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DESCRIPTION RU2085108C1

A METHOD FOR PREDICTING THE FUNCTIONAL DEPENDENCE OF THE HUMAN BODY ON
HELIOGEOPHYSICAL FACTORS

[0001]

The invention relates to medicine, helioclimate pathology and space anthropoecology.

[0002]

The purpose of the invention is a prognostic assessment of the functional dependence of

the human body on heliogeophysical factors based on a computer analysis of the space environment during critical periods of intrauterine life.

[0003]

The objective is achieved by entering the subject's date of birth into a computer database of space conditions for 6-8 decades using seven parameters: Wolf numbers, sunspot area, solar radio emission, interplanetary magnetic field, geomagnetic activity indices, the number of magnetic storms, and the phase position of the Moon. This database calculates the combination of the above-mentioned heliogeophysical factors during any of the forty weeks of intrauterine development, evaluates the combination of heliogeophysical factors and the strength of their impact on the body during the formation of the body's main functional systems and during critical periods of ontogenesis, identifies the functional system that has experienced the most intense impact of these factors, short-term exposure of the body to hypogeomagnetic "load," and determines the form of functional heliogeophysical dependence.

[0004]

The method is carried out as follows.

[0005]

The computer database is fed with daily data on the space environment for the past 6-8 decades (the average lifespan of a human) based on seven parameters: Wolf numbers, sunspot area, solar radio emission, interplanetary magnetic field, geomagnetic activity indices, the number of magnetic storms, and the phase position of the Moon.

Then the exact date of birth of the subject is determined and entered.

The computer program calculates a combination of heliogeophysical factors, conditionally classified by the strength of their impact in ranks from 1 to 7, during any of the 40 weeks of the intrauterine period of the body's development.

They evaluate the combination of heliogeophysical factors and the strength of their impact during critical periods of "laying down" and formation of the main functional systems of the body.

Based on the data obtained, the functional system of the body that experienced the most intense impact of the above-mentioned factors of solar and geomagnetic activity is identified. The parameters of this functional system become markers. Then the body is exposed to a short-term hypogeomagnetic "load" in a special installation that weakens the induction of the Earth's magnetic field by 800 to 1000 times. When the functional parameters selected by the markers change during the 1st to 3rd minute of the subject's stay in a hypogeomagnetic environment and the presence of intrauterine exposure to solar activity and the Earth's magnetic field in ranks from 7 to 5, a high degree of functional heliogeophysical dependence is diagnosed. If functional parameters change at 4-6 minutes and there is intrauterine exposure to solar activity and the Earth's magnetic field in ranks from 4 to 3, a medium degree of functional heliogeophysical dependence is diagnosed. When functional parameters change during the 7-10th minutes of stay in a hypogeomagnetic environment and intrauterine space exposure in ranks from 2 to 1, a conclusion is made about a low degree of functional heliogeophysical dependence.

[0006]

The degree of heliogeophysical dependence is assessed in a similar manner for other variants of the ranks of heliogeophysical factors and the time of development of physiological responses.

[0007]

With intrauterine exposure to the geomagnetic environment (assessed by geomagnetic activity indices and the number of magnetic storms) in ranks from 3 to 7 and a pronounced reaction of the body to the heliogeomagnetic environment, the GMF form of heliogeophysical dependence (from the geomagnetic field) is determined.

With intrauterine exposure in ranks from 3 to 7, characterizing the activity of the Sun (Wolf numbers, radio emission, sunspot area), a conclusion is made about the SA form of heliogeophysical dependence (on solar activity).

With intrauterine exposure to the interplanetary magnetic field in ranks from 3 to 7, a conclusion is made about the IMF form of the heliogeophysical dependence (from the sector structure of the interplanetary magnetic field).

[0008]

The use of this method allows us to predict the degree and form of the functional heliogeophysical dependence of the human body, to determine the optimal periods and means for carrying out preventive measures in cases of pronounced heliotropic and magnetotropic reactions (the early use before the onset of natural heliogeophysical disturbances of such therapeutic and preventive means as a hypogeomagnetic installation, point magnetic applicators, etc.).

[0009]

Example 1.

Subject K. was born on September 20, 1969.

Computer analysis of the period of intrauterine development revealed the presence of extreme values of the geophysical environment in the rank of 5 to 7 (number of magnetic storms) in the fifth month of the intrauterine period, during which the formation of the visual organs occurred.

[0010]

Taking this circumstance into account, a study was conducted on the dark adaptation of the retina, which in this case is a marker of the functional system.

After assessing the initial parameters, the study continued in a hypogeomagnetic chamber with measurements taken at the 3rd, 5th and 10th minutes. The greatest deviation of the parameter from the initial level was noted at the 3rd minute of stay in the chamber. Based on the obtained data, a conclusion was made about the high degree of functional heliogeophysical dependence of the organ under study, in particular, the visual sphere, on the geomagnetic field, and the GMF form of the functional heliogeophysical dependence was determined.

[0011]

Example 2.

The subject R. was born on November 20, 1964. Computer analysis of the period of intrauterine development revealed the presence of extreme values of the heliogeophysical environment in the rank from 1 to 2 (interplanetary magnetic field) in the third month of intrauterine development. During this period, the cardiovascular system is “laid down”, the parameters of which are selected as a marker. After assessing the initial parameters, the study continued in a hypogeomagnetic chamber. At the 9th minute, a slight increase in blood pressure, increased pulse rate, and a feeling of pressure in the frontal-temporal region on the right were noted. Consequently, the conclusion about the low degree of functional

heliogeophysical dependence of the organism under study, in particular, the cardiovascular system, is determined by the MMF form of heliogeophysical dependence.