Smoking cessation

Increase in smoking cessation rates associated with rise in e-cigarette use

A noticeable increase in the use of e-cigarettes was accompanied by a significant increase in quit rates at population level, a study from the USA has found.

The researchers analysed data from the US Current Population Survey-Tobacco Use Supplement surveys for the periods 2001-02, 2003, 2006-07, 2010-11, and 2014-15. These surveys covered large and representative population samples and provided information on self-reported smoking prevalence, quit attempts and successful quit attempts, together with data on the use of e-cigarettes. All data were controlled for age, gender, ethnic origin and state of residence.

Of the 161,054 respondents to the 2014-15 survey, 104,788 had never smoked, 22,548 were current smokers and 2,136 were recent quitters (i.e. had given up in the past year). In the 2014-15 survey 8.5% of adults had ever used e-cigarettes and 2.4% were currently using them. Men were more likely to use e-cigarettes than women, and younger people more likely than older people. Only 2% of those who had never smoked had used e-cigarettes while 38.2% of current smokers and 49.3% of recent quitters had used them.

Quit rates were compared between the five surveys studied. Using the 2001-02 survey as a baseline both the 2010-11 and 2014-15 surveys showed significantly higher quit attempt rates ($P < 0.05$ and $P < 0.001$), with a large jump in quit attempt rates in 2014-15.

The annual cessation rate figures followed a similar pattern of increase, although the increase was only statistically significant comparing the rate for 2014-15 with that for 2010-11: 5.6% vs 4.5%.

Taking data from the 2014-15 survey, e-cigarette users had a higher cessation rate than those who had not used e-cigarettes in the preceding year; 8.2% vs 4.8%, respectively, $P < 0.001$.

This study has demonstrated two important findings. First, in 2014-15 e-cigarette users in the United States attempted and succeeded in quitting at higher rates than non-users. Second, the overall population smoking cessation rates had increased in 2014-15 compared with 2010-11, the same period that saw e-cigarettes come into popular usage.

The study authors, from the University of California, conclude: 'This study based on the largest representative sample of e-cigarette users to date, provides a strong case that e-cigarette use was associated with an increase in smoking cessation at the population level.'

DR JEZ THOMPSON

Zhu S-H, Zhuang Y-L, Wong S et al. E-cigarette use and associated changes in population smoking cessation: evidence from US current population surveys. *BMJ* 2017;358:j3262

Paediatrics

Children with inflammatory bowel disease at increased risk of cancer

A diagnosis of inflammatory bowel disease (IBD) in childhood more than doubles the relative risk of developing cancer but the absolute risk remains low, according to the findings of a



Swedish nationwide cohort study.

Using several of Sweden's comprehensive national registers 9,405 children with IBD were identified during the study period from 1964 to 2014. Of these 4,648 (49%) had ulcerative colitis, 3,768 Crohn's disease, and the remaining 989 had unclassified colitis.

For every IBD case, up to ten reference individuals without IBD matched for gender, age and place of residence were randomly selected.

The median age at first diagnosis of IBD was 15 years, and the median age at end of follow-up was 27.

There were 497 first diagnoses of cancer in the IBD patients during 148,682 person-years of follow-up (3.3 per 1,000 person-years).
In the reference group, the equivalent figures were 2,256 cancers in 1,486,983 person-years of follow-up (1.5 per 1,000 person-years).
This equated to one extra cancer per 556 IBD patients followed for a year compared with the reference subjects.

Those with childhood IBD had more than double the relative risk (RR) of cancer; RR 2.2 (95% CI: 2.0-2.5). The risk was higher in ulcerative colitis than Crohn's disease RR 2.6 (95% CI: 2.3-3.0) vs RR 1.7 (95% CI: 1.5-2.1).

The risk of developing cancer was higher in those who had primary sclerosing cholangitis RR 6.6 (95% CI: 4.9-8.7), and among those with long-standing colitis (≥ 10 years) RR 3.9 (95% CI: 2.9-5.0), and those having a first-degree relative with cancer onset before the age of 50, RR 4.4 (95% CI: 3.2-5.8) than in those who did not.

The highest risks were for gastrointestinal cancers: colorectal cancer RR 19.5 (95% CI: 14.7-26.2); small intestine cancer RR 12.8 (95% CI: 3.4-51.8) and liver cancer RR 134 (95% CI: 59.6-382) compared with the reference groups. However, the absolute numbers were low.
As the authors point out, relative risks for gastrointestinal cancers were high, but absolute risks were low.

Overall the relative risk of gastrointestinal cancer in the IBD cohort compared with the reference group was 18.0 (95% CI: 14.4-22.7).

Neither a history of extra-intestinal manifestations of IBD nor having surgery was significantly associated with developing cancer. The study was underpowered with regard to drug exposures.

The study authors state: 'We cannot rule out that thiopurines or TNF inhibitors increase the risk of cancer, as our study was not big enough to recognise whether drugs are a major risk factor for cancer development in children and young adults. Instead, we suggest that extent and duration of chronic inflammation might be the main driving mechanisms underlying the increased risk of cancer.'

DR CHRIS BARCLAY

Olén O, Askling J, Sachs MC et al. Childhood onset inflammatory bowel disease and risk of cancer: a Swedish nationwide cohort study 1964-2014. *BMJ* 2017;358:j3951

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