

1) A 2017 study <https://doi.org/10.3389/fpubh.2017.00279> (Hedendahl 2017, highlighted copy attached) measured wireless radiation levels from cell phones and Wi-Fi at schools under various conditions. This study found that when students were watching Youtube videos streaming via Wi-Fi, the Wi-Fi radiation levels measured the highest at 397 uW/m² (=0.0397 uW/cm²).

Per the [2012 Bioinitiative Report](#), which is a compendium of over 3,800 studies, the following health effects were found in many scientific studies at this radiation level 0.04 uW/cm² and below: **headaches, fatigue, concentration difficulties, and sleep problems**, which you can see here on pp- 1-2:

<https://www.bioinitiative.org/wp-content/uploads/pdfs/BioInitiativeReport-RF-Color-Charts.pdf>

(For example, for RF power density levels 0.003-0.02 μW/cm², Heinrich 2010 found that in children and adolescents (8-17 years, short-term exposure caused headaches, irritation, concentration difficulties in school).

These symptoms are the same symptoms of microwave sickness, as defined by Merriam-Webster's medical dictionary www.merriam-webster.com/medical/microwave%20sickness

Microwave Sickness: *a condition of impaired health reported especially in the Russian medical literature that is characterized by headaches, anxiety, sleep disturbances, fatigue, and difficulty in concentrating and by changes in the cardiovascular and central nervous systems and that is held to be caused by prolonged exposure to low-intensity microwave radiation.*

The study goes on to recommend that because of the high radiation exposure levels, Wi-Fi access points and Wi-Fi on devices be turned off when not in use for academic purposes.

- 2) Attached is file **RFReadingsSchool** showing RF radiation measurements at school in various conditions - school gym, underneath school Wi-Fi router, cell phones, ipads, laptops, areas outside schools with cell towers, outside at schools without cell towers. Also includes brain scan images done by the NIH in 2011 showing increased metabolism in the brain caused by cell phone use.
- 3) A 2011 study (**Mortazavi 2011**, attached) of **469 elementary and junior high school students** found that there was a statistically significant **higher prevalence of headaches, fatigue, concentration problems, heart palpitations, and nervousness among students who used cell phones compared to students who never used cell phones.**

Furthermore, a statistically significant association was found between the **time mobile phones were used in talk mode and the number of headaches per month, number of vertigo incidents per month, number of sleeping problems per month), or even the site of headaches.**

- 4) Attached is **spec sheet of the Aruba Wi-Fi access points** used in my resident school district, where there is one per classroom. Each one is capable of connecting 256 devices, so in a classroom with 30 students, that would provide connectivity for at least 8 devices per student (Chromebook, ipad, cell phone, etc). This is excessive, and more than what's needed, and exposes children to high levels of radiation in the classroom.