

BMI and Nutritional Knowledge in Fulton County IL

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Introduction

According to the Center for Disease Control, the number one cause of death in adults in the United States is heart disease (1). The risk factors for heart disease include hypertension, diabetes, being physically inactive and high blood cholesterol. Most of these risk factors have a high correlation with obesity(2). More than 2/3 of US adults are considered overweight or obese; this is twice as much as in the 1970's, making obesity a great public health issue. Similar to the rest of the country, Fulton County in the state of Illinois has faced the obesity epidemic. According to the Illinois Project for Local Assessment Needs (IPLAN), 20.4% of Fulton County residents are obese excluding those that are considered in the overweight category. Of those that are considered obese, 19.1% have been advised that they are obese and 41.3% are in the process of attempting to lose weight (3). This project aims to survey the adult population of Fulton County in order to determine if there is a correlation between a higher body mass index and a lack of nutritional knowledge. In recent years, Body mass index has been favored for measurement of adiposity and hence obesity (4). Body mass index is a measure of body fat based on height and weight. An individual with a body mass index of <25 is considered normal BMI, 25-30 is considered overweight, and >30 is considered obese. As outlined in the IPLAN for Fulton County, the number one height priority of the county is the management of obesity as it relates to chronic diseases such as diabetes, chronic pulmonary problems and chronic heart problems. The county has plans to set up interventional strategies such as educational classes that aim to teach about nutrition. With this survey we hope to find the deficits in nutritional knowledge as well as how those deficits affect BMI; We also hope to create better nutritional tools that can be used to teach individuals about nutrition based on their own shortcomings.

Methods

This study utilized a survey tool by the Physician Committee for Responsible Medicine (PCRM) about nutritional knowledge(5). The 15-question tool incorporated questions from the PCRM tool as well as general demographic information. We utilized this survey in hopes of comparing the results of the PCRM survey with that obtain in the population of Fulton County. Patients were surveyed from Graham Medical Group of Canton IL in three family medicine practices. The patient population included men and women ages 18 and up. Pregnant women and children were excluded from the survey. The participants were divided into groups of the three categories of BMI (normal, overweight, or obese). Participants were then asked to report their weight and height in order to calculate their BMI. Survey was collected over a month period and the results were analyzed.

Results

60 individuals participated in this study with approximately 54 (90%) women and 6 (10%) men. Of 60 individuals that participated in the survey, 95% were Caucasian while 1.6% were Black/African American and 1.6% were of Native American or Hawaiian origin. The results indicate that there is no correlation between nutritional knowledge deficit and increasing BMI (see table 1). Of the 10 questions evaluating nutritional knowledge, individuals in the normal range BMI answered 40% of the questions correctly which is the same result for those in the obese category. The results also illustrate that compared to the rest of the country, the people of Fulton County are less knowledgeable according to the survey. Based on the percentage correct in each question, the rest of the country answered 60% of the questions correctly as oppose to 40% in Fulton County (see table 2).

	Normal	Overweight	Obese
Calories in skim milk or Cola	14.3%	14.3%	71.4%
Cholesterol in cheese and steak	42.1%	21.1%	36.8%
Calories in cheese from fat	37%	12.5%	50%
Colon	40%	20%	40%
Cancer risk and soy products	48.1%	29.6%	22.2%
Salmon content	40%	10.0%	50.0%
Cholesterol in Egg and Big Mac	55.6%	22.2%	22.2%
Foods high in Calcium	33.3%	24.2%	42.4%
Fiber between Fish or Beef	47.1%	23.5%	29.4%
More calories per ounce	33.3%	33.3%	33.3%

Table 1: Percent Correct based on BMI Ranges

	Fulton County Population	PCRM Survey Population
Calories in skim milk or Cola	11.9%	19%
Cholesterol in cheese and steak	34.5%	39%
Calories in cheese from fat	14.3%	20%
Colon	35.1%	59%
Cancer risk and soy products	50.9%	41%
Salmon Content	16.9%	20%
Cholesterol in Egg and Big Mac	15.8%	7%
Foods high in Calcium	56.9%	22%
Fiber between Fish or Beef	30.4%	36%
More calories per ounce	5.1%	14%

Table 2: Comparison of percent correct between Fulton County and PCRM Survey Population

Discussion/ Conclusions

The results of this study indicates that obesity in Fulton County is not caused by a lack of nutritional knowledge. Obese individuals are as knowledgeable about fats, proteins, calories and fibers as their non-obese counterparts. Efforts to decrease the obesity rate in Fulton County should therefore be directed at behavioral modifications and other obstacles to having a healthy BMI. The efforts at improving behavioral modification can be addressed by health care providers. It has been shown that physician in primary care setting lack clinical nutritional knowledge (6). Physician gaining more knowledge about nutritional may be of some benefit in helping set up ways of approaching behavior modifications. Behavioral modification in obese adolescent has been effective in reducing BMI in obese children (7), therefore it may be beneficial to try such measures in the adult population of Fulton County. Factors such as socioeconomic status should also be taken into consideration. In the past, obesity was considered disease of individuals with high SES but in recent years it has switched to those with low SES (8). Therefore, further research can be done to see if SES plays a role in the increasing obesity rate.

References

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