



## **THERMODYNAMICS CONCEPTION OF HEALTH AND PROPHYLAXIS**

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### **Abstract**

It becomes firmly established on the basis of long-term researches, that epidemic of chronic noninfectious diseases a decline of ability of aerobic formation of energy is the basis of, that specifies the functions of mitochondria's on insufficiency.

**Keywords:** Thermodynamics conception of health, aerobic energy, «industry of health»

### **Introduction**

Hopes to improve the health of population due to clinical medicine are illusive, because perfection of curatively-diagnostic help does not diminish the amount of patients. To do a

population healthier medicine is unable by reason of distinctions in technologies of affecting mechanisms of health and illness. Deciding a problem is possible only by one method: to distinguish a health in an independent category and manage the name of. It maybe, if to examine life and health from positions of thermodynamics.

## **Theoretical bases**

Nothing in the world takes place without the expenses of energy. It touches and life as process [1, 2 a. o.]. And than more potential of energy of living organism, he is steadier to external and internal influences [3, 4]. Formation of energy in the living system is transformation of sunny energy in thermal, mechanical, electric to and other types of energy. An eventual link of process and his accumulator are mitochondria's. Efficiency of their activity at organism level shows up in the maximal consumption of oxygen (MCO, ml/min/kg). Thus, viability of organism is determined by his potential of energy, that can be identified with a physical health level and measured [4]. And it means that it is possible to manage (to save, restore, strengthen) viability (by a health).

In the process of evolution there is perfection of efficiency of intracellular formation of energy [5], i. e. this function has for form's sake Homo Sapiens the evolutionary conditioned threshold that we named a «safe» health level [SHL] and gave quantitative description to him [3, 4]. Higher SHL register oneself neither endogenous risk of chronic noninfectious diseases [CND] nor diseases [3]. For 25 years the stake of population of Ukraine, being in a «safe zone» health, diminished from 8 to 1% [4].

At influence of negative factors of environment, including social, unhealthy style of life, aging, etc. there is a decline of intracellular formation of energy. In accordance with thermodynamics conception of health and prophylaxis [3] the exit of efficiency of this process outside SHL is accompanied by the phenomenon of «selfdevelopment» of pathological process and is primary cause of epidemic of CND (a decline of energy - height of entropy - chaos of functions - pathology). At distribution of similar changes in the scale of population, except development of epidemic of CND, an aging rate is accelerated, a reproductive function suffers, the physical qualities of and other go down, i.e. the phenomenon of biological degradation of Homo Sapiens is formed [7].

First reaction of organism on a defect ATP in cages is an increase of level of arteriotony [6]. Thus, fight against endogenous risk of development of CND factors without the increase of potential of energy to the level conditioned by an evolution, - ineffective. Myers J. [9] confirmed our conclusion [4] that subzero

indexes of aerobic capacity are more powerful predictor of general death rate and cardiovascular morbidity, what other cardiovascular risk factors, such as a hypertension, smoking, hyperlipidemia and diabetes mellitus. An Aspenes S. a.o. [10] in researches of the healthy Norwegian population confirmed our the data about the presence of SHL, showing that every decline of MOC on 5 ml/min/kg below SHL increases the risk of development of cardiovascular pathology on 56%.

Thus, morbidity and death rate of modern population are conditioned, mainly, by mitochondria's insufficiency, i.e. by the decline of health level, and CND - only investigation of this process [6].

### **Ways of decision of problem.**

In an order to provide making healthy of population, creation of «industry of health» (in addition to existent «industry of illness») is needed. At the investment of facilities in a health practically healthy man the necessity of financing of problems of sick people will diminish appropriately.

«Industry of health» is presently formed as centers of fitness, shaping, SPA, wellness and other. But they are created without a due scientifically-technological ground, professional approach and application of management technologies by a health.

We are work out the express-estimation of health level, accessible on complication for a middle medical personnel, and a case frame is created by the health of man [ 3, 4]. Only at joint determination of indexes of health and illness and their comparison it is possible to talk about the prognosis of the state of health of concrete man and present for him diseases, and also determine correct strategy and tactics of making healthy and treatment. Making healthy must come true constantly, and treatment - if necessary.

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