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269585 Comparison of firefighters' physical activity pattern during work day and off day

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Male firefighters are well known as a high risk occupational group for obesity in the United States (US). However, few studies have examined possible work related mechanism that might contribute to their tendency to gaining weight. So it would be very interesting and important to examine their physical activity level at work and compare it to physical activity level on offday. This study presents the pattern of firefighters' physical activity objectively measured with actigraphs on two days (one 24-hr duty day and one 24-hr non-duty day). As part of the on-going FORWARD study, we analyzed the physical activity data of 30 firefighters in a Southern California county Wellness Fitness Program. We measured their work load, number of call, exercise and other work characteristics. Their average energy expenditure from physical activity on a work day was 677 Kcal and 500 Kcal on off day. In 22 of 30 firefighters (73.3%), physical activity level on a work day was higher than that on off day (this study will be finished till June, 2012). Among 6 periods of a 24-hr (every 4 hours), physical activity was the highest in 8am-12pm (273 Kcal in workday and 164 Kcal on offday, respectively). The amount of time spent on moderate physical activity per day was about 44 minutes on a work day, and 36 minutes on an off day, respectively. These results did not meet the guideline which the Fire Service Joint Labor Management Wellness Fitness Initiative recommends (60 to 90 minutes on every work shift).

Learning Areas:
Administration, management, leadership
Assessment of individual and community needs for health education
Clinical medicine applied in public health
Occupational health and safety
Program planning
Public health biology

Learning Objectives:
1. Analyze physical activity pattern of firefighters on work day and off day. 2. Identify work related factors for firefighters obesity by interpreting physical activity pattern

Keywords: Physical Activity, Obesity

Presenting author's disclosure statement:

Qualified on the content I am responsible for because: I have been a co-investigator in FORWARD study (in UCI, Center for occupational and environmental health). I am interested in workplace health promotion and work stress. My major field is south Korea, and I have been in visiting professor in UCI for 2 years.
Any relevant financial relationships? No

I agree to comply with the American Public Health Association Conflict of Interest and Commercial Support Guidelines, and to disclose to the participants any off-label or experimental uses of a commercial product or service discussed in my presentation.

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