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Sent: 6/7/2011 5:35:12 PM  
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Bcc:  
Subject: Fw: FORTUNE - Cell Phone Use is Way Up. So Why are Brain Cancer Rates Down?

Interesting article.

**From:** News Flash  
**Sent:** Tuesday, June 07, 2011 05:26 PM  
**Subject:** FORTUNE - Cell Phone Use is Way Up. So Why are Brain Cancer Rates Down?

FORTUNE magazine reports on the apparent disconnect between radiation doses attributed to cell phone use and brain cancer rates, which have fallen since 1990.

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## **Cell phone use is way up. So why are brain cancer rates down?**

Scott Woolley

FORTUNE, June 7, 2011

*Despite a 500-fold increase in radiation exposure from cell-phones since 1990, brain cancer rates have fallen.*

During the 1980s, just as Americans began pumping low-frequency radiation through their skulls with cell phones, brain cancer rates in the U.S. slowly increased. At the beginning of the decade, doctors delivered the devastating diagnosis of brain cancer to 63 out of every 1 million Americans every year; by 1990 that number had risen to 70 per million. And that's when cell phone usage really took off.

Yet while the link between phones and tumors may have seemed certain to grow, a strange thing happened. Beginning in 1991 the rate of brain cancer incidence reversed course and began to slowly fall. By 2008, the last year for which the National Cancer Institute has data, 65 out of every 1 million Americans got a brain cancer diagnosis annually.

During those same two decades, the radiation beamed by phones into American brains increased about 500-fold, in proportion to the wild growth in cell phone use. There are roughly 60 times more cell phones in the U.S. than there were in 1990, and each one is used for an average of about 20 minutes per day, up from just a minute or two in the industry's expensive early days. The combined effect of more customers each talking more has been a stunning increase in total talk time.

Combining data from the National Cancer Institute and the cellular industry's main trade group yields this intriguing graph:

The chart's clear disconnect between radiation dose and cancer rates does not conclusively prove cell phone are safe, cautions David Savitz, a Brown University epidemiology professor who has studied the issue. Most worrisome, it's possible there is simply a huge delay between a person using a cell phone and that exposure causing a brain tumor.

Yet Savitz also finds the utter lack of an increase in total brain cancer following the massive increase in (low-level) radiation very reassuring. Even if the average lag between exposure and symptoms was 30 years, there would almost certainly be outliers who develop symptoms after just 20 years -- outliers who would be showing up in the data by now. (That's what's happened after early exposures to things like asbestos.) Total cell phone use may have been far lower in 1990, but there were already 5 million subscribers. It wouldn't take many of those early adopters coming down with cell phone-caused brain cancer to bump up the cancer rates in 2008.

"The real question is: When would we see the beginning of the epidemic?" says Savitz, the former editor of the *American Journal of Epidemiology*. "It would be unprecedented relative to other agents we've studied to have no evidence of the beginning of the problem."

The World Health Organization study released last week classified cell phones as "possibly carcinogenic to humans," based largely on a study that found a 40% increased risk for a cancer called gliomas among heavy cell phone users. Those users reported averaging 30 minutes per day talking on their phones over a 10-year period. That's somewhat scary news for the typical AT&T (T) customer, who averaged 21 minutes a day in the first quarter of this year. And

it's *really* scary for customers of low-cost providers that specialize in replacing landline service such as MetroPCS (PCS) or Leap Wireless (LEAP). Customers of Leap's Cricket service average a whopping 50 minutes per day.

And yet, so far at least, all that talking hasn't jacked up the overall incidence of brain cancer.

The ultimate answer to the question of whether cell phones cause brain cancer will only be definitively resolved after a few more decades in which the population's radiation dose stabilizes at a high level and brain cancer rates either jump or continue to decline. That stabilizing has already happened. After three decades of stunning growth, time spent talking on cell phones in the U.S. leveled off in 2010 at 2.7 trillion minutes a year.

<http://tech.fortune.cnn.com/2011/06/07/cell-phone-use-is-way-up-so-why-are-brain-cancer-rates-down/>