

## American Health Alliance

Keeping the Allied Health Professions Informed

### Excess Body Fat Leads to Chronic Disease

by Tami Herndon

13 million US children are obese, an epidemic number, steadily rising since the 1970s. Childhood obesity means having excess body fat, not simply being overweight. Compared to non-obese children, obese children are five times as likely to be obese as adults, predisposing them to heart disease, diabetes, psychological effects, and cancer.



Obese children usually have two or more cardiovascular risk factors, such as high cholesterol and high blood pressure, an increased risk of developing asthma, and more fractures and musculoskeletal pain than non-obese children. Obese children also deal with psychological

and social effects, such as low self-esteem and weight-bias attitudes from peers, educators, and parents.

Childhood obesity increases the risk of having chronic disease in adulthood by five times. Heart disease, the number one cause of death for men and women in America, and Type II diabetes, accounting for 95% of adult-diagnosed cases, are both triggered by obesity.

### Lifestyle Influences Linked to Childhood Obesity

by Tami Herndon

Three lifestyle influences have been linked to childhood obesity – early-life risk factors, diet, and physical activity.

#### Early Life Risk Factors

Children with four or more early life risk factors - maternal obesity, excess pregnancy weight gain, smoking during pregnancy, low maternal Vitamin D status, and no breastfeeding - are four times as likely as children without the risk factors to be obese by age four.

#### Diet

Grain products and snack foods have replaced vegetables, fruit, and milk in the American

child's diet. Sweets and sodas are the affordable alternative to more costly fresh fruits and vegetables and most US neighborhood food stores sell only convenience foods.

### Other Contributing Factors

In 2010, more than 10,000 new high-sugar, high-fat packaged snacks and beverages were added to the US market.

The number of new larger-portion food items added each decade has increased from 15 in the 1960s-1970s to 140 in the 1990s-2000s.

The amount of food eaten is as important as the type of food eaten. When pre-school children were served double amounts of food, they consumed 25% more calories than when served a single portion.



#### Physical Activity

Less than half of US pre-teens and 8% of US teens meet general physical activity

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guidelines. Because physical inactivity is a primary cause of obesity, lower physical activity possibly contributes to obesity *more* than increased caloric intake.

## Intervention: A Proposed Solution

by Tami Herndon

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### Early Life Interventions

Childhood obesity prevention is most beneficial during pregnancy and infancy, the time when a child's metabolism is being programmed.

Lifestyle modification initiatives such as helping pregnant mothers maintain healthy weights and educating parents about healthy food and activity choices for their toddlers consistently produce positive changes in diet and activity habits.



### Healthy Diet

Avoiding nutritionally-limited foods high in sugar and fats and eating vegetables and fruits can protect against obesity. Also, allowing children to serve their own plates may avoid creating poor eating habits. In response to rising obesity rates, the Food & Drug Administration Food and Veterinary Medicine Strategic 2012-2016 Plan calls for improved nutrition facts labeling on products and at food outlets.



### Physical Activity

Physical exercise, regardless of type, helps to reduce childhood obesity by improving body composition and activating metabolism. The World Health Organization recommends children ages 5-17 get at least 60 minutes of physical activity per day.

Participation from families, healthcare professionals, educators, government officials, and the food industry provides the best chance of reducing childhood obesity rates in the US and beyond. Simple, actionable priorities can improve the health of this generation of children and many generations to come:

- ✓ Pre-natal obesity education
- ✓ Early obesity education at the primary care level
- ✓ Improved access to healthy food and physical activity
- ✓ Portion control
- ✓ Improved nutritional labeling on products and at food outlets
- ✓ Responsible food marketing to children and teens

### Research Results

Recent findings connect a fat mass gene, *FTO* rs9939609, to high BMI, and the *PCSK1* gene, previously linked to a hormonal disorder known for early-onset obesity, was shown to have a stronger association for children than adults