

Effects of Acute Exercise on Serum Cytokine Composition in Elite Boxers: Th1/Th2/Th17 Balance

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ABSTRACT The purpose of this study is to investigate effects of heavy exercise such as a boxing match on serum cytokine composition of elite boxers. Blood samples were collected from boxers before and after a 3-round of boxing match. Cytokines were assessed by high sensitive ELISA. Acute traumatic exercise increased serum levels of IL-6, TNF α , and IL-10 whereas no significant change was observed for serum levels of IFN-g, IL-4, and IL-17A. To the best of the researcher's knowledge, this is the first report to investigate Th1/Th2/Th17 balance in heavily trained boxers. These findings suggested that strenuous exercise did not affect IL-17 secretion during exercise. In conclusion, alterations in serum cytokine composition of elite boxers could be important to have a properly working immune system against to infectious agents.