Effect of Live-Fire Training Drills on Firefighters' Platelet Number and Function

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Abstract

Background. The leading cause of line-of-duty death among firefighters is sudden cardiac events. Platelets play a critical [illegible] during an [illegible] role in the formation of an occlusive thrombus [illegible] purpose of this study was to [illegible] chemic event. **Objective.** The effect of firefighting on platelet number [illegible] examine the acute [illegible] **Methods.** Apparently healthy male fire[illegible] and aggregability [illegible] age 29 [illegible] 7.8 years) participated in 18[illegible] fighters (N = 114) [illegible] simulated firefighting activity in a [illegible] structure [illegible] minutes [illegible] were obtained [illegible] that contained live fire [illegible] activity and analyzed [illegible] before and after simulated firefighting [illegible] chemistry, and platelet [illegible] for complete blood cell count (CBC) [illegible] was measured [illegible] number and function. Platelet functio[illegible] platelet aggregability [illegible] ing a PFA-100 analyzer to assess [illegible] **Results.** As expected, per[illegible] [illegible] in heart [illegible] minute [illegible] resulted in significant increas[illegible] [illegible] significant changes in blood [illegible] temperature [illegible] [illegible] The most important finding in this study [illegible] minutes of simulated firefighting caused a 24% [illegible] platelet number and a significant increase in [illegible] increase in [illegible] **Conclusions.** Firefighting resulted in a signif[illegible] aggregabi[illegible] [illegible] increase in platelet number and aggregability, indic[illegible] [illegible] that even short bouts of firefighting can increase [illegible] [illegible] apparently healthy firefighters. **Key words:** [illegible] [illegible] [illegible] platelet count, platelet [illegible] test, platelet ag[illegible] [illegible] firefighter [illegible] gregat[illegible]

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