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## Use of mobile phones and risk of brain tumours: update of Danish cohort study.

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### Abstract

**OBJECTIVE:** To investigate the risk of tumours in the central nervous system among Danish mobile phone subscribers.

**DESIGN:** Nationwide cohort study.

**SETTING:** Denmark.

**PARTICIPANTS:** All Danes aged  $\geq 30$  and born in Denmark after 1925, subdivided into subscribers and non-subscribers of mobile phones before 1995.

**MAIN OUTCOME MEASURES:** Risk of tumours of the central nervous system, identified from the complete Danish Cancer Register. Sex specific incidence rate ratios estimated with log linear Poisson regression models adjusted for age, calendar period, education, and disposable income.

**RESULTS:** 358 403 subscription holders accrued 3.8 million person years. In the follow-up period 1990-2007, there were 10 729 cases of tumours of the central nervous system. The risk of such tumours was close to unity for both men and women. When restricted to individuals with the longest mobile phone use-that is,  $\geq 13$  years of subscription-the incidence rate ratio was 1.03 (95% confidence interval 0.83 to 1.27) in men and 0.91 (0.41 to 2.04) in women. Among those with subscriptions of  $\geq 10$  years, ratios were 1.04 (0.85 to 1.26) in men and 1.04 (0.56 to 1.95) in women for glioma and 0.90 (0.57 to 1.42) in men and 0.93 (0.46 to 1.87) in women for meningioma. There was no indication of dose-response relation either by years since first subscription for a mobile phone or by anatomical location of the tumour-that is, in regions of the brain closest to where the handset is usually held to the head.

**CONCLUSIONS:** In this update of a large nationwide cohort study of mobile phone use, there were no increased risks of tumours of the central nervous system, providing little evidence for a causal association.

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The image shows a thumbnail of the article's content. On the left is a table of contents with sections like 'Introduction', 'Methods', 'Results', and 'Conclusions'. On the right is a line graph titled 'Tumour Incidence' showing a slight upward trend over time from 1990 to 2007. The y-axis is labeled 'Age Group' and the x-axis is labeled 'Year'.

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