CELL PHONES AND RADIATION

What you should know

Cellular phones, MP3 players and other mobile devices are a relatively recent phenomenon, but they have become indispensable for the more than 2 billion people around the globe who use them every day.

Recent media reports connecting the use of these devices with brain tumors and other health concerns are leading people to question the long term, radiation risks of exposure to the electromagnetic fields (EMF) emitted by these devices.

While there are many competing points of view, the science in this area is inconclusive. However, there are some facts we do know that might help you to make up your own mind.

What is electromagnetic (EM) radiation?

Electromagnetic radiation is a broad category made up of a number of well-know types of radiation: radio waves, microwaves, visible light, ultraviolet (UV) radiation, and X-rays. These radiation types have become some of the most indespensibe tools of the modern age, enabling everything from microwave ovens to CT scanners.

The difference between these types of radiation is in the amount of energy they have. Radio waves and microwaves generally are very low energy, whereas x-rays can have much more energy.

What kind of radiation do cell phones use?

In order to provide you with wireless voice and data services, your cell phone must transmit and receive signals. These signals are at specific energies of radio frequency (RF) radiation.

RF radiation is low energy and low frequency. It can be used to transmit both AM-FM radio signals and over the air television programing.

Does this radiation pose a health risk?

There have been many studies conducted on this question. There is currently no conclusive evidence linking exposure to cell phone radiation to cancer. According to the Eurpoean Union, "a person who has used a mobile phone for up to 10 years does not have a higher risk of brain tumours or other cancers in the head."

Much of the recent concern has been about the exposure of children to RF radiation from cell phones. There are two main reasons for this concern, first a child's brain is still developing and therefore more vulnerable. In addition, by using cell phones in childhood, a child's lifetime exposure to RF radiation will be significantly longer than that of individuals who started using cell phones later in life.

The limited number of studies focused on the matter could not demonstrate that a higher health risk existed for children, compared to adults.

However, further study is required to make any general conclusions. If there is a health risk from exposure to RF radiation, it would seem to be so minimal that until now it has not been satisfactorily measured. According to the World Health Organization (WHO):

> **"Current scientific evidence indicates that exposure to RF fields, such as those emitted by mobile phones and their base stations, is unlikely to induce or promote cancers."**

I'm still going to use my cell phone. What can I do to minimise my exposure?

You can limit your own or your child's exposure by:

- Using hands-free devices (Bluetooth or wired headsets), which allow you to use your cell phone while keeping the handset away from your head and body
- Limiting the amount of time spent using the cell phone (such as call duration and frequency of calls). The City of Toronto's Public Health department recommends that children under eight should only use mobile phones in emergencies and teenagers should limit calls to less than 10 minutes

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