

## USE OF MICRONUCLEAR TEST IN ASSESSMENT OF INFLUENCE OF NEGATIVE FACTORS OF THE ENVIRONMENT ON THE PERSON

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Work has estimated emergence of anomalies in microkernels of a bukkalny epithelium at the population of Republic of Belarus.

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Now on the planet there is a set of the technogenic sources of pollution poisoning the biosphere with the most various connections which can do harm to live organisms. One of the most important effects of influence of pollutants is violation of integrity of genetic structures of cages as it leads to the hereditary changes which are transferred to the next generations. The brightest indicator of this influence can be considered increase in quantity of microkernels in a cage.

Frequency микроядр in the stratified cages widely is used in molecular epidemiology and cytogenetics as a biomarker for assessment of presence and extent of chromosomal damage to the human populations subject to influence of genotoksichesky agents or having a susceptible genetic profile and genomic stability in human populations. For today micronuclear test is very relevant, it is used as the screening of various diseases based on anomalies of kernels in cages.

The minimum invasiveness of collecting cages, low cost, simplicity of storage and preparation of medicines do micronuclear test of a bukkalny epithelium the ideal choice for molecular and epidemiological researches.

Any fabric possessing the dividing cages such as epithelium of a neck of the uterus, gullet, bladder, nasal, bronchial and shchechny mucous membrane can be used for assessment of microkernels. However cells of a mucous membrane of a cheek as they are the first line of contact with many dangerous connections are preferable. The peeled cells of epitelialny fabric receive from active division of a basal layer. These cages migrate to a surface within 5-14 days and can show nuclear damage at this time. The basal layer also provides the first barrier against potential carcinogens.

Under the influence of etiogenny factors in a cage anomalies of a kernel which share on are formed: cytogenetic, proliferative and destruktсионny. Cages with microkernels, protrusions like "the broken egg" and "language", to proliferative – two-nuclear cages, a notch, and to destruktсионny – cages from a perinuklearnny vakuolyu, karioreksisy, kariolizisy and kariopiknozy belong to cytogenetic.

Investigated influence of an anthropogenic zagryazneniye of the environment on cells of a human body. Also it was studied impacts of smoking, alcohol, genetic diseases, allergies, dental diseases, a psychoemotional state on the frequency of anomalies in microkernels of a bukkalny epithelium.

The accurate regularity between these factors and frequency of anomalies has been revealed. At the people subject to one of these factors, the number of protrusions in microkernels and microkernels with karioreksisy and kariopiknozy sharply increased. Thanks to application of micronuclear test on cages of a bukkalny epithelium it is possible to reveal influence of factors of the external environment and to analyse their impact on a human body.

However this test is recommended to be used together with others as results of this research can significantly differ depending on the applied methods of fixing, coloring and methodical receptions of the microscopic analysis.