Institute of Environmental Medicine (IMM)
at the Karolinska institutet, Stockholm

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MOBILE PHONE USE AND ACOUSTIC NEUROMA

A study from the Institute of Environmental Medicine (IMM) at Karolinska Institutet, Sweden, found that 10 or more years of mobile phone use increase the risk of acoustic neuroma and that the risk increase was confined to the side of the head where the phone was usually held. No indications of an increased risk for less than 10 years of mobile phone use were found.

Press Release

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At the time when the study was conducted only analogue (NMT) mobile phones had been in use for more than 10 years, and therefore we cannot determine if the results are confined to use of analogue phones, or if the results would be similar also after long term use of digital (GSM) phones.

In close collaboration with the clinics where these patients are treated all new patients with acoustic neuroma were identified during a three year period in certain parts of Sweden. Persons without the disease were randomly selected from the population registry (controls). A nurse contacted all patients and controls and asked them if they wanted to participate in the study. All who agreed participated in a personal interview where detailed questions were asked about their mobile phone use and other issues of importance for the study.

A total of about 150 acoustic neuroma patients and 600 healthy controls participated in the study. The risk of acoustic neuroma was almost doubled for persons who started to use their mobile phone at least 10 years prior to diagnosis. When the side of the head on which the phone was usually held was taken into consideration, we found that the risk of acoustic neuroma was almost four times higher on the same side as the phone was held, and virtually normal on the other side.

Acoustic neuroma is a benign tumour on the auditory nerve that usually grows slowly over a period of years before it is diagnosed. It occurs in less than one adult per 100,000 per year.

This is the first report from the Swedish part of the so called INTERPHONE study, an international collaboration coordinated by WHO's cancer research institute, IARC (International Agency for Research on Cancer). The Swedish results need to be confirmed in additional studies before firm conclusions can be drawn. Other centers within the INTERPHONE study where a sufficient number of long term mobile phone users can be included – primarily the Nordic – will contribute valuable data. This Swedish study, and eventually other INTERPHONE reports, will be reviewed by the scientific community

and a coherent evaluation will gradually emerge. It can also be expected that these results will stimulate experimental research which will also contribute information of importance for the interpretation of the findings.

The study was funded by the European Union Fifth Framework Program, "Quality of Life and Management of living Resources" (contract QLK4-CT-1999-01563), the Swedish Research Council, and the International Union against Cancer (UICC). The UICC received funds for this purpose from the Mobile Manufacturers' Forum and GSM Association. Provision of funds to the INTERPHONE study investigators via the UICC was governed by agreements that guaranteed INTERPHONE's complete scientific independence. These agreements are publicly available at http://www.iarc.fr/pageroot/UNITS/RCA4.html

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