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Smart Meters

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IT'S YOUR HEALTH

Smart Meters



THE ISSUE

In recent years, utility companies in several provinces have started installing wireless smart meters in Canadian businesses and residences. Some people have expressed concern about the possibility of health effects from exposure to the [radiofrequency \(RF\) energy](#) that these devices emit.

SMART METERS

Smart meters are relatively new wireless devices that transmit information using RF signals to let utility companies know how much water, gas or electricity a household or business is using. The signals emitted by smart meters are of relatively low power, similar to [cell phones](#) and [wireless internet routers](#). The maximum amount of power that a smart meter device can transmit must comply with [Industry Canada regulations](#).

HEALTH RISKS

As with any wireless device, some of the RF energy emitted by smart meters will be absorbed by anyone who is nearby. The amount of energy absorbed depends largely on how close your body is to a smart meter. Unlike cellular phones, where the transmitter is held close to the head and much of the RF energy that is absorbed is localised to one specific area, RF energy from smart meters is typically transmitted at a much greater distance from the human body. This results in very low RF exposure levels across the entire body, much like exposure to AM or FM radio broadcast signals.

Survey results have shown that smart meters transmit data in short bursts, and when not transmitting data, the smart meter does not emit RF energy. Furthermore, indoor and outdoor survey measurements of RF energy from smart meters during transmission bursts were found to be far below the human exposure limits specified in Health Canada's [Safety Code 6](#).

Based on this information, Health Canada has concluded that exposure to RF energy from smart meters does not pose a public health risk.

Canada



REDUCE YOUR RISK

Since RF energy exposure levels are far below Canadian and international safety limits, Health Canada does not consider that any precautionary measures are needed to reduce RF energy exposure from smart meters.

In cases where multiple smart meters are installed together, as in some townhouses or high-rise buildings, the total exposure levels from multiple smart meters will still be far below Health Canada's RF energy exposure limits, due to the infrequent nature of transmissions.

THE GOVERNMENT OF CANADA'S ROLE

Health Canada has developed guidelines for safe human exposure to RF energy. The current version of these exposure guidelines is specified in a document called *Limits of Human Exposure to Radiofrequency Electromagnetic Energy in the Frequency Range from 3 kHz to 300 GHz* – Safety Code 6 (2009).

The limits specified in these guidelines are based on an ongoing review of published scientific studies on the health impacts of RF energy. Using data from these studies, Health Canada set the general exposure limits far below the threshold for potentially adverse health effects.

Health Canada continues to monitor the science regarding RF exposure and will take action if future research establishes that RF energy exposure poses a health risk to Canadians.

FOR MORE INFORMATION

- World Health Organization, [Electromagnetic fields and public health: base stations and wireless technologies](http://www.who.int/media-centre/factsheets/fs304/en/index.html) at : www.who.int/media-centre/factsheets/fs304/en/index.html
- International Agency for Research on Cancer [electromagnetic fields news release](http://www.iarc.fr/en/media-centre/pr/2011/pdfs/pr208_E.pdf) at: www.iarc.fr/en/media-centre/pr/2011/pdfs/pr208_E.pdf
- World Health Organization, [Electromagnetic Fields](http://www.who.int/peh-emf/en/) at: www.who.int/peh-emf/en/

FOR INDUSTRY AND PROFESSIONALS

- Health Canada's [Consumer and Clinical Radiation Protection Bureau](http://www.hc-sc.gc.ca/ahc-asc/branch-dirgen/hecs-dgsec/psp-ppp/ccrpb-bpcrpsc-eng.php) at: www.hc-sc.gc.ca/ahc-asc/branch-dirgen/hecs-dgsec/psp-ppp/ccrpb-bpcrpsc-eng.php
- Health Canada's RF exposure guidelines (Safety Code 6) at: www.hc-sc.gc.ca/ewh-semt/pubs/radiation/radio_guide-lignes_direct-eng.php
- Industry Canada's [Radio Standards Specification 102](http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01904.html) at: www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf01904.html
- Industry Canada's [Client Procedures Circular CPC-2-0-03](http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08777.html) at: www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf08777.html
- Industry Canada's [Guidelines for the Protection of the General Public in Compliance with Safety Code 6](http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf05990.html) at: www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf05990.html

RELATED RESOURCES

- For safety information about food, health and consumer products, visit the [Healthy Canadians](http://www.healthycanadians.gc.ca) website at: www.healthycanadians.gc.ca
- For more articles on health and safety issues go to the [It's Your Health](http://www.health.gc.ca/iyh) web section at: www.health.gc.ca/iyh

You can also call toll free at 1-866-225-0709 or TTY at 1-800-267-1245

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