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In this letter we would like to present data, which has been obtained in an experiment carried out in order to establish optimal dosage of Life Enhancer.

Introduction:

It is known, that human organisms have to adjust constantly for a great deal of irritants of different capacity during its life span. The most interesting fact for us is that the response of an organism to any influence always has common features at certain periods of time. These features do not depend on the nature of the irritant, but on the power of the influence. H. Selye was the first to demonstrate in his multiple experiment existence of some common nonspecific syndrome appearing after any strong influence of different nature or after repetitive influences. Selye described this reaction of the organism as stress reaction, and the agents responsible for this reaction were called "stressors" (Selye, 1963). Later, however, this term was expanded without sufficient reasons.

Selye described the organism reaction in extreme conditions, however, adaptation reactions always take place in usual life also. Next step in the development of adaptation theory was made by a Russian scientists, Garkavy Kvakina, Ukolova (1983). Their hypothesis, and later the theory of adaptation reactions, revealed another reaction quite different from stress which follow weak and medium influences. The response to weak irritants was called the reaction of training, and to medium ones - the reaction of activation. It is important to mention here that the latter reaction has its own levels, namely the reaction of low activation, the reaction of increased activation, and the reaction of very high activation. They also paid attention to the so-called "elements of strain" in each reaction which usually appear, when the pressure of affectant becomes stronger, and the reaction tends to the next one. The order of reaction driving is as follows: the training reaction, the reaction of low activation, the reaction of increased activation, and the reaction of very high activation, stress. The emergence of strain elements demonstrates, that the reaction has reached its upper level, if the influence has been increasing. The strain elements are shown in Table 1. These authors also described a complex of changes in the neuroendocrine system. They proposed a method for identification of certain organism reactions, based on fixing changes occurring in proportions between different blood cells. It is important to stress that all these changes do not exceed parameters considering to be normal by practical doctors, so traditional medicine is not interested in these data. However, the dynamics of these parameters can demonstrate an adaptation capacity of each person, reflect existence of exertion caused by excessively strong influence, what may, in turn, prevent the disease. Actually, we deal with the method allowing to observe premorbidable conditions, when some concrete symptoms cannot be registered yet. It is necessary to say here, that because of uncertainty in the medical norms, we used those accepted by Garkavy et al. (Table 1). This particular method makes it

possible to fit the proper measure of influence for each person, and the nature of such **affectants**. does not have significance (it may be a single biostimulator, a mixtures of **biostimulators**, magnetic field, drug, physical training, etc). The authors found that the training reaction and the reaction of low activation correspond to the state of physiological comfort and the lack of danger for one is health, therefore, the “reaction of high activation” is actually the fist level of stress according to Selye, the early beginning of a disease, although features of serious organic disturbance at this moment are not observed, and it is impossible to establish any diagnosis.

The aim of our investigation was to determine the effectiveness and dosage of Life Enhancer, which is **necessary** for maintaining of the “training reaction”, or the “low activation”.

## **Materials and Methods**

Eight volunteers (7 females and 1 male) have participated in this experiment. The age ranged from 28 to 60 years old. The control analysis of peripheral blood has been made for each of them before the experiment. We used a method accepted in hematological practice, based on the count of the following blood cells:

1. Total amount of **leucocytes** in liquid blood.
2. Total amount of eosinophil liquid blood.

We also prepared blood smears stained after Pappenheim with further analysis under microscope and counting:

1. Lymphocytes,
2. Monocytes,
3. Segmented neutrophils,
4. Basophil,
5. Eosinophil, but we have used data on this type of cells obtained from the liquid blood.

Data on standard medical norms are shown in Table 2. After the control analysis all patients started to take Life Enhancer in different doses. We made blood analyzes for each of them twice a week at fixed times for 1.5 months and once a week during the last month. So the period of observation accounted for was 2.5 months. Data on each patient is presented in the tables attached. The dose, shown in the table, reflects the quantity of Life Enhancer taken by the patient the day before.

## **Results and Discussion**

From this group of patients, we have considered each person separately. The present study has preliminary character. A small amount of the group observed in the experiment does not allow to make serious conclusions. However, we should take note of the following:

1. The increase of LE dosage appears to be the cause of the strain in the adaptation

reactions.

2. The decrease of LE dosage results in normalization of blood analyzes, although it does not occur immediately.

3. Under the condition of low liver and kidney function, LE tends to be accumulated in the organism, what may be the cause of very high activation emerging, although the dosage still remains constant.

4. We have not observed any dependence of the present reaction from the menstruation cycle.

5. The disturbance of the proper intervals between LE intakes during a day may provoke the reactions of very high activation, even stress.

6. To obtain the harmonical reactions, one should take the LE not less than 2 months.

7. It's necessary to decrease the amount of LE, otherwise the strain elements began to occur and later it can cause the high activation reaction, what is likely to be connected with recovering of hypothalamus sensitivity to hormone influence (Dilman, 1987). In spite of the fact, that biostimulators are used from the ancient time, there is no complete information about them as there are no definite criteria for their usage. The mechanism of their affection on the organism is different from drugs. Actually, the biological science has just recently started the investigation of these mechanisms and the searching of necessary criteria for appliance of different herbs.

So, each observation in this field may be useful.

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Patient 1.

**A woman of 28 years old, without any health status complains.** She had taken 6 tablets of Life Enhancer (LE) per day before the experiment, so we asked her to interrupt intake for a week. In control analysis, we observed the reaction of high activation or training with simultaneous existence of so-called "strain elements" (the level of segmented neutrophil was below the normal, lymphocytes above normal, and basophil above normal). his patient began to take LE from 6 tablets per day. She continued to take 6 tablets per day during next 2 weeks, then we registered in her analysis stress-reaction (20% of lymphocytes, eosinophil near the upper borderline of the medical norm, basophil exceeding the norm). The next analysis displayed very high reaction of activation (eosinophil almost twice more than the upper meaning of the norm, basophil also exceeding the norm). Total combination of these characteristics corresponds to the allergic reaction. The next analysis, under the previous conditions of intake, showed further increase of tense in the organism (leucocytosis, growth of eosinophil and basophil). After that we decided to change the dosage of LE to 4 tablets a day. In the following analysis we observed a tendency of normalization of the reaction with the decrease of eosinophil to the level of medical standard, however the levels of basophil and lymphocytes still remained very high. With the permission of the patient, we raised the dosage again until 6, and then 9 tablets a day. It resulted in increasing eosinophil, and much more essential increase of basophil, than before. It's interesting that the organism reaction appeared to be late with the response to the dosage alteration. The repetitive increase of the dosage was accompanied by sleeplessness. After that we decreased the dosage to 4, then 3.5 tablets a day. Again, we observed the normalization of blood reaction with the substitution of the very high activation by the reaction of increased activation and training without the elements of strain, However, the last analysis revealed very high activation, which might have been the result of the previous sensibilisation, from the one side, and may also have reflected the necessity of further decrease of the dosage, from the other side.

Patient 2:

**A woman of 40 years old complains of depression and weak health.** Control showed very high activation. Started the intake of LE at 2 per day. We observed the following changes in the blood: (the constant and gradual increases of both **leucocytes** and eosinophil, but without exceeding the range of medical standards). The reaction of increased activation was dominant the first time. However, soon it was submitted by the reaction of very high activation, and after

the increase of the dose until 4 tablets, we registered leucocytosis, basophilia (2.3%), and also the prevalence of the reactions with the strain elements. We decreased the dosage to 2.5 tablets, but we **didn't** manage to normalize the reaction and after 2 weeks the very high activation with the basophilia was still observed.

Patient 3:

**A woman of 25 years old.** She has endocrinological problems, low liver function, and a kidney disease. Control showed the existence of very high activation (lyphocvytes 47%). After the beginning the LE intake from 2 tablets, we saw emerging of the training reaction, later transformed in the increased activation with the growth of basophil to the upper level of the medical standard. After the dosage raising to 3, and later to 9 tablets, we observed very high activation, with occurring leucosytosis, and followed the stress reaction (lymphocytes 19%). While decreasing the dose the reaction of increased activation and low activation without strain were registered. The patient, according to her personal opinion, began to feel better.

Patient 4:

**A woman of 32 years old complains of migraine, menstruation disfunction, and depression.** Control demonstrated the complete lack of eosinophil in the presence of the training reaction, which means the existence of chronic stress. This particular patient was observed just once a week. She started with 2 tablets of LE and we **didn't** register any changes during the next 2 weeks. However, later we saw either the training reaction with strain, or the reaction of very high activation, what made us to change the dose to 1.5 tablets a day. In this case we succeeded to maintain either the reaction of training, either low activation, or increased activation without strain. The last analysis showed the emergence of eosinophil, what be can considered to be some kind of achievement.

Patient 5:

**A woman of 30 years old complains of nervousness.** Control analysis displayed very high activation with strain (eosinophil below the norm, lymphocytes 50%, basophil above the norm). The starting dose was 2 tablets. At the beginning we observed leucocytosis, increase of the monocytes (9%) in the presence of another parameters corresponding to the training reaction. Later the leucocytosis disappeared, and the increased activation reaction became dominant. According to her personal feeling the nervousness began to disappear. We should mention here, that although the **observed** reactions **didn't** have any features of strain at that time, the amount of basophil had been increasing constantly to the upper level of the norm. Before the analysis of July, 16, the patient had taken 2 tablets late in the night (after 11 :OOp.m.) And next morning at 7:00a.m., we observed stress with leucocytosis, lymphopenia (lymphocytes 16%), but after the resuming of the previous scheme of LE intake, all these dangerous indications disappeared.

Patient 6:

**A woman of 59 years old without any health status complains.** Unfortunately, she

could only participate in the experiment for 3 weeks. Her constant dosage was 2 tablets a day. We didn't register any changes in her blood analyzes, what might have been the result of the short period of time for her observation, or the result of so-called "hyperadaptosis", which is characteristic for this age (this term was suggested by Dilman in 1987).

Patient 7:

**A man of 50 years old without health complaints.** We paid attention on high, in comparison with the other patients, level of leucocytes. Control showed the reaction of increased activation. He started with the 4 tablets of LE, what was accompanied by leucocytosis, basophilia, the occurrence either very high activation, or increased activation with strain elements. We have found the data in literature about the differences in man and woman organisms in the sensitivity regarding different biostimulators (Garcavy et al., 1983). So we increased the dosage to 6, then to 9 tablets, after that the reaction of training and increased activation was observed. The question about the reasons of high leucocyte level has remained opened.

Patient 8:

**A woman of 40 years old without complaints of health problems.** Control showed very high activation. She started the LE intake from 2 tablets. The observation revealed the increase of leucocyte, eosinophil, basophil but without exceeding the norm. During the first two weeks the reaction of very high activation occurred. Later it was substituted by the training reaction. The leucocytosis on the 23<sup>rd</sup> of July appeared not to be in relation with LE, but was caused by physical training. The increase of LE to 4, 6, or 9 tablets led to prevailing of the reaction of very high activation, and after 9 tablets the strain was maximal (segmented neutrophils 31%, lymphocytes 62%). After the decrease of the dosage to 2, then 1.5 tablets, we registered a tendency of reducing of the leucocytes to 47%, and growth of the segmented neutrophils to 47%. This state is very close to the harmonical reaction of increased activation, but lymphocytes slightly exceed the demanding level (47% instead of 45%). The patient felt the improvement of health condition.