

Dr. Paul Demers
Chair of the Royal Society of Canada's Expert Panel Reviewing Safety Code 6

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c/o Russel MacDonald at admin-assistant@rsc-src.ca

Dear Dr. Demers,

Having been integrally involved in the cell phone safety issue for more than a decade and a half, it has always struck me that the regulatory system in Canada makes it very difficult for precautionary steps that could save lives to be implemented. The answer most offered by the experts I have consulted: the existing product liability and consumer safety laws in Canada and the U.S. tilt heavily toward the industry in the cell phone arena. I don't understand all of those political and legal complexities, but it does make sense that when existing law is not working to protect people, then new law is needed.

Like hundreds of thousands of other Canadians, I was excited to purchase my first cell phone in the late 1980's. And like most people, I assumed that the phones were safe. Then in 1992, the Larry King Live TV show aired an interview with David Reynard, who was suing the wireless industry because he felt that his wife's death from a brain tumour was caused by frequent use of her cell phone. Could this really be true? The cell phone industry said it couldn't be true. Their protestations were such that in the spring of 1993, United States Senator Edward Markey (D-MA) convened hearings to address this important health issue. It turned out that there were no data upon which a true judgement of cell phone safety could be based and that set into motion a decade and a half of much needed global research into the problem. As data poured in, countries around the world took action while Canada and the U.S. stood still.

- In unexplainable irony, the U.S. mobile phone industry funded a \$28.5 million program in the 1990s to address cell phone safety – still the largest effort in the world. The program identified genetic damage and increased cancer risk associated with cell phone use. The program's leaders recommended warnings to consumers and the use of headsets as precautions. Nothing was done.
- In 1999, the Parliament of the United Kingdom government appointed Sir William Stewart to look into the cell phone safety issue by reviewing all peer-reviewed scientific evidence available at the time. His *Independent Expert Group on Mobile Phones* released its report in 2000, and recommended: that use of mobile phones be restricted for children under the age of 16; that the industry should refrain from promoting cell phone use by children altogether; and that neither hand-held nor hands-free phones be used while driving.
- In 2000 the European Union funded a 13 country research project titled REFLEX, the results of which published in 2004. The findings of this program reinforced and confirmed the concerns arising from the industry-funded U.S. studies and led to a number of European precautionary steps.

- In 2001, the German government, upon comprehensive review of available science on cell phone dangers, recommended that: “Parents should keep their children as far away from this technology as possible.”
- In March, 2002, the French Government: reiterated an earlier caution to parents to restrict their children’s use of cell phones; recommended that pregnant women should use an earpiece to keep the phone away from their bodies and the developing fetus; and recommended that teenagers should keep cell phones away from their developing sex organs.
- In 2003, the Russian National Committee on Non-Ionizing Radiation Protection (RNCNIRP) warned that children under the age of 16 and pregnant women should not use cell phones at all. They also recommended that people suffering from neurasthenia, psychopathy and other neuroses, memory loss, sleep disorders and epilepsy refrain from cell phone use. RNCNIRP also recommended that cell phone calls be limited to 3 minutes and that users should wait a minimum of 15 minutes before making another call. The use of headsets and hands free functions was also recommended.
- Finland, the home of Nokia, issued safety warnings about children’s use of cell phones in 2002, and reiterated the warnings in 2004 and 2009.
- Following publication of a study by Dr. Siegal Sadetzki showing increases in salivary gland tumours in 2008, Israel’s Knesset placed restrictions on cell phone use by children.
- In late 2008, the European Parliament voted 522 to 16 to urge ministers across Europe to promulgate stricter radiation limits for emissions from wireless devices and wireless signal delivery systems.
- In Brussels, Belgium in January 2009, the Constitutional Court set aside an opinion that only federal authorities had the power to legislate on standards aimed at protecting human health. It judged “that Regions have the authority to prevent different types of environmental pollution” including radiation. Further, “the choice made by the regional legislature...to apply the principle of precaution falls within the right of this legislative body to make its own assessment and cannot be rejected simply because there are no stricter international standards in force.” Brussels’ Environment Minister Evelyne Huytebroeck said “In the absence of scientific consensus, the principle of precaution dictates that we should take measures to avoid the risk of irreversible damage to the environment and to health.”
- In Sweden, electro-hypersensitivity -- a condition linked to cell phone exposures – has been ruled a “functional impairment”, meaning that its citizens can claim for compensation from the government from this debilitating environmentally induced health problem. In addition, those suffering from the condition can request special accommodations in public places to reduce exposure so that they are able to gain access to the same places as other Swedish citizens.
- In January 2010, an Italian Labour Tribunal recognized that a man’s benign tumour was caused by working long hours using a cell phone and cordless phone. This is the first

time that an Italian judge has recognized the causal link between cell phones and disease and the subsequent declaration of disability due to occupational exposure to cell phone irradiation set a precedent for other similar cases.

- On August 29, 2013 the American Academy of Pediatrics (representing 60,000 pediatricians) sent a letter to the U.S. FCC which included the following: *As radiation standards are reassessed, the AAP urges the FCC to adopt radiation standards that:*
 - *Protect children's health and well-being. Children are not little adults and are disproportionately impacted by all environmental exposures, including cell phone radiation. Current FCC standards do not account for the unique vulnerability and use patterns specific to pregnant women and children. It is essential that any new standard for cell phones or other wireless devices be based on protecting the youngest and most vulnerable populations to ensure they are safeguarded throughout their lifetimes.*
 - *Reflect current use patterns. The FCC has not assessed the standard for cell phone radiation since 1996. Approximately 44 million people had mobile phones when the standard was set; today, there are more than 300 million mobile phones in use in the United States. While the prevalence of wireless phones and other devices has skyrocketed, the behaviors around cell phone uses have changed as well. The number of mobile phone calls per day, the length of each call, and the amount of time people use mobile phones has increased, while cell phone and wireless technology has undergone substantial changes. Many children, adolescents and young adults, now use cell phones as their only phone line and they begin using wireless phones at much younger ages.*
- *Pregnant women may carry their phones for many hours per day in a pocket that keeps the phone close to their uterus. Children born today will experience a longer period of exposure to radio-frequency fields from cellular phone use than will adults, because they start using cellular phones at earlier ages and will have longer lifetime exposures. FCC regulations should reflect how people are using their phones today.*
- *Provide meaningful consumer disclosure. The FCC has noted that it does not provide consumers with sufficient information about the RF exposure profile of individual phones to allow consumers to make informed purchasing decisions. The current metric of RF exposure available to consumers, the Specific Absorption Rate, is not an accurate predictor of actual exposure. AAP is supportive of FCC developing standards that provide consumers with the information they need to make informed choices in selecting mobile phone purchases, and to help parents to better understand any potential risks for their children. To that end, we support the use of metrics that are specific to the exposure children will experience.*

The AAP supports the reassessment of radiation standards for cell phones and other wireless products and the adoption of standards that are protective of children and reflect current use patterns.

The scientific data accrued over the past 16 years that have compelled precautionary and compensatory actions around the world have been interpreted much differently by officials in

Canada. To this point in time, the only possible protection for Canadian consumers against cell phone dangers has come through administrative systems and the courts in the United States.

- In 2005, Sharesa Price was awarded a settlement in the California workers' compensation system for her claim that cell phones caused her brain cancer and other permanent harm.
- In 2006, Mark Hart was awarded a similar claim in the California workers' compensation system based on the same science as in the Price case. At the time of the settlement, he was deceased and an undisclosed amount of compensation was awarded to a surviving family member.
- In July 2007, John Orchitt succeeded in his claim against AT&T, Alascom and Ward North America, Inc. in the Alaska Supreme Court for injuries suffered at work following exposure to wireless radiation signals while repairing a damaged transmitter. Of special note is that his injuries were recognized by the court as being non-thermal in nature, a finding that runs in the face of Canada's Safety Code 6 and the U.S. Federal Communications Commission guidelines which are based on thermal measures.

While governments around the world have heeded emergent medical data showing danger and taken steps to protect citizens, especially the young, Canada has distinguished itself by inaction in the face of mounting evidence suggesting that cell phones may pose the greatest general public health threat in a century. Precautions regarding cell phone dangers are long overdue for their citizens.

While it is true that big questions remain about whether health effects reach a lot of people, or a few people, starting with a Frye Hearing in Washington, D.C. Superior Court on December 2, 2013, in a lawsuit begun in 2001, the science will be heard with all witnesses under oath. It will be the most rigorous review of the science ever done, particularly when careers are on the line and perjury is a threat. So, we will know more about the objective science next spring, but right now there is certainly uncertainty.

My Endnote library contains almost 19,000 studies on this issue. It would hardly be even possible to read those in four years time. Thus, by practical definition, the Royal Society cannot possibly complete a comprehensive review in the time that it has been given. It can, however, acknowledge that there is at least doubt as to the adequacy of safety provisions of Safety Code 6, and recommend precaution and more rigid standards until the answers become clear.

Respectfully submitted,

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