



Health
Canada

Santé
Canada

Healthy Environments and
Consumer Safety Branch

Direction générale,
Santé environnementale et sécurité des consommateurs

Your file Votre référence

Our File Notre référence

Dear Sir/Madam:

Health Canada administers the *Radiation Emitting Devices Act*, which governs the sale, lease and importation of radiation emitting devices in Canada. In addition, the Department's mandate regarding human exposure to radiofrequency (RF) electromagnetic energy from wireless devices includes carrying out research into possible health effects, monitoring the scientific literature related to such effects on an ongoing basis, and developing RF exposure guidelines, commonly referred to as Safety Code 6. Safety Code 6 sets recommended limits for safe human exposure to electromagnetic fields (EMFs) in federally regulated industries and workplaces.

Under the *Radiocommunication Act*, the Minister of Innovation, Science and Economic Development Canada (ISED), has the power to manage the use of radio spectrum and regulate radio apparatus through technical standards and conditions of authorization. Under this authority, ISED has adopted Health Canada's RF EMF exposure guideline for the purpose of protecting the general public from RF over-exposure. ISED requires that all radiocommunication and broadcasting antennas and all apparatus, such as cell phones, base stations and Wi-Fi routers, comply with the relevant limits outlined in Safety Code 6 at all times.

In 2015, Health Canada updated Safety Code 6 to take into account recent scientific data from studies carried out worldwide. In the establishment of acceptable limits, departmental scientists considered all peer-reviewed scientific studies, and employed a weight-of-evidence approach when evaluating possible health risks from exposure to RF energy. When establishing Safety Code 6, Health Canada incorporated several tiers of precaution into the human exposure limits. These included conservative thresholds for the occurrence of adverse effects, extreme worst-case situations for body size and orientation in relation to the RF fields, and additional safety margins. Since these conservative approaches are cumulative (i.e., stacked upon each other), Safety Code 6 provides very large margins of safety against the occurrence of all established adverse health effects associated with RF field exposure. The Department's updated Safety Code 6 makes Canada's limits among the most stringent science-based limits in the world.

It is Health Canada's position, and that of the Expert Panel of the Royal Society of Canada (https://rsc-src.ca/sites/default/files/pdf/SC6_Report_Formatted_1.pdf), that current measures on RF EMFs protect our most vulnerable. Safety Code 6 human exposure limits, established by Health Canada, are designed to provide protection for all age groups, including infants and children, on a continuous basis (24 hours a day/seven days a week).

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This means that if someone, including a small child, were to be exposed to RF energy from multiple sources for 24 hours a day, 365 days a year, within the Safety Code 6 limits, there would be no adverse health effects.

The RF EMF exposure limits and the conclusions of Health Canada are similar to those arrived at by the European Commission's Scientific Committee on Emerging and Newly Identified Health Risks and the World Health Organization (WHO). These limits are consistent with the science-based standards used in other parts of the world, including the United States, the European Union, Japan, Australia, and New Zealand. Large safety margins have been incorporated into these limits to provide a significant level of protection for the general public and personnel working near RF sources. Internationally, while a few jurisdictions have applied more restrictive limits for RF field exposures from cell towers, scientific evidence does not support the need for limits that are more restrictive than Safety Code 6.

Health Canada acknowledges that some people have reported an array of health symptoms that they attribute to exposure to EMF. At present, the symptoms attributed to EMF exposure have been termed idiopathic environmental intolerance (IEI-EMF) by the WHO, where "idiopathic" refers to unknown causes. This means that while the symptoms attributed by some persons to electromagnetic hypersensitivity are real, the scientific evidence provides strong support that these health effects are not associated with EMF exposure. Health Canada, other leading health agencies, and the WHO, have concluded that, to date, there is no convincing scientific evidence linking adverse symptoms to levels below existing RF exposure limits.

On June 15, 2016, the House of Commons Standing Committee on Health (HESA) report entitled "Radiofrequency Electromagnetic Radiation and the Health of Canadians," pursuant to Standing Order 109, the Government was required to table its response to the Committee's recommendations in the House of Commons within 120 calendar days. The Government tabled its response on October 6, 2016. The response is available on HESA's website under "Recent Business": <http://www.parl.gc.ca/Committees/en/HESA>

Thank you again for taking the time to write about this important issue.



Tim Singer
Director General
Environmental and Radiation Health
Sciences Directorate