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Is cellular phone radiation harmful? ^[1]

Hello Alice,

I regularly use a mobile phone. I read that there is a possibility that you can get cancer, because of the "radiation" of a mobile phone.

Is this true?

Greetings from The Netherlands

Answer

Dear Greetings from The Netherlands,

Given that there are almost seven billion cell phone subscriptions worldwide, this question is pertinent! Current scientific research has shown no consistent relationship between cell phone use and cancers of the brain, nerves, and head/neck area. Modern cell phones operate at a different frequency level and at a lower power level than earlier types of cell phones. Additionally, modern cell phone usage has changed dramatically with the focus shifting away from making calls to texting, using the Internet, and running applications. Recent studies have explored all methods of use, not just the effect of phone-against-ear. However, cell phone technology and the use of cell phones have been changing so rapidly that researchers have been trying to keep up. Consider, however, that all of these studies have been short-term — because cell phones are a relatively new, albeit ubiquitous, part of daily life for many, they haven't yet been subject to studies investigating long-term health effects.

Like microwaves, cell phones emit radiofrequency energy, a form of non-ionizing electromagnetic radiation that can be absorbed by tissues near the phone when it's operating. The amount of radiofrequency energy that a user is exposed to depends on the technology of the phone, the distance between the phone's antenna and the user, the extent and type of use, and the user's distance from cell phone towers. However, to date there is no evidence from studies of cells, animals, or humans that radiofrequency energy can cause cancer. The other type of radiation — ionizing — is much more powerful. This type of radiation, found in x-rays and ultraviolet light, is able to damage the deoxyribonucleic acid (DNA) in your cells, which can potentially cause cancer.

While cell phone radiation can't damage your DNA, cell phone use can cause tissues near the cell phone to heat up from the radiofrequency energy, similar to the way that microwaves heat food. The Food and Drug Administration (FDA) and Federal Communications Commission (FCC) have [guidelines](#) [2] that cell phone manufacturers must follow to limit the amount of radiofrequency energy, and this limit falls well below the level shown to cause any changes in lab animals. Still, the companies must report the energy exposure of each model of phone that they release, so don't fret about radiation levels when deciding on a new phone as these organizations are keeping tabs on the energy exposure of each kind of phone.

If you're still concerned, limiting the time you spend on your cell, keeping the phone away from your body when not in use, and using an earpiece/headset or speakerphone (preferably not in public) will help limit your exposure to radiofrequency energy. In all, experts recommend limiting daily cell phone usage to less than 30 minutes per day. For more information, you may want to check out the [FDA Radiation-Emitting Products](#) [3] section. Information is calling!

Alice!

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