

For 5G and pre-5Gs. Health Canada's Safety Code 6 is not protective of our health or the environment and needs to be revised.

Modified from the Urgent Appeal to Suspend 5G in Canada <http://c4st.org/5Gappeal/> (Please sign and share)¹

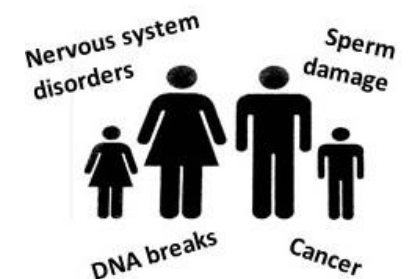
Safety guidelines/standards: Health Canada's Safety Code 6 (2015)² sets the safety limits for human exposure to radiofrequency (radiation in the frequency range from 3 kHz to 300 GHz. Health Canada recommends limits for safe human exposure but does not regulate the general public's exposure to radiofrequency (RF) radiation. Innovation, Science and Economic Development (ISED) Canada has adopted Safety Code 6 (2015) as its standard and applies it in the regulation of wireless devices such as cell phones and cell towers.

There is strong scientific evidence that Safety Code 6 does not protect Canadians' health^{3,4,5,6}, nor does it address potential harm to the natural environment. Health Canada's process in updating Safety Code 6 (in 2015) was deeply flawed^{7,8,9,10,11}.

Safety Code 6 guidelines for the frequencies used for telecommunications are based on the premise that radiofrequency radiation causes harm only at exposure levels that produce excessive heat¹².

Simply put, Health Canada says: if it does not heat, it does not harm. This premise is outdated and has been disproven.

Present RF Environment: Hundreds of peer-reviewed scientific publications describe biological effects and harms with exposures far below Safety Code 6 limits, in humans, plants e.g. trees¹³, laboratory animals and wildlife such as birds^{14, 15} and pollinators^{16,17}. In spite of claims to the contrary, Canada's guidelines for cell tower antenna emissions lag behind those of many other countries including China, Russia and parts of Italy and Switzerland.¹⁸



Biological Effects: Existing cell antennas emit RF radiation, which is scientifically demonstrated to cause or contribute to numerous health effects including cancers^{19,20}, sperm damage²¹, reproductive harms, learning and memory deficits, neurodegenerative, cellular and genetic damage^{22,23,24,25,26,27}. A growing number of Canadians also experience immediate and debilitating health problems such as headaches, irregular heartbeats, cognitive difficulties and insomnia, resulting in poor quality of life²⁸. All Canadians are susceptible to developing such health issues, unless their ever-increasing exposure to RF radiation is curtailed.

Chemical reactions can be sped up at non-thermal levels by exposure to microwave radiation:

Besides the effects at non-thermal (non- heating) levels documented in biological systems, there is also supporting evidence from chemistry. Microwave radiation is within the radiofrequency range. "Microwave assisted chemistry" accelerates particular chemical reactions with low non-heating levels of radiofrequency radiation²⁹ and has been commercialized^{30 31}. In living systems, the acceleration of some chemical reactions would cause molecular damage, chemical imbalances and dysfunction. This is consistent with observations of significant effects in humans, animals, plants and isolated cells.

No safety testing on 5G. There has been **no testing** to ensure that 5G technology is safe for humans and the natural environment^{32,33}. In addition to the possible harm from non-heating effects from the pre-5Gs, 5G millimeter frequency radiation may cause overheating of small invertebrates such as insects, including bees^{34,35,36}.

Hundreds of scientists and medical doctors who work in the field of radiofrequency radiation and health are warning that "5G will substantially increase exposure to radiofrequency electromagnetic fields RF-EMF, that has been proven to be harmful for humans and the environment". *5G Appeal to the European Union*³⁷.

More than 1,000 beekeepers have signed the *International Appeal. Stop 5G on Earth and in Space*³⁸.

SAFER ALTERNATIVES

Fibre optics can provide Internet access that is safe, faster, reliable, resilient, secure, affordable, and, in the long-term, more environmentally and economically sound than wireless connections.

NEEDED ACTIONS

- All telecommunications providers should be required to connect fibre directly to the premises (FTTP) that can connect to wireline equipment in the premises, and to not replace existing wired telephone and Internet services with wireless.
- Immediately suspend the installation of new antennas, especially “small cell” antennas near homes, hospitals, schools, public buildings and sensitive wildlife habitats, until safety guidelines have been appropriately revised and implemented;
- Immediately suspend the auctioning and transferring of all spectrum licences, until safety guidelines have been appropriately revised and implemented, and until the total economic implications are understood.

Canadians’ health and the environment should be protected before further rollout of wireless infrastructure, including 5G:

- Health Canada’s *Safety Code 6* must be revised. A truly independent panel with appropriate expertise must systematically review the scientific evidence of the effects of RF radiation. This requires rigorous scientific methods, transparency, full public consultation from initial scoping throughout the process, and health-protective precautionary interpretation of findings;
- Binding guidelines must be established to protect wildlife and the environment from RF radiation using a similar process;
- Building on the regulation of chemicals, the burden of proof should be shifted to the telecommunications industry, so the requirement is that it proves that its products are not harmful to Canadians or the environment;
- Keep as low as possible (ALARA or “as low as reasonably achievable”) Canadians' indoor and outdoor exposure to RF radiation from wireless technologies through proper regulation, monitoring, enforcement and ongoing public education and technical device management. One of many examples would be to require that some wireless devices e.g. cordless phones not transmit (i.e., not emit radiation) when not in use.

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Endnotes

- ¹ Suspend 5G Canada Appeal. <http://c4st.org/5Gappeal/>
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- ¹² Health Canada. (2015). Limits of human exposure to radiofrequency electromagnetic energy in the frequency range from 3 KHz to 300 GHz. Safety Code 6 (2015), 24. [See Section 2. MAXIMUM EXPOSURE LIMITS, paragraph 2 - first sentence.] <https://www.canada.ca/en/health-canada/services/publications/health-risks-safety/limits-human-exposure-radiofrequency-electromagnetic-energy-range-3-300.html>
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- ³⁸ International Appeal. Stop 5G on Earth and in Space. More than 290,000 signatories as of 10 August 2020. <https://www.5gspaceappeal.org/the-appeal#fn49b>