Natural Supplements protect the body from EMF exposure

Oxidative DNA damage in rats exposed to extremely low frequency electro magnetic fields.

Our results showed that the exposure to ELF-EMF induced oxidative DNA damage and lipid peroxidation (LPO). The **8OHdG** levels of exposed group (4.39+/-0.88 and 5.29+/-1.16 8OHdG/dG. 10(5), respectively) were significantly higher than sham group at 50 and 100 days (3.02+/-0.63 and 3.46+/-0.38 8OHdG/dG.10(5)) ($p<0.001$, $p<0.001$).

https://www.ncbi.nlm.nih.gov/pubmed/15788236

Effects of electromagnetic fields exposure on the antioxidant defense system

Free radical formation can take place in various ways, including ultraviolet light, drugs, lipid oxidation, immunological reactions, radiation, stress, smoking, alcohol and biochemical redox reactions. Oxidative stress occurs if the antioxidant defense system is unable to prevent the harmful effects of free radicals. Several studies have reported that exposure to EMF results in oxidative stress in many tissues of the body. Exposure to EMF is known to increase free radical concentrations and traceability and can affect the radical couple recombination. The purpose of this review was to highlight the impact of oxidative stress on antioxidant systems.

Glutathione (GSH) is an endogenous antioxidant and an important cellular defense agent against oxidative damage.

Treatment with **MEL (melatonin)** significantly prevents oxidative damage in the brain [142].

When applied antioxidant supplemented with EMF exposure, improved the hydrophilic, lipophilic and enzymatic antioxidant blood capacity and partially compensated for these changes [147], [148]. **Vitamin E (tocopherol)** is one of the most important such antioxidants. Compounds of vitamin E, including alpha, beta, gamma and delta tocopherols, are soluble in lipid. Vitamin E is stored in the liver and has many functions.

Our previous study revealed that FA (**Vitamin B9 - Methylfolate**) prevented the adverse effect of exposure to EMF by preventing reductions in cell numbers in the cerebellum and brain. Kıvrak observed that EMF triggered oxidative damage by increasing the levels of CAT activity and reducing GPx activity. They also noticed that oxidative damage in the brain was significantly prevented by FA therapy [75] (Fig. 3).

6. Conclusion
The biological effect of exposure to EMF is a subject of particular research interest. The results of the recent studies not only clearly demonstrate that EMF exposure triggers oxidative stress in various tissues, but also that it causes significant changes in levels of blood antioxidant markers. Fatigue, headache, decreased learning ability, and cognitive impairment are among the symptoms caused by EMF. The human body should therefore be protected against exposure to EMF because of the risks this can entail. **As reported in many studies, people may use various antioxidants such as vitamin E, MEL and FA to prevent the potential adverse effects of exposure to EMF.**

https://www.sciencedirect.com/science/article/pii/S2213879X17300731

Resveratrol may reverse the effects of long-term occupational exposure to electromagnetic fields on workers of a power plant

This study supported that occupational and long-term exposure to high-voltage electricity lines may play an adverse effect on human health, and **resveratrol** supplement could be effective as a protection strategy against ELF-EMFs.

http://www.oncotarget.com/index.php?journal=oncotarget&page=article&op=view&path%5B%5D=17668&path%5B%5D=56570

50 Hz Extremely Low Frequency Electromagnetic Fields Enhance Protein Carbonyl Groups Content in Cancer Cells: Effects on Proteasomal Systems

The finding that **EGCG**, a natural antioxidant compound, counteracted the field-related pro-oxidant effects demonstrates that the increased proteasome activity was due to an enhancement in intracellular free radicals.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2722031/

Effect of Green Tea in Decreasing Electromagnetic Waves Damages

About 60 newest published articles results have been studied in last decade (2002-2013) in this research about inhibitory effects of **green tea** on electromagnetic waves damages.

Pro-oxidant and antioxidant properties of **green tea** can effective to neutralize the harmful effects of chemical-physical environmental pollutants such as electromagnetic radiation. Therefore, in order to promotion of health level and prevention of diseases spread, particularly cancer and reduce the costs of treatment, it is recommended to predict the daily consumption of green tea, with the exception of pregnant women.

http://zjrms.com/en/articles/955.html

Mobile phone radiation-induced free radical damage in the liver is inhibited by the antioxidants N-acetyl cysteine and epigallocatechin-gallate.

Mobile phone-like radiation induces oxidative damage and changes the activities of antioxidant enzymes in the liver. The adverse effect of RFR may be related to the duration of mobile phone use. **NAC** and **EGCG** protect the liver tissue against the RFR-induced oxidative damage and enhance antioxidant enzyme activities.

https://www.ncbi.nlm.nih.gov/pubmed/20807176

Increased DNA oxidation (8-OHdG) and protein oxidation (AOPP) by low level electromagnetic field (2.45 GHz) in rat brain and protective effect of garlic.

To investigate the oxidative damage and protective effect of garlic on rats exposed to low level of electromagnetic fields (EMF) at 2.45 GHz Microwave radiation (MWR). Daily 500 mg/kg garlic was given to Group III during the study period.

RESULTS: Exposure to low level of EMF increased 8-OHdG level in both plasma and brain tissue whereas it increased AOPP level only in plasma. **Garlic** prevented the increase of 8-OHdG level in brain tissue and plasma AOPP levels.

https://www.ncbi.nlm.nih.gov/pubmed/24844368

https://www.deannaminich.com/how-to-protect-yourself-from-emf-radiation/