



FULL TEXT LINKS



[Environ Res.](#) 2018 Jul;164:405-416. doi: 10.1016/j.envres.2018.01.035. Epub 2018 Mar 21.

Wi-Fi is an important threat to human health

Martin L Pall ¹

Affiliations

PMID: 29573716 DOI: [10.1016/j.envres.2018.01.035](https://doi.org/10.1016/j.envres.2018.01.035)

[Free article](#)

Abstract

Repeated Wi-Fi studies show that Wi-Fi causes oxidative stress, sperm/testicular damage, neuropsychiatric effects including EEG changes, apoptosis, cellular DNA damage, endocrine changes, and calcium overload. Each of these effects are also caused by exposures to other microwave frequency EMFs, with each such effect being documented in from 10 to 16 reviews. Therefore, each of these seven EMF effects are established effects of Wi-Fi and of other microwave frequency EMFs. Each of these seven is also produced by downstream effects of the main action of such EMFs, voltage-gated calcium channel (VGCC) activation. While VGCC activation via EMF interaction with the VGCC voltage sensor seems to be the predominant mechanism of action of EMFs, other mechanisms appear to have minor roles. Minor roles include activation of other voltage-gated ion channels, calcium cyclotron resonance and the geomagnetic magnetoreception mechanism. Five properties of non-thermal EMF effects are discussed. These are that pulsed EMFs are, in most cases, more active than are non-pulsed EMFs; artificial EMFs are polarized and such polarized EMFs are much more active than non-polarized EMFs; dose-response curves are non-linear and non-monotone; EMF effects are often cumulative; and EMFs may impact young people more than adults. These general findings and data presented earlier on Wi-Fi effects were used to assess the Foster and Moulder (F&M) review of Wi-Fi. The F&M study claimed that there were seven important studies of Wi-Fi that each showed no effect. However, none of these were Wi-Fi studies, with each differing from genuine Wi-Fi in three distinct ways. F&M could, at most conclude that there was no statistically significant evidence of an effect. The tiny numbers studied in each of these seven F&M-linked studies show that each of them lack power to make any substantive conclusions. In conclusion, there are seven repeatedly found Wi-Fi effects which have also been shown to be caused by other similar EMF exposures. Each of the seven should be considered, therefore, as established effects of Wi-Fi.

Keywords: Activation of voltage-gated calcium channels; Brain impact; Electromagnetic field (EMF); Impact of pulsation and polarization; Testis/sperm count and quality; Wi-Fi or WiFi.

Copyright © 2018 The Author. Published by Elsevier Inc. All rights reserved.

[PubMed Disclaimer](#)

Comment in

[Comments on "Wi-Fi is an important threat to human health".](#)

Najera A.

[Environ Res.](#) 2019 Jan;168:514-515. doi: 10.1016/j.envres.2018.07.026. Epub 2018 Jul 31.

PMID: 30075849

[Comment on "Wi-Fi is an important threat to human health".](#)

Arribas E, Ramirez-Vazquez R, Escobar I.

Environ Res. 2018 Nov;167:639. doi: 10.1016/j.envres.2018.08.029. Epub 2018 Aug 24.

PMID: 30173116 No abstract available.

[Response to Pall, "Wi-Fi is an important threat to human health".](#)

Foster KR, Moulder JE.

Environ Res. 2019 Jan;168:445-447. doi: 10.1016/j.envres.2018.10.016. Epub 2018 Oct 22.

PMID: 30390567 No abstract available.

[Re to Wi-Fi is an important threat to human health, Environ. Research 164: 405, 2018.](#)

Pinto R, Sambucci M, Laudisi F, Nasta F, Lodato R, Altavista P, Lovisolo GA, Marino C, Pioli C.

Environ Res. 2020 Dec;191:110138. doi: 10.1016/j.envres.2020.110138. Epub 2020 Sep 2.

PMID: 32890476 No abstract available.

Related information

[GEO Profiles](#)

LinkOut – more resources

Full Text Sources

[Elsevier Science](#)

Other Literature Sources

[scite Smart Citations](#)

Medical

[MedlinePlus Health Information](#)