

Indicators of hormonal status of the military servicemen in the modern type of military technogenesis

Konopleva I., Meshkov A., Sitdikova I., Alieva G., Ivanova T., Gerasimova L., Khuzikhanov F.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© 2016, International Journal of Pharmacy and Technology. All rights reserved. The paper presents the results of the evaluation of the testosterone level in the military servicemen. The work at the military enterprises is characterized by storage and disposal of chemical weapons and the presence of a number of harmful factors. The effect of carcinogens and reproductive hazards in the operation environment on the hormonal system changes the levels of hormones responsible for the reproductive function of the body. It is known that the reduction in the concentration of testosterone leads to male infertility, and its increase with age can trigger the development of prostate cancer. Testosterone indicators in our study were distributed subject to the contingent, age, length of service and a type of troops. Determination of hormone was conducted by enzyme-linked immunosorbent assay (ELISA) of blood. The study revealed hormonal disorders in all contingents examined. A high-risk group involves retired and former military servicemen (high levels of testosterone were found in 52.1% of the surveyed of this contingent), persons over 70 years old (high levels of testosterone were found in 61.5% of the surveyed in this age group), the workers with length of service of 30-39 years (high levels of testosterone were found in 55.2% of the surveyed with this length of service). Low levels of testosterone were found in private soldiers (3.6% of the surveyed of this contingent), in persons aged 18-29 years (3.3% of the surveyed in this age group), and in those with length of service of 1-2 years (3.6% of the surveyed with this length of service).

Keywords

Hormonal status, Military technogenesis, Testosterone