

Appendix 2: Supplementary information on potential confounders [posted as supplied by author]

Section 1. Categorising alcohol use

One drink was defined as approximately equivalent to one unit or one glass of alcoholic drink or 10g of ethanol. Participants were categorised according to their alcohol intake as follows: non-drinkers, moderate drinkers (women: 1-14 drinks/week, men: 1-21 drinks/week), intermediate drinkers (women: 15-20 drinks/week, men: 22-27 drinks/week) and heavy drinkers (women: ≥ 21 drinks/wk, men: ≥ 28 drinks/week). The lower limit for intermediate drinking is based on public health guidelines in many countries¹⁻⁴, whereas the lower limit for heavy drinking is based on estimated thresholds between the beneficial health effects of alcohol and an increased risk of type-2 diabetes, liver cirrhosis and death⁵⁻⁸.

Section 2. Identifying potential confounders and mediators

All our analyses were adjusted for age, sex, socioeconomic position, body mass index (BMI), tobacco smoking and alcohol intake. These potential confounders were selected based on a priori knowledge of their associations with job strain and cancer.

Work stress, operationalised as job strain, has been shown to be associated with obesity, tobacco smoking, alcohol intake⁹⁻¹¹ and vary by age, sex and socioeconomic position¹²⁻¹⁷. The risk of cancer in general as well as colorectal, lung, breast and prostate cancers in particular increases with increasing age¹⁸. The overall cancer risk and the risk of the main cancer types in our analyses is associated with socioeconomic position¹⁹⁻²¹, BMI²², smoking²³⁻²⁵ and alcohol intake²⁶⁻²⁹. Some cancers, such as colorectal cancer, are more common in men than women¹⁸ and some cancers, such as breast or prostate cancers, only occur in either sex. We adjusted our lung cancer analyses for sex and alcohol intake, though there is some evidence from two recent meta-analysis that though sex and alcohol intake have been observed to be associated with lung cancer risk, the first association may be an artefact of the strong association between alcohol intake and smoking,²⁶ and the second related to other lung cancer risk factors differing in men and women³⁰.

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