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UCF Forum

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6-26-2013

## We Must All Work to Solve Childhood Obesity

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### STARS Citation

Barkley, Lisa (2013). We must all work to solve childhood obesity. UCF Today, 2013-06-26. Retrieved from <http://today.ucf.edu/we-must-all-work-to-solve-childhood-obesity/>

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## We Must All Work to Solve Childhood Obesity

**By Lisa Barkley**  
UCF Forum columnist  
Wednesday, June 26, 2013

Obesity is a global epidemic. It is particularly affecting our children and adolescents. This new phenomenon of having a chronic medical condition affecting such a large proportion of those under 18 years old is unprecedented.

It also has some very scary consequences. With the current obesity in our nation, by 2050 it is estimated that the rates of diabetes, cardiovascular disease and other chronic diseases related to obesity will increase exponentially. Yet despite our scientific knowledge of the risks of obesity, our ability to control and decrease the epidemic has been limited.

Much of the interventions for childhood obesity have focused on changing the individual by decreasing food intake, increasing physical activity and changing lifestyle factors that promote obesity. This is necessary, but since this epidemic is multifactorial, we must also consider some of the issues that can have a greater impact on reducing obesity.

While the science of obesity is still not fully known, there is evidence of the biological determinants of obesity. There are three pathways that contribute to obesity.

- The first is the starvation pathway, in which the body is resistant to the hormone insulin in response to unhealthy diets. This leads to a state where the body stores more fat, and the hormones that tell the body that it is full are impaired. This leads to weight gain and a false sense of starvation, triggering eating more. Further nervous-system activity promotes further fat gain and decreased physical activity.
- The second pathway is the stress pathway. In this pathway, insulin resistance occurs from the body's response to chronic stress and the same process occurs as in the starvation pathway.

- The third pathway is the reward pathway, when insulin resistance affects hormones that impact on the part of the brain that controls food-seeking behavior. This leads to increases in the desire and cravings to eat, especially for high-fat and high-sugar foods that will lead to increased weight gain.

These biological factors are strongly linked to human-survival mechanisms to prevent starvation, thus are very strongly programmed and hard to overcome.

Thus, these biological factors must be considered in treatment. Treatments include: focusing on increasing physical activity, which decreases insulin resistance and lowers stress levels; teaching and practicing stress management and relaxation techniques; and avoiding highly processed foods that promote insulin resistance.

Similar to how health advocates address tobacco, we must consider the addictive factors of obesity and actively regulate food policies and advertising. The food-marketing business spends millions of dollars promoting many unhealthy foods, especially targeting our children. Children don't have the level of brain maturity to shift through these messages to determine healthy choices.

Social influences are very impactful on health behavior. These influences include the environments where we are born, live, play, work and learn.

There are several social influences that impact on childhood obesity. At the family level, there are more dual-career and single-parent working families. This makes it more common for families to eat fast and unhealthy food. Portion sizes in restaurants are often double normal portions, leading to more excess food intake. There are also marked increases in TV watching and computer time. This promotes being sedentary, mindless eating, and exposure to food marketing of unhealthy food choices.

At the school level, students are more inactive as gym classes are removed from the curriculum and children are often exposed to unhealthy food choices in cafeterias and vending machines. At the community level, the design of our neighborhoods promotes car use, and walking/biking are often not appealing or safe. Many communities have poor sidewalks or facilities that promote activity. City planning must incorporate land use and zoning policies that promote physical activity as the easy choice. At the societal level, we must consider school, agricultural, health and social-service policies that will promote healthier lifestyles.

It is clear that obesity disproportionately affects poor and minority populations. More efforts must be made to tailor obesity interventions to address the underlying causes of health disparities.

Minority and poor populations are much more likely to live in communities where there are more toxic influences, such as poor physical facilities, environmental toxins and less access to supermarkets that sell fresh produce. Many of these environments have higher crime and negative social influences that limit the ability to be physically active in the community.

In addition, these factors contribute to chronic stress, which in itself contributes to obesity and poor health.

Addressing the epidemic of childhood obesity will involve a multifactorial approach, which considers both the personal and various social factors that impact on health. We will continue to have little impact on reversing the obesity epidemic if we only address the individual.

While individual responsibility is a key factor, it only one part of the picture. We all have to take a part in helping our children grow up healthy.

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