**Biological Effects of 5G Waves (with references)**

**1)- Skin :**

**(Betzalel N, Ishai PB, Feldman Y. Environmental Research 2018; Volume 163, p. 208-216.)**

**2)- Eyes (cataracts)**

**Experimental studies on the influence of millimeter radiation on light transmission through the lens]. Prost, M. Klin Oczna. 1994 Aug-Sep;96(8-9):257-9. (https://www.ncbi.nlm.nih.gov/pubmed/7897988)**

**3)- Multiple adverse systemic effects:**

**(Kostoff RN, Heroux P, Michael A, Tsatsakis A. Adverse health effects of 5G mobile networking technology under real-life conditions. Toxicol Lett 2020; 323:35-40**.)

**4)-  Complex simultaneous dynamic effects inside the brain tissue:**

**(https://ehtrust.org/absorption-of-5g-radiation-in-brain-tissue-as-a-function-of-frequency-power-and-time/)**

**5)- The possibility of 5G technology waves  playing a major role part in the emergence of Covid-19**

**(https://scienceintegritydigest.files.wordpress.com/2020/07/fioranelli.pdf) (this study has been withdrawn possibly under political pressure)**

**6)- stimulation of skin receptors can affect nerve signaling causing a whole body response with physiological effects on heart rate, heart rhythm, and the immune system. Profound** Effects of 5G millimeter  waves on all biological systems includ- ing cells, bacteria, yeast, animals and humans

(Current State and Implications of Research on Biological Effects of Millimeter Waves: A Review of the Literature. Andrei G. Pakhomov. Bioelectromagnetics 19:393–413 (1998). http://www.rife.org/otherresearch/millimeterwaves.html)

7)- 5G waves inducing heart rate changes through skin receptor stimulation

(Reactions of biological systems of various complexity to the action of low-level EHF radiation. Chernyakov GM, Korochkin VL, Babenko AP, Bigdai EV (1989). In Devyatkov ND (ed): "Millimeter Waves in Medicine and Biology". Moscow: Radioelectronica, pp 141-167) (in Russian).

**8)- 5G wavelength (60GHz) has unique property of absorbing oxygen which interferes with the hemoglobin process in the human body**

**https://scientists4wiredtech.com/wireless-at-60-ghz-has-unique-oxygen-absorption-properties/**

**(60-GHZ oxygen band: precise broadening and central frequencies of fine –structure lines, absorption profile at atmospheric pressure, and revision of mixing coefficients**

**M.Yu. Tretyakov, M.A. Koeshelev, V.V. Dorovskikh, D.S. Makarov, P.W Rosenkranz)**

**9)- 5G frequencies (55GHz and 73GHz caused pronounced arthymia**

**(Effects of low-intensity electromagnetic radiation in the millimeter range on the cardio-vascular system of the white rat. Potekhina IL, Akoyev GN, Yenin LD, Oleyner VD (1992): Fiziol Zh [formerly Fiziol Zh SSSR] 78: 35-41) (in Russian).**

**10)- Bacterial Affects and antibiotic resistance:**

**(Effect of millimeter-band radiation of non-thermal intensity on the sensitivity of staphylococcus to various antibiotics. Bulgakova VG, Grushina VA, Orlova TI, Petrykina ZM, Polin AN, Noks PP, Kononenko AA, Rubin AB (1996). Biofizika 41:1289-1293 (in Russian). https://www.ncbi.nlm.nih.gov/pubmed/9044624)**

**11)- Immune System**

**[Suppression of nonspecific resistance of the body under the effect of extremely high frequency electromagnetic radiation of low intensity]. Kolomytseva MP. Biofizika. 2002 Jan-Feb;47(1):71-7. https://www.ncbi.nlm.nih.gov/pubmed/11855293**

**12)- Chromatin effects:**

**(Effects of low-intensity extremely high frequency electromagnetic radiation on chromatin structure of lymphoid cells in vivo and in vitro]. Gapeev AB. Radiats Biol Radioecol. 2003 Jan-Feb;43(1):87-92. https://www.ncbi.nlm.nih.gov/pubmed/12677665)**

**13**)-**Dr. Pall report on 5G listing eight distinct harms of EMF's, 5G included:**

**(https://peaceinspace.blogs.com/files/5g-emf-hazards--dr-martin-l.-pall--eu-emf2018-6-11us3.pdf)**

1. **Attack our nervous systems including our brains leading to widespread neurological/neuropsychiatric effects and possibly many other effects. This nervous system attack is of great concern.**
2. **Attack our endocrine (that is hormonal) systems. In this context, the main things that make us functionally different from single celled creatures are our nervous system and our endocrine systems – even a simple planaria worm needs both of these. Thus the consequences of the disruption of these two regulatory systems is immense, such that it is a travesty to ignore these findings.**
3. **Produce oxidative stress and free radical damage, which have central roles in essentially all chronic diseases.**
4. **Attack the DNA of our cells, producing single strand and double strand breaks in cellular DNA and oxidized bases in our cellular DNA. These in turn produce cancer and also mutations in germ line cells which produce mutations in future generations.**
5. **Produce elevated levels of apoptosis (programmed cell death), events especially important in causing both neurodegenerative diseases and infertility.**
6. **Lower male and female fertility, lower sex hormones, lower libido and increased levels of spontaneous abortion and, as already stated, attack the DNA in sperm cells.**
7. **Produce excessive intracellular calcium [Ca2+]i and excessive calcium signaling.**
8. **Attack the cells of our bodies to cause cancer. Such attacks are thought to act via 15** **different mechanisms during cancer causation.**

**Quote from Nobel Prize nominee Robert O. Becker:**

**"All life pulsates in time to the Earth and our artificial fields cause abnormal reactions in all organisms. Increasing electropollution could set in motion irreversible changes leading to our extinction"**