



Battling Childhood Obesity in Alabama

Impact Statement

The Problem:

The results of the 1999-2000 National Health and Nutrition Examination Survey indicate that 15 percent of children and adolescents ages 5 to 19 are overweight. This represents a 4 percent increase from the estimates from 1988 through 1994. Overweight is defined by a body mass index above the 95th percentile of the sex-specific BMI growth charts. It has also been found through various studies that this percentage is greater in children living in rural areas.

What's Been Done:

The Alabama Cooperative Extension System decided to look into the problem of obesity in the state. Extension did an assessment of children in the rural Black-Belt counties of Alabama. Wilcox, Macon and Bullock counties were chosen for the sample population. Extension's assessment looked at fourth-graders in Bullock County and fifth-graders in Wilcox and Macon counties. In order to obtain heights and weights of the children to determine a body mass index, parental consent was needed. Therefore, only the children with a signed parental consent form could participate in the study. Out of 626 children, 470 participated in the fall of 2002, and 434 participated in the spring of 2003.

A total of 245 girls participated in the study in the fall. Of the 21 9-year-old girls participating in the study, 9.5 percent were underweight, 47.6 were within normal weight limits, 9.5 percent were at risk for becoming overweight and 33.3 percent were overweight. Of the 160 10-year-old females, only 1.9 were underweight, 55 percent were within normal weight limits, 13 percent were at risk for becoming overweight and 30 percent were overweight. Of the 56 11-year-old females, 3.6 were underweight, 69.6 were within normal weight limits, 14.3 percent were at risk for becoming overweight and 12.5 percent were overweight. There were eight 12-year-old females that were in the fall study. Seventy-five percent of these girls were of normal weight and 25 percent were at risk for becoming overweight.

Two hundred thirteen total males participated in the study in the fall. Sixteen were 9-years-old, with 9 percent being underweight, 68.8 percent within normal weight limits, 12.5 percent at risk for becoming overweight and 18.8 percent overweight. Ninety-two of the boys participating were 10 years old, with 2.2 percent being underweight, 56.5 percent within normal weight limits, 26.1 percent at risk for becoming overweight and 15.2

percent overweight. Eighty-seven of the boys were 11 years old, with 1.1 percent being underweight, 60.9 percent within normal weight limits, 18.4 percent at risk for becoming overweight and 19.4 percent overweight. Eighteen of the boys were 12 years old, with zero being underweight, 55.6 percent within normal weight limits, 16.7 percent at risk for becoming overweight and 27.8 percent overweight.

When Extension returned in the spring to look at the change in the students over time, a total of 434 students—244 females and 190 males—participated in the study. There were a total of 16 nine-year-old females. Of these, zero were underweight, 54.5 percent were within normal weight limits, 9.1 percent were at risk for becoming overweight and 36.4 percent were overweight. Eighty-nine 10-year-old females participated, with 3.4 percent being underweight, 56.2 percent within normal weight limits, 15.7 percent at risk for becoming overweight and 24.7 percent overweight. One hundred fifteen 11-year-olds participated, with .9 percent being underweight, 63.5 percent within normal weight limits, 13.9 percent at risk for becoming overweight and 21.7 percent overweight. Twenty-one 12-year-olds participated, with zero being underweight, 57.1 percent within normal weight limits, 33.3 percent at risk for becoming overweight and 9.5 percent overweight.

A total of 190 males participated in the spring study. Of these, five were 9 years olds, none were underweight, 20 percent were normal weight, 80 percent were at risk for becoming overweight and none were overweight. Fifty-two were ten years old. Of these, none were underweight, 55.8 percent that had a normal weight, 17.3 percent were at risk of becoming overweight and 26.9 percent were overweight. A total of 103 males in the spring study were 11 years old. Of these, 1 percent was underweight, 55.3 percent was normal weight, 17.5 percent was at risk for becoming overweight, and 26.2 percent were overweight. Thirty 12-year-old males participated in the spring study, of which there were none underweight, 46.7 percent of normal weight, 33.3 percent at risk for becoming overweight and 20 percent overweight.

The percentage of overweight females in this study was twice the national average of children ages 9 through 10. With the females, we saw an interesting trend. The percentage of overweight girls decreased as they got older. With the boys the effect was opposite. As the boys got older, the at-risk group moved to the overweight group. This gives us great insight into how we need to design programs for males and females differently as they age and mature.

Another interesting trend that we observed in the diet records that we collected was that the students who drink more milk and consumed greater amounts of calcium rich foods tended to have lower weights. Again this gives us great insight as to the foods that need to be stressed in the diets of these children and adolescents.

Why We Care

The national trend toward obesity is increasing and this study found that even more children are at risk for being overweight or are already overweight in Alabama. Extension understands that with the increase in obesity, there will be an increase in diabetes, cardiovascular disease and cancers. Extension wants to slow down this trend and

even stop it, to raise a healthier population in Alabama. With this data, Extension can begin to determine causes and design programs that will meet the firsthand needs of our population.