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BIOGRAPHY

Alfia I Aminova is a Paediatric faculty from Sechenov First Moscow State Medical University, Russia.

She is the Head of the clinic Federal Research Center for Medico-Prophylactic Technologies for Health Risk Management during 2009-2013. She is working as a Lecturer at two different Universities. Her highest qualification is in Paediatrics and Gastroenterology. Her area of scientific interests is children's gastroenterology, ecology, sports medicine and rehabilitation. She has more than 300 publications, including 127 in peer-reviewed journals and she is the author of seven inventions, two monographs and more than 30 manuals for doctors.

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MONOHYDRIC PHENOL IMPACT ON THE STATE OF CEREBRAL BLOOD FLOW AND COGNITIVE FUNCTIONS OF CHILDREN

Introduction: It is known that among the factors which induce the development of cerebrovascular disorders are hypoxia and the impact of toxic substances on the central nervous system, phenol and its derivatives (cresols) belong to the group of highly hazardous substances (category 2). The main sources of anthropogenic phenols are chemicals such as coke and petrochemicals, textiles, pulp and paper industry. Phenols and cresols are able to accumulate in the brain parenchyma. This may lead to the development of cerebrovascular disorders. The objective of this study is to evaluate the patterns of cerebral haemodynamics and cognitive function impairments for children with vegetovascular dystonia associated with exposure of monohydric phenols.

Conclusions: Thus, dysfunction associated with aerogenic phenol and cresol influence is characterized the linear velocity of the blood flow in the cerebral arteries, a low level of audio-verbal memory, the overall mental development and a high degree of anxiety are the effect markers of conditions of phenol and cresol influence. Identified patterns of cognitive, behavioural status and cerebral haemodynamics are recorded on the background of marker deviations of homeostatic parameters concerning phenol in children in the form of increased level of regulatory hormones and cholinergic neurotransmitters (adrenocorticotrophic hormone, cortisol, serotonin and cGMP), increased lipid peroxidation products, activation and consequent depletion of antioxidant blood activity and an increase of MDA concentration. Submitted patterns of cerebral blood flow and cognitive and behavioural functions can be used as an additional criterion of dysfunctions of the central humoral- metabolic mechanisms in children with influence of monohydric phenols.