

Bowel cancer and physical activity

Supplementary file Two

Detailed information about bowel cancer

Bowel cancer is the second most common cause of cancer-related mortality accounting for 10% of all deaths from this disease (Cancer Research UK, 2016e). Whilst 5-year survival rates are good for people diagnosed at an early stage of cancer (stage one), only 15% of people are typically diagnosed at this time (Cancer Research UK, 2016d). Approximately 20-25% of people are diagnosed at each of the remaining three stages, with 5-year survival decreasing markedly with increasing stage such that diagnosis at stage four has a five year survival rate of 7% for men and 8% for women (Cancer Research UK, 2016d). Symptoms of bowel cancer include a change in normal bowel habits, bleeding from the rectum or blood in stools, and pain in abdomen or back passage (Cancer Research UK, 2016a). The main treatments for bowel cancer are surgery, radiotherapy and chemotherapy. Long-term effects of treatment include needing to have a colostomy or illeostomy bag, stools that are softer, looser or liquid, constipation, bloating, wind, and faecal and urinary incontinence.

There are a number of factors which can increase the likelihood of bowel cancer. These include a strong family history of bowel cancer, having ulcerative colitis or crohn's disease, and having conditions which affect the production of insulin or growth hormones such as diabetes (Cancer Research UK, 2016c). Incidence is also higher amongst males and increases with age; lifetime risk of bowel cancer is approximately 1 in 14 in males and 1 in 19 for females, with the majority of diagnoses in patients ≥ 65 years (Cancer Research UK, 2016e). Those who are overweight or obese are also at increased risk. There is also evidence of lifestyle factors including smoking, drinking alcohol, eating red and processed meat, and insufficient PA

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(Cancer Research UK, 2016b). Evidence suggests that there is a direct link between PA and bowel cancer, irrespective of obesity. Mechanisms of action include, a reduction in circulating hormones and growth factors that stimulate growth of epithelial cells of the colon (such as insulin and insulin-like growth factors IGF-1), a reduction in inflammatory markers, improved immunity and an increase in gut motility (reducing exposure of the colonic epithelium to carcinogens in food and gastric bile) (Wolin, Yan, Colditz, & Lee, 2009).

References

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