

Weight Gain Prevention in Hypertensive Smokers

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BACKGROUND

Obesity and smoking are major risk factors for a variety of health-related disorders, such as heart disease, stroke, certain forms of cancer, and diabetes (US DHHS 1990, 1998). Recently, it has been reported that up to 65 percent of adult Americans are overweight or obese (Flegal et al., 2002). The increasing epidemic of obesity has led to many initiatives to treat obesity and to a number of recent initiatives to prevent weight gain (e.g., RFA-DK-02-021). Similarly, the prevalence of smoking has not declined in the past few years (CDC, 1999), despite several effective and cost-effective smoking cessation programs. One unwanted effect of smoking cessation is weight gain, which may exacerbate weight-related health issues. Behavioral (and pharmacological, to a lesser degree) programs designed to reduce this post-cessation weight gain have met with some success. However, given that this weight gain is typically cosmetic, it has been concluded that such programs should be targeted to those at higher medical risk as a result of the weight gain (e.g., hypertensives). To our knowledge, no study has evaluated a smoking cessation program, followed by lifestyle modification, to prevent weight gain among those placed at medical risk by this post-cessation weight gain. A population clearly at medical risk following smoking cessation (and the resultant weight gain) are those with hypertension. Some studies find an increased prevalence of hypertension following cessation (Gerace et al., 1991; Lee et al., 2001; Seltzer, 1974). It is believed that this is largely (but not solely) due to weight gain following cessation (Gerace et al., 1991; Kannel & Higgins, 1990). However, any weight gain in those with hypertension places them at risk. Body weight is the single best predictor of adult blood pressure, and blood pressure responds to very small changes in overall body weight.

OBJECTIVES

Primary endpoints include smoking cessation and body weight changes at a 1-year follow-up. Secondary endpoints include changes in dietary intake and physical activity. Exploratory endpoints include changes in blood pressure and hypertensive status in both groups (e.g., movement from high normal to hypertensive by JNC VI criteria), as well as changes in blood pressure medication status and salt intake.

METHODS:

Given that a 5.4-13.6 kilogram weight gain following cessation is likely to place hypertensives at increased medical risk for cardiovascular disease, we propose the following Specific Aims: (1) To recruit a sample of 660 smokers with hypertension or elevated blood pressure (high normal by JNC VI criteria). Given that Blacks are at high risk for both post-cessation weight gain and hypertension, the majority of the cohort recruited will be Black; and (2) To randomize participants to: (a) a validated smoking cessation program followed by a validated weight control program (TONE) consisting of changes in dietary intake and physical activity; or (b) the same smoking cessation intervention followed by a general health education (contact-time control) program.

FINDINGS / RESULTS:

No results to report at this time.

PUBLICATIONS:None at this time.