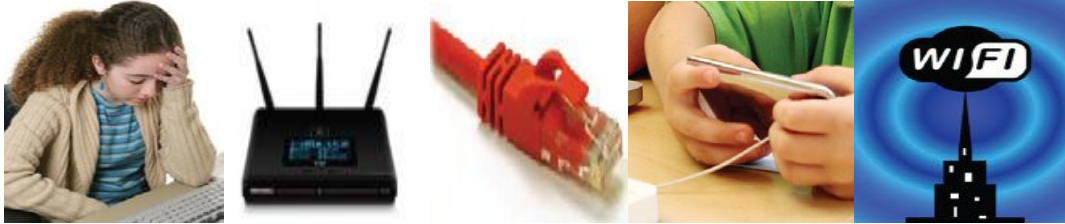


COMMERCIAL WI-FI ROUTERS (TRANSMITTERS) IN SCHOOLS



MICROWAVE RADIATION: RESOURCE LIST: WHAT EVERY PARENT SHOULD KNOW

Many Public Health Agencies & International Experts Recommend Limiting Children's Exposure Due to High Susceptibility for Harmful Biological Effects:

World Health Organization (WHO) and the International Agency for Research on Cancer (IARC), May, 2011: Radiofrequency Electromagnetic Fields emitted by wireless communication devices as Type 2B Carcinogen (possible cancer risk to humans). The WHO report advised the public, particularly young adults and children, "Given the potential consequences for public health of this classification and findings", and "pending the availability of such information, it is important to take pragmatic measures to reduce exposure...". This classification also includes Wi-Fi emissions as so affirmed by IARC experts as follows: "So the classification 2B, possibly carcinogenic, holds for all types of radiation within the radiofrequency part of the electromagnetic spectrum, including the radiation emitted by base station antennas, radio/TV towers, radar, Wi-Fi, smart meters, etc." For further information from the WHO: http://www.iarc.fr/en/media-centre/pr/2011/pdfs/pr208_E.pdf and <http://goo.gl/77ztt>

Health Canada's public health recommendation on cell phones, Oct., 2011: "The department also encourages parents to reduce children's RF (radiofrequency radiation) exposure from cell phones since children are typically more sensitive to a variety of environmental agents" and "there is currently a lack of scientific information regarding the potential health impacts of cell phones on children". http://www.hc-sc.gc.ca/ahc-asc/media/advisories-avis/_2011/2011_131-eng.php

American Academy of Environmental Medicine (AAEM), Jan, 2012:

"Chronic exposure to wireless radiofrequency radiation is a preventable environmental hazard that is sufficiently well documented to warrant immediate preventative public health action...The current medical literature raises credible questions about genetic and cellular effects, hormonal effects, male fertility, blood/brain barrier damage and increased risk of certain types of cancers..." "Children are placed at particular risk for altered brain development, and impaired learning and behavior". <http://aaemonline.org/images/CaliforniaPublicUtilitiesCommission.pdf> (California PUC) http://aaemonline.org/emf_rf_position.html (RF/EMR position paper)

International Journal of Oncology, May, 2011:

"The risk for astrocytoma was highest in the group with first use of a wireless phone before the age of 20... In conclusion, an increased risk was found for glioma and use of mobile or cordless phone. The risk increased with latency time and cumulative use in hours and was highest in subjects with first use before the age of 20". <http://www.ncbi.nlm.nih.gov/pubmed/21331446>

Journal of the American Academy of Pediatrics, Feb., 2005:

"Children are especially sensitive to all electromagnetic fields because their nervous systems are fragile, their brain tissues more conductive and their small skeletons more easily penetrated by microwaves". <http://pediatrics.aappublications.org/content/116/2/e303.abstract>

American Society for Reproductive Medicine, Oct 2010 (published in Fertility and Sterility Journal, 2011): "Men exposed for only four hours (to Wi-Fi enabled laptops) experienced measurable DNA damage to their sperm and reduction in movement, or motility of the sperm as well as inducing DNA fragmentation." - Not thermal effect. [http://www.fertstert.org/article/S0015-0282\(11\)02678-1/abstract](http://www.fertstert.org/article/S0015-0282(11)02678-1/abstract)

The WHO and European Environmental Agency (EEA): Children's Health and the Environment: A Review of Evidence: "The possible adverse health effects in children associated with radio frequency fields have not been fully investigated." "Because there are suggestions that RF (radio frequency) exposure may be more hazardous for the fetus and child due to their greater susceptibility, prudent avoidance is one approach to keeping children's exposure as low as possible." (page 184) <http://www.who.int/ceh/publications/evidence/en/index.html>

Royal Society of Canada for Health Canada, March, 1999: Expert Panel Report: A Review of the Potential Health Risks of Radiofrequency (RF) Fields from Wireless Telecommunication Devices:

"There is ample evidence that children or other subpopulations can be more susceptible to the effects of exposure to chemical and radiological hazards than healthy, young adults.. The issue of susceptible subpopulations has received very little study with respect to RF field exposure". (pg. 17/155)

"There are documented biological effects to RF fields even at low, non-thermal exposure levels, below Safety Code 6 exposure limits. These biological effects include alterations in the activity of the enzyme ornithine decarboxylase (ODC), in calcium regulation, and in the permeability of the blood brain barrier...Some of these biological effects brought about by non-thermal exposure levels of RF could potentially be associated with adverse health effects." (pg. 9/155) *ODC is an enzyme always found present with tumour formation <http://www.rsc.ca/documents/RFreport-en.pdf>

The Parliamentary Assembly of the Council of Europe (PACE), May 2011: The potential dangers of electromagnetic fields and their effect on the environment, adopted Resolution 1815: European Governments voted in favour to "take all reasonable measures to reduce exposure to electromagnetic fields" and "for children in general, and particularly in schools and classrooms, give preference to wired Internet connections; and strictly regulate the use of mobile phones by schoolchildren on school premises". <http://www.assembly.coe.int/Mainf.asp?link=/Documents/AdoptedText/ta11/ERES1815.htm>

Canadian Human Rights Commission: Medical Perspective on Environmental Sensitivities
http://www.chrc-ccdp.ca/pdf/envsensitivity_en.pdf (electromagnetic fields)

Canadian Human Rights Commission: Legal Perspective on Environmental Sensitivities
http://www.chrc-ccdp.ca/pdf/legal_sensitivity_en.pdf

A growing number of people around the world attribute their ill health or serious disease to ever increasing levels of microwave, radio frequency radiation from wireless communications and electronic devices. The Canadian Human Rights Commission recommends accommodation for those with electrohypersensitivity (EHS); explaining electromagnetic fields are an environmental trigger for some, preventing those most severely affected from leaving their homes even. In general, common symptoms include: headaches, dizziness, nausea, facial flushing, tinnitus, irritated eyes, rapid heart rate, palpitations, anxiety, depression, skin rashes, muscle twitches and tingling, sleep disturbances, extreme fatigue, concentration and memory problems.

Open Letter Regarding Wi-Fi Networks in Schools: Dr. Magda Havas, PhD, Associate Professor, Environmental & Resource Studies, Trent University, Ontario
<http://www.magdahavas.com/wordpress/wp-content/uploads/2012/05/Wi-Fi-Open-Letter2012.pdf>

Ontario English Catholic Teacher's Association: Wi-Fi Position Paper (45,000 members)

<http://www.oecta.on.ca/wps/wcm/connect/6a665c0049fedbee85919db62552ca8d/WiFiPositionPaper2.pdf?MOD=AJPERES&CACHEID=6a665c0049fedbee85919db62552ca8d>

Workers Compensation Act, Occupational Health and Safety Regulation: Part 5 — Chemical Agents and Biological Agents http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/296_97_03

5.57 (1) "If a substance identified as any of the following is present in the workplace, the employer must replace it, if practicable, with a material which reduces the risk to workers: (a) ACGIH A1 or A2, or IARC 1, 2A or **2B carcinogen**". Other examples of 2B carcinogens include: **lead, DDT, methylmercury, chloroform, HIV, and car exhaust!**

**United States District Court, District of Oregon Portland Division:
Civil Action No. 3:11-cv-00739-MO: Morrison vs. Portland School District**

Preliminary Injunction Motion http://devvy.net/pdf2/september2011/portland_wifi.pdf

Second Amended Complaint for Declaratory, Injunctive or Other Relief

<http://www.wirelesswatchblog.org/wp-content/uploads/2001/11/1-Second-Amended-Complaint.pdf>

The following Expert Declarations were filed in support of David Morrison's suit against Wi-Fi in Portland Public Schools. (Click on hyperlinks)

- **Amended Declaration of Dr David Carpenter**
- **Amended Declaration of Barry Trower**
- **Declaration of Dr. Andrew Goldsworthy**
- **Amended Declaration of Lloyd Morgan**
- **Declaration of Dr. Magda Havas**
- [6] Havas – Addendum A – Studies-1
- [8] Havas – Addendum C – International Appeals-1
- **Report of David Savitz (Portland Public Schools)**
- [24] Reply of Dr David Carpenter, M.D. to David Savitz

Contact Info: David O. Carpenter, M.D.

Phone: 518-525-2660 Email: carpent@uamail.albany.edu

Contact Info: Dr. Magda Havas, PhD,

Phone: 705-748-1011 ext. 7882 Email: mhavas@trentu.ca

Parents must demand from School Districts:

- 1) Health and Safety hearings in the School District that ALL parents are invited to attend and participate
- 2) Full Disclosure of Potential Risks of long term RF/EMR exposure for Children
- 3) IT Policy that requires Informed Parental Consent to a 2b carcinogen before allowing Wi-Fi in schools
- 4) Accommodation for those with the environmental syndrome, electro-hypersensitivity (EHS)
- 5) At minimum, keep some schools in the district at each educational level, free of Wi-Fi (microwave radiation) emissions and instead utilize hard wired communications only

School Boards and Administrators should know they can be held legally accountable for knowingly placing children at great risk for illness and serious disease by:

- 1) Wilfully ignoring established science on the harmful effects from long term exposure to microwave, radio frequency radiation
- 2) Forcing an established 2 b carcinogen (via wi-fi emissions) on vulnerable children with no way to protect them selves from chronic exposure
- 3) Failing to inform parents of all adverse biological effects confirmed by the Canadian Royal Panel (experts for Health Canada) in 1999 and by the World Health Organization in 2011
- 4) Failing to obtain informed parental consent to expose children to established environmental hazard that increases risk for cancer
- 5) Failing to accommodate students who are sensitive to wireless electromagnetic fields, as so advised by the Canadian Human Rights Commission (2007) and the World Health Organization (2005)
- 6) Violating parental rights, both God given and legal, to protect their progeny from a known health hazard

Parental Non-Consent Form (Give to Principal and Teacher):

<http://citizensforsafetechnology.org/WiFi-NonConsent-Form-for-Use-in-Schools,72,44>

Statement of Accountability (Give to Principal and School District):

<http://citizensforsafetechnology.org/WiFi-Statement-of-Accountability-Cdn-format,19,156>

Health Action Network Society: BC Parents Demand Choice & Precaution over Wi-Fi

<http://www.hans.org/195-bc-parents-demand-choice-a-precaution-over-wi-fi>

Websites for further info:

<http://international-emf-alliance.org/> (Scientists and Doctors)

www.citizensforsafetechnology.org

www.kawarthasafetechnology.org

www.safeschool.ca

www.safeinschool.org

www.radiationeducation.com

Videos

(Video) BBC (UK): Panorama: WiFi - A Warning Signal (Radiation levels in a Wi-Fi enabled classroom tested up to 3 times the intensity found in the main beam of a cell tower!!)

Part 1: <http://www.youtube.com/watch?v=luNaDj6VLHw> (10 min),

Part 2: <http://www.youtube.com/watch?v=aGplfEnWptk&feature=related> (10 min),

Part 3: <http://www.youtube.com/watch?v=-VqnPtq4GbU&feature=related> (9 min)

(Video) Global News, 16:9: Is Wi-Fi dangerous? (other countries also; 20 min)

<http://www.youtube.com/safeschool#p/u/3/KN7VetsCR2>

(Video)The Dangers of Wi-Fi: <http://www.youtube.com/watch?v=LiO7ofDGoD8>

(Video) Professor Magda Havas, EMF expert: Wifi in Schools Presentation:

<http://www.youtube.com/watch?v=hwmfKoUMEk&mid=5166>

(Video) Cardiologist, Dr. Stephen Sinatra: WiFi in Schools a Health Hazard

<http://www.heartmdinstitute.com/wireless-safety/why-get-wired-schools>

(Video) International Scientists—Pointing to Biological Hazards and Risks to the Genetic Code from Unchecked Proliferation of Wireless Technologies: <http://vimeo.com/18018440>

(Video) Wi-Fi in Schools Part 1: Microwave Radiation Dangers in the Classroom (15 min & 30 min)

Part 1: <http://www.youtube.com/watch?v=FO0AnNHZ8vI>

Part 2: <http://www.youtube.com/watch?v=Cb0G6L8oRIU>

(Video) CBC News: Warning cell phone companies give, but hide inside their user manuals:

<http://bit.ly/hHBXDu>

Autism and ADD/ADHD: Is the Proliferation of Wireless Radiation Connected?

A possible association between fetal/neonatal exposure to radiofrequency electromagnetic radiation and the increased incidence of autism spectrum disorders (ASD).

<http://www.ncbi.nlm.nih.gov/pubmed/14962625>

Wireless Radiation in the Etiology and Treatment of Autism: Clinical Observations and Mechanisms

<http://www.emf-safe-zone.com/articles/EMR-Autism-ACNEM-final2.pdf>

Wi-Fi and EM Radiation - The Rest of the Autism Story

<http://www.emf-safe-zone.com/articles/Wi-Fi%20and%20EM%20Radiation%20-%20The%20Rest%20of%20the%20Autism%20Story.pdf>

Dr. Mercola: Autism Spectrum Disorder has Risen to New Heights

<http://articles.mercola.com/sites/articles/archive/2009/09/10/1-in-100-Now-Have-Autism-Spectrum-Disorder.aspx>

Wi-Fi alters brain activity in young adults

<http://wifiinschools.org.uk/resources/wifi+brain+July+2011.pdf>

Globe & Mail: Cellphone use during pregnancy linked to hyperactivity

<http://www.theglobeandmail.com/life/the-hot-button/cellphone-use-during-pregnancy-linked-to-hyperactivity/article2371755/>

CTV News: Autism on the rise in Canada, USA: studies

<http://www.ctv.ca/CTVNews/Health/20120329/autism-study-prevalence-20120329/#ixzz1qZjehVPc>

It Just Makes Sense – The Link between Wireless Technology and the Rise in Autism

<http://prd34.blogspot.ca/2012/04/it-just-makes-sense-link-between.html>

Fetal Radiofrequency Radiation Exposure from 800-1900 MHz-Rated Cellular Telephones Affects Neurodevelopment and Behavior in Mice

<http://www.nature.com/srep/2012/120315/srep00312/full/srep00312.html>

Warning: Using a mobile phone while pregnant can seriously damage your baby (observed 13,000 children)

<http://www.independent.co.uk/life-style/health-and-families/health-news/warning-using-a-mobile-phone-while-pregnant-can-seriously-damage-your-baby-830352.html>

Pregnant Women Should Minimize Exposure to Cell Phones: Study (observed over 29,000 children)

<http://topnews.us/content/230048-pregnant-women-should-minimize-exposure-cell-phones-study>

International News on Wi-Fi in Schools:

German Government advises against WiFi:

<http://www.independent.co.uk/environment/green-living/germany-warns-citizens-to-avoid-using-wifi-401845.html> also, http://www.icems.eu/docs/deutscher_bundestag.pdf

European Environmental Agency advises the precautionary principle for WiFi:

<http://www.eea.europa.eu/highlights/radiation-risk-from-everyday-devices-assessed>
<http://www.independent.co.uk/environment/green-living/eu-watchdog-calls-for-urgent-action-on-wifi-radiation-402539.html>

Austria medical association pressing for a ban on WiFi in schools:

<http://www.telegraph.co.uk/news/uknews/1549944/Warning-on-wi-fi-health-risk-to-children.html>

Herouville St Claire Normandy removes WiFi from schools:

<http://freepage.twoday.net/stories/5670096/>

UK: The Association of Teachers and Lecturers (ATL) with 160,000 members has called for a government investigation into the biological and thermal effects of "WiFi" networks:

<http://news.scotsman.com/education/39Wifi-in-schools-may-give.5156371.jp>

(USA) Progressive Librarians Guild urges the precautionary principle for WiFi in libraries June 2008:

<http://libr.org/plg/wifiresolution.php>

USA: Sebastopol CA. City Council chooses the precautionary principle and terminates contract for free city wide WiFi:

<http://www1.pressdemocrat.com/article/20080324/NEWS/803240314/1033/NEWS>

England: Teachers union call to suspend WiFi in schools:

<http://www.dailymail.co.uk/news/article-1039235/Suspend-wi-fi-schools-says-union-chief-following-reports-causes-ill-health.html>

WiFi code for Welch Schools:

<http://www.independent.co.uk/environment/green-living/child-safety-fears-prompt-wifi-code-for-welsh-schools-403255.html>

Peer-reviewed (highest standard) studies on the Biological Effects from 2.45 GHz (Wi-Fi range) Radiofrequency

Use of Laptop Computers Connected To Internet Through Wi-Fi Decreases Human Sperm Motility And Increases Sperm DNA Fragmentation: <http://tinyurl.com/bwt6ten>

Laptop expositions affect motility and induce DNA fragmentation in human spermatozoa:

http://www.safeschool.ca/uploads/Laptop_Expositions.pdf

Effects of 2.45 GHz microwaves on meiotic chromosomes of male CBA/CAY mice:

<http://jhered.oxfordjournals.org/content/76/1/71.short>

Effects of microwave at 2.45 GHz radiations on reproductive system of male rats

<http://www.informaworld.com/smpp/content~content=a922592632~db=all~jumtype=rss>

Effects of Wi-Fi Signals On the P300 Component of Event-Related Potentials during an Auditory Hayling Task <http://tinyurl.com/3ntyj73>

Wi-Fi Electromagnetic Fields Exert Gender Related Alterations on EEG: <http://tinyurl.com/3jpxtn>

Mutagenic response of 2.45 GHz radiation exposure on rat brain:

<http://www.ncbi.nlm.nih.gov/pubmed/20353343>

Single strand DNA breaks in rat brain cells exposed to microwave radiation:

<http://www.ncbi.nlm.nih.gov/pubmed/16458332>

Some behavioral effects of short-term exposure of rats to 2.45 GHz microwave radiation:

<http://www.ncbi.nlm.nih.gov/pubmed/3178900>

Erythropoietic changes in rats after 2.45 GHz non-thermal irradiation:

<http://www.ncbi.nlm.nih.gov/pubmed/15729835>

Effects of exposure to 2.45 GHz microwave radiation on male rat reproductive system:

<http://www.journalcra.com/?q=node/380>

Provocation study using heart rate variability shows microwave radiation from DECT phone (2.45 GHz) affects autonomic nervous system, European Journal of Oncology, Library Vol. 5, 273-300
http://www.avaate.org/article.php3?id_article=2043 (double blind study using 2.4 GHz, Wi-Fi frequency)

This is the first study that documents immediate and dramatic changes in both Heart Rate and HR variability associated with MW exposure at levels well below (0.5%) federal guidelines in Canada and the United States (1000 microW/cm²).

QUESTIONS:

- 1) Should school administrators be able to unilaterally decide to expose an entire population of a school without the requirement of informed parental consent, or should parents participate in deciding what exposure risk their children take on?
- 2) How can we scientifically extrapolate any safety of Wi-Fi exposure to a unique population that has never been studied and in the manner with which children will be exposed in schools 5 days a week?
- 3) Do we accept assurances of safety when approximately 75% of all independent studies conducted on RF/EMR show cellular changes and genetic damage with little exposure?
- 4) Do we know what levels of radiation will be emitted by multiple Wi-Fi routers and many wireless devices at close proximity for many hours and what possible affects they will have on small children?
- 5) Given that the American Society for Reproductive Medicine warns that only 4 hours of Wi-Fi exposure from a laptop causes permanent DNA damage to sperm, how will students, parents and teachers learn of this fact?
- 6) Given that significant biological effects have been documented for short term exposures in the frequency ranges similar to those used by Wi-Fi routers, will parents be warned that there is the potential for permanent health damage to their children?
- 7) How will schools accommodate those who are electro-hypersensitive (EHS) as recognized in separate reports by the WHO and the Canadian Human Rights Commission re environmental sensitivities, when Wi-Fi emissions are throughout every school in the district?
- 8) If Saanich SD has opted to not install Wi-Fi in its elementary schools and has limited coverage to 25% in middle schools, why then is Sooke SD installing Wi-Fi in ALL its schools and without informed consent?

Saanich SD 63 Information Technology Policy (pg. 10/15)

http://www.safeschool.ca/uploads/Victoria_School_Board_Bans_WiFi_in_Elementary_Schools.pdf

- 9) Do we ignore clear evidence microwave exposure from cell phones is linked to increased risk for brain tumours and instead blanket entire schools with this same type of radiation?

Conclusion:

Caution is a valid position, especially when a school typically installs many routers, not just one, and children will be exposed continually during each school day. There is an absence of long term evidence; no study at all in children who are uniquely susceptible; and no required pre-market testing for safety of wireless devices. If studies examined by the WHO showed increased cancer risk in adults using wireless phones 30 minutes a day over 10 years, then what is the risk to the smaller and still developing child who is continuously exposed in school to multiple Wi-Fi routers and devices? Wi-Fi itself is not a learning tool and is only a means to connect computers and can be achieved by wired means that respects the uncertainty of health impacts on children in particular. Both the WHO and HC have recently recommended 'prudent avoidance' in regards to microwave RFR exposure. It seems very reasonable parents would want to, and be allowed to, exercise caution where their own children spend a significant amount of time and where Wi-Fi is not essential to a good education but merely a convenience to access the internet without wires.