Colon cancer growth reduced by exercise

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Exercise may play a role in reducing the growth of colon cancer cells according to new research published in *The Journal of Physiology*. The study found that after a short session of high intensity interval training (HIIT), growth of colon cancer cells was reduced, and this also increased indicators of inflammation.

For a long time, the focus on exercise has been on the positive changes in the body that occur following a longer period of training. However, these findings suggest that the effects following a single session of HIIT, an exercise regime involving short, high energy bursts are also important.

The changes following HIIT suggest that repeated exposure to the acute effects of exercise may contribute to the fight against the cancer. These results reinforce the importance of doing regular exercise and maintaining a physically active lifestyle.

The study conducted by The University of Queensland in conjunction with the University of Waterloo, Ontario, involved colorectal cancer survivors completing either a single session of HIIT or 12 sessions over 4 weeks. Their blood samples were collected either immediately after the single session of exercise or at rest after 4 weeks of training, and were then analysed to study the growth of colon cancer cells.

Importantly the method used to model the colon cancer cells in the laboratory is very different to how they grow in the human body, requiring future research to translate these findings into human tumours.

James Devin, lead author on the research said:

"We have shown that exercise may play a role in inhibiting the growth of colon cancer cells. After an acute bout of HIIT there were specific increases in inflammation immediately after exercise, which are hypothesised to be involved in reducing the number of cancer cells.

This suggests that a physically active lifestyle may be important in tackling human colorectal tumours. We would now like to look at how these changes in growth occur and understand the mechanisms by which biomarkers in the blood can impact cell growth."

More information: James L. Devin et al, Acute high intensity interval exercise reduces colon cancer cell growth, *The Journal of Physiology* (2019). DOI: 10.1113/JP277648

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