EFFECTS OF CORDYCEPS FOOD SUPPLEMENT ON ADAPTATION OF PHYSICALLY ACTIVE INDIVIDUALS TO PHYSICAL LOADS
Milasius Kazys, Peciukoniene Marija, Dadeliene Ruta
(Vilnius Pedagogical University, Lithuania)

In sportsmen’s nutrition, the Cordyceps food supplement gaining popularity. It is produced from the fungus Cordyceps sinensis. Therefore, investigations of the effects of Cordyceps, a food supplement used by sportsmen, on their blood morphological and biochemical indices is important. The aim of the study was to elucidate the effect of the natural food supplement Cordyceps on the blood morphological and biochemical indices of physically active individuals.

The study cohort comprised 28 sportsmen aged 22-25 years, their physical activities being mainly oriented toward developing their aerobic endurance. After the first examination when the sportsmen’s indices of physical development, physical working capacity, functional capacity, psychomotor functions, blood morphological and biochemical composition had been established, the study subjects were divided into two groups (experimental and control), 14 subjects in each. Members of the experimental group (Group 1) were administered Codyceps in capsules, each containing 500 mg of dry fermented powder of the multicomponent fungus Cordyceps sinensis. Codyceps was administered for 14 days according to the following scheme: 4 days – one capsule with breakfast an one with lunch, 6 days – one capsule three times a day, and 4 days one capsule four times a day. Members of both experimental (Group 1) and control (Group 2) groups did not change their daily routine: they attended lectures at the university and had their usual exercises.

Blood from the vein was taken for morphological and biochemical analyses. A Micros-60 hematological analyzer was employed to examine the total blood picture which included: red blood corpuscles (RBC), hemoglobin concentration (HGB), haematocrit (HCT), mean red corpuscle volume (MCV), mean corpuscular hemoglobin (MCH), mean corpuscular hemoglobin concentration (MCHC), red corpuscle distribution area (RDW), platelet (PLT), mean platelet area (PDW), platelet index (PCT) erythrocyte sedimentation rate (ESR), white blood corpuscle (WBC) count, lymphocyte (LYM), monocyte (MON), granulocyte (GRA) count and percentage.

Blood biochemical investigations were performed using a Reflatron-IV express–analyzer. The following indices were examined: creatinekinase (CK), creatinine (Crea), cholesterol (Chol), triglicerides (Tg), bilirubin (Bil), urea (Urea), uric acid (Ua).

We found that changes of the indices of red blood corpuscles, mean red corpuscle volume, red corpuscle distribution area, mean corpuscular hemoglobin and its concentration in the blood of the study participants over the experimental period were insignificant and showed no positive effect of Cordyceps on hemopoiesis.

Over the experimental period, positive changes in leucocyte number and leukocyte formula were revealed. At a lower total lymphocyte count, the number of lymphocytes increased, and in the leucogram the percentage ratio between granulocytes and agranulocytes was leveled. Creatinine concentration, which statistically significantly increased over the experimental period on the background of lowered creatinekinaze, uric acid and urea levels in the blood of the study individuals; indicates the ergogenic effect of Cordyceps on the energetic system and physical and functional performance of the sportsmen’s body.

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