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Changes in Some Hematological Factors During Short-term Starvation in Juvenile Siberian Sturgeon, *Acipenser baeri*

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Abstract

The Effect of starvation interrals on hematological factors including hemoglobin, hematocrit, red (RBC) and white blood cell (WBC) count and corpuscle indices (MCV, MCH, MCHC) of Siberian sturgeon, Acipenser baeri, with an initial body weight of 19.71±0.83g was studied in a flow-through rearing system. After adaptation for one week to experimental conditions, 15 experimental fish were randomly distributed each in twelve 500L fiberglass tanks and were subjected to 4 different feeding regimes: C, control (fed four times daily); T1 (2 days starvation); T2 (4 days starvation) and T3 (8 days starvation). At the end of the starvation periods, blood samples were collected from the caudal vein and were immediately transported to the laboratory for analyses. Hematocrit value in the control group was significantly lower ($P<0.05$) than the fish starved for 2 days. MCHC value in the control group was significantly higher ($P< 0.05$) than the fish starved for 2 days. Hemoglobin concentration, RBC and WBC counts, MCV and MCH did not show any significant difference between the treatments and the control group ($P>0.05$). WBC count decreased with longer starvation periods, though not significant ($P>0.05$). It could be concluded that hematological factors of juvenile Siberian sturgeon were not significantly affected by short-term starvation. But analysis of these factors alone might not give a clear picture of the physiological condition of fish and hence the use of other blood physiological factors is suggested in future studies.

Keywords*: Acipenser baeri, Food deprivation, Hematological factors, Corpuscle indices*