

Cardiometabolic Risk Factors Responses to Supplemental High Intensity Exercise in Middle School Children

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Abstract : In adults, short bursts of high-intensity exercise (intensities between 80-95% of maximum heart rates) increase cardiovascular and metabolic function without the time investment of traditional aerobic training. Similar improvements in various health indices are also becoming increasingly evident in children in countries other than the United States. In the United States, physical education programs have become shorter in length and fewer in frequency. With this in the background, it is imperative that health and physical educators delivered well-organized and focused fitness programs that can be tolerated across many different somatotypes. Perhaps the least effective lag-time in a US physical education (PE) class is the first 10 minutes, a time during which children warm up. Replacing a traditional PE warmup with a 10 min high-intensity exercise protocol is a time-efficient method to impact health, leaving as much time for other PE material such as skill development, motor behavior development as possible. This supplemented 10 min high-intensity exercise increases cardiovascular function as well as induces favorable body composition changes in as little as six weeks with further enhancement throughout a semester of activity. The supplemental high-intensity exercise did not detract from the PE lesson outcomes.

Keywords : cardiovascular fitness, high intensity interval training, high intensity exercise, pediatric

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