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Abstract
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Zhejiang Da Xue Xue Bao Yi Xue Ban. 2008 Jan;37(1):34-8.

[Blocking 1800 MHz mobile phone radiation-induced reactive oxygen species production and DNA damage in lens epithelial cells by noise magnetic fields].

[Article in Chinese]

Wu W, Yao K, Wang KJ, Lu DQ, He JL, Xu LH, Sun WJ.

Source

Eye Center, The Second Affiliated Hospital, College of Medicine, Zhejiang University, Hangzhou 310009, China.

Abstract

OBJECTIVE:

To investigate whether the exposure to the electromagnetic noise can block reactive oxygen species (ROS) production and DNA damage of lens epithelial cells induced by 1800 MHz mobile phone radiation.

METHODS:

The DCFH-DA method and comet assay were used respectively to detect the intracellular ROS and DNA damage of cultured human lens epithelial cells induced by 4 W/kg 1800 MHz mobile phone radiation or/and 2 muT electromagnetic noise for 24 h intermittently.

RESULT:

1800 MHz mobile phone radiation at 4 W/kg for 24 h increased intracellular ROS and DNA damage significantly ($P < 0.05$). However, the ROS level and DNA damage of mobile phone radiation plus noise group were not significant enhanced ($P > 0.05$) as compared to sham exposure group.

CONCLUSION:

Electromagnetic noise can block intracellular ROS production and DNA damage of human lens epithelial cells induced by 1800 MHz mobile phone radiation.

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[Publication Types, MeSH Terms, Substances](#)

Publication Types

English Abstract

MeSH Terms

Cells, Cultured

Cellular Phone*

DNA/radiation effects

DNA Damage/radiation effects*

Electromagnetic Fields

Epithelial Cells/metabolism

Epithelial Cells/radiation effects*

Humans

Lens, Crystalline/cytology

Microwaves/adverse effects*

Radiation

Reactive Oxygen Species/metabolism*

Substances

Reactive Oxygen Species

DNA

