Effective Strategies for Obesity Prevention in Underserved at-Risk Groups

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Obesity in the United States (US) is a serious public health issue, as 35.7% of adults and 16.9% of children and adolescents are overweight or obese [1]. This high prevalence generates concern due to negative outcomes associated with obesity such as cardiovascular disease, diabetes, and hypertension [2]. To date there is a paucity of research on effective strategies for obesity prevention in groups that are disproportionately affected. These underserved, at-risk groups in the US include very young children (1-5 years old), early adolescents (11-14 years old), and postpartum women.

Very Young Children

Early childhood is an ideal time for obesity prevention, as young children undergo developmental changes that culminate in the adiposity rebound, a period of increasing body mass index following the nadir. Timing of adiposity rebound is crucial, as children who experience an early adiposity rebound are more likely to become obese adults than normal rebounders [3]. Additionally, children form eating behaviors very early in life, as they learn about their food environment, develop a sense of portion sizes, and gain food-related attitudes, which ultimately shape their weight status trajectory [4]. Habits established early in childhood may persist into later stages of life and become harder to reverse as they become more engrained. Currently, most interventions have been geared towards older children and implemented primarily in school setting [5]. However, school-based interventions have produced limited success in changing weight-related behaviors of children, as they have been enacted past the optimal age for change [5]. Presumably, it is the parents that exert the strongest influence during childhood, as young children are dependent on them for provision of food. Mothers, especially, are the key decision makers, as they function as “gatekeepers” of food in the household [6]. It is the mom who is most often responsible for the planning, purchase and preparation of meals. Thus, it is not surprising that consumption of fruit, vegetable, and high-fat food of mothers was positively associated with that of other family members, including children [7]. Intervention efforts aimed at mothers of young children have shown positive results in decreasing intakes of energy, total and saturated fat, high-fat snacks, sweetened beverages, and fast-food, as well as increasing physical activity. Mothers who modified their food choices as part of a lifestyle intervention were observed to make comparable changes for their children [7]. The paramount role that mothers exert on weight-related behaviors of their children suggests that the most effective obesity prevention strategy at this age should focus on mothers as agents of change.

Early Adolescents

Adolescence presents another critical time for planning and implementing obesity prevention strategies. This life stage is marked by profound physical and psychosocial changes [8] as individuals transition to adult eating patterns [9]. These changes sometimes interfere with regular eating patterns, resulting in excessive dietary restraint (i.e. anorexia nervosa) in some individuals, and obesogenic behaviors in others. During this phase, individuals gain more freedom in making decisions about their food choices, physical activity, and lifestyle. Despite their increased independence in the food environment, adolescents may be strongly influenced by the home and community [10]. Yet minimal consideration has been given to the home as a setting for reinforcing food- and weight-related behaviors. At present, most home-based research has focused on the influence of a single factor on weight outcomes. For example, several studies have explored the impact of parental influence on obesity status [11,12]. However, the home environment is best conceptualized as a network of complex interactions composed of environmental, psychological, and social components. A more comprehensive framework that simultaneously investigates the unique contributions of individual variables and their interactive effects would be beneficial. Thus, a focus on the home may be particularly promising as a more inclusive approach to prevention of obesity during adolescence.

Postpartum Women

Postpartum women are a third at-risk group that should be targeted in the prevention of obesity. The year after childbirth is a dynamic period of change, in which excess weight gained during pregnancy must be lost in order to prevent permanent overweight or obesity. After the birth of an infant, women are faced with negative body image, neglect of self-care, increased demands of childcare, and greater need for social support [13]. These challenges are further compounded by a progression toward a less healthful lifestyle that is characterized by poor dietary choices and sedentary behaviors [13,14]. In a study of new mothers, the author found that most women did not comply with dietary guidelines, as indicated by their low consumption of grains, vegetables, and dairy. In addition, these mothers had excessive intakes of fats and sugars in their diets [13]. Factors related to the weight status of these women included nutrition knowledge [7], attitudes [15], and satisfaction with body image [16]. The importance of nutrition knowledge is illustrated by Nuss et al. who documented that women with a greater understanding of nutrition retained less weight at one year post-partum than did their counterparts. In particular, accurate knowledge of fat and energy content of foods was lacking in this cohort [17], and the most significant determinants of weight loss were dietary restraint and decreased energy intake [18]. Other predictors of weight loss in postpartum women include weight management skills, such as food labels and self-monitoring via food diaries. Intervention strategies for these women should focus on improving dietary restraint, decreasing energy intake, enhancing nutrition knowledge and adherence to

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dietary guidelines. Additionally, emphasis on psychological aspects such as self-care, weight-related distress, negative body image, and depressive symptoms, should be addressed in programs of weight control in postpartum.

Conclusions

It is clear that strategies for obesity prevention should involve very young children, early adolescents, and postpartum women. These three stages of life are pivotal due to physiological and psychological changes that may lead to subsequent obesity. Based on the evidence that food-related behaviors are developed at a very young age, and the significance of the timing of adiposity rebound, early intervention is of utmost importance. Since young children lack the cognitive capacity and independence in food selection, efforts should be channeled towards mothers as agents of change. Adolescence is another opportune time for intervention. The dichotomous nature of youth eating behavior at this interval makes it a unique one for targeted intervention efforts. The home has been neglected in research to date, even though it may be the most appropriate milieu for promoting healthful habits. The third underserved group that warrants attention in obesity prevention is postpartum women. It is a time where mothers have to acclimate to rapid changes in life events, making healthful behaviors more challenging. Effective programs in this population must emphasize psychosocial components and improving dietary compliance. In sum, implementation of the above strategies in these underserved, at-risk groups may help diminish the obesity epidemic.

References