

Very overweight teens may double their risk of bowel cancer in middle age

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Juan Carreño de Miranda's "La monstrua desnuda" (The Nude Monster) painting.

Being very overweight in your teens may double the risk of developing bowel cancer by the time you are middle aged, suggests research published online in the journal *Gut*.

And a high level of an indicator of systemic [inflammation](#)—erythrocyte sedimentation rate, or ESR for short—at this age is also linked to heightened risk of the disease in later life, the study shows.

Adult obesity and inflammation have been associated with an increased risk of bowel cancer, which is the third most common form of cancer among men, worldwide. However, less is known about how obesity and systemic inflammation might be influential during late adolescence.

The researchers therefore tracked the health of almost 240,000 Swedish men, who had been conscripted into the military between the ages of 16 and 20 in 1969-76.

At enlistment, the men had a health check, which included weight and height, and ESR levels. The men were then monitored for bowel cancer up to 2010, using national cancer registry data.

At the time of conscription, nearly 12% of the men were underweight, while almost 81% were of normal weight. Some 5% were moderately overweight; 1.5% were very overweight; and 1% were obese.

During the monitoring period, which spanned an average of 35 years, 885 of the men developed bowel cancer, 384 of which were rectal cancers.

Compared with those whose weight was within the normal range when they enlisted (BMI 18.5-25 kg/m²), those who were very overweight, with a BMI ranging between 27.5 and nudging 30, were twice as likely to develop bowel cancer.

Obesity in young adulthood, classified as a BMI of more than 30, was associated with a 2.38 higher risk of developing bowel cancer.

Among [men](#) without known inflammatory bowel disease at the time of their conscription health check, those with a high ESR of 15+ mm/hour, had a 63% higher risk of developing bowel cancer than those with a low ESR of less than 10 mm/hour.

This is an observational study so no definitive conclusions can be drawn about cause and effect, but the researchers say that the findings suggest that both BMI and inflammation during adolescence may have a role in the development of bowel cancer.

Both factors were independent of each other, indicating that teen BMI may influence bowel cancer risk through mechanisms other than inflammation, as measured by ESR, they say.

Further studies are needed to better understand the role of life course inflammation and BMI in the development of [bowel cancer](#), conclude the researchers, who add that this may help inform preventive strategies.

More information: Adolescent body mass index and erythrocyte sedimentation rate in relation to colorectal cancer risk, *Gut*, DOI: [10.1136/gutjnl-2014-309007](https://doi.org/10.1136/gutjnl-2014-309007)

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