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Nurturing healthy habits Regular gardening can reduce cancer risk

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REGULAR but short periods of exercise – such as gardening or cleaning – reduce the risk of bowel cancer, scientists say.



Scientists found even brief bouts of physical activity released an important protein that could help battle the disease.

Just a moderate amount of exercise is enough to stave off the lifethreatening illness, and the findings could help scientists develop lifesaving treatments for it in future, researchers say.

However, people must exercise several times a week for a sustained period to feel the full benefits, the experts added.

As part of a new study, researchers discovered exercise caused interleukin-6 to be released into the bloodstream, where it repaired the DNA of damaged cells.

Experts had known that exercise cuts people's risk from bowel cancer by around a fifth, but the reasons for this were not well understood.

They found that whenever people exercised regularly over a sustained period, the protein was released into the bloodstream and repaired the DNA of abnormal cells, reducing the opportunities for damaged cells to become cancerous.

For the study, a team from Newcastle and York St John universities recruited 16 men aged 50 to 80, all of whom had risk factors for bowel cancer, such as being overweight or not physically active.

They provided an initial blood sample and then rode indoor bikes at a moderate intensity for half an hour. A second blood sample was taken immediately after they got off.

On another day, two more blood samples were taken before and after the participants rested. The tests showed there was an increase in IL-6 (interleukin-6) released during exercise.

Scientists then added the blood samples to bowel cancer cells in a lab and monitored cell growth for 48 hours. Blood samples collected straight after exercise were found to have slowed the growth of cells associated with bowel cancer when they were compared with the samples from resting participants.

The samples from exercising participants reduced DNA damage from cancer cells, suggesting exercise can even return the cells to their original, healthy state.

Bowel cancer is the fourth most common cancer diagnosed in the UK – with around 120 Brits being diagnosed with it every day and around 42,900 people getting it every year.

Exercise is known to reduce the risk from the disease by around 20 per cent.

Gardening and cleaning can reduce the risk of getting a devastating diagnosis as well as going to the gym, playing sports or just walking or cycling to work.

The researchers now plan to find out exactly how exercise combats cancer and what kind of exercise is most effective at protecting people from the illness.

Dr Sam Orange, an author of the study, said: "Our findings are really exciting because they reveal a newly identified mechanism underlying how physical activity reduces bowel cancer risk that is not dependent on weight

loss.

“Understanding these mechanisms better could help develop more precise exercise guidelines for cancer prevention.

“It could also help develop drug treatments that mimic some of the health benefits of exercise.

“Physical activity of any type, and any duration, can improve health and reduce bowel cancer risk but more is always better. People who are sedentary should begin by moving more and look to build physical activity into their daily routines.”

Dr Adam Odell, another study author, added: “Importantly, it is not just bowel cancer risk that can be reduced by leading a more active lifestyle.

“Clear links exist between higher exercise levels and a lower risk of developing other cancers, such as cancers of the breast and endometrium.

“By working out a mechanism through which regular physical activity is able to produce anti-cancer effects, our study provides further support for current national and global efforts to increase exercise participation.”

The findings were published in the