

# Calcium supplements may boost risk of abnormal bowel growths

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Calcium supplements, taken with or without vitamin D, may increase the risk of small growths in the large bowel (colon) called polyps, suggest results from a large US trial published online in the journal *Gut*.

The researchers say further studies are recommended to confirm these results - and any possible risks must be weighed against the benefits of supplementation. But given that [calcium supplements](#) are taken by millions of people around the world, the findings may have important implications for bowel cancer screening and prevention.

Polyps are small growths in the lower part of the large bowel. They are non-cancerous, but some could eventually turn into cancer if they are not removed.

Polyps come in different shapes and sizes, and this study specifically focused on the risk of serrated polyps, which are less common than conventional "adenomatous" polyps, but likely have the same risk of developing into cancer. Some studies have suggested that [calcium](#) and vitamin D may protect against [colon polyps](#), but results have been mixed.

So to investigate further, a team of US-based researchers set out to determine whether taking daily calcium and vitamin D supplements reduce the risk of serrated polyps.

They analysed findings from a large US trial involving over 2,000 patients aged between 45 and 75 who had a history of polyps and were

due to have a follow-up test (colonoscopy) in 3 to 5 years.

Patients were excluded if they had a family history of bowel cancer, [inflammatory bowel disease](#), or other serious health conditions - and several factors were taken into account at the start of the study, including sex, diet, weight (BMI), and use of anti-inflammatory drugs.

The remaining patients were randomly split into groups to receive either daily calcium supplements, daily vitamin D supplements, both or neither for 3 or 5 years (treatment phase) until their colonoscopy.

Effects 3 to 5 years after treatment ended (observational phase) were also recorded.

During the treatment phase, there was no effect of either calcium or vitamin D on cases of serrated polyps. However, during the later observational phase (6-10 years after treatment began), the researchers found increased risks of serrated polyps among patients taking calcium alone and among those taking a combination of calcium and vitamin D.

There was evidence that women and smokers were at higher risk when exposed to calcium supplements, but no association was found between vitamin D alone and the risk of serrated polyps. The results also suggest an association with calcium supplements only, not dietary calcium.

Strengths of the study include its randomised design and large sample size, say the authors. However, they point out that findings are derived from a secondary analysis of a trial and it is possible that some results from these analyses were due to chance.

Further studies are recommended to confirm these results, say the authors, but if calcium and its combination with vitamin D are truly associated with an increased risk of serrated polyps, "this has important

public health implications," they conclude.

In the meantime, they suggest that patients with a history of pre-cancerous serrated [polyps](#), especially women and smokers, may wish to avoid [vitamin D](#) and [calcium supplementation](#).

**More information:** Seth D Crockett et al. Calcium and vitamin D supplementation and increased risk of serrated polyps: results from a randomised clinical trial, *Gut* (2018). [DOI: 10.1136/gutjnl-2017-315242](https://doi.org/10.1136/gutjnl-2017-315242)

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