

EFFECT OF NON-IONIZING ELECTROMAGNETIC RADIATION AT MOBILE PHONE FREQUENCY ON HUMAN THYROID CELLS

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Background/Purpose: The aim of this study was to examine the effect of non-ionizing electromagnetic radiation (NIER) at mobile phone frequency on human thyroid cells.

Methods: We cultured samples of normal thyroid tissue and subsequently exposed the cultured thyrocytes to NIER for 3 hours. NIER effects were evaluated in terms of proliferation using a cell viability assay and immunohistochemistry.

Results: We found that NIER exposure for 3 hours has lead to an increased proliferation of thyrocytes in cell viability assay ($p=0.007$). This result was confirmed by immunohistochemistry with antibodies against Ki67.

Discussion & Conclusion: In this study we present for the first time an *in vitro* evaluation of NIER effects on human thyroid cells. Our results suggest a proliferative effect of NIER on human thyrocytes, an effect that may link NIER exposure with potential carcinogenesis.