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Stephanie McKee

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Ref: H201902432

Dear Ms McKee

Response to your request for official information

I refer to your request of 10 April 2019 under the Official Information Act 1982 (the Act) for information on the health impacts of 5G communications technology.

The Ministry of Health (the Ministry) provides advice to Government and the public on the health effects of non-ionising radiation, including 5G. There are many misconceptions about 5G on the internet. The balance of research evidence indicates that exposure to the radiofrequency fields produced by any transmitter, including those that will be used by 5G, do not cause health problems, provided they comply with international guidelines. Research reviews have not found persuasive evidence of any adverse effects of exposures at levels which comply with those guidelines. You can find web links for many of the significant review papers that guide the Ministry's policy and advice on its website. This page is updated regularly.

www.health.govt.nz/our-work/radiation-safety/non-ionising-radiation

Standards

The Ministry recommends the use of exposure limits as outlined in New Zealand Standard: *NZS 2772.1:1999 Radiofrequency fields - Maximum exposure levels - 3 kHz to 300 GHz*. More information about this can be found on the Ministry's website by searching 'exposure standards'. This Standard sets limits on exposures to radiofrequency radiation, produced by all types of radio transmitters (including 5G transmitters), for both the workplace and the general public, including millimetre waves. This Standard already includes a precautionary element that requires exposures to be as low as possible.

Any telecommunications site installed by a cellphone network operator is obliged by law to comply with the Resource Management (National Environmental Standards for Telecommunication Facilities) Regulations 2016, which requires compliance with the exposure limits set in NZS 2772.1:1999, irrespective of the technology being used.

The frequencies to be used by 5G are close to those that have been used by other transmitters for many years. 5G modulation is very similar to that used by 4G, and there is no good evidence that health effects are sensitive to modulation.

The following related web links may be useful to you:

- <https://www.health.govt.nz/our-work/environmental-health/non-ionising-radiation/radiofrequency-field-exposure-standard>
- <https://shop.standards.govt.nz/search/ed?q=radiofrequency+fields>
- <https://www.who.int/peh-emf/standards/en/>
- <https://www.icnirp.org/>

Monitoring

The Ministry also convenes an expert advisory committee, known as the Interagency Committee on the Health Effects of Non-Ionising Fields, to review new research. The Committee meets every six months, and its terms of reference require that should there be reasonable suspicion of health hazards, or other issues of significance, these must be brought to the attention of the Minister of Health. The Committee will continue to monitor new research as and when it becomes available.

In addition, the Ministry participates in a World Health Organization (WHO) project to assess the health effects of electromagnetic fields. Information about this project can be accessed at the following link: <https://www.who.int/peh-emf/project/en/>.

Further information may also be available from Radio Spectrum Management (RSM) a business unit of the Ministry of Business, Innovation and Employment responsible for efficiently and effectively managing the radio spectrum in New Zealand. The RSM website is as follows: <https://www.rsm.govt.nz/>

You have the right, under section 28 of the Act, to ask the Ombudsman to review any decisions made under this request.

Please note this response (with your personal details removed) may be published on the Ministry website.

Yours sincerely



Deborah Woodley
Deputy Director-General
Population Health and Prevention