

Cell Phones Linked to Brain Tumors

By Stephanie Tardieu

Cellular phones are a multi-billion dollar industry, and it's not hard to see why. Over the past 10 years, it's become the most popular personal item used nationwide on college campuses and in the modern developed world. In the year 2000, it was estimated that 92 million people used cell phones in the U.S. (a number that keeps growing by one million every month). By 2003, the number of users worldwide surpassed 700 million! Though the cell phone was invented as a means to facilitate communication, the inventor himself could not possibly imagine the enormous impact this small and practical device would have today.

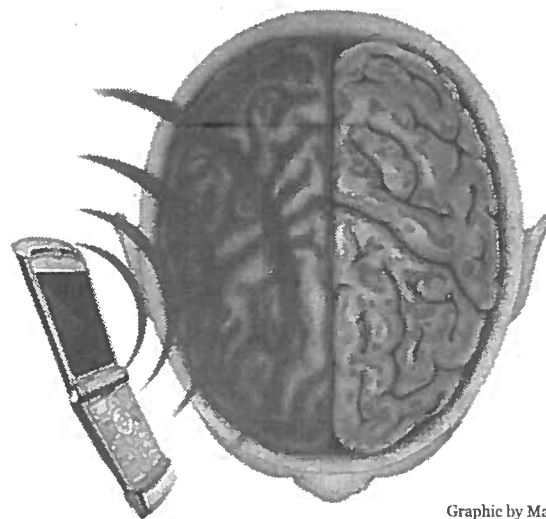
Cell phones not only connect us to our loved ones, but to our work, the Internet, and the world at large all while fitting in the confines of a pocket. Its users include women and men of (literally) all ages. Recently I overheard my niece request a cell phone for Christmas from her parents at the mere age of 7! Cell phones have evolved into a necessity and for some of us, a lifeline we simply cannot do without. I must admit I could not do without my Sidekick II which allows me to maintain my schedule, look up the weather, download my favorite tunes, play Tetris, chat with my girls online, text my boyfriend and of course talk to my mom all at once. A cell phone has

simply become a vital essentiality in our lives. Or is it really vital?

In recent years, the widespread use of cell phones has led to increased concerns about its possible health hazards and long term effects, namely brain cancer. In 1993, a Florida man pressed charges against a cell phone company claiming that his wife's brain tumor was caused by radiation emitted from her cell phone. The lawsuit was dismissed at the time due to a lack of scientific and medical evidence to prove that claim. However, the question still remains: Are cell phones really dangerous?

Cell phones operate with basic electromagnetic energy located between FM radio waves and the waves used in microwaves on the electromagnetic spectrum. This energy is called radio frequency (RF). The amount of RF someone is exposed to through cell phones depends on 2 factors: the distance from the cell phone to the head, and the length and frequency during which the cell phone is used. According to Dr. Glen Kowach, Ph.D., professor of chemistry at The City College of New York, "If you've got some of the newer cell phones, they operate at 2.4 GHz and that happens to be very close to the frequency of your microwave oven. Your microwave oven uses electromagnetic radiation, a wave-

length of light that you can't see. However, these radio frequencies are attuned to the absorption of water. So if you have a cell phone that is tuned to that frequency then the water in your skin and your brain could be heated by it (your cell phone)." Scientists have established that the heating of brain tissues is a prime cause of malignant tumors.



Graphic by Matt Mead

Over the past few years researchers at the Swedish National Institute for Working Life (SNIWL) have extensively investigated the long-term health effects of heavy cell phone usage. Heavy cell phone usage is defined as 2,000 hours or more of cell phone usage. The researchers found alarming and overwhelming evidence linking heavy cell phone usage to the development of malignant brain tumors. The study monitored the cell phone habits of 2,200 brain cancer patients in comparison to the same number of healthy control subjects. Of the 2,200 cancer subjects, 905 reported ex-

tensive use of their cell phones. The malignant tumors were most often found on the side of the brain where the subject most often used the cell phone. In addition, studies on lab rats with RF have lead to similar and even more dramatic results.

Another study, in the *Annals of Neurology*, found that cell phones

affect the brain's electrical activity. Fifteen young men were exposed to cell phones that were turned either on or off. When the phones were on, neurons on the near side of their brain were slightly more active. This effect lasted for about an hour. Previous studies have also looked at how mobiles affect brain functions like attention. For example, last year Australian scientists discovered that cell phone use can temporarily help you with certain tasks that require working memory, but can also slow reaction time.

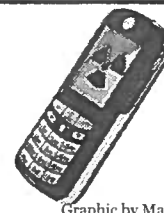
Unfortunately since cell phones are relatively new on the scope of tech-

nology, scientists simply do not have the means to follow-up on the full spectrum long-term effects of their radiation emissions on our health...yet. But the wheels have already been set in motion.

According to Telephia, a major cell phone digital company, young adults between the ages of 18 and 24 are the heaviest consumers of cell phone minutes. The average consumer in that age group uses an average of 1,300 minutes per month and therefore 260 hours per year. At that rate, members of that age group (including myself) would reach the 2,000 hours criteria of heavy cell phone usage in less than 8 years and thus are at the highest risk.

Gustavo Hernandez, a 19 year old sophomore student at the City College of New York surveyed the number of hours he used his cell phone in a month: "I found that I use my cell phone on an average 70 minutes per day so that's 2170 minutes per month". When I told Gustavo the rate at which it would take for him to reach the heavy cell phone usage rate he said: "I only use it to talk to my friends, my job, and my family in DR. I didn't realize how much time I was actually spending on it... So it would take me about 5 years to get to that point...Wow."

According to SNIWL, the cell phone industry denies any claim of their product being harmful. But this new evidence clearly shows that RF radiation is related to



Graphic by Matt Mead

malignant brain tumors. Of course only time will tell the fate for the rest of us real life guinea pigs subject to the cell phone pandemic. But why sit around 8 years and wait for a brain tumor to show up on your CAT scan or MRI? You can start to modify your cell phone behavior today. Scientists working with the SNIWL advise that:

1. You can reduce your exposure to RF energy from cell phones by reducing the amount of time spent on your phone per day.
2. If you must have extended conversations on your cell phone every day, you should place more distance between your body and your phone. This can either be done thru making use of your speakerphone feature or a head set piece.

It's funny how history repeats itself, for instance in the 70s the tobacco companies refused to admit to the overwhelming evidence of cigarette linkage to lung cancer. Well today we all know that's just bogus. It seems that the worldwide billion-dollar cell phone industries have chosen the same route.

So as a fellow cell phone user it looks like yet again we're going to have to think ahead and progressively before we end up like the first generations of cigarette smokers: unsuspecting ill-fated lab rats.

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