



5G: Health & Safety

5G is the 5th generation of mobile networks, a significant evolution of today's 4G networks. It is being designed to meet the very large growth in data and connectivity of today's modern society, the internet of things with billions of connected devices and tomorrow's innovations. In addition to delivering faster connections and greater capacity, a very important advantage of 5G is the fast response time referred to as latency, which for 5G will be around 1 millisecond which is virtually instantaneous. This enables the widespread connection of devices for our smart cities and homes, autonomous and safer vehicles, enhanced health care and education.

In relation to the health and safety of 5G, the wireless industry relies on the advice of health agencies such as the World Health Organization (WHO) and adopts the guidelines on electromagnetic field (EMF) exposure of the International Commission on Non-Ionizing Radiation Protection (ICNIRP) and other standards bodies. The ICNIRP guidelines form the basis of many national regulations and of the European Council Recommendation on EMF.¹

In May 2019, the European Commission answered a parliamentary question about 5G and health² and confirmed that the applicable exposure limits remain up-to-date and protective:

"Protection of public health ... is always taken into account. In particular, the strict and safe exposure limits for electromagnetic fields recommended at EU level by Council Recommendation 1999/519/EC on the exposure of the general public to electromagnetic fields apply for all frequency bands currently envisaged for 5G. The 5G Infrastructure Public Private Partnership (5G PPP) ... develops systems designed to operate well below the safe health limits of electromagnetic emissions defined by Council Recommendation 1999/519/EC"

The European Commission's view is in line with other agencies and regulators such as the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) who recently also addressed the topic with the following advice:"

"Contrary to some claims, there are no established health effects from the radio waves that the 5G network uses...(t)his network currently runs on radio waves similar to those used in the current 4G network, and in the future will use radio waves with higher frequencies.

It is important to note that higher frequencies does not mean higher or more intense exposure. Higher frequency radio waves are already used in security screening units at airports, police radar guns to check speed, remote sensors and in medicine and these uses have been thoroughly tested and found to have no negative impacts on human health."³

For those wanting to learn more about 5G technology and how it operates, including health and safety related information, please consult our booklet: [5G and EMF Explained](#).⁴

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¹ Council Recommendation 1999/519/EC on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz)

² http://www.europarl.europa.eu/doceo/document/P-8-2019-001526-ASW_EN.html

³ <https://www.arpansa.gov.au/news/misinformation-about-australias-5g-network>

⁴ http://www.mwfai.org/docs/eng/2018_05_MWF_5G-EMF_Explained_final.pdf