

frequency of 10-11 Hz. The decrease of the θ/α also means that the influence succeeded.

The process of the reorganization of EEG pattern is carried out unidirectional with the reduction in the system of the disorder measure, random and increase of the reproduction function, which shows the increase of the system efficiency: the optimization parameters grow in 1,5 times in comparison with an outcome before treatment.

It's also necessary to mention that the biotropical EEG parameters reflect normalization of the neurodynamical processes of the brain activity, directed on amplification of the braking reaction.

The Conclusions

As a result of carried out science work we have got the following results, which are new for the science:

1. The model of the efficiency colourstimulating optimization influences at stress was investigated. The light structure of the model met to a pattern of an alpha-rhythm spindle. The alfa-spindle model was developed in such way that, that lightimpulse porosity decreased all over again up to peak of a spindle and then as smoothly increased up to the last lightimpulse.
2. The Formed model to optimization to efficiency of the influence to account of the reinforcement intersystemic relationships of the system of the regulation. For these purpose was released structure in the form of pattern "resonance of breath", including change the correlations to duration of the inhalation and exhalation under unchangeable period 10 seconds.
3. It is designed module biocontrolled of the system deterministic biocontrol, including possibility to independent realization of the synchronous influence by the method of the colour stimulation and resonance of breath.
4. Efficiency training of the colour stimulation beside student, having high neuroemotional load, was charaterized by change their functional condition in after training period to account of the transformations neurodynamic to activities of the brain.

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The work was submitted to international scientific conference «Basic research», Croatia, July 25 - Aug 1, 2009, came to the editorial office on 20.07.2009.

THE EFFECT OF THE CHANGE IN POPULATION QUALITY OF LIFE ON THE VALUES OF PREGNANCY LOSS AND FETUS DEVELOPMENT

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The fact of comparatively higher population quality of life and medical service in previous decades has been a distinction feature of Russia development dynamics for last 20 years [G.A. Komarov, 2009]. Slowing down the rate of economic development is considered as a main cause of direct material losses, missed benefit, non-expectancy to live till a certain number of years. The specific contribution of social loss is accepted to account for 81.6% of total loss, while that of ecological loss – 18.4% [N.I. Kozlova et al., 2002].

Despite the measures undertaken to stimulate birth rate, the before-existent level failed to be achieved, thereby confirming the notion of eventual character of demographic crisis. It should be noted that low values of birth rate are observed in European economically favourable countries as well, because the population urbanization with the change-over to health quasi-modern type is characteristic of industrial society. The most important causes, giving rise to different disorders of intrauterine development, include chronic malnutrition and improper nutrition of women before and during pregnancy [V.A. Shchurov et al., 2008]. In the countries undergone fascist occupation the baby development in mothers, who went hungry in war time, was accompanied by a number of disorders: increasing the incidence of spontaneous abortions, premature births, mortinatality [Yu.I. Novikov et al., 1981]. The children born grew weakened, they had more diseases and higher mortality rate. In countries with higher animal protein consumption the body size of younger-age children was relatively more [T.V. Volkova, 1988]. For example, in Bombay, where society caste structure still remains, the body mass of "the lowest" class newborns amounts to 79% of the value of "the highest" class children [R.K. Ignat'yeva, 1970]. In France the body length in the newborns of immigrants from South Africa is less in comparison with natives of Paris [F. Rovilli-Sausse, 1998]. In

21.6% of children from relatively poor Eastern Kentucky the body length is lower than 15th percentile, that is closely connected with education level and father's employment status [D.L. Crooks, 1999].

The aim of the present study was to analyze the effect of changing quality of life in the Kurgan Region population on the frequency of pregnancy loss, and that of fetus and newborn growth and development. The work is based on the analysis data of 2600 delivery and newborn histories within the period of 1989-2008, 95 fetuses of pregnancy loss, and that of studying the intellectual abilities of 445 children under school age.

After 1991 the Kurgan Region, economically successful before, changed into a region with the economy of depressive character, losing up to 1% of population every year, and a half of the region population found itself far from poverty boundaries. The region population has been observed to consume much less animal food products. 1/3 decrease of meat product consumption couldn't affect the growth and development of newborns, first of all, in those families where women are engaged in industry doing physical work. According to this, the birth rate has decreased from 20‰ in 1989 to 9‰ by 1997, and it still remains at the level of 10‰ at present. The process of body growth acceleration of Kurgan girls has lagged behind its tempo in other large towns. The mean values of girls' body growth have rested upon the level of 163±0,4 cm. The analysis made demonstrated that beginning from 170 cm the decrease of longitudinal body sizes of women in labor and their pelvis size is accompanied by not only the decrease of body sizes, but by that of newborn head as well. The decrease of head circumference from 36.1±0.1 to 34.5±0.1 cm has been revealed in newborns of different years after 1990.

The tendency towards systemic hypotension and anemia has been revealed for women in labor from unfortunate families. Pregnancy loss prevention remains the most important reserve of birth rate. In cases of pregnancy loss in women with special education from an economically more successful group this loss occurs in later periods. The degree of fetus maturity increases accordingly from 19% to 45%.

Within the period of 1990-1997 the incidence of the arrest of children intrauterine development increased from 2% to 16%, and by the present it has reached 6% of newborn number. The percentage of premature children has amounted to 2.9%, 8.4% and 4%, respectively. Under the conditions of economic crisis the values of Apgar-1 scale 8% decreased ($p \leq 0.001$). Besides, the dependence of this value on a district latitude disappeared, but the difference between urban and rural newborns remained.

Hence, in economically unfavourable families the retardation of newborn growth was observed, which affected head growth to a lesser extent. Under favourable conditions such children would compensate for developmental retardation in postnatal period.

This is not so in practice, because after their birth these children remain in the same families of insufficient material security. The coefficient of intellect in children under school age was found to be lower than age-related standards. Mother's level of education is of importance for the development of intellectual abilities in children, particularly in rural ones under school age. Family's material security plays more important role in the development of intellectual abilities in urban children, particularly in boys. In economically unfavourable families the coefficient of intellect in children under school age depends directly on the level of parents' income.

Early pregnancy, the absence of husband in a woman, as well as the absence of special education, work – these are considerably unfavourable factors, first of all those of economic aspect. Under the conditions of material sufficiency these factors just can't have a restraining effect on fetal growth and child's development.

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The work is submitted to Scientific Conference "Basic and applied research in medicine", France (Paris), October 13-20, 2009. Came to the Editor's Office on 26.08.2009.