

UK plans to lower EMF limits

By Alex Kirby
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The exposure of people in the UK to electromagnetic fields (EMFs) should be cut significantly, the government's radiation advisers say.

The National Radiological Protection Board (NRPB) says the UK should adopt international exposure standards.

EMFs are given off by many industrial and domestic electric installations and appliances, including mobile telephones and wiring circuits.

Some experts say deeper cuts are necessary to protect people's health. EMFs are measured in units called microTeslas.

The NRPB has recommended for many years that nobody should be exposed to a level higher than 1,600 microTeslas.

But in a consultation document on restricting people's exposure, it now recommends the UK should adopt the guidelines of the International Committee on Non-Ionizing Radiation Protection (Icnirp).

The commission's recommended level is far lower, at 100 microTeslas.

Health impact

The NRPB paper reviews recent research on possible health effects.

It includes reviews of EMFs and possible health effects by Icnirp, the World Health Organisation, and the UK's Independent Expert Group on Mobile Phones.

The NRPB says: "All scientific investigations are subject to uncertainties, including the interpretation of studies on the possible adverse health effects of exposure to EMFs.

"The results from well designed and conducted studies have uncertainties that can be quantified statistically, but may not always be explicable.

"Hence a cautious approach is used in making proposals for quantitative restrictions on EMF exposures."

But some experts believe the traditionally cautious NRPB should have seized the chance to be much bolder.

Denis Henshaw, professor of physics at the University of Bristol, told BBC News Online: "The adoption by the NRPB of a precautionary approach to EMF exposures is to be welcomed.

"In the case of new installations (power lines, sub-stations, etc.) this needs to result in public exposures well below 0.4 microTeslas, the level at which a doubling of the risk of childhood leukaemia has been seen.

"This should also protect against increased risk of adult brain cancer, miscarriage and a number of other adverse health outcomes.

"In the case of existing installations the adoption of the Icnirp exposure limit of 100 microTeslas still leaves people living near high-voltage power lines potentially exposed to magnetic field levels of several or even tens of microTeslas, well above the levels where adverse health effects have been reported.

"Future consideration will need to be given to reducing exposures with respect to existing installations."

Leukaemia risk

Two years ago an NRPB investigation found "a weak association" between EMFs and an increased risk of childhood leukaemia.

It said the extra danger was slight, but recommended further research.

The investigation included a study of 3,000 children which suggested electricity pylons could double the childhood leukaemia risk.

But the NRPB said the evidence applied not just to power lines, but to the effects of electrical power inside houses.

In 2000, a US study concluded people might be likelier to commit suicide if they were regularly exposed to low-frequency electromagnetic fields.

The UK Electricity Association said it fully supported the NRPB approach.

Dr John Swanson, its scientific adviser, said: "The new proposals do not change what the science says, but are more about looking at what could be the pros and cons of changing the safety margins from those we use now.

"This does not mean that the old guidelines were fundamentally flawed. It is simply asking the question, should we have even greater safety margins than we already have."

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