



## Wireless Technology

Wireless technology, especially in schools, has become an increasingly controversial topic. The steady increase in youth cell phone use and the location of cell towers, as well as the increased use of wireless networks and devices in schools, has made the potential effects of wireless technology on students' health and safety a concern to many parents and educators.

The type of energy used in wireless technology is radiofrequency (RF). RF radiation is non-ionizing. In other words, it is not strong enough to affect the structure of atoms it contacts.

RF can be dangerous at very high levels because it creates heat, and has the ability to heat tissue rapidly. This is the principle by which microwave ovens cook food. Cell phones and wireless networks produce RF, but not at levels that can cause significant heating. For cell towers, RF energy decreases rapidly with distance and ground-level exposures are typically well below exposure limits set by the Federal Communications Commission (FCC).

Wireless technology is still relatively new, and world-wide, researchers continue to study the effects of long-term exposure. To-date, the scientific evidence linking long-term use of cell phones to cancer or other health effects is not conclusive. More research is needed to clarify the question of safety.

### Who is protecting you

#### U.S. Federal Communications Commission (FCC)

The FCC ensures that all wireless communication devices sold in the United States follow safety guidelines that limit radiation exposure. The FCC also authorizes and licenses transmitters and facilities that generate RF and microwave radiation. Major RF transmitting facilities under the jurisdiction of the FCC, such as radio and television broadcast stations, satellite-earth stations, experimental radio stations and certain cellular, PCS and paging facilities, are required to undergo routine evaluation for RF compliance whenever an application is submitted to the FCC for construction or modification of a transmitting facility or renewal of a license. The FCC has authority to take action if a wireless phone produces hazardous levels of RF energy.

#### U.S. Food and Drug Administration (FDA)

The FDA, in collaboration with the FCC, regulates wireless technology devices such as wireless computer networks and cellular phones. FDA monitors the health effects of wireless phones and has authority to take action if wireless phones are shown to emit RF at a level that is hazardous to the user.

### What you can do to protect yourself

Although there is not sufficient evidence to conclude that there is a definite risk associated with long-term cell phone use, people who are concerned can limit exposure by:

- **Limiting use** — reducing the number/length of calls; and
- **Using "hands-free" devices** — Using "hands-free" devices can help to keep mobile phones away from the head.

## Resources

You can explore this radiation source further through the resources at the following URL:

<http://www.epa.gov/radtown/wireless-tech.htm#resources>

We provide these resources on-line rather than here so we can keep the links up-to-date.