



Policy Name

Policy Owner:	Director of Studies
Formally Endorsed By:	Trustees
Endorsement Date:	September 2023
Next Review Date:	September 2025

Draft Radiofrequency Radiation Policy

Children and staff may not have active (emitting) mobile phones or other radiofrequency emitting devices on in school during the school day unless required for emergency safety or medical reasons.

Students

All students from Classes 6-12 may only bring in a mobile device with express written permission requested by parents to either the Principal or Director of Studies.

- All students with permission will be required to hand in their phone (switched off) in to their Guardian or Class Teacher at registration and collect it from reception at the end of the day.
- Any student found with a phone during school hours will have it confiscated.
- Parents will be contacted to collect the confiscated mobile phone at their convenience.

Staff

- With the current exception of the Mansion House, Internet access is supplied for staff and children where needed via hard-wired Ethernet cabling. No staff or pupils may use Wi-fi outside of the Mansion and within the mansion it may only be accessed via school devices for school purposes.
- No other RF emitting devices are permitted at school (including RF emitting smart watches, Bluetooth music players, games etc.)
- Whilst we appreciate this issue can be controversial, credible evidence regarding negative health effects of mobile phones, wi-fi and other radiofrequency radiation exposures is available and substantial; below is a small selection of credible resources which justify our policy. This policy is also very much in keeping with inherent Steiner principles, important to preserve general wellbeing regarding social health and interaction and is essential to support inclusivity at the school. Thank you so much for your support in keeping Michael Hall a healthy place for our staff and pupils.

References:

1. **WHO International Agency for Research on Cancer (IARC)**, Press Release No. 208, 31 May 2011
http://www.iarc.fr/en/media-centre/pr/2011/pdfs/pr208_E.pdf
Lyon, France, May 31, 2011 - The WHO/International Agency for Research on Cancer (IARC) **classified radiofrequency electromagnetic fields as possibly carcinogenic to humans (Group 2B)**, based on an increased risk for glioma, a malignant type of brain cancer, associated with wireless phone use.
2. 2011 (still also current policy): “the UK Chief Medical Officers advise that children and young people under 16 should be encouraged to use mobile phones for essential purposes only, and to keep calls short”. (Ref NHS Advise leaflet:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/215711/dh_124899.pdf)
- 3.
4. American Academy of Environmental Medicine (AAEM)

Statement on AAEM’s position on EMF radiation

http://aaemonline.org/emf_rf_position.html

Because of the well documented studies showing adverse effects on health and the not fully understood quantum field effect, AAEM calls for exercising precaution with regard to EMF, RF and general frequency exposure. In an era when all society relies on the benefits of electronics, we must find ideas and technologies that do not disturb bodily function. It is clear that the human body uses electricity from the chemical bond to the nerve impulse and obviously this orderly sequence can be disturbed by an individual-specific electromagnetic frequency environment. Neighbors and whole communities are already exercising precaution, demanding abstention from wireless in their homes and businesses.

AAEM asks for:

- An immediate caution on Smart Meter installation due to potentially harmful RF exposure.
- Accommodation for health considerations regarding EMF and RF exposure, including exposure to wireless Smart Meter technology.
- Independent studies to further understand the health effects from EMF and RF exposure.
- Recognition that electromagnetic hypersensitivity is a growing problem worldwide.
- Understanding and control of this electrical environmental bombardment for the protection of society.
- Consideration and independent research regarding the quantum effects of EMF and RF on human health.
- Use of safer technology, including for Smart Meters, such as hard-wiring, fiber optics or other non-harmful methods of data transmission.

The AAEM Statement on WiFi in Schools (Approved by the American Academy of Environmental Medicine Board of Directors on October 3, 2012.)

<http://aaemonline.org/wifischool.html>

“Adverse health effects from wireless radio frequency fields, such as learning disabilities, altered immune responses, and headaches, clearly exist and are well documented in the

scientific literature. Safer technology, such as use of hard-wiring, is strongly recommended in schools.”

<http://aaemonline.org/docs/WiredSchools.pdf>

5. **German Doctors Freiburger Appeal in 2002 and 2012.**

Radio-frequency Radiation Poses a Health Risk. Physicians Demand Overdue Precaution.

<http://freiburger-appell-2012.info/en/observations-findings.php>

More than 1000 physicians signed the “Freiburg Appeal” in 2002. It was translated into many languages. As many as **36,000** people from all over the world support its warning about the dangers of radio-frequency radiation. Today—ten years later—we as physicians and scientists call again on our colleagues and the wider global community, but also on all politicians around the world.

As physicians and scientists, we hereby call on our colleagues; on the leaders of federal, state, and local governments; but also on the wider community to take action and implement the following precautionary strategies, which also include fundamental human rights:

1. **Protect the inviolability of the home by minimizing radio-frequency exposure levels, which penetrate through the walls of one’s own home.**
2. Ensure considerably lower radio-frequency radiation exposures as well as exposure limits that reliably protect humans and nature from adverse biological effects of electromagnetic fields. **Any further expansion of wireless technologies is irresponsible.**
3. **Prefer wired solutions for home use and public institutions, especially at preschools, schools, colleges, universities, nursing homes, and hospitals.**
4. Cutback and reprogram continuously emitting devices such as cordless phones, wireless Internet access (Wi-Fi), and wireless smart meters so that they only operate and emit radio-frequency radiation on demand when being used.
5. Provide special protection for children and adolescents: **Children below the age of 8 should not use cell phones and cordless phones; children and adolescents between the ages 8 and 16 should also not use cell phones or only use them in the case of an emergency.** Cell phone and online device advertisements must not be directed at children and adolescents, and these devices should not be used at schools.
6. Attach clearly visible warning labels and safety guidelines for lowering the radiation exposure on cell phones and other wireless devices, including instruction manuals. An important reminder: do not carry a cell phone right next to your body when it is turned on.
7. **Identify and clearly mark protected zones for electrohypersensitive people; establish public areas without wireless access or coverage, especially on public transport, similar to smoke-free areas for nonsmokers.**
8. Promote the development of communication technologies and electricity use that is more compatible with health. Prefer wired solutions for home use and public facilities. Expand fiber-optic networks as the foundation of a modern, sustainable, and performance-based technology that meets the ever-increasing demand for higher data transmission rates.
9. Provide government funding for industry-independent research and education that do not dismiss strong scientific and medical findings of potential risks, but rather work to clarify those risks.

6. **Cyprus Medical Association, the Vienna / Austrian Medical Chambers and the Cyprus National Committee on Environment and Children’s Health: Nicosia Declaration on Electromagnetic Fields / Radiofrequencies, Nov 2017 Common Position Paper**

http://www.cyprus-child-environment.org/images/media/assetfile/HMA%20S_EN_17.pdf

The main issues raised in the Declaration are:

Potential health Impacts of non ionizing radiation from EMF/RF include carcinogenicity (class 2b IARC 2011), developmental neurotoxicity, effects on DNA, on fertility, hypersensitivity and other serious effects are well documented in peer reviewed studies and occurring at extremely lower levels than existing limits. The fact that fetuses and children have delicate systems that direct the development of human life is reaffirmed. Despite scientific controversies substantial scientific evidence of risks for fetuses and children does exist, indicating damages that could be serious and in some cases irreversible. This evidence is strong enough to support precautionary actions and to establish activities and rules for minimizing exposure as well as careful technology handling.

Abstract of the main suggestions made:

At the Policy level guidelines and regulatory standards need to be revised. In the meantime existing science based and biological relevant criteria must be applied to evaluate children's exposure from devices or infrastructures.

Decision makers especially in Education and the Health Sector need to be aware of risks and the existing safe alternatives of the Technology, must consider adequately Health concerns, children's vulnerability and support safe environments in schools, day-care and paediatric units. They must promote age related rational application of digital technology. **Wireless Networks should be prohibited in schools, particularly in preschools, kindergartens and elementary schools, where wired connections should be adopted.** We ask them to follow the ALARA (As Low As Reasonably Achievable) principle and the Council of Europe Resolution 1815 to take all reasonable measures to reduce exposure to RFR.

Exposure at home and schools (where children depending on their age spend at least 60-90% of their time) can and must be reduced by minimising the use of mobile phones and other wireless devices.

Medical professionals, especially paediatricians and obstetricians should be adequately educated

The public have the right to be fully informed about potential health risks from all wireless and EMF transmitting devices/infrastructures and educated on risk reduction strategies. Parents need to be empowered to demand a safe environment at home and schools.

7. 2013 The American Academy of Pediatrics (AAP) (60,000 Pediatricians and Pediatric Surgeons).
Letter to Federal Communications Commission (FCC) and the Commissioner of the U.S. Food and Drug Administration (FDA), August 2013.
<http://apps.fcc.gov/ecfs/document/view?id=7520941318>
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.
8. **Swiss Physicians for the Environment (MfE)**

http://www.aefu.ch/fileadmin/user_upload/aefu-data/b_documents/Aktuell/120316_Brief_NIS.pdf

[translated using Google Translate]

Dear Federal Councillors, Dear national councilors, Dear StänderätInnen

The International Agency IARC cancer called mobile phone radiation as "possibly carcinogenic". The IARC classifies the cancer risk of this radiation is thus equal to one as in prohibited rightly insects DDT.

The radiation exposure from mobile phone has increased greatly in recent years and will continue to rise.

We, the Doctors for the Environment (AefU) note with concern that the NIS Regulation, the Swiss population - but especially sensitive population groups such as children and pregnant women - does not provide sufficient negative Health- impacts of the electromagnetic fields protects.

We appeal to you in your decisions and actions around electricity and radio equipment applications, the precautionary principle "as much as necessary and as little as possible" taken into account.

1. The NIR ordinance protects insufficient

The NIR ordinance dates from the year 2000. Two years later downgraded the international Agency for Research on Cancer magnetic fields as possibly carcinogenic one because studies Children with a load of 0.4 micro tesla show a doubling of leukemia risk. The Swiss limit for stationary installations is 1 micro Tesla. In 2008, showed a Study in Switzerland increased Alzheimer risk for people living near high voltage power lines. The National Research Programme 57 that low frequency magnetic fields the DNA was found Repair capacity of cells to slow down. Population studies of mobile phone use and brain tumors show an increased risk of glioma. Referred to the International Cancer Agency Therefore, mobile phone radiation as "possibly carcinogenic". A case study of the University Zurich reveals that 10 times during the operation of a mobile antenna in a cowshed frequently calves blindness occurred. In view of these studies should Swiss limits by a factor 10 revised downward.

2. The radiation exposure increases continuously

The radiation exposure from mobile phone has increased tenfold in recent years and continues to increase. The introduction of the fourth generation of mobile communications starts with a farther Compaction of the infrastructure. In February 2012, were from the federal government for concessions Awarded new mobile frequencies, which the federal treasury brings nearly a billion francs. Funds for continued research are not provided, although Swiss scientists recommend this in the final report of the NRP 57.

3. The precautionary principle should be applied to non-ionizing radiation (NIR) strictly

We therefore call on you in your decisions

- given the recent studies on a tightening of NIS Regulation to work
- a precaution field reduced infrastructure planning to pursue
- legal basis for mandatory declaration of NIS-emitting devices to create
- the upcoming expansion of the electricity network without additional exposure of the population to plan

• **continuous, independent, practical and interdisciplinary research Focus on vulnerable groups such as children, pregnant women, chronically ill to assist and electro-sensitive patients.**

9. **The Austrian Medical Chamber** (Österreichische Ärztekammer, ÖÄK) 40,000 doctors
<http://wifiinschools.org.uk/resources/safeschools2012.pdf>

Schools should provide the best possible learning environments. In this context low noise levels, good air quality and low radiofrequency / microwave radiation are crucial. Wi-Fi environments will lead to high microwave exposure for students and teachers which might increase the burden of oxidative stress. Oxidative stress might slow down the energy production especially in brain cells and may lead e.g. **to concentration difficulties and memory problems in certain individuals. The Austrian Medical Association recommends Wi-Fi free school environments.**

10. **Declaration: Doctors Call for Protection from Radiofrequency Radiation Exposure** (signed by over 50 MDs)
www.c4st.org/images/documents/hc-resolutions/medical-doctors-submission-to-health-canada-english.pdf

Physicians Call for Health Canada to Provide:

- i) Wireless safety standards that are more protective of the health of Canadians; and**
- ii) Guidelines and resources to assist Canadian physicians in assessing and managing health problems related to microwave radiation.**

There is considerable evidence and research from various scientific experts that exposure to microwave radiation from wireless devices; Wi-Fi, smart meters and cell towers can have an adverse impact on human physiological function.^{1 2} Many recent and emerging studies from university departments and scientific sources throughout the world support the assertion that energy from wireless devices may be causatively linked to various health problems including reproductive compromise, developmental impacts, hormonal dysregulation and cancer. In fact, in 2011 the World Health Organization listed microwave radiation as a Class 2B possible carcinogen³ and subsequent research strengthened the evidence that a stronger designation may be justified.^{4 5 6}

Out of sincere concern for the health of Canadians at all stages of life – from the developing fetus through childhood and into adulthood – we respectfully request that: i) Health Canada develop and support strategies to raise awareness about microwave radiation impacts and to minimize prolonged exposure to microwave radiation in schools and other places where children are regularly exposed.

ii) As Health Canada has acknowledged that a full literature review was not part of its latest update of Safety Code 6 (the safety guideline for wireless exposure pertaining to thermal effects on the tissue of adult males) we request a comprehensive literature review for all age ranges with **less reliance on industry-funded studies.**

iii) Health Canada provide guidelines and resources to assist Canadian physicians in becoming apprised of microwave exposure and related health problems and clinical

presentations that may be associated with over-exposure or sensitivity (similar to the 2012, “Guideline of the Austrian Medical Association for the diagnosis and treatment of EMF related health problems and illnesses.”) (Note; this guideline is under review with an update expected.)

11. **French National Assembly, March 2013**

<http://www.assemblee-nationale.fr/14/ta/ta0096.asp>

This public service **should be implemented in schools through an infrastructure that promotes the use of wired data connections. Indeed, the precautionary principle must push the state and local authorities to protect children, especially the younger ones, the influence of waves.** (Annex section, Create a public service of digital educational)

12. **Israeli Ministry of Education recommendations, August 2013**

Section 4, Radiation systems guidelines WLAN, Wi-Fi and end devices used teachers and students

<http://translate.google.com.au/translate?sl=auto&tl=en&prev=t&hl=en&ie=UTF-8&u=http://cms.education.gov.il/EducationCMS/Applications/Mankal/EtsMedorim/3/3-6/HoraotKeva/K-2013-3-3-6-11.htm>

3.6 Information Technology and Computing

Under this circular detailing practical guidelines are the result of extensive work of the inter-ministerial, and aim to **reduce and minimize the exposure of students and teaching staffs to non - ionizing radiation arising from the use of communication equipment, devices or equipment other end.** Keeping procedures and promote forms all school attendees will help to balance the needs of evolving technology and maintaining the health of students and school staff.

Interpretation of the recommendations:

<http://www.gsma.com/publicpolicy/israeli-ministry-of-education-issue-guidelines-to-limit-wi-fi-in-schools>

Israel’s Ministry of Education has issued a new set of guidelines which will prevent wireless networks being installed in classrooms prior to the first grade and limit the amount of Wi-Fi use between first and third grades.

The new policy that will go into effect in August 2013 also requires that all Wi-Fi equipment be tested for compliance with safety limits before and after installation in an Israeli school and that desktop computers and power supplies be kept at least 20 cm from students.

To limit unnecessary exposure teachers will be required to turn off all radio frequency emitting devices such as mobile phones and Wi-Fi routers when they are not in use for educational purposes.

In the first grade students will be limited to use Wi-Fi to study for one hour per day and no more than three days per week. Between the first and third grades students will be limited to use Wi-Fi up to two hours per day for no more than four days per week.

13.

14. **Oceania Scientific Advisory Association**

<http://www.orsaa.org/>

15. **Cyprus Government ban on Wi-Fi in nursery schools and halted in elementary schools**

See important video link also:

Video from the Government subtitled in English (thanks to EHT)

: https://www.youtube.com/watch?time_continue=1&v=-kb_KWHPFk0

<https://ehtrust.org/cyprus-issues-decree-banning-wireless-kindergarten-elementary-school-classrooms/>

The Cyprus Minister of Education and Culture issued a Decree on January 31, 2017 marked “urgent” to all Directors of Kindergartens and Primary Schools with specific measures to eliminate and minimize wireless radiation exposure to children in schools. **“We have taken the decision to have the wireless network Wi-Fi disabled in all Public kindergartens in Cyprus,” reads the Decree. Wireless is to be removed from all Cyprus kindergartens, wireless installations are halted in elementary schools and limited to administrative offices.**

“The Ministry of Education does not intend to proceed with the installation of wireless points and Wi-Fi access classrooms in elementary school.”

16.

17. International EMF Scientists Appeal

<https://www.emfscientist.org/>

As of March 15, 2018, 237 EMF scientists from 41 nations have signed the Appeal. They had to have published peer reviewed science relevant to this field to be allowed to sign.

International Appeal

Scientists call for Protection from Non-ionizing Electromagnetic Field Exposure

We are scientists engaged in the study of biological and health effects of non-ionizing electromagnetic fields (EMF). **Based upon peer-reviewed, published research, we have serious concerns regarding the ubiquitous and increasing exposure to EMF generated by electric and wireless devices. These include—but are not limited to—radiofrequency radiation (RFR) emitting devices, such as cellular and cordless phones and their base stations, Wi-Fi, broadcast antennas, smart meters, and baby monitors as well as electric devices and infra-structures used in the delivery of electricity that generate extremely-low frequency electromagnetic field (ELF EMF).**

Scientific basis for our common concerns

Numerous recent scientific publications have shown that EMF affects living organisms at levels well below most international and national guidelines. Effects include increased cancer risk, cellular stress, increase in harmful free radicals, genetic damages, structural and functional changes of the reproductive system, learning and memory deficits, neurological disorders, and negative impacts on general well-being in humans. Damage

goes well beyond the human race, as there is growing evidence of harmful effects to both plant and animal life.

These findings justify our appeal to the United Nations (UN) and, all member States in the world, to encourage the World Health Organization (WHO) to exert strong leadership in fostering the development of more protective EMF guidelines, encouraging precautionary measures, and educating the public about health risks, particularly risk to children and fetal development. By not taking action, the WHO is failing to fulfill its role as the preeminent international public health agency.

Collectively we also request that:

- 1. children and pregnant women be protected;**
 2. guidelines and regulatory standards be strengthened;
 3. manufacturers be encouraged to develop safer technology;
 4. utilities responsible for the generation, transmission, distribution, and monitoring of electricity maintain adequate power quality and ensure proper electrical wiring to minimize harmful ground current;
 5. the public be fully informed about the potential health risks from electromagnetic energy and taught harm reduction strategies;
 6. medical professionals be educated about the biological effects of electromagnetic energy and be provided training on treatment of patients with electromagnetic sensitivity;
 7. governments fund training and research on electromagnetic fields and health that is independent of industry and mandate industry cooperation with researchers;
 8. media disclose experts' financial relationships with industry when citing their opinions regarding health and safety aspects of EMF-emitting technologies; and
 - 9. white-zones (radiation-free areas) be established.**
18. 2020: "Measures to reduce exposures from mobile phones have been recommended by the Independent Expert Group on Mobile Phones and PHE continues these recommendations which were accepted by government. The main advice is:
- excessive use of mobile phones by children should be discouraged"
- <https://www.gov.uk/government/publications/radio-waves-reducing-exposure/radio-waves-reducing-exposure-from-mobile-phones>