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INFORMATION TECHNOLOGY FOR DIAGNOSTICS AND MANAGEMENT OF PERSONAL HEALTH

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Statement of the Problem: The main source of health of the person - healthy life style (HLS). Modern information technology can help to personalize and optimize HLS, raising it to the level of HLS-HiTech. Main indicators of person health its physical and mental working ability.

Major factors of ensuring health: physical activity and proper nutrition. Also such indicators of person viability as his biological age and risk of death are important for integrated assessment.

Results: For assessment and optimum control of above-mentioned indicators and factors of health we created the computer system consisting of a number of autonomous modules. The Risk module - for assessment of general risk of death of the person in the next 10 years. The Bioage module - for biological age assessment for an organism and its separate systems. The Physical Working Capacity module - for determination of level of physical reserves and personal optimization of the program of their increase. The Mental Performance module - for testing the main characteristics of cognitive and sensorimotor human abilities and for optimization of the schedule of the intellectual work. The Healthy Food module - for nutrition quality estimation and diet optimization. The Stress module - to estimate stress level and to choice means to its reduction. Input data for these modules are results of questioning and simple functional tests.

Conclusion & Significance: The created modules are the basis of currently developed Internet system of personalized healthcare support. The system is recommended for individual and family application. In general, the developed tools allow to raise HLS to HLS-HiTech level. The system can be useful not only at personal, but also at the population level. For example, it was used to optimize the food basket of Russia.

Notes:

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