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Tip for That #12: Integrative Medicine Competency: Energy Medicine (Microwaves, cell phones and health)

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Tip for That #12

Integrative Medicine Competency: Energy Medicine (Microwaves, cell phones and health) October 27, 2017

Radiation is the emission (sending out) of energy from any source. Radiation exists across a spectrum from very high-energy (high-frequency) radiation to very low-energy (low-frequency) radiation. This is sometimes referred to as the *electromagnetic spectrum*.

Microwaves are a form of electromagnetic radiation and they occupy a place on the electromagnetic spectrum between ordinary radio waves and infrared light. We are exposed daily to microwave radiation from **cell phones**, **Wi-Fi**, **laptops**, **tablets and smart meters**. Emerging science suggests that this exposure may be detrimental to our health.

The International Agency for Research on Cancer (IARC), part of the World Health Organization (WHO), classifies microwave radiation as a possible human carcinogen – in the same category as lead and gasoline exhaust. Wireless technology is linked with **cognitive problems, brain tumors, other cancers, DNA damage, impaired fertility and adverse effects on endocrine, immune and cardiac health.**

Microwave sickness syndrome is a recognized disorder, with the WHO estimating that 3.5 to 5 percent of people suffer from this malady, which includes headaches, nausea, dizziness, fatigue, difficulty concentrating, depression and sleep disorders.

Some interesting research came out of Harvard and Yale medical schools in May 2016, when doctors and scientists warned pregnant mothers to limit their unborn babies' exposure to this potentially harmful radiation by keeping cell phones away from their bellies due to the possible impact on brain development. They also recommended limiting children's use of cellphones, iPads and other wireless technology because it can cause behavioral and concentration problems. The electromagnetic field of Wi-Fi disturbs calcium signaling in the brain, which regulates the flow of information at the cell membrane.

Children absorb ten times more microwave radiation than adults because a child's skull is thinner and smaller. Canada, Europe and other countries have embraced the precautionary principle by enacting policies limiting children's exposure to cell phones and wireless devices. The American Academy of Pediatrics (AAP) updated their recommendations on cell phone and wireless exposure in 2016 after a

study found that exposure to wireless radiation significantly increased the prevalence of highly malignant heart and brain cancers in rodents.

Though human studies on brain cancer are unclear, there is plausible preliminary evidence of an effect. The precautionary principle states that if something has a suspected risk of causing harm, despite lack of scientific consensus, actions should be taken to avoid or minimize that harm. The science behind this may seem preliminary, but there is plenty of evidence and plausibility that microwaves affect us at a cellular level and may contribute to adverse health outcomes.

Though we cannot completely avoid exposure to microwave radiation, here are some tips on reducing exposure:

- Never hold your cell phone to your head. Use a headset instead (better than Bluetooth).
- 2. Keep your cell phone away from sensitive areas (testes, uterus, breasts).
- 3. Turn off Wi-Fi before you go to bed and turn your phone to airplane mode.
- 4. Encourage your children's school to eliminate Wi-Fi and use wired Internet connections instead
- 5. Request your energy company to remove your smart meter.

The widespread use of Wi-Fi and cellular is one of the largest uncontrolled studies in human history. We aspire to practice evidence-based medicine, yet we haven't demanded safety evidence for the use of cell phones, Wi-Fi and smart meters. The new 5G network will include higher frequencies than those ever utilized, or tested, in the history of mankind.

In Health (I hope), Kristen

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Access only for Aurora Family Medicine Residents: see "Electromagnetic Radiation and Health" within the Environmental Health section of the IMR:

https://integrativemedicine.arizona.edu/program/IMR FamilyMed 2017/environmental health an integrative approach 2016/emerging research/8.html

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