

# MORE STUDIES ON HEALTH RISKS FROM ELECTRO-MAGNETIC FIELDS

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The European Commission is inviting all interested parties, including industry and the general public, to send in their comments on a report that was prepared by the Scientific Committee on Emerging and Newly Identified Health Risks regarding electro-magnetic fields.

Although invisible to the human eye, we are constantly exposed to electro-magnetic fields of all sorts. One can switch on a radio set and receive broadcast transmission or send radio messages thanks to the ever-present radio waves. Lately we have seen tens of transmitter masts all over the country to enhance reception and transmission in mobile telephony. Electrical appliances also produce electro-magnetic fields around them.

It must be made very clear from the outset that to date there is no scientific evidence that electro-magnetic rays are a risk to human health except for a link between childhood leukaemia and exposure to very low frequency fields. Extremely low frequency fields are present in household appliances and domestic installations, power and high voltage transmission lines, electric engines in cars, welding applications, and installations in the power electric industry. In view of this, the European Union adopted a directive in 2004 on minimum health and safety conditions for workers exposed to electro-magnetic rays whereby pregnant female workers, for instance, have the right to have their work changed if during their normal working duties they are constantly exposed to electromagnetic rays from computers, machinery or photocopiers.

Recently there was also a debate on whether mobile telephony transmitter masts used as radio-telephone base stations are a health hazard. To date there is no evidence that exposure to these waves pose a health risk.

Indeed, various studies have been carried out on the possible risks to human health from exposure to electro-magnetic rays. Recently, the Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR) was asked to update and draw the European Commission's attention to any significant findings in

view of newly available information.

In its analysis, the Committee made a number of interesting conclusions. The Committee found that the use of mobile phones for less than 10 years does not pose any increase risk of brain tumour or acoustic neuroma. This acoustic neuroma is a benign tumour that develops in the vestibular nerve of the ear which is responsible for balance. Usually this kind of tumour grows very slowly and does not spread from its original site within the brain.

However, the Committee also found that there are indications that in the case of long-term use of mobile phones there exists an association with acoustic neuroma.

According to the findings of the Committee, children or adolescents may be more sensitive to radio frequency field exposure than adults. However, there is no specific evidence so far that proves this sensitivity.

Studies carried out on animals have not yet shown that radio frequency fields may cause cancer or enhance carcinogens or in any way accelerate the development of transplanted tumours. More studies need to be carried out on this issue as adequate data is still lacking.

The Scientific Committee found that childhood leukaemia may be linked to exposure to extremely low frequency fields, but so far there is no known mechanism to explain such relation between the two. Less than one per cent of childhood leukaemia in European countries may be attributed to extremely low frequency fields. Extremely low frequency fields are present in household appliances and domestic installations and power and high voltage transmission lines, among others.

The Committee found that according to recent research there is no link of extremely low frequency to breast cancer and cardiovascular disease. The link to neurodegenerative diseases and brain tumours remains uncertain.

The Committee is thus recommending proper evaluation and assessment of possible health effects from long-term exposure to intermediate frequency fields, in view of increasing human exposure to such fields.

With regard to radio frequency fields (found in mobile telephony, broadcasting transmitters, microwave ovens, radars, medical and industrial applications) the Scientific Committee found that no health effect has been consistently demonstrated at exposure levels below the limits previously established. However, it considers the database for this evaluation as seriously limited for long-term low-level exposure.

As part of its preparation to publish a report on the issue, the European Commission is inviting interested stakeholders to send comments on the Scientific Committee opinion by November 3, 2006. Further information can be found at [ec.europa.eu/health/ph\\_risk/committees/04\\_scenihr/\\_cons\\_03\\_en.htm](http://ec.europa.eu/health/ph_risk/committees/04_scenihr/_cons_03_en.htm) ©