



2020 ICNIRP Guidelines

The International Commission on Non-Ionizing Radiation Protection (ICNIRP) has published their updated exposure guidelines¹. The ICNIRP Guidelines form the basis of many national regulations as well as the European regulatory framework on EMF.^{2,3}

ICNIRP's original guidelines were published in 1998 and reconfirmed in 2009 and 2017. The 2020 Guidelines were developed following a further extensive review of all relevant scientific literature, scientific workshops and a comprehensive public consultation process. The 2020 Guidelines have reconfirmed that the only established hazards from RF exposures above 10 MHz relate to heating.

The updated Guidelines have again been designed to ensure protection for all members of the community by incorporating substantial reduction factors to ensure that any increased temperature caused by RF exposure is well within the normal range that we experience in our daily lives.

The 2020 Guidelines remain substantially the same as the earlier guidelines in terms of limits up to 6GHz in frequency with the new guidance being applicable mainly for frequencies above 6GHz.

With the advent of 5G technology, it is important to note that the new Guidelines cover all the frequencies envisaged for 5G. In practical terms, there will be no change in the typical levels of radio signals experienced in the community since these levels are already well below the limit values established by the Guidelines.

As ICNIRP's Chairman Dr. Eric van Rongen stated in its Media Release⁴ announcing the new Guidelines:

"When we revised the guidelines, we looked at the adequacy of the ones we published in 1998. We found that the previous ones were conservative in most cases, and they'd still provide adequate protection for current technologies. However, the new guidelines provide better and more detailed exposure guidance in particular for the higher frequency range, above 6 GHz, which is of importance to 5G and future technologies using these higher frequencies. The most important thing for people to remember is that 5G technologies will not be able to cause harm when these new guidelines are adhered to."

The mobile and wireless industry support the adoption of ICNIRP based national regulations. We encourage countries that have yet to do so, to adopt the ICNIRP limits as they represent the most up to date assessment of the science and these limits keep exposures well below the thresholds for established health effects.

March 2020

¹ ICNIRP. Guidelines for limiting exposure to electromagnetic fields (100 kHz to 300 GHz). Health Phys 118(00):000-000; 2020. Pre-print. DOI: 10.1097/HP.0000000000001210.

² Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz) <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31999H0519>

³ Directive 2013/35/EU of the European Parliament and of the Council of 26 June 2013 on the minimum health and safety requirements regarding the exposure of workers to the risks arising from physical agents (electromagnetic fields).

⁴ ICNIRP Media Release, March 11, 2020 available at www.icnirp.org