The latest WHO recommendations agree with epidemiological studies in many countries that suggest a child exposed to electromagnetic waves of 0.3 mT or more over a long period of time has a higher risk of developing leukemia.

Tuning into radio waves issue / WHO guidelines urge govts to take steps to monitor EMF levels

Masaki Takakura / Yomiuri Shimbun Staff Writer

The World Health Organization earlier this month recommended governments to take measures to study healthy levels of exposure to electromagnetic fields (EMF). The WHO's electromagnetic fields Environmental Health Criteria, released June 18, 2007 focus on exposure to electromagnetic waves that is suspected of being linked to leukemia in children.

Radio waves radiate from sources such as electrical appliances and power cables.

The WHO recommendations should be a starting point for a discussion of the possible health risks of electromagnetic radiation.

Based on EMF studies over 11 years, the WHO came up with 10 recommendations, including:
-- The establishment of guidelines regarding maximum permissible EMF levels.
-- Encouraging electric power companies to consult residents and local governments in areas where power cables are erected.
-- Promoting EMF-related studies.

In particular, the recommendations also ask governments and electric power companies to work toward increasing public awareness of electromagnetic wave-related health risks.

By establishing open forums to discuss electromagnetic waves, the views of local residents as well as other interested parties should be reflected when formulating policies involving radio wave radiation, the WHO noted.

The world body said the proposed sharing of information will help citizens act independently to avert any radiation risks from EMF.

The British government in 2004 established an advisory council on electromagnetic wave risks that now comprises more than 40 organizations, including the Health Department, electric power firms, societies for childhood leukemia patients and their parents, and residents' bodies opposed to the construction of high-voltage power lines.

Japan does not have a government-sponsored consultative body yet.

Another characteristic of the WHO recommendations this time is that it advises governments of the world to adopt regulatory steps to comply with WHO-set international guidelines on human exposure to electromagnetic waves. For example, 100 mT (microtesla) or less per hour when their frequency is 50 hertz. A microtesla is a unit to gauge radio wave strength.

Electromagnetic waves below power cables are no more than 20 mT.

It is known that properties of electromagnetic waves, which have properties of both electricity and magnetism, work differently depending on their wavelengths. These waves include sunlight and X-rays.

Ultralow-frequency radio wave emissions from electrical appliances are, for example, 2.5 to 53 mT from hair driers and 0.1 to 2 mT from a TV, according to the WHO.

High-frequency waves generated by appliances such as cell phones are not mentioned in the WHO recommendations this time.

Electric power companies and the government have failed to draw up any quantitative exposure limits regarding radio waves as they claim there is no reliable proof that electromagnetic waves can have an adverse affect on health.

Recently, the Economy, Trade and Industry Ministry formed a panel of experts on electromagnetic wave issues in its Natural Resources and Energy Study Council. The panel is scheduled to study the advisability of introducing regulatory measures in accordance with WHO recommendations.

There will be no need to make any major changes to the existing electric power

facilities, even if the government takes some form of radio wave regulation, officials of the ministry's Electric Power Safety Division said.

The latest WHO recommendations agree with epidemiological studies in many countries that suggest a child exposed to electromagnetic waves of 0.3 mT or more over a long period of time has a higher risk of developing leukemia.

The WHO, however, adds that the connection has not been established by experimenting on animals.

Less than 4 percent of the world's children live in environments with 0.3 mT or stronger electromagnetic waves.

The WHO recommendations fall short of calling for any stringent limits on electromagnetic wave radiation in the near future.

So how should Japan respond to the WHO recommendations?

Tetsuo Kakehi, representative of Gauss Network, a civic group addressing issues relating to electromagnetic waves, has admitted: "People who are anxious about the possible health hazards of electromagnetic waves tend to only collect research that points out the health risks."

As electromagnetic waves are invisible, there is an unfortunate trend toward underestimating the possible health hazards of radio waves.

Meiji Pharmaceutical University Prof. Chiyoji Okubo, a former research fellow of the WHO, said, "The public should be able to judge the health risks of electromagnetic waves."

Electric power companies and electrical appliance manufacturers should provide consumers with as much relevant data as possible.

It is hoped the WHO recommendations will lead to the government, industrial sector and local residents exchanging views about the possible risks of electromagnetic waves.
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