



Newsletter

CANCER CONSULTANTS OF AMERICA

BRIDGING THE GAP BETWEEN CANCER AND UNDERSTANDING®

Cancer Answers

Cell Phones and Cancer



Technology is designed to make our lives easier and has become an integral part to our everyday lives. Included in this technology are cell phones that are meant to provide people with accessibility to information, entertainment, and the ability to connect with other people from any location in the world. Interestingly, there are more cell phones in existence than people inhabiting our planet. The first commercially available cell phone was the DynaTAC 8000X made available by Motorola in 1983. Later, generations would refer to this cell phone as the "brick phone" which was made popular by the character Zack Morris on the television show, "Saved by the Bell". Cell phones function by using electromagnetic radiation (energy) to link with cell phone towers that are strategically placed in areas with populations of cell phone users. The cell phone towers also emit energy from their base locations to connect to the cell phones. The cell phone towers are connected to other towers thereby creating a network for communication across great distances. This array of towers allows for cell phone #1 connected to tower A to connect with tower B that is connected to cell phone #2. The common element for these connections is energy which is emitted from both cell phones and cell phone towers.

Cell phones emit energy known as radiofrequency (RF) radiation, more specifically extremely low-frequency (ELF) radiation. Following short durations of exposure to ELF radiation, people have reported feelings of headaches, fatigue, tinnitus (ringing sounds in the ear), and nausea. Scientific laboratory investigations have observed that long-term exposure to ELF radiation resulted in DNA damage in human cells. More meaningful evidence has been collected from people using cell phones for various amounts of time. Buccal (cheek cells) swab samples collected from cell phone users after cell phone use revealed dose-dependent DNA damage within the cheek cells on the same side of the head where the cell phone use occurred. In support of these findings, a study reported increased risk of malignant brain tumors on the side of the head where the cell phone was located during use. Another area of focus is the impact that RF radiation has on the gonads (ovaries and testes) of humans. Following exposure to RF radiation in a laboratory setting, sperm were found to have DNA damage, genetic mutations, and reduced motility. Collectively, these findings suggest that energy emitted by the cell phone can cause DNA damage. It is worth noting that other investigations did not find any adverse effects on semen quality in cell

(continued next column)

phone users who kept their cell phones in their pants pockets. However, this study is flawed because it did not exclusively identify the location of the cell phone on the person while the cell phone was in operation. Failure to provide this information is significant because RF radiation is increased during cell phone operation as opposed to simply being turned to the on position. The exact mechanism connecting RF energy and DNA damage continues to be debated, however the evidence connecting cell phone radiation to DNA damage is known. The DNA damage and mutations that result from RF radiation has been reported and these genetic insults can contribute to the development of cancer.

It is good practice to be aware of the cell phone location while it is in use. Cell phone usage includes any operation that utilizes cellular or wireless connectivity for conversations, searches, and streaming services. By using wired earpieces connected to the cell phone, the user can create distance between the cell phone and sensitive areas of the body. This distance between the cell phone and the user decreases the impact that RF radiation has on the body. In contrast to the benefit of wired earpieces, wireless earpieces also emit RF radiation that can add to the exposure to radiation the body experiences during cell phone operation.

Follow the link for additional reading:

[Jagetia, G.C. \(2022\). Genotoxic Effect of Electromagnetic Field Radiations from Mobile Phones. Environ. Res. 212 \(Pt D\), 113321.](#)

Submit your **Cancer Answers** topics to info@CancerConsultantsOfAmerica.com

We Are Available to You

Please contact us today if you would like more information about how our services can benefit you and your family.

Services:

- Individual and Family Cancer Education
- Medical Appointment Liaison Services
- Information Seminars and Public Speaking Events

Fun Facts – April

Cancer Awareness Month:

- Testicular Cancer (Purple)
- Head & Neck Cancer (Burgundy & Ivory)
- Esophageal Cancer (Periwinkle)
- Minority Cancer (Lavender)



April 2 – National Peanut Butter & Jelly Day 🍪

April 3 – Find a Rainbow Day 🌈

April 10 – National Siblings Day 👨👩👦

April 16 – National Librarian Day 📚

April 23 – National Picnic Day 🍷

April 25 – National DNA Day 🧬

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