

# MEMORANDUM

**TO:** UPCI Faculty and Staff

**FROM:** Ronald B. Herberman, MD

**SUBJECT:** Important Precautionary Advice Regarding Cell Phone Use

**DATE:**

Recently I have become aware of the growing body of literature linking long-term cell phone use to possible adverse health effects including cancer. Although the evidence is still controversial, I am convinced that there are sufficient data to warrant issuing an advisory to share some precautionary advice on cell phone use.

An international expert panel of pathologists, oncologists and public health specialists, recently declared that electromagnetic fields emitted by cell phones should be considered a potential human health risk.<sup>1</sup> To date, a number of countries including France, Germany and India have issued recommendations that exposure to electromagnetic fields should be limited. In addition, Toronto's Department of Public Health is advising teenagers and young children to limit their use of cell phones, to avoid potential health risks.

More definitive data that cover the health effects from prolonged cell phone use have been compiled by the World Health Organization, International Agency for Research on Cancer. However, publication has been delayed for two years. In anticipation of release of the WHO report, the following prudent and simple precautions, intended to promote precautionary efforts to reduce exposures to cell phone electromagnetic radiation, have been reviewed by UPCI experts in neuro-oncology, epidemiology, neurosurgery and the Center for Environmental Oncology

## **Practical Advice to Limit Exposure to Electromagnetic Radiation Emitted from Cell Phones**

1. Do not allow children to use a cell phone, except for emergencies. The developing organs of a fetus or child are the most likely to be sensitive to any possible effects of exposure to electromagnetic fields.

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<sup>1</sup> *The Case for Precaution in the Use of Cell Phones Advice from University of Pittsburgh Cancer Institute Based on Advice from an International Expert Panel*, available at [www.preventingcancer.org](http://www.preventingcancer.org)

2. While communicating using your cell phone, try to keep the cell phone away from the body as much as possible. The amplitude of the electromagnetic field is one fourth the strength at a distance of two inches and fifty times lower at three feet.

Whenever possible, use the speaker-phone mode or a wireless Bluetooth headset, which has less than 1/100<sup>th</sup> of the electromagnetic emission of a normal cell phone. Use of a hands-free ear piece attachment may also reduce exposures.

3. Avoid using your cell phone in places, like a bus, where you can passively expose others to your phone's electromagnetic fields.
4. Avoid carrying your cell phone on your body at all times. Do not keep it near your body at night such as under the pillow or on a bedside table, particularly if pregnant. You can also put it on "flight" or "off-line" mode, which stops electromagnetic emissions.
5. If you must carry your cell phone on you, make sure that the keypad is positioned toward your body and the back is positioned toward the outside so that the transmitted electromagnetic fields move away from you rather than through you.
6. Only use your cell phone to establish contact or for conversations lasting a few minutes, as the biological effects are directly related to the duration of exposure. For longer conversations, use a land line with a corded phone, not a cordless phone, which uses electromagnetic emitting technology similar to that of cell phones.
7. Switch sides regularly while communicating on your cell phone to spread out your exposure. Before putting your cell phone to the ear, wait until your correspondent has picked up. This limits the power of the electromagnetic field emitted near your ear and the duration of your exposure.
8. Avoid using your cell phone when the signal is weak or when moving at high speed, such as in a car or train, as this automatically increases power to a maximum as the phone repeatedly attempts to connect to a new relay antenna.
9. When possible, communicate via text messaging rather than making a call, limiting the duration of exposure and the proximity to the body.
10. Choose a device with the lowest SAR possible (SAR = Specific Absorption Rate, which is a measure of the strength of the magnetic field absorbed by the body). SAR ratings of contemporary phones by different manufacturers are available by searching for "sar ratings cell phones" on the internet.