

THE IMPORTANCE OF BEEHIVE PRODUCTS FOR SPORTSMEN

A. BALTUSKEVICIUS, J. IVASKEVICIENE, V. ZELEZNIAKENE, LITHUANIA

In this report, we wanted to give some scientific information on the importance of the utilization of beehive products for active sportsmen.

Sportsmen are undergoing strenuous training. In modern training, fatigue or overtraining may occur. This has a great influence on the organism. But the reaction to the training charges is individual.

So each sportsman can adapt himself to a hard training regime by using correct recovery means.

Some important means of recovery of the human body and of improvement of the working capacity are: the pedagogical, the medical-biological and the psychological training. But one of the most important means is a rational alimentation based on vitamins, not on harmful pharmacological substances. And the beehive products are very useful for a fast and complete recovery.

Honey, bee bread, pollen, royal jelly – all these are concrete products used for the recovery of sportsmen.

We began to use beehive products when the USSR handball team was trained for the Olympic Games in Montreal in 1976, where the Soviet team won only gold medals. A spoonful of bee bread mixed with honey was added to the ration of the sportsmen twice a day.

Knowing the importance of the beehive products, we used them in the ration of athletes. Two series of investigations were carried out.

To stimulate the physical ability of sportsmen, we used beehive products for a period of 20 days. Two times a day, in the morning and in the evening, they received the following beehive products:

- a) 5 g 2:1 honey with bee bread;
- b) royal jelly with glucose, under the shape of pills, in doses of 70 mg, placed under the tongue;
- c) 10 g of pollen.

According to our experience, this mixture of beehive products proved to be optimal.

At first, 19 highly qualified athletes (runners and jumpers) were examined. They had a medical check-up and tests before and after the administration of the beehive products.

The data showed that their physical ability increased. The oxygen consumption increased, too. Also, 17 of the investigated athletes improved their sport results.

In the second series, 20 sportsmen of the Lithuanian combined team (high-level throwers and masters of sport) were examined. During a period of three weeks, the athletes were administered beehive products in the same combination and doses as for the first series of athletes. The throwers underwent training six times a week, three hours per day, in a regime of maximal and submaximal effort.

Table 1

Data in the Investigation of Track-and-field Athletes

	At the beginning of the investigation	At the end of the investigation	p
PWC 170 kg/min	2733±44.5	2936±32.5	p<0.01
PWC 170 to 1 kg of body mass	13.6±0.63	14.7±0.43	p<0.05
VO ² max 1/min	3.8±0.03	4.3±0.18	p<0.5
VO ² max ml/min to 1 kg of body mass	45.5±0.8	46.9±0.6	p<0.05
Dynanometry of hands			
right	59.4±0.6	61.0±0.5	p<0.05
left	57.4±1.8	59.3±1.5	p>0.05
Spirometry	5.100±50	5.330±43	p<0.05
Pneumotracheometry			
in inhalation	6.95±0.2	7.45±0.17	p<0.01
after expiration	5.9±0.3	5.9±0.3	0

Table 2

Data of the Investigation

	Lactate mmol/l		Urea mmol/l	Hemoglobin (g%)
	After training	Recovery after 24 hours		
At the beginning of the investigation	11.53±0.07	4,6±0.04	7.5±0.14	13.8±1.11
At the end of the investigation	6.09±0.11	2.4±0.04	4.5±0.03	14.9±0.14
p	<0.05	≤0.05	≤0.05	<0.01

The various functions of the blood vessels, the respiratory organs, the muscular activity, the haemoglobine, the lactic acid, the urea in the blood and the physical activity were tested.

By comparing the data of the examinations before and after the experiment, we found that, under the influence of the beehive products, the quantity of haemoglobine in the blood increased. The physical activity index and the oxygen consumption increased, too. The spirometry, the pneumotracheometry, the hand dynamometry, the lactic acid and the urea concentration in the blood showed the positive influence the beehive products have on the organisms of sportsmen. At the end of the investigation, the concentration of lactic acid in the blood decreased after the physical activity. The most important fact is that the recovery of the organism increased after 24 hours.

No allergic reactions were observed. Eighty percent of the athletes improved their performances. All the tested sportsmen were in good shape and full of energy.

Taking into consideration the value of the beehive products and the results of our investigation, we may assert that the beehive products increase the physical ability and some functions of the organism and improve the sportsmen's performance.

It is necessary for sportsmen who undergo difficult trainings to use beehive products as means of improving the process of recovery.

The beehive products are valuable not only as means of stimulation. Their main value resides in the fact that they are a natural source of energy. Another important feature of the beehive products is that they have no harmful effect on the human organism like other stimulants which may cause serious side effects.