

# Smoking associated with increased risk for colorectal cancer and death

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An analysis of previous studies indicates that smoking is significantly associated with an increased risk for colorectal cancer and death, according to an article in the December 17 issue of JAMA.

Although tobacco was responsible for approximately 5.4 million deaths in 2005, there are still an estimated 1.3 billion smokers in the world. While a number of cancers are attributable to smoking, the link between cigarette smoking and colorectal cancer (CRC) has been inconsistent among studies. "Because smoking can potentially be controlled by individual and population-related measures, detecting a link between CRC and smoking could help reduce the burden of the world's third most common tumor, which currently causes more than 500,000 annual deaths worldwide. In the United States alone, an estimate of approximately 50,000 deaths from CRC would have occurred in 2008," the authors write.

Edoardo Botteri, M.Sc., of the European Institute of Oncology, Milan, Italy, and colleagues conducted a meta-analysis to review and summarize published data examining the link between smoking and CRC incidence and death.

The researchers identified 106 observational studies, and the meta-analysis was based on a total of nearly 40,000 new cases of CRC. For the analysis on incidence, smoking was associated with an 18 percent increased risk of CRC. The researchers also found a statistically significant dose-relationship with an increasing number of pack-years

(number of packs of cigarettes smoked/day, multiplied by years of consumption) and cigarettes per day. However, the association was statistically significant only after 30 years of smoking.

Seventeen studies were included in the analysis of mortality, which indicated that smokers have a 25 percent increased risk of dying from CRC than people who have never smoked. There also was an increase in risk of CRC death with increasing number of cigarettes per day smoked and for longer duration of smoking. For both incidence and death, the association was stronger for cancer of the rectum than of the colon.

"Smoking has not been considered so far in the stratification of individuals for CRC screening. However, several studies reported that CRC occurs earlier in smokers, particularly in those with heavy tobacco consumption, and our previous and present findings provide strong evidence of the detrimental effect of cigarette smoking on the development of adenomatous [benign tumor] polyps and CRC. We believe that smoking represents an important factor to consider when deciding on the age at which CRC screening should begin, either by lowering the age in smokers or increasing the age in non-smokers," the authors write.

Source: JAMA and Archives Journals

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