise the question of whether there are increased levels of this bacteria in early-onset colorectal cancer, which is increasing worldwide for unknown reasons.”



Actor Chadwick Boseman passed away in 2020 after a four-year battle with colon cancer

Meanwhile, researchers in Asia reported that another common and usually harmless bacterium plays a major role in the cause of stomach cancer, *S. anginosus*, which is part of the normal flora of the mouth, nose, throat, intestines and vagina.

The bacteria can lead to abscesses, pneumonia, heart infections, UTIs and tissue infections.

In studies in mice, they found that when the body's immune system is weakened, the bacteria can spread to other parts of the body and cause an inflammatory response that can cause acute damage to the stomach lining, an infection called gastritis.

This can cause cancer to grow, in some cases doubling the size of the tumors. Another type of bacteria, *Helicobacter pylori*, is also known to cause stomach ulcers, increasing a person's risk of developing stomach cancer, the fifth most common type in the world.

Professor Joseph Sung Jao-yiu from the Chinese University of Hong Kong and co-author of the study said: "This lays an important foundation for further human studies that will help doctors better treat and prevent stomach cancer caused by bacteria."

Tumors get a lot of help from the bacteria that live in our mouth, throat and intestines. These bacteria are generally harmless, apart from causing occasional treatable illnesses.



As pictured above, having no energy, unintentional weight loss, constant digestive problems, difficulty swallowing, feeling sick, and a lump at the top of your stomach are all warning signs and symptoms of stomach cancer.

Rates of colorectal cancer (CRC) in young age groups have seen a historic 50 percent increase among adults under 50 in the U.S. since 1999 – considered "early-onset" cancer, or when cancer occurs between the ages of 18 and 49 year.

About 52,000 people die every year.

Studies suggest that the number of cases in the age group worldwide has increased by 80 percent in three decades, to 3.26 million cases per year in 2019, up from 1.82 million in 1990.

The *F. nucleatum* bacteria lurk in the mouth and make the cancer much more difficult to treat by acting as a protective sheath around tumor cells and shielding them from targeted drugs.

In their study published in the journal [Nature](#), The Hutch Center cancer researchers looked at the levels of the bacteria in color tumor tissues from 200 CRC patients.

Dr. Fred Hutch cancer researcher Susan Bullman said: “We have consistently seen that patients with colorectal tumors harboring *Fusobacterium nucleatum* have poor survival and a worse prognosis compared to patients without the microbe.

“Now we discover that a specific subtype of this microbe is responsible for tumor growth. It suggests that therapies and screening that target this subgroup within the microbiota could help people who are at higher risk for more aggressive colorectal cancer.”

Actor Chadwick Boseman, famous for his roles in the films *Black Panther* and *Get on Up*, died of CRC at the age of 43.

Stomach cancer kills about 11,000 Americans every year. Sixty-two percent of people with stomach cancer are diagnosed after the cancer has already spread, regionally or far, beyond the place where it started. This makes it incredibly difficult to treat.

Prof Sung, co-leader of the Asian study, said: “Our results suggest that long-term *S. anginosus* infection causes intensive chronic gastritis comparable to *H. pylori* infection.

“In fact, these two pathogens could work together to promote stomach inflammation and ultimately stomach cancer. This could change the way we approach prevention and treatment of the disease.” Their research was published in the journal [**Cell**](#).

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