

**AN EDUCATION PLATFORM FOR AWARENESS AND PREVENTION OF OBESITY
 EPIDEMIC AMONG CHILDREN AND ADOLESCENTS**

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INTRODUCTION

Obesity is now replacing undernutrition and infectious diseases as the leading cause of ill health. It is considered as one of the greatest medical challenges to health in the United States; over 65% of American adults are either overweight or obese leading to 320,000 deaths each year in the United States (Kopelman, 2005). The annual medical costs of obesity in the United States are enormous (Bhattacharya and Bundorf, 2009). Globally, according to the World Health Organization, there are more than one billion overweight adults, of which at least 300 million are clinically obese. A recent National Health and Nutrition Examination Survey (NHANES) data (2003–2006) has showed that for children aged 6–11 years and 12–19 years, the prevalence of overweight was 17.0% and 17.6%, respectively.

The prevention of both the associated adolescent diseases and psychological effects and the prevention of adulthood obesity depends on raising awareness about obesity and encouraging better dietary habits among elementary, middle, and high school students. The healthy diet and activity patterns seem difficult to maintain in the current physical environment and the social environment should be manipulated toward encouraging awareness and prevention of obesity.

The goal of this ongoing and multifaceted project is to contribute to the efforts aimed at reducing the growth of the obesity epidemic by providing computational models of the molecular phenomena underlying the symptom and then to use these models in developing education software for adolescents and youth teaching them about the biology behind the development of obesity and the potential methods for preventing it.

This study introduces the use of bioengineering and computational technology into sociological research; it will allow for study of adolescent behaviors with clear objective analysis of changes

in adolescent activity, increasing the impact of the study on the youth population across the country.

The benefit of our educational module is that we will present the students with an active learning environment where they will be expected to both understand obesity and make changes in their lives that will prevent their development of obesity. If successful, the high school level educational modules could be adopted into statewide health class curriculum and increase the impact of these educational modules on students across the state.

Figure 1. An example on-line social network, dedicated to conversations and interactions pertaining to the development of reading materials for children and youth. The obesity social network would be similar in its layout and implementation.



REFERENCES

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