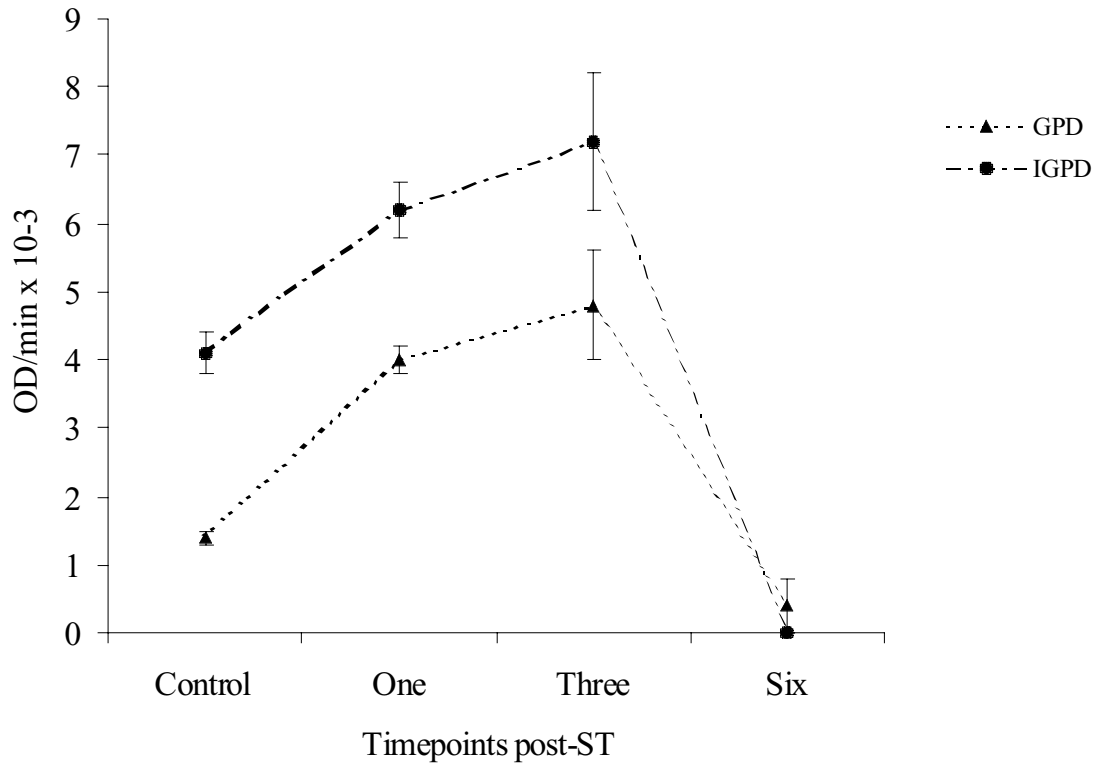
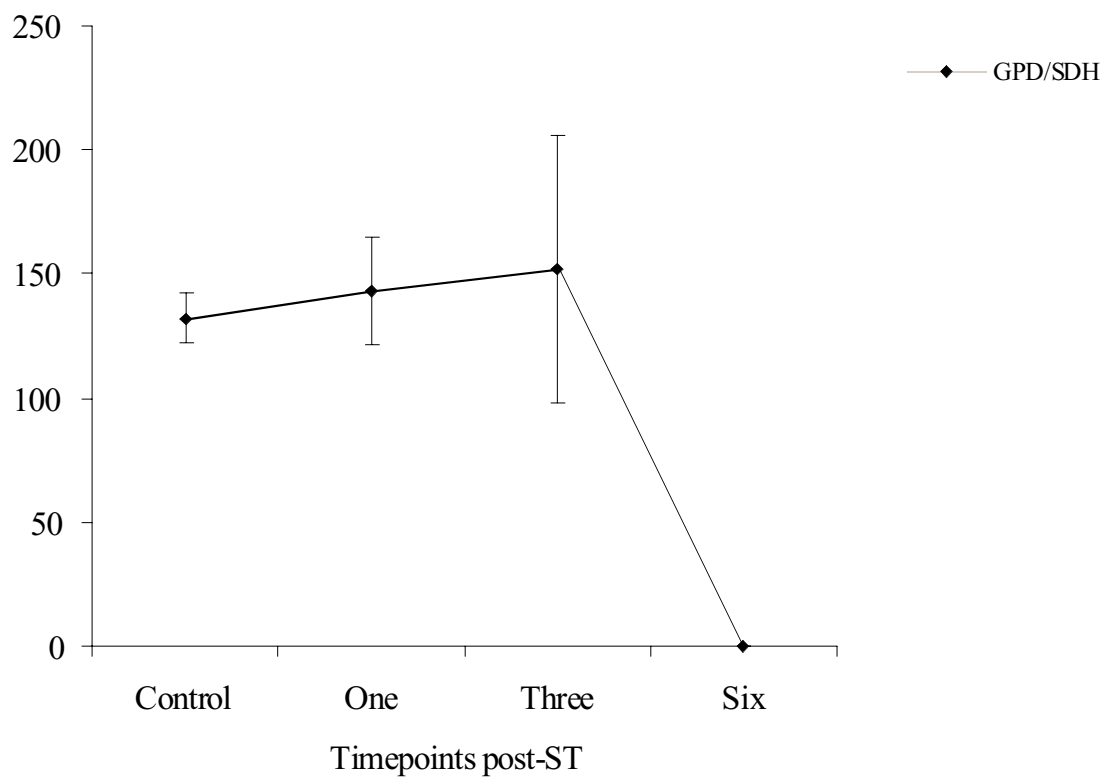


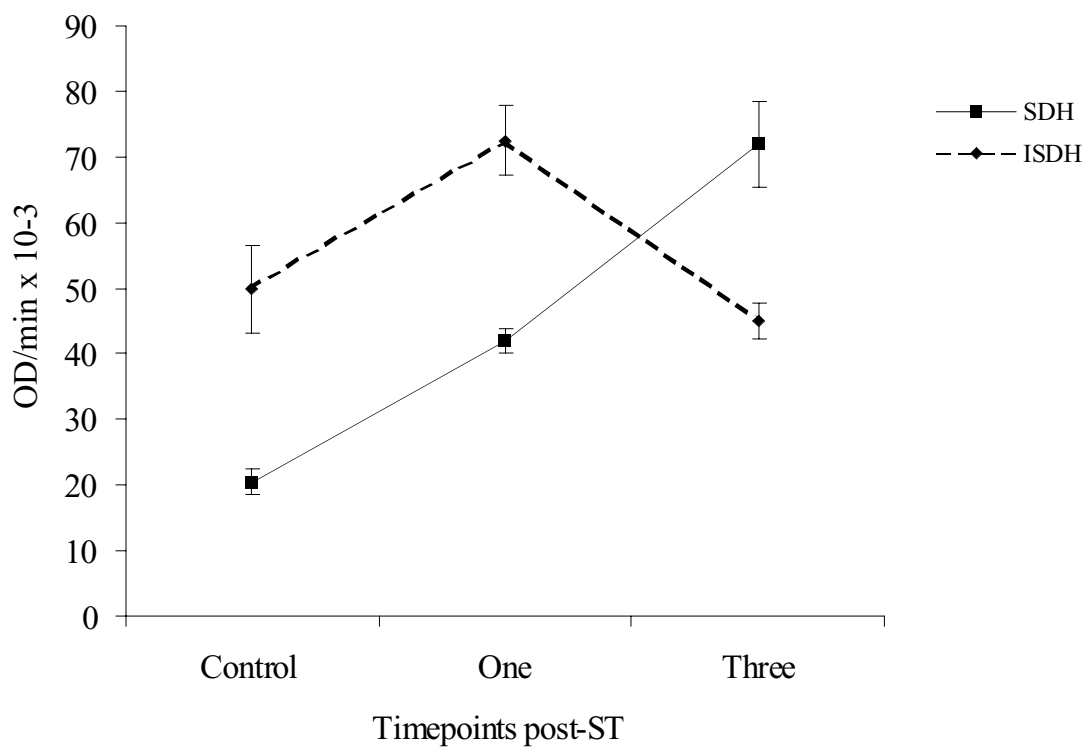
**Figure 7.** SDH and ISDH enzyme activities in slow fibers of rat soleus following spinal cord transection. Values are means – SEM. a, significantly different from control. b, significantly different from one month post-ST. c, significantly different from three months post-ST. Significance was accepted at  $P < 0.05$ .



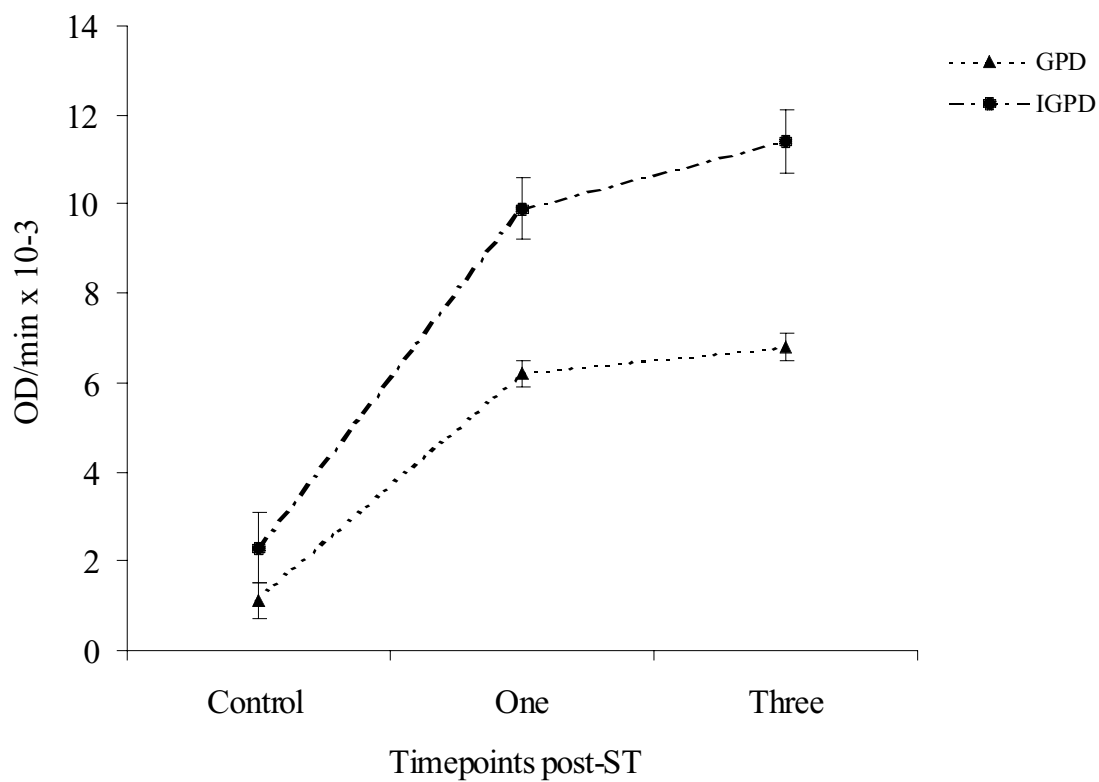
**Figure 8.** GPD and IGPD enzyme activities in slow fibers of rat soleus following spinal cord transection. Values are means – SEM. a, significantly different from control. b, significantly different from one month post-ST. c, significantly different from three months post-ST. Significance was accepted at  $P < 0.05$ .



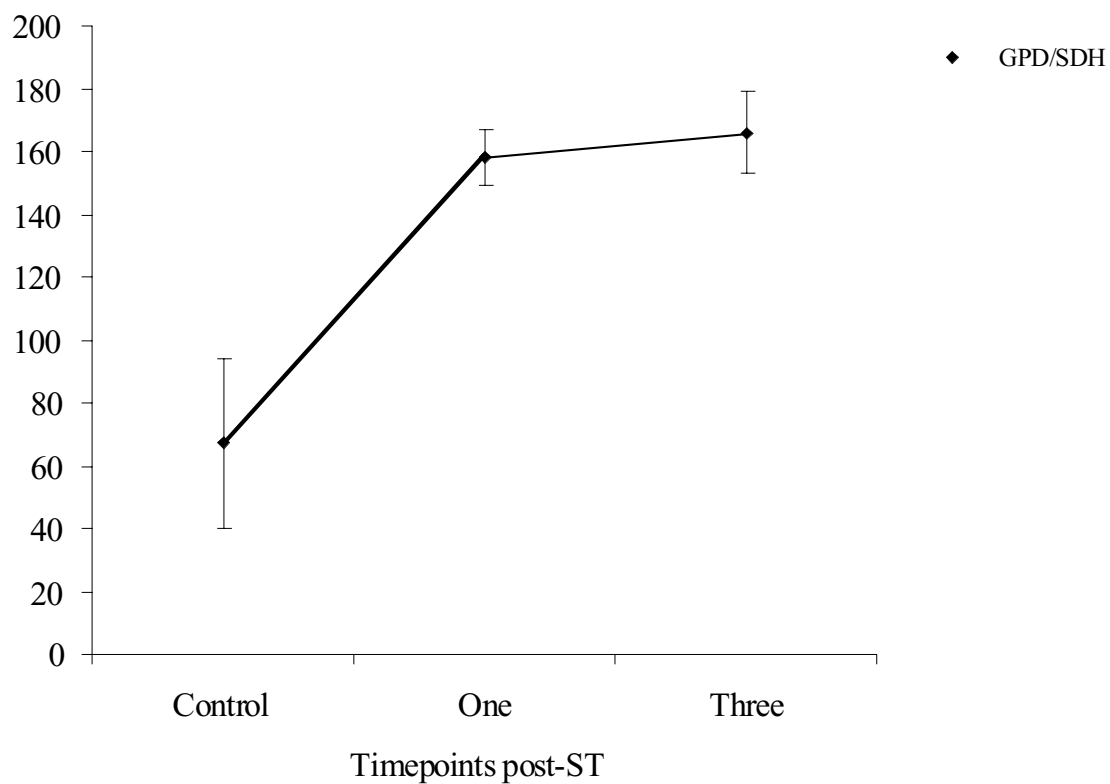
**Figure 9.** GPD/SDH ratio in slow fibers of rat soleus following spinal cord transection. Values are means – SEM. a, significantly different from control. b, significantly different from one month post-ST. c, significantly different from three months post-ST. Significance was accepted at  $P < 0.05$ .



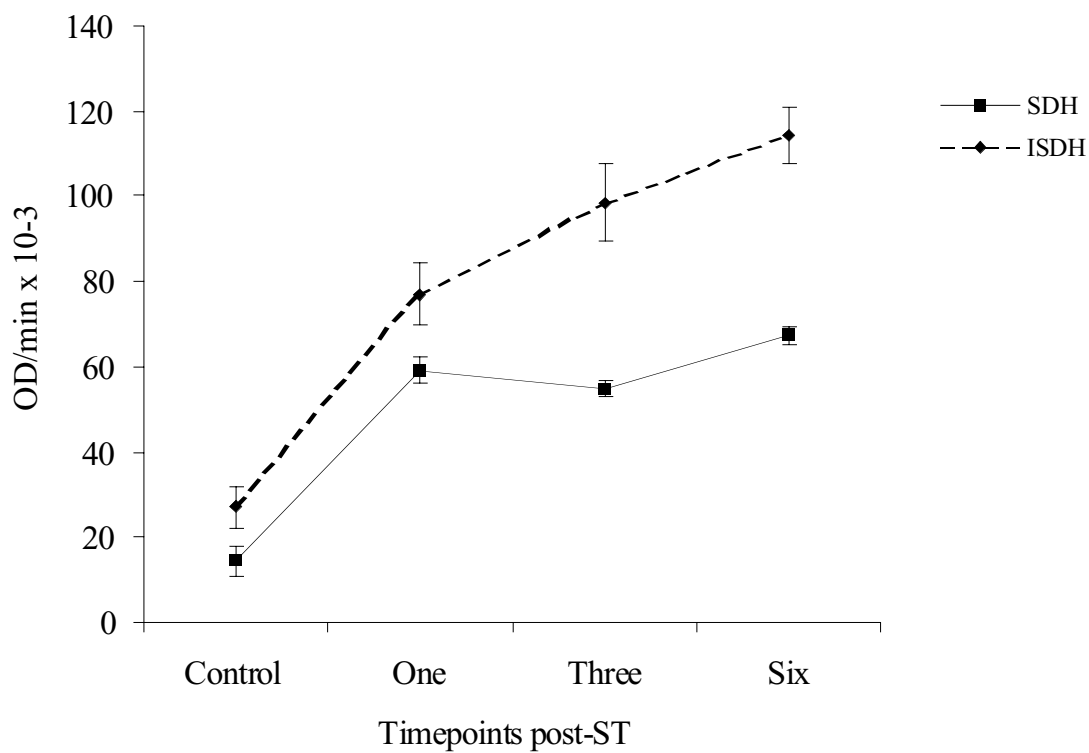
**Figure 10.** SDH and ISDH enzyme activities in fibers staining positively for both slow and fast MHC in rat soleus following spinal cord transection. Values are means – SEM. a, significantly different from control. b, significantly different from one month post-ST. Significance was accepted at  $P < 0.05$ .



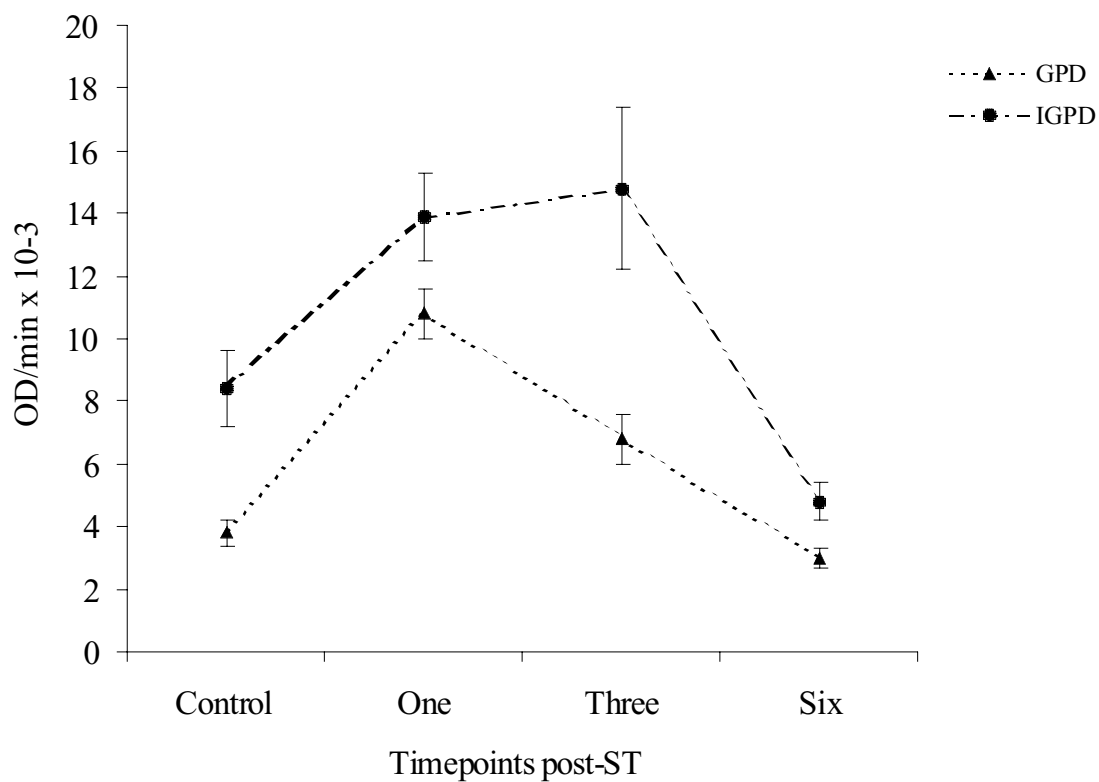
**Figure 11.** GPD and IGPD enzyme activities in fibers staining positively for both slow and fast MHC in rat soleus following spinal cord transection. Values are means – SEM. a, significantly different from control. b, significantly different from one month post-ST. Significance was accepted at  $P < 0.05$ .



**Figure 12.** GPD/SDH ratio in fibers staining positively for both slow and fast MHC in rat soleus following spinal cord transection. Values are means – SEM. a, significantly different from control. b, significantly different from one month post-ST. Significance was accepted at  $P < 0.05$ .

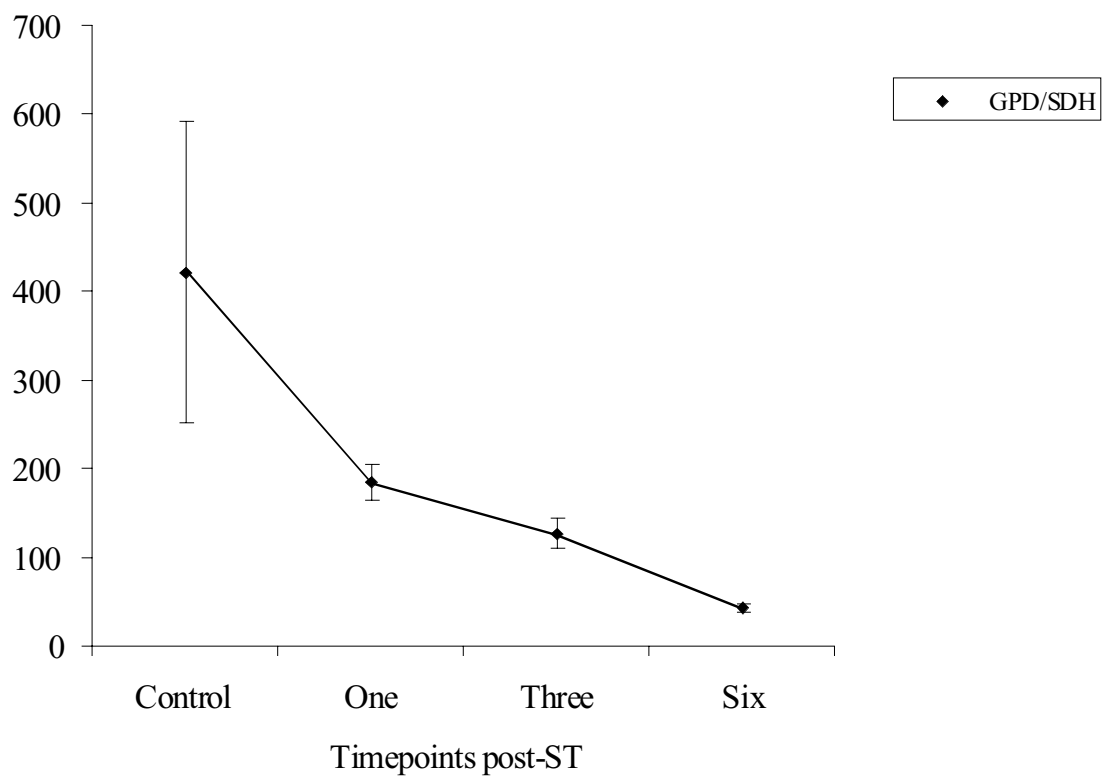


**Figure 13.** SDH and ISDH enzyme activities in MHC type IIa fibers in rat soleus following spinal cord transection. Values are means – SEM. a, significantly different from control. b, significantly different from one month post-ST. c, significantly different from three months post-ST. Significance was accepted at  $P < 0.05$ .

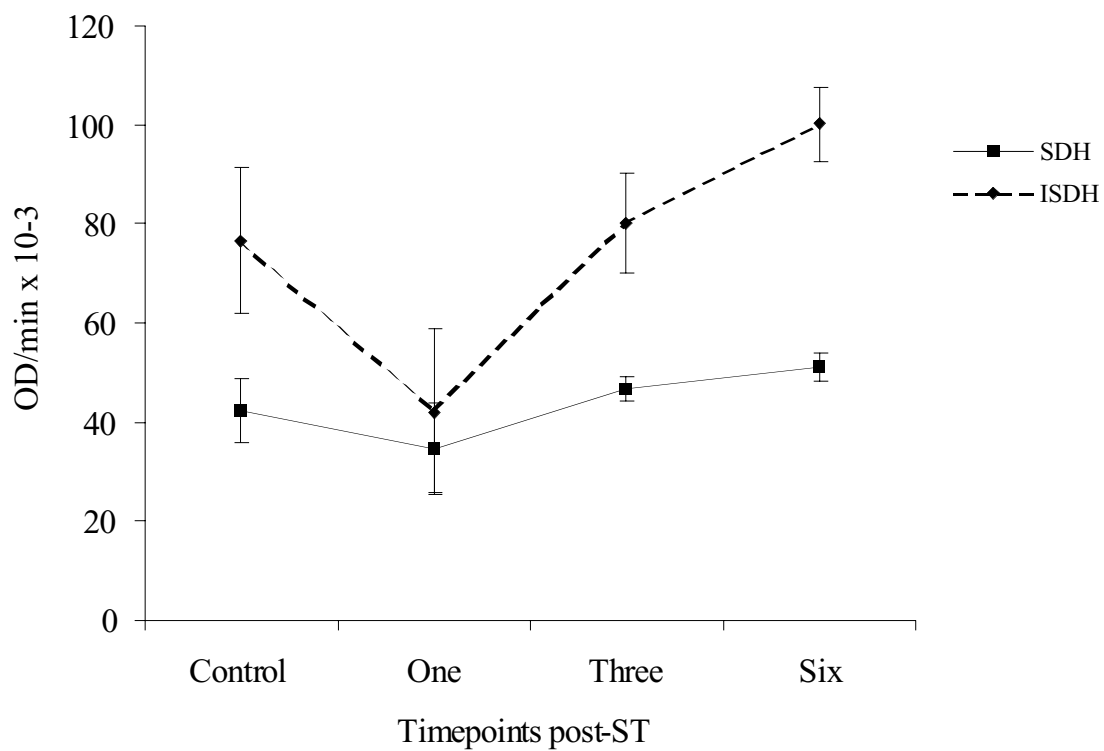


**Figure 14.** GPD and IGPD enzyme activities in MHC type IIa fibers in rat soleus following spinal cord transection. Values are means – SEM. a, significantly different from control. b, significantly different from one month post-ST. c, significantly different from three months post-ST. Significance was accepted at  $P < 0.05$ .

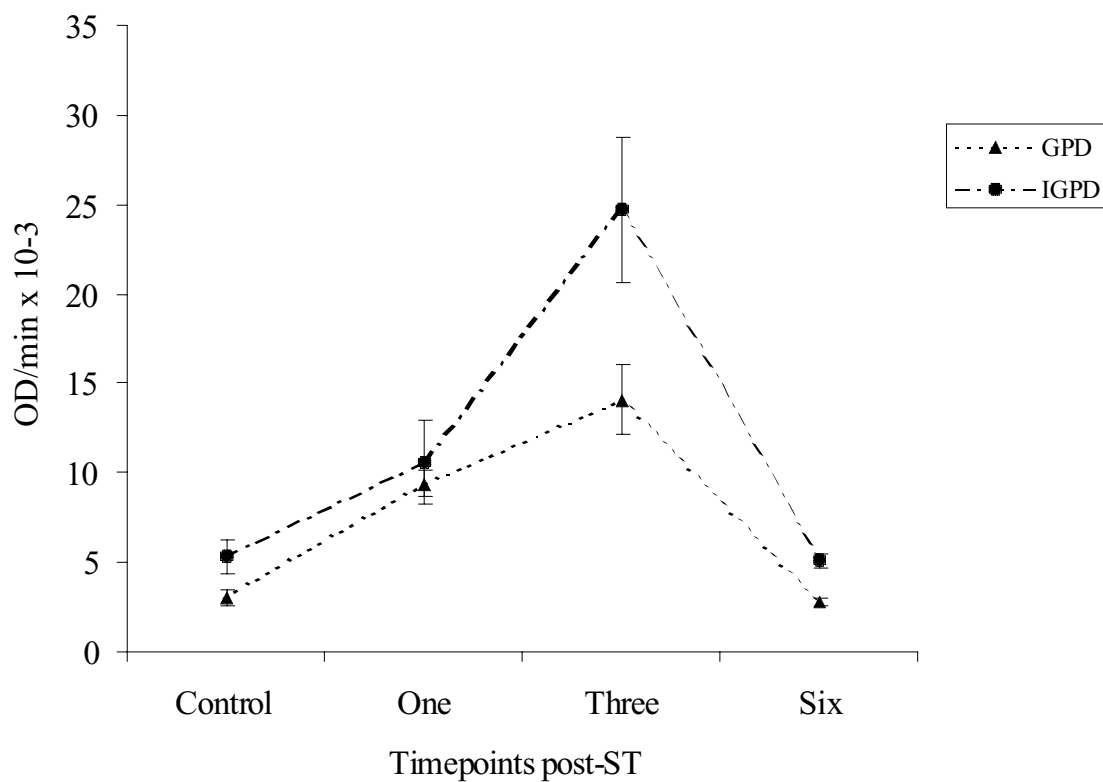




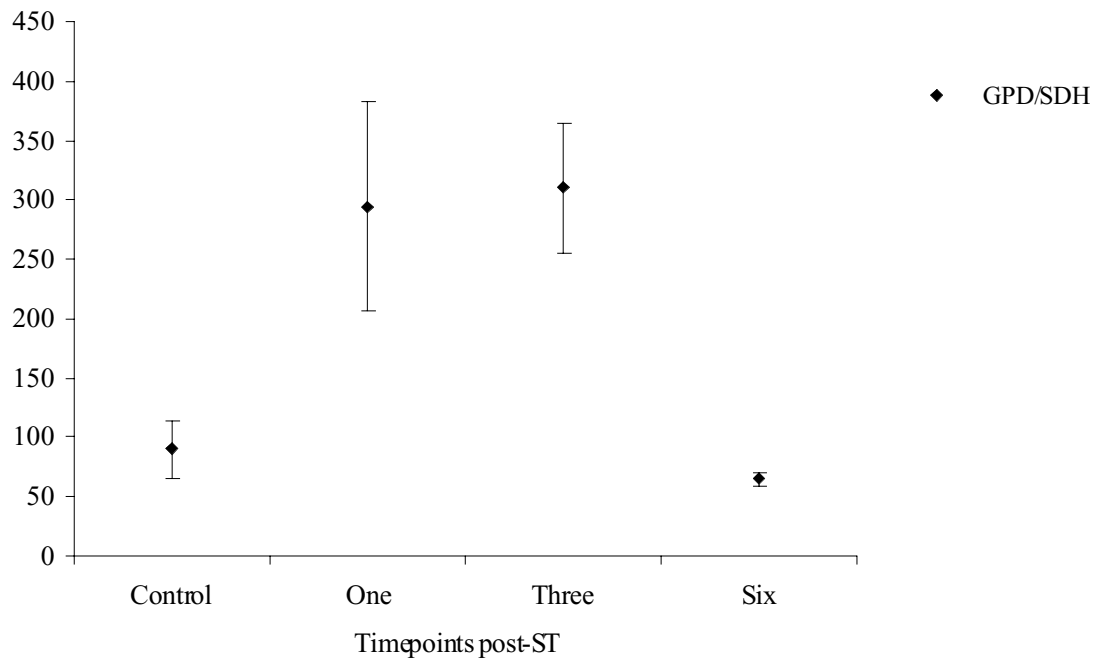
**Figure 15.** GPD/SDH ratio in MHC type IIa fibers in rat soleus following spinal cord transection. Values are means – SEM. a, significantly different from control. b, significantly different from one month post-ST. c, significantly different from three months post-ST. Significance was accepted at  $P < 0.05$ .



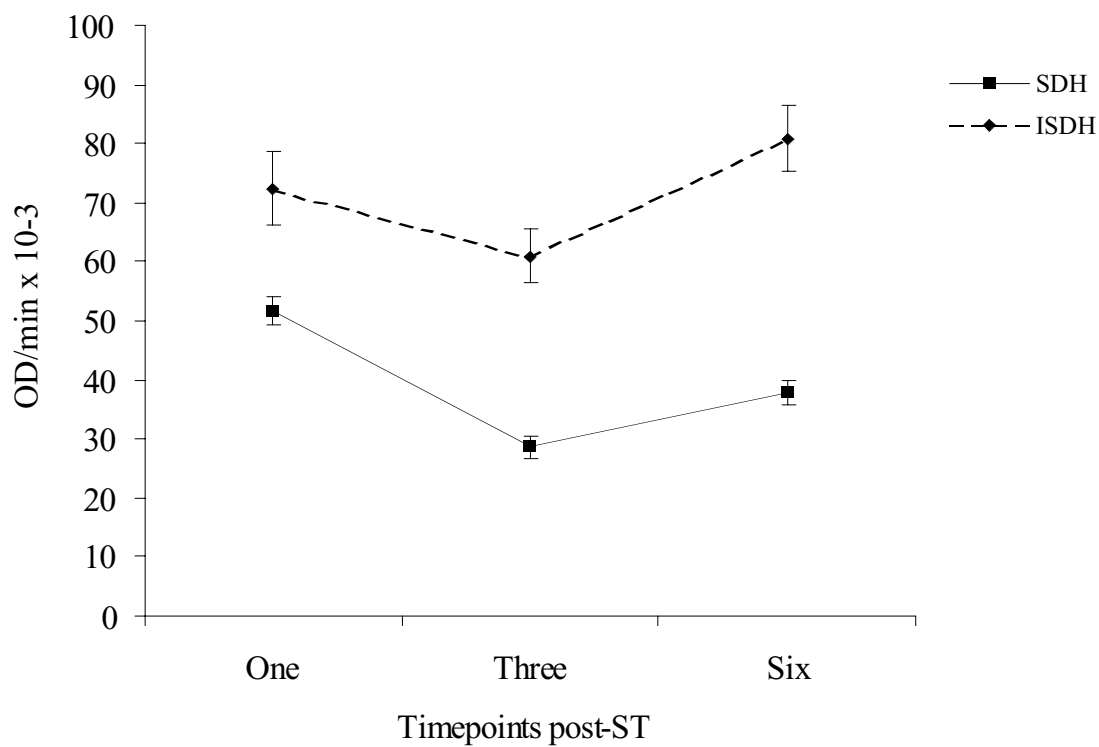
**Figure 16.** SDH and ISDH enzyme activities in fibers co-expressing MHC types IIa and IIx in rat soleus following spinal cord transection. Values are means – SEM.



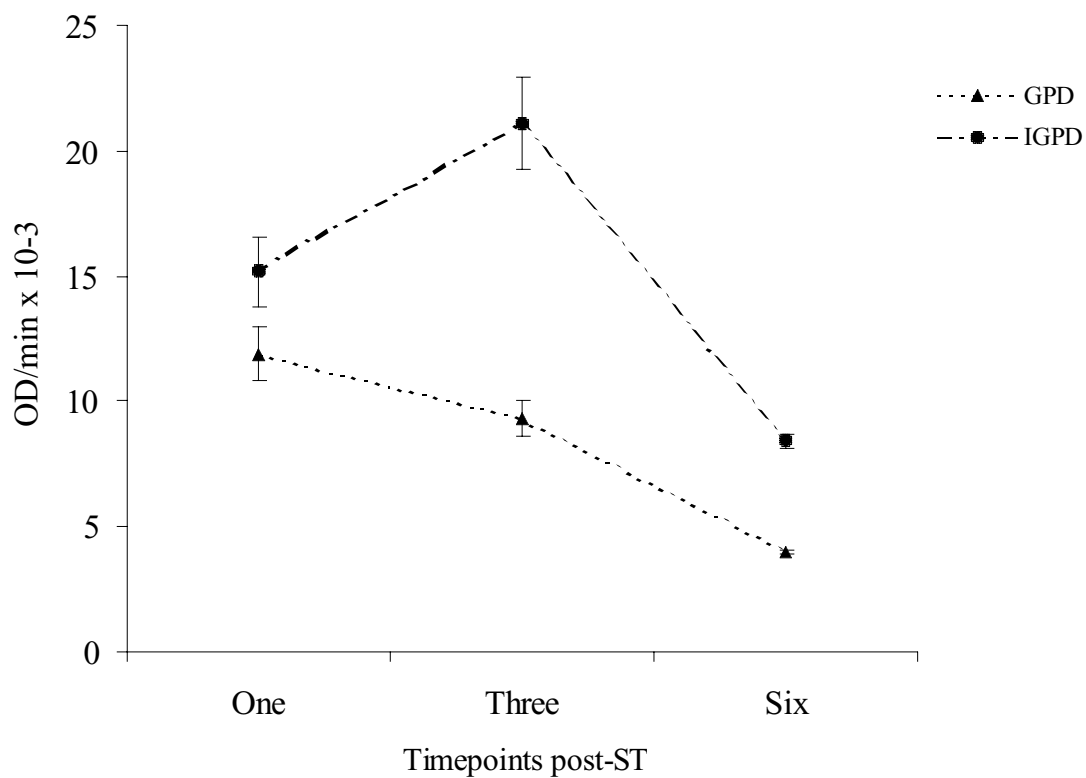
**Figure 17.** GPD and IGPD enzyme activities in fibers co-expressing MHC types IIa and IIx in rat soleus following spinal cord transection. Values are means – SEM. a, significantly different from control. b, significantly different from one month post-ST. c, significantly different from three months post-ST. Significance was accepted at  $P < 0.05$ .



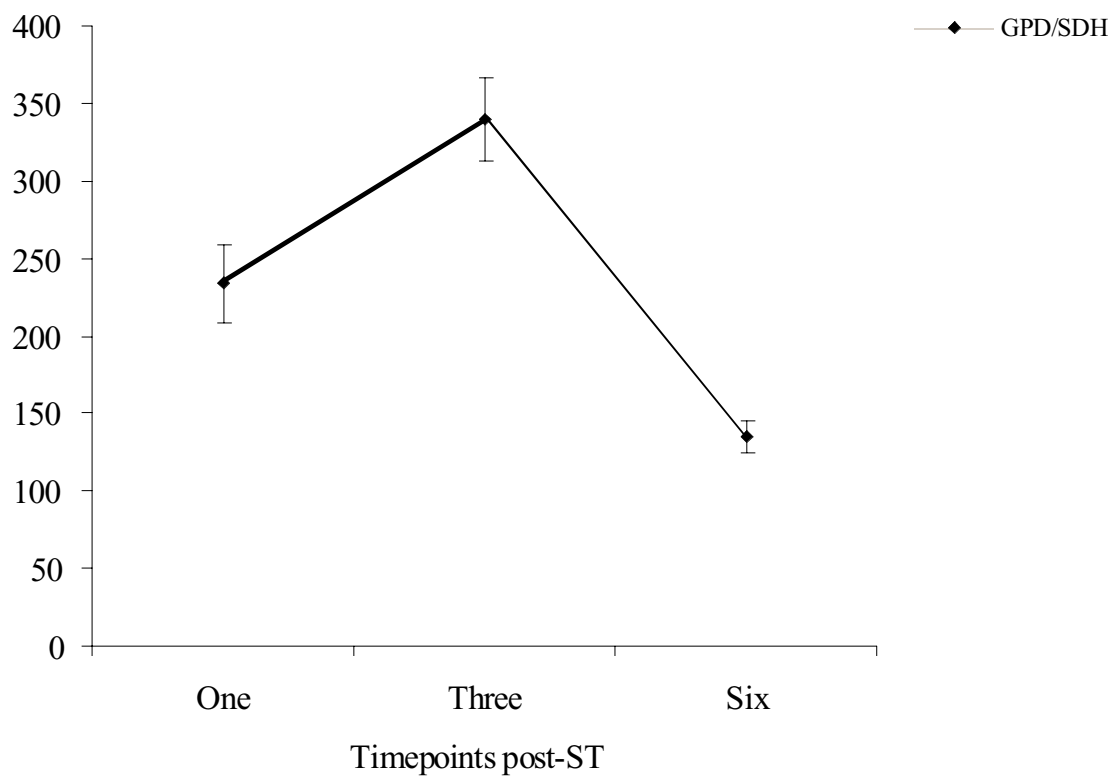
**Figure 18.** GPD/SDH ratio in fibers co-expressing MHC types IIa and IIx in rat soleus following spinal cord transection. Values are means – SEM. a, significantly different from control. b, significantly different from one month post-ST. c, significantly different from three months post-ST. Significance was accepted at  $P < 0.05$ .



**Figure 19.** SDH and ISDH enzyme activities MHC type Iix in rat soleus following spinal cord transection. Values are means – SEM. b, significantly different from one month post-ST. c, significantly different from three months post-ST. Significance was accepted at  $P < 0.05$ .



**Figure 20.** GPD and IGPD enzyme activities MHC type IIx in rat soleus following spinal cord transection. Values are means – SEM. b, significantly different from one month post-ST. c, significantly different from three months post-ST. Significance was accepted at  $P < 0.05$ .



**Figure 21.** GPD/SDH ratio in MHC type IIx in rat soleus following spinal cord transection. Values are means – SEM. b, significantly different from one month post-ST. c, significantly different from three months post-ST. Significance was accepted at  $P < 0.05$ .

## **Vita**

Jeffrey Scott Otis was born on January 21, 1974 in Fairfax, Virginia. He grew up in Phoenixville, Pennsylvania, a suburb of Philadelphia.

He received his Bachelor s degree in Biology with an emphasis on Vertebrate Physiology in December 1996 from The Pennsylvania State University. He completed one year of graduate course work in Clinical Exercise Physiology at The University of Pittsburgh before transferring into the Muscle Physiology and Biochemistry option at Virginia Tech in the fall of 1998.

He plans to complete his Ph.D. in Muscle Physiology at Virginia Tech and pursue a career in academia.

He has been married to Debra Ann since May 27, 2000.