



If you were to lay your digestive tract out in a straight line, it would form a tube spanning nearly ten meters. The last 1.5 meters of that are called the colon, or large intestine. Cells in this organ's lining constantly renew themselves, but the genes that moderate this process occasionally go awry, leading to the excessive growth of new cells. That results in small growths or abnormal clumps of cells called polyps. The majority of these polyps won't do any harm, but some can become cancerous when their cells begin to grow and divide rapidly, projecting further into the colon. At that point, they can transform into colon cancer, one of the most prevalent and preventable forms of cancer in the world. That's a slow process: though growth times vary, it often takes around ten years for a small polyp to grow and develop into a cancerous one. We don't know exactly what causes the majority of colon polyps and colon cancers. We do know in general that colon cancer involves the activation of what's called oncogenes in the polyp, and/or the loss of tumor-suppressor genes that

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usually keep cancer cells in check. Most cells have proto-oncogenes that help them grow. When a proto-oncogene mutates, or there are too many copies of it, it can become a permanently active oncogene with cells that grow out of control. While we don't yet know exactly what underlying factors cause these changes, experts suspect a combination of both environmental and inherited genetic factors. In the worst cases, when cells within polyps divide and spread unchecked, they eventually break through the lining of the colon. Lymph and blood vessels carry those cells all over the body, and they can go on to form tumors.

Despite these challenges, there's a solution. We've become extremely good at detecting and removing offending polyps before they can cause cancer. This happens through a process called screening, and when we do it regularly, we can prevent many cases of colon cancer. So, who's at risk? Most cases occur in people aged 50 years or older. This group is considered at average risk for colon cancer or colon polyps. There's also a higher risk group that includes people with personal or family histories of colon polyps or cancer, and those who suffer from inherited genetic syndromes, or inflammatory diseases, like Crohn's disease and ulcerative colitis. So the best age to initiate screening varies from person to person. If you have access to healthcare, it's best to consult a doctor to find out when you should begin. Screening can be done with various tests.

Colonoscopy involves a long, thin, flexible tube that's fitted with a video camera and light at the end and placed internally to examine the colon for polyps. If polyps are found, a doctor can do a polypectomy, a procedure that removes polyps from the colonic wall. Doctors can also then test the polyp for cancerous cells. Colonoscopy is the only test that can be used to both find and remove polyps. There are, however, other useful screening tests, including imaging and at-home tests that can allow patients to examine their stool for small amounts of blood. Occasionally, polyps are too large to be removed during a colonoscopy, in which case, the next step is surgery. If blood and

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imaging tests then reveal that cancerous cells have spread outside the colon, then a special treatment, like chemotherapy, may also be required to stop the cancer from escalating. We can also take on certain habits to reduce our likelihood of developing colon cancer in the first place. There's evidence that maintaining a healthy weight, not smoking, and being physically active can help. But most importantly, access to healthcare and regular screenings at crucial times in life are the best ways to prevent colon cancer.