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**ЗБІРНИК ТЕЗ**  
**МІЖВУЗІВСЬКОЇ КОНФЕРЕНЦІЇ**  
**МОЛОДИХ ВЧЕНИХ ТА СТУДЕНТІВ**  
**«МЕДИЦИНА ТРЕТЬОГО ТИСЯЧОЛІТТЯ»**  
*до 215-ої річниці утворення Харківської вищої медичної школи*





# Теоретична та експериментальна медицина





during 2 minutes of proof-reading test can be divided in 3 groups – 1<sup>st</sup> group with low working ability (<30% of executed work, 26,48±1,7% in average), 2<sup>nd</sup> group – with average working ability (>30%, 33,4±2,36% in average), 3<sup>rd</sup> group – with high (>40%, 43,5±3,77% in average). In dynamics of training groups remain, however, number of people in them changes – increases the quantity of students with average and high working ability and decreases with low, that is estimated by us as an index of adaptation process to psychic and emotional load in university.

Visual memory study showed higher indexes in initial state in students with high working ability on 32% comparing to low and on 14% comparing to average. Such differences were monitored during whole training process however, the positive tendency of visual memory improvement was determined in the end of 3<sup>rd</sup> year.

Regarding visual perception, the greatest worsening was noticed in students of 3<sup>rd</sup> group in beginning, but in the end of 3<sup>rd</sup> training year its indexes improve by 45%, whereas in students of 1<sup>st</sup> group significant changes of visual perception in 3 years were not determined. In people of 2<sup>nd</sup> group those indexes improved by 35% in dynamics of training.

Conclusions. In process of adaptation to training in medical university in 40% of examined students the improvement of visual memory and visual perception as indexes of higher level of brain's integrative activity was determined. Integrative function of brain that can be evaluated based on visual memory and perception is one of factors that provide the level of intensity of adaptation to psychic and emotional stress.

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**EFFECT OF 1,3,7-TRIMETHYLCZANTINE ON THE ANTIPYRETIC ACTIVITY OF PARA-ACETYLAMINOPHENOL AND 4-HYDROXY-2-METHYL-N-2-PYRIDINIL-2H-1,2-BENZOTIAZIN-3-CARBOXAMIDE-1,1-DIOXIDE**

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In medical practice, combined pharmacotherapy with the addition of known caffeine adjuvant (1,3,7-trimethylxanthine) to nonsteroidal anti-inflammatory drugs (NSAIDs) is often used.

The purpose of the study was to investigate the effect of caffeine on the antipyretic activity of the NSAID of different chemical structures - piroxicam (4-hydroxy-2-methyl-N-2-pyridinyl-2H-1,2-benzothiazine-3-carboxamide-1,1-dioxide) and paracetamol (para-acetylamino-phenol) on the background of "milk" fever in laboratory animals - white rats of both sexes of line WAG.

Animals were divided into 7 groups of 6 animals in each group. Animals of the 1<sup>st</sup> group were a control, they were intragastrically injected with 3% starch suspension (2 ml per 200 g rat). Animals of groups 2 to 7 were all injected at once with the 3% starch suspension which consisted experimental medical products and pharmaceutical compositions: animals of the 2<sup>nd</sup> group - piroxicam (1.3 mg per 1 kg of animal weight), 3<sup>rd</sup> group - caffeine adjuvant (0.6 mg/kg), 4<sup>th</sup> group - piroxicam (1.3 mg/kg) with caffeine (0.6 mg/kg), 5<sup>th</sup> group - paracetamol (0.6 mg/kg), group 6 - paracetamol (6 mg/kg) with caffeine (0.6 mg/kg), 7<sup>th</sup> group - reference diclofenac sodium (8.0 mg/kg). Doses were recalculated from human doses to rats, taking into account the coefficient of specific sensitivity according to Rybolovlev Yu.R. "Milk" fever appears in rats at a temperature rise to 38.1-38.8 °C. A peak of temperature was noticed after the introduction of piroxicam, which gradually decreased during 1, 2, 3 hours, but no positive antipyretic effect was observed. After 24 hours the temperature returned to normal.

The peak of temperature was observed (38.10 °C) after the introduction of caffeine but no positive antipyretic effect was observed. After 24 hours the temperature returned to normal.

The peak of temperature decreased slightly after the addition of caffeine to piroxicam. Antipyretic activity of this pharmaceutical composition was 1.3 more times in piroxicam.

Analysis of the dynamics of antipyretic effect of paracetamol showed that the hypothermic action of this drug takes place 1 hour after introduction to 38.33 °C.





A slow decrease of temperature was observed after 2 and then 3 hours subsequently to the introduction of the pharmaceutical formulation of paracetamol and caffeine. After 24 hours the temperature returned to normal.

The peak of temperature was 38.28 °C and gradually decreased after 1, 2, 3 hours after the addition of the reference diclofenac sodium drug (to 37.70 °C) subsequently to measuring the temperature, after 24 hours of the experiment, it returned to normal (37.10 °C).

Thus, in the presence of caffeine, the antipyretic effect of paracetamol significantly increases and prolongation of this effect is observed. Therefore, this pharmaceutical composition is considered appropriate in relation to the antipyretic activity, in contrast to the pharmaceutical composition of the pyroxicam with caffeine, which preventive treatment is not effective due to its low antipyretic activity.

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EXPERIMENTAL STUDY OF THE ANTI-INFLAMMATORY EFFECT OF 4-HYDROXY-2-METHYL-N-(4-METHYLTHIAZOLE-2-YL)-2H-1,2-BENZOTHAZINE-3-CARBOXAMIDE 1,1-DIOXIDE, 1,3,7-TRIMETHYLYXANTHINE AND THEIR COMPOSITION

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Rheumatic diseases are one of the most urgent problems not only in rheumatology, but also in medicine in general due to high rates of their prevalence. According to WHO, 30% of cases of temporary disability and 10% of disablement are associated with rheumatic diseases, and more than 4% of the world's population have various diseases of the joints and the spine. Modern medicine has a wide variety of anti-inflammatory drugs, but the serious problem of already existing medicaments for the rheumatic diseases treatment is that long-term use causes different side effects. Therefore, the search for highly effective pharmacological compositions that suppress inflammation and have a low risk of undesirable side effects is relevant.