

WiFi Cancer

Wi-Fi, the invisible, wireless communications network, is omnipresent these days. This ubiquity has led to certain individuals becoming concerned that it may be causing detrimental health problems in humans, as highlighted in a recent feature by ABC Catalyst. However, there is in fact no evidence whatsoever to suggest that Wi-Fi causes any sort of harm to anyone at any point during their lives. Wi-Fi (standing for Wireless Fidelity) communicates between devices using radio waves, much like those that transmit television or radio show broadcasts across the world. The frequencies of these radio waves are far higher - between 2.4 and 5 gigahertz - than FM radio transmission, which tend to be around 10 to 100 times lower. As frequency is directly related to the energy of the wave, higher frequency waves are also more energetic.

Human bodies contain systems that rely on electrical signals, like the heart and brain. Particularly energetic radiation could therefore potentially disrupt them, with drastic medical consequences. In addition, certain sources of radiation, such as X-rays, can damage DNA and potentially lead to cancer. So is there any evidence to suggest that the radiation used in Wi-Fi networks - known as radio frequency radiation - also brings about these types of harm? At a recent gathering of the International Agency for Research on Cancer (IARC), a panel decided that radio frequency radiation could possibly be harmful, perhaps inducing cancer. It is classified as a Class 2B possible human carcinogen, but this is by no means evidence of actual danger. Wi-Fi actually shares this category with coffee, carpentry, Styrofoam cups and pickled vegetables - all "possible" human carcinogens. Inclusion in this category means that the possibility that they cause cancer hasn't been ruled out, but the link hasn't been demonstrated. Mobile phones use radio frequency radiation that is similarly energetic to that used by Wi-Fi. There have been a plethora of studies investigating links between mobile phone usage and health problems, including brain tumours. Although some have suggested that the most frequent users are more likely to develop tumours, this could be explained by problems with the way the study was carried out.

In fact, the studies that seem to show a link between brain cancer and radio frequency radiation exposure are often found to be poor or flawed studies. The evidence is, at the very least, massively inconsistent, and far larger studies that have analyzed the results of multiple smaller ones have concluded there is no such link between mobile phone or Wi-Fi exposure and the disease in adults, children and even animals. It's simply not energetic enough to be dangerous. A small number of medical researchers, such as those appearing in the ABC Catalyst feature, may be wary of this "sea of radiation" produced by mobile phone and Wi-Fi networks, but even they admit that there is literally no evidence to suggest that they are harmful.

Adapted from www.iflscience.com

Ex. 1 Find the words or expressions in the text which mean the following:

1) being everywhere: _____

2) to mean sth (especially of an abbreviation): _____

3) a transmission: _____

4) to depend on sth: _____

5) to cause sth to operate wrongly: _____

6) a meeting: _____

7) a growth on sb's brain: _____

8) research with mistakes: _____

9) irregular: _____

10) a sickness: _____

11) a person who conducts studies: _____

12) not figuratively: _____

Ex. 2 Match the expressions from the two columns into logical collocations:

1.	to cause	of studies
2.	there's no evidence	the possibility of sth
3.	drastic	of radiation
4.	a source	exposure
5.	to lead to	whatsoever
6.	to rule out	in a category
7.	a plethora	cancer
8.	to carry out	detrimental health problems
9.	radiation	a study
10.	inclusion	medical consequences

Ex. 3 Provide English equivalents of these expressions:

1) wszechobecny	7) wywoływać nowotwór
2) podkreślić coś	8) czynnik rakotwórczy
3) częstotliwość	9) w żadnej mierze
4) składać się z czegoś	10) niepokoić się czymś
5) szkodzić	11) powodować coś
6) grupa dyskusyjna	12) sklasyfikować coś jako

Grammar corner...

At higher levels even simple words can be problematic, because they take on unusual meanings. One such word is „will” which sometimes, apart from expressing the future, means „tend to” or „assume” (i.e. expect sth to be true). Like in a sentence: *Here’s what I will normally do when I get to the office in the morning* will does not describe a future intention, but what a person tends to do every day. Another example: *You won’t (will not) have any spare change, Sir, will you?* Here what the beggar is trying to express is that he assumes the passer-by doesn’t have any change to give him, but he asks anyway:-) If you want to make assumptions about the past, you just use: *will not have done sth*, e.g. *you won’t have finished the report, will you?*

Ex. 4 Express the following using „will”

1. you assume your friend doesn’t know the answer: ...
2. you usually stay at The Hilton when you’re in Warsaw: ...
3. you assume your employee didn’t read the guidelines: ...
4. you want to explain to „the new guy” that you usually work in a team of 5: ...
5. your grandma never watches the news, so you assume that she didn’t hear about the latest scandal: ...

GLOSSARY	
ubiquity	wszehobecność
to stand for sth	oznaczać coś
a broadcast	transmisja
to rely on sth	polegać na czymś
to disrupt sth	zakłócić coś
a gathering	zgromadzenie / spotkanie
a brain tumour	guz mózgu
flawed studies	badania obarczone błędem
inconsistent	niespójny
a disease	choroba
a researcher	badacz
literally	dosłownie
to cause detrimental health problems	powodować szkodliwe skutki zdrowotne
there's no evidence whatsoever	nie ma absolutnie żadnych dowodów
drastic medical consequences	poważne skutki medyczne
to lead to cancer	prowadzić do zachorowania na raka
to rule out the possibility of sth	wykluczyć możliwość czegoś
a plethora of studies	ogrom badań
to carry out a study	przeprowadzić badanie
radiation exposure	narażenie na promieniowanie
inclusion in a category	zaliczenie do kategorii
omnipresent	wszehobecny
to highlight sth	podkreślić coś
a frequency	częstotliwość
to contain sth	składać się z czegoś
to cause harm	szkodzić
a panel	grupa dyskusyjna
to induce cancer	wywoływać nowotwór

a carcinogen	czynnik rakotwórczy
by no means	w żadnej mierze
to be wary of sth	niepokoić się czymś
to bring about sth	powodować coś
to classify sth as	sklasyfikować coś jako
carpentry	stolarstwo
pickled vegetables	warzywa piklowane
figuratively	metaforycznie

ANSWER KEY:

Ex. 1

- 1) ubiquity
- 2) to stand for sth
- 3) a broadcast
- 4) to rely on sth
- 5) to disrupt sth
- 6) a gathering
- 7) a brain tumour
- 8) flawed studies
- 9) inconsistent
- 10) a disease
- 11) a researcher
- 12) literally

Ex. 2

- 1) to cause detrimental health problems
- 2) there's no evidence whatsoever
- 3) drastic medical consequences
- 4) a source of radiation
- 5) to lead to cancer
- 6) to rule out the possibility of sth
- 7) a plethora of studies
- 8) to carry out a study
- 9) radiation exposure
- 10) inclusion in a category

Ex. 3

- 1) omnipresent
- 2) to highlight sth
- 3) a frequency
- 4) to contain sth
- 5) to cause harm
- 6) a panel
- 7) to induce cancer
- 8) a carcinogen
- 9) by no means
- 10) to be wary of sth
- 11) to bring about sth
- 12) to classify sth as

Ex. 4

- 1) ... you won't know the answer ...
- 2) ... I'll usually stay at The Hilton when in Warsaw
- 3) ... you won't have read the guidelines ...
- 4) ... we'll usually work in a team of 5 ...
- 5) ... you won't have heard about the latest scandal ...