

Semenova N., Khristenko N.  
THE EFFECTS OF NOISE ON THE PREMATURE INFANTS  
Kharkiv National Medical University (Department of Hygiene and Ecology No. 2),  
Kharkiv, Ukraine

**Introduction.** Some researchers are consider that premature infants have an increased risk of loss of hearing, violation of cerebral functions, sensory development, and also language problems as a result of noise influence.

The aim of our study was to examine adverse effects of noise on the premature infants in the neonatal intensive care units.

**Materials and methods of researches.** We are inspected 28 children, the conclusions of nursing of that differed substantially. Distribution of children of the sex was 1:1. The middle weight of the total cohort of premature infants was (2043,35±531,67) g (min – 810,0 g, max – 2900,0 g). Research and estimation of the noise loading was conducted by the hygienic methods. Our diagnosis of hearing loss included history of present illness.

**Results of researches.** Noise levels in the NICU № 1 into incubator – 54 dB, in the NICU № 2 into incubator – 34 dB. In the NICU № 1 hearing loss registered in 71,4 % of premature infants, in the NICU № 2 – in 40 % of premature infants. Artificial lung ventilations, resuscitation systems, aspirators, and incubators are the sources of high noise levels in the NICU.

**Conclusions.** Noise can be considered as a factor that could to complicate nursing of premature infants. So, we proposed an algorithm to reduce the noise in NICU. We are proposing to make outside of hearing premature infants the Artificial Lung Ventilation, alarm signals of resuscitation. Currently, we continue to study the impact of noise stress on the development of preterm infants, namely their neurological condition, taking into account the starting neurological status and neurological status of children's in the clinical examination.