

## **Weight Management Program for Fire Fighters: Feasibility Pilot**

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**PURPOSE:** There is a high prevalence of obesity among firefighters and cardiovascular disease is the leading cause of line-of-duty deaths. Prevention efforts are needed for this group, however shift work creates challenges for firefighters to participate in traditional weight management programs. This pilot study examines the feasibility of a tailored weight loss program that uses commercially available phone apps, a student coach-in-training, and print materials to assist career fire fighters with weight loss.

**METHODS:** Career Baltimore County Fire Fighters who were overweight or obese and interested in losing weight were eligible for the study. Baseline measurements included height and weight; body composition using dual x-ray absorptiometry; and a Functional Movement Screen (FMS). The FMS was a field screen used to identify areas of movement pattern limitation and asymmetry with overall scores ranging from 0 to 21 with lower scores indicating greater limitations. Participants were provided print materials and encouraged to increase their activity levels, use tailored caloric goals, follow the DASH diet and work towards 180 min/wk of moderate intensity physical activity. They were encouraged to use a phone app to assist with self monitoring and had weekly meetings with a student coach-in-training. The pilot study took place within a college semester. At the end of the program weight and body composition were re-assessed. **RESULTS:** There were four female and seven male participants with an average age of 39.0(SD=9.4), average Body Mass Index of 34.1(SD=5.0) and average percent body fat of 41.3(SD=5.8). The mean FMS score was 11.1(SD=2.3) and these relatively low scores indicated functional limitations in common movement patterns. On-treatment analyses (n=10) indicate an average of 4.0% weight loss and an average 9.2% decrease in percent body fat. **CONCLUSION:** The use of commercial available apps with support from a student coach-in-training and evidenced-based weight loss recommendations is a feasible approach to support career firefighters in their weight loss efforts.

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