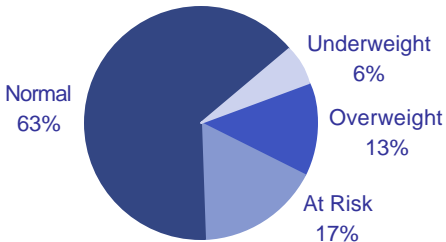


In recent years, pediatricians have raised the alarm that a “pandemic” of childhood obesity is affecting American youth. Excess body weight in children can lead to many health problems, including type 2 diabetes, once an adult disease, which has become increasingly common in children. Overweight youth are also likely to become overweight adults, risking numerous health problems, including cancer, respiratory conditions, and cardiovascular disease, as well as premature death (U.S. Surgeon General, 2004). The Centers for Disease Control and Prevention (CDC) has established standards for children’s weight based on the the distribution of children’s height and weight during the 1970s. According to these standards, children are overweight if their body mass index (BMI), an index calculated from their weight and height, is at or above the 95<sup>th</sup> percentile for children of their age and gender. Children are at risk for becoming overweight if their BMI is above the 85<sup>th</sup> percentile but below the 95<sup>th</sup> percentile.

**Prevalence**

In the Health Care Survey of DoD Beneficiaries for children, parents are asked to report the estimated height and weight of a selected child. As shown in Figure 1, among DOD beneficiaries ages 6 to 17, BMI’s from parental reports indicate that approximately 13 percent of children are overweight, and another 17 percent are at risk for becoming overweight.

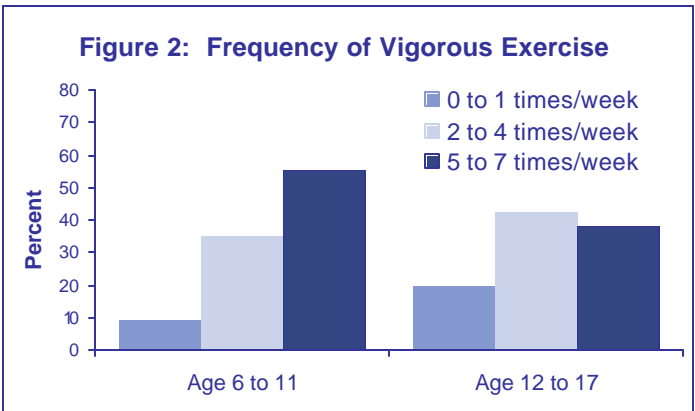
**Figure 1: Percent of Children Age 6 to 17 At, Below, or Over Normal Weight**



Within the sample of children 6 to 17, more boys are overweight than girls (16 percent compared to 11 percent), and children whose reporting parent is less educated are more often overweight than are children whose parent has at least some college (16 percent compared to 13 percent with a high school education). More black children are overweight and at risk for being overweight than are children of other races or ethnicities.

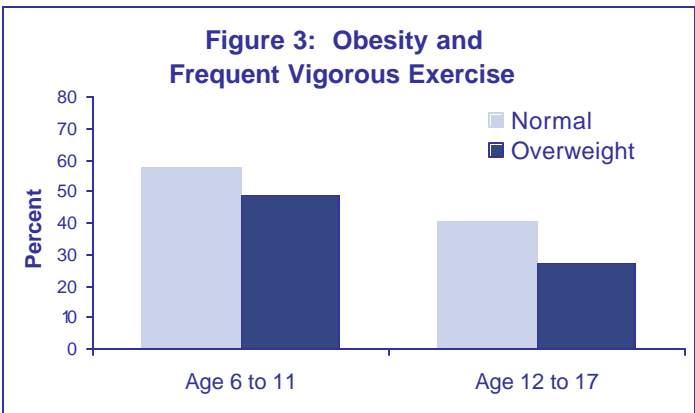
**Physical Activity**

Obesity arises when energy intake in the form of food exceeds energy expended through physical activity. Causes of obesity may be divided into those that reduce energy expenditure and those that increase intake. To identify the role of these factors, questions in the HCSDB ask about children’s exercise, television watching and consumption of fast foods.

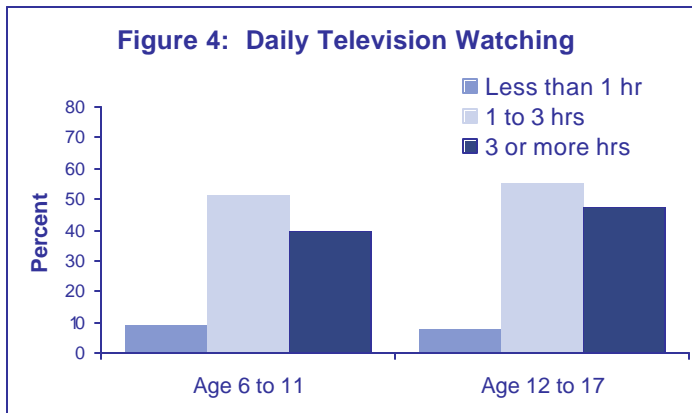


According to their parents, children become less active as they get older. Fifty-six percent of children aged 6 to 11 and 38 percent aged 12 to 17 are vigorously active for at least 20 minutes 5 or more days per week, where vigorous activity means exercise that causes heavy breathing or sweating. Nine percent of younger children and 19 percent in the older group are vigorously active once per week or less.

Children who are overweight according to their parents exercise less often than children of normal weight. As shown in Figure 3, 49 percent of overweight



# Overweight Children in the Military Health System



children age 6 to 11 and 57 percent who are of normal weight exercise vigorously 5 or more days a week, while 27 percent of overweight older children and 40 percent who are of normal weight exercise that frequently.

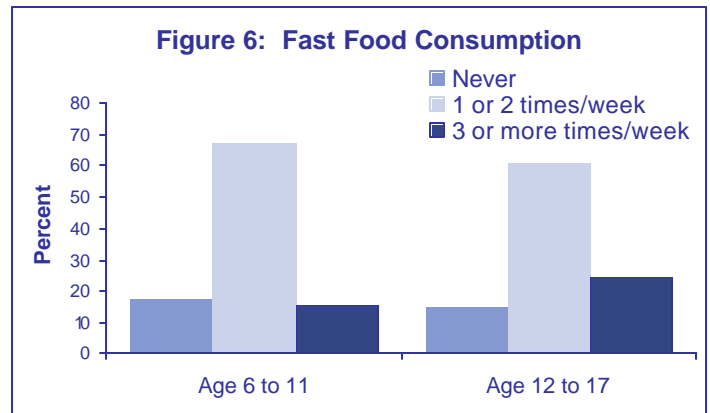
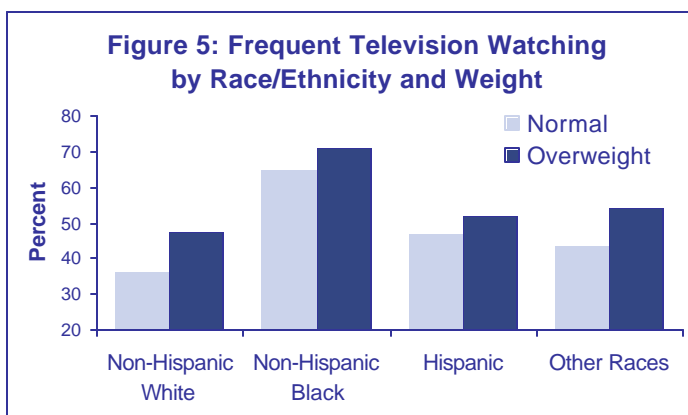
## Watching Television

Television watching and similar activities can substitute for physical activity, contributing to obesity. According to their parents, 40 percent of children 6 to 11 and 47 percent of children 12 to 17 watch 3 or more hours of television a day. Only 8 percent of the older group and 9 percent of the younger group watch one hour or less. Among overweight children, television watching is still more frequent: 58 percent in the older group and 49 percent in the younger watch 3 or more hours.

As shown in Figure 5, television watching is highest among black children. Comparing overweight children with children of normal weight by race, 71 percent of overweight black children watch television 3 or more hours per day, compared to 36 percent of white children of normal weight.

## Eating Fast Food

Obesity is also promoted when, through an unhealthy diet,



energy intake is increased compared to energy expended. One indicator for an unhealthy diet may be how often a child eats at a fast food restaurant. As shown by Figure 6, among DOD beneficiaries ages 6 to 11, 18 percent never eat fast food and 15 percent eat it three or more times a week. Among children 12 to 17, 15 percent never eat fast food and 25 percent eat it three times a week or more. Fast food does not appear to be strongly associated with obesity, however. About a quarter of adolescent children of all weight categories eat fast food frequently, as do 20 percent of obese and 15 percent of normal weight among children 6 to 11.

## Conclusion

As in the civilian population, the number of overweight children indicated by the HCSDB suggests that obesity is a growing problem in the MHS. Behavior that makes children more likely to be overweight, such as not exercising enough, watching many hours of television and eating unhealthily are more common among older children. Black children also appear to be at greater risk for these reasons. Programs or communications to promote a healthy lifestyle may be especially important for these groups.

## References

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