Age at commencing smoking and risk of death in adulthood

P1-C4

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Starting smoking during childhood or adolescence is associated with disproportionately worse health outcomes later in life. People who commence smoking at **younger** ages are more likely to be **heavier smokers**, **less likely to quit**, and have **higher risk of death**.

BACKGROUND

- Tobacco smoking is the leading cause of preventable illness and death worldwide.
- Smoking might be particularly detrimental during pre-adulthood stages of growth and development.
- We investigated associations between age at commencing smoking and all-cause and cause-specific mortality among current and former smokers in a large multi-country prospective cohort study.

METHODS

- 162,817 ever smokers in the European Prospective Investigation into Cancer and Nutrition (EPIC) study were analysed.
- Participants were recruited between 1992-2000 in nine countries: Denmark, France, Germany, Italy, Norway, Spain, Sweden, the Netherlands, and United Kingdom.
- Cox regression models with age as the timescale, stratified by country, sex, and birth cohort, and adjusted for education level estimated hazard ratios (HRs) and 95% confidence intervals (CIs) for all-cause, cancer, cardiovascular disease, and respiratory disease mortality in relation to age at commencing smoking modelled using restricted cubic splines.

RESULTS

- 60% of participants were women; median age at recruitment was 51 years; median age at commencing smoking was 18 years.

Figure 1. Age at commencing smoking and average number of cigarettes smoked per day among current smokers in EPIC

- Smokers who started smoking at younger ages were more likely to smoke a greater number of cigarettes per day.

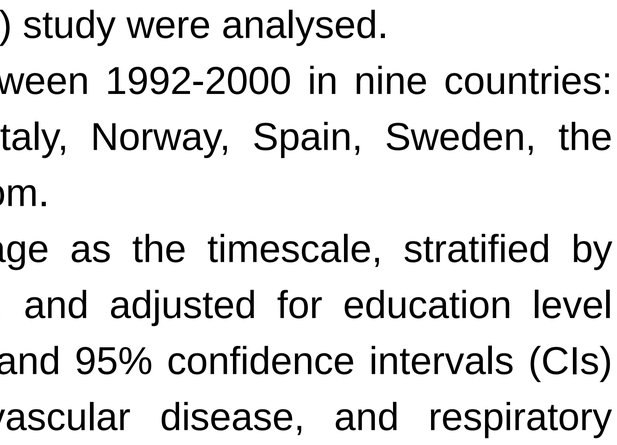
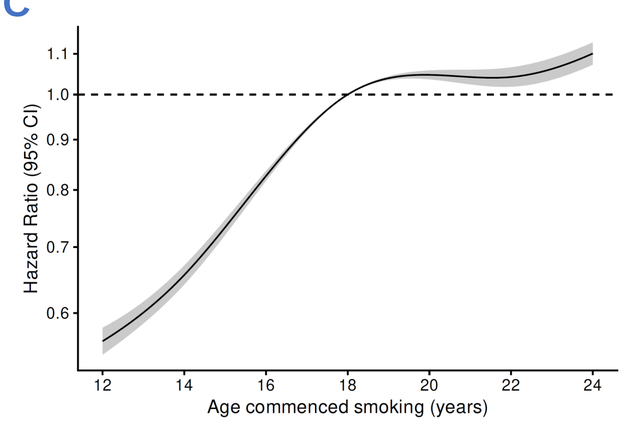


Figure 2. HRs and 95% CIs of quitting smoking in relation to age at commencing smoking in EPIC

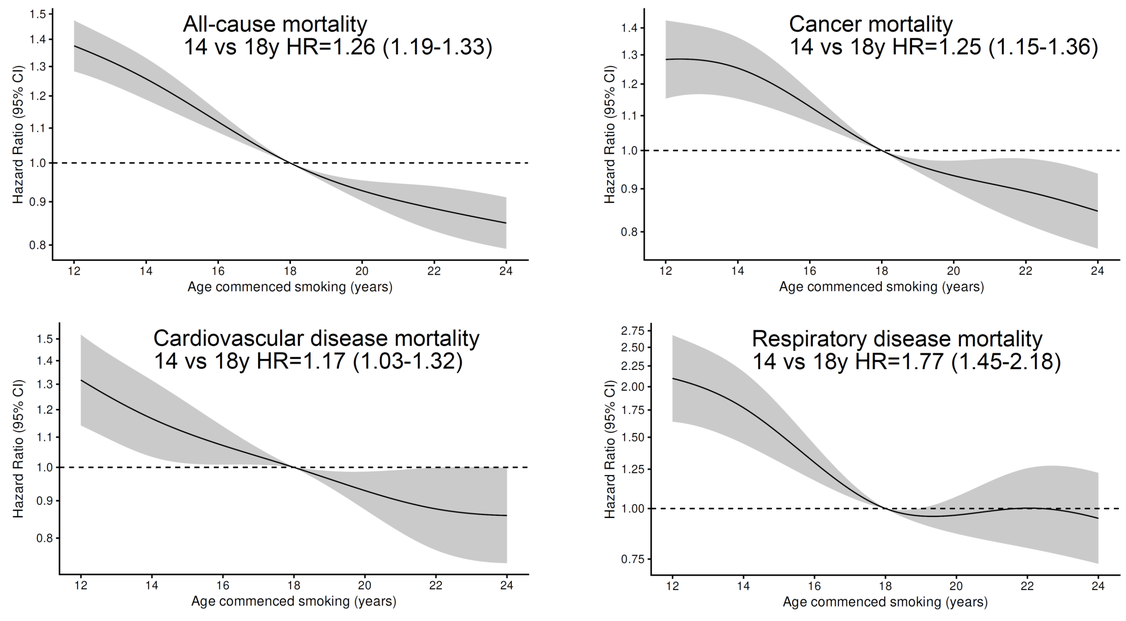
- Smokers who started smoking at younger ages were less likely to quit smoking.



RESULTS

- During 16.5 years follow-up, 20,579 participants died, including 9,074 from cancer, 4,662 from cardiovascular disease, 1,333 from respiratory diseases.

Figure 3. HRs and 95% CIs for mortality in current smokers in relation to age at commencing smoking in the EPIC study



- Commencing smoking at age 21 versus 18 years was associated with lower overall mortality: **HR=0.90 (95% CI 0.86-0.95)**.

CONCLUSIONS

This study highlights the harmful effects of starting to smoke during childhood or adolescence.

- People who commenced smoking at a younger age were more likely to be heavier smokers and less likely to quit smoking.
- Younger age at commencing smoking was associated with higher all-cause, cancer, cardiovascular disease, and respiratory disease mortality.
- Delaying age at commencing smoking was beneficial.

These findings reinforce the importance of public health measures aimed at curbing access to tobacco products and discouraging smoking uptake among youths. This study provides strong support for policies to phase out or raise the age for sale of tobacco products.

ADDITIONAL INFORMATION

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Where authors are identified as personnel of the International Agency for Research on Cancer / World Health Organization, the authors alone are responsible for the views expressed in this article and they do not necessarily represent the decisions, policy or views of the International Agency for Research on Cancer / World Health Organization.

For information on how to submit an application for gaining access to EPIC data and/or biospecimens, please follow the instructions at http://epic.iarc.fr/access/index.php

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