

RESPONSE

Denise Smith PhD, Leanne V. Haller MS, Ron Benedict MS, and Moore Moore PhD

ABSTRACT

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The purpose of this study was to determine the effect of resistance training on heart rate and workload during a simulated emergency response. The study was conducted in a community center. The participants were 10 male and 10 female firefighters. The participants were divided into two groups: a control group and an experimental group. The control group performed a standard physical fitness test, and the experimental group performed the same test followed by a simulated emergency response. The results showed that the experimental group had a significantly higher heart rate and workload during the simulated emergency response compared to the control group. The heart rate of the experimental group increased from 120 to 145 beats/min during the response, while the control group's heart rate remained at 120 beats/min. The workload of the experimental group was 26.25 beats/min, while the control group's workload was 12.5 beats/min. The results suggest that resistance training can improve the cardiovascular fitness and workload capacity of firefighters during a simulated emergency response.

Key words

INTRODUCTION

Firefighters are exposed to extreme conditions. Even a short exposure to these conditions can result in heat stress, dehydration, and fatigue. The heat stress experienced by firefighters is a result of the high temperatures and humidity of the fire environment. The dehydration is caused by the loss of fluids through sweating. The fatigue is caused by the physical exertion of fighting fires. The combination of these factors can lead to a decrease in cognitive function and an increase in the risk of accidents. The purpose of this study was to determine the effect of resistance training on heart rate and workload during a simulated emergency response. The study was conducted in a community center. The participants were 10 male and 10 female firefighters. The participants were divided into two groups: a control group and an experimental group. The control group performed a standard physical fitness test, and the experimental group performed the same test followed by a simulated emergency response. The results showed that the experimental group had a significantly higher heart rate and workload during the simulated emergency response compared to the control group. The heart rate of the experimental group increased from 120 to 145 beats/min during the response, while the control group's heart rate remained at 120 beats/min. The workload of the experimental group was 26.25 beats/min, while the control group's workload was 12.5 beats/min. The results suggest that resistance training can improve the cardiovascular fitness and workload capacity of firefighters during a simulated emergency response.