

Men with high genetic chance of bowel cancer could have lower risk with healthy lifestyles

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Men with a high genetic risk of developing bowel cancer over the next 25 years could have a lower risk of developing the disease if they also have a healthy lifestyle, according to a Cancer Research UK-funded study published in the journal *Genetics in Medicine* today.

For example, men of 50 who have a high genetic risk of developing bowel cancer have a 29 per cent risk of developing the disease within the next 25 years. But by living healthily this risk could drop to as low as 13 per cent – if healthy lifestyles are equally beneficial across all the risk groups.

The study – by scientists at The Institute of Cancer Research, London – combined genetic and [lifestyle risk factors](#) to help find men at the highest risk of developing bowel cancer.

It used mathematical models that included 37 different factors that could put people at risk of cancer to calculate how likely it was for a man to be diagnosed with bowel cancer over the next 25 years.

These factors included inherited genetic faults that increase the risk of bowel cancer, as well [lifestyle factors](#) affecting risk such as consumption of alcohol, red meat, and fruit and vegetables, body mass index (BMI), smoking habits, physical activity, aspirin use and [inflammatory bowel disease](#).

The scientists estimate that 610 cases of bowel cancer could be

prevented over the next 25 years in the UK if 10,000 men in the highest risk category had the healthiest lifestyle. For men in the lowest risk group, 70 cases of bowel cancer could be prevented.

Professor Richard Houlston, professor of molecular and population genetics at The Institute of Cancer Research, London, said: "Bowel cancer is one of the biggest cancer killers and the number of cases is going up in the Western world. We have made big strides in our understanding of the genetic and lifestyle factors that can contribute to the development of bowel cancer, and that gives us an opportunity to begin assessing people for their future risk. If we can identify people who are at strongly increased risk, through both genetic and lifestyle factors, we can begin to give them targeted health messages, aimed at helping them make choices that could prevent the disease."

Jessica Kirby, Cancer Research UK's senior health information manager, said: "We know that maintaining a [healthy lifestyle](#) reduces the risk of [bowel cancer](#). More than half of bowel cancers could be prevented, largely through lifestyle changes such as being a non-smoker, keeping a healthy weight, drinking less alcohol, being physically active and eating a diet that is low in red and processed meat and high in fibre."

More information: Matthew Frampton et al. Modeling the prevention of colorectal cancer from the combined impact of host and behavioral risk factors, *Genetics in Medicine* (2016). [DOI: 10.1038/gim.2016.101](https://doi.org/10.1038/gim.2016.101)

Provided by Cancer Research UK

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