

Is Fast Food Making Us Fat?

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ABSTRACT

This study looks at the contribution that consuming fast food may make to the rise in American obesity rates. One important goal of this study was to survey 500 U.S. adults in order to assess the frequency with which they consume fast food and dine in other restaurants. It also compares the BMI of survey participants with their reported frequency of eating fast food meals and snacks. An additional goal of the study was to assess the feasibility and effectiveness of gathering survey data via an online survey form.

Study outcomes show that Americans report a notable amount of fast food consumption and that there is a correlation between BMI and the number of fast food meals consumed among survey participants. Results of this preliminary study may be used to assess the possibility of a more extensive project with a larger population. Findings may also be beneficial to individuals seeking to take steps toward a more healthful personal lifestyle and may provide useful data to health care professionals and community health organizations.

Keywords: Obesity; Overweight; Diet; Fast Food; BMI

BACKGROUND

Despite the trending admiration of rail thin models, movie stars with “6-pac” abs, and ultra-slim music idols, the typical American does not have a trim physique. In fact, obesity rates in the US and around the world have increased at such an alarming rate that it is termed an obesity epidemic. While obesity rates have steadily increased over the last 50 years, they have risen so dramatically in the past two decades that researchers are looking for factors that may contribute to this increase in an already dangerous statistic. Obesity in America has become a major public health problem for the most recent generation of both adults and children (Grady, 2010).

Although a number of factors have been shown to contribute to weight gain, research continues to indicate that the two primary factors which have the greatest impact are diet and exercise. Within the scope of diet and exercise are numerous sub-categories of causation that can have an impact on body mass and weight gain. This study looks at the role that diet, especially the consumption of fast food and eating in restaurants may play in the prevalence of overweight and obesity among Americans.

OBESITY

It has been commonly accepted for many years that primitive man was short-lived and subject to degenerative ailments, and that the general lack of sanitation, modern medicine and varied diet would have rendered ancient man disease-prone and unhealthy. Yet, recent anthropological reports indicate that when living in near-isolated conditions, without access to the foods of civilization, primitive societies may have had a higher standard of health than many in today’s world (Bass, 1999).

Fat was scarce in the ancient world and the ability to find food, to consume sufficient nutrition for daily activities and to store any excess as fat for future use was a genetic advantage that allowed humans to survive even when times were lean and food was in short supply. Today, this genetic predisposition to store fat is still with us, but our lifestyles have changed so drastically over the centuries that the genetic advantage of fat storage has been

greatly diminished. It has, in fact, become a liability in today's world. Excess fat now poses one of the greatest threats to human well-being (WHO, 2000).

According to the U.S. Surgeon General two out of every three Americans are overweight, and one out of every three is obese (U.S. Department of Health and Human Services, 2000). Body Mass Index (BMI) is a formula used to calculate how much fat a person has by comparing height to weight, and sometimes takes age into account (BMI.org, 2009). A person is considered overweight if he has a BMI equal to or over 25 and obese if he has a BMI equal to or greater than 30 (World Health Organization, 2013). In 2005, there were 127 million American adults whose BMI was over 25 and were considered overweight; almost half of them were officially deemed obese, and this number has been steadily rising (LaFee, 2005). A 2009 study shows that obesity has overtaken cigarette-smoking as the leading cause of preventable deaths in the United States (Baum, 2009).

Carrying excess body weight is associated with the onset of serious health complications. One in three Americans is expected to have diabetes by 2050. The presence of heart disease, cardiovascular disease, metabolic syndrome, hypertension, depression, infertility and various types of cancer have also been closely associated with unhealthy weight gain (World Health Organization, 2013). In fact, according to the Centers for Disease Control (CDC), one out of every eight deaths in America is caused by an illness that can be directly related to excess weight and obesity. About 350,000 people in the United States die every year due to obesity related diseases. If this health trend continues, it is possible the USA will experience a decline in the average life expectancy of its citizens (Centers for Disease Control and Prevention, 2012).

RESTAURANT AND FAST FOODS

The substantial rise in the number of overweight Americans, especially in light of the association of excess weight with serious health disorders, makes a search for causal factors particularly important. Understanding that a balance between calories consumed and calories burned is essential for maintaining a healthy weight, researchers have been examining recent changes in eating habits of the American public. What we eat, the kinds of food that are prepared at home and how far we are from fast food restaurants and supermarkets can play a major role in whether we gain, maintain, or lose weight (Booth, 2001).

One trend that is receiving considerable attention is the upsurge in the amount of fast food that is consumed by the typical American family. The prevalence of obesity has been increasing for several decades, but during the last few decades, the rate of obesity has increased dramatically. The acceleration of overweight and obesity in the American population suggests environmental factors at work, rather than biological (Rosencheck, 2008). During the time of greatest increase in obesity, there has been a virtual explosion in the number of and variety of fast food restaurants. Terms such as "Supersize Me" and "Fast Food Nation" have become a part of the culture and suggest that fast food is at least a contributing factor in the rising obesity rates (National Bureau of Economic Research, 2009). Between 1977 and 1996, the amount of restaurant and fast food consumption for the average person rose from 9.6% of total intake to 23.5% (Greenwood, 2008). Food calories consumed in restaurants and fast food establishments rose to 32% by 2004, nearly a 1/3 increase in Americans' daily intake of calories (Bowman and Vineyard, 2004).

With the large number of working parents in today's society, the busy calendar of activities that many families keep, and the relatively low cost, convenience and large portions of fast food, eating out at fast food restaurants often becomes a quick and easy substitute for the home cooked family dinner (Health Care Center, 2012a). The Pew Research Center reports that approximately 20% of Americans eat in fast food restaurants at least twice a week (2006). The problem with this is that food consumed in restaurants, particularly fast food restaurants, is generally high in fat and calories and contains excess sodium and sugar. Research also shows that families that eat more often in fast food restaurants tend not to have healthy fruits and vegetables on hand in the home (Health Care Center, 2012b).

A recent article in the Pacific Daily News reports a government study that says, on average, U. S. adults get as much as 11% of their overall calories from fast food (2013). Additionally, in a long term investigation, the Coronary Artery Risk Development in Young Adults (CARDIA) study, showed that people who ate fast food two or more times per week experienced an average weight gain of 10 pounds more than study participants who ate fast

food less than once a week (Health and Wellness, 2011). Eating in restaurants or fast food generally increases calorie intake and people who choose fast food as a meal three or more times a week have a higher risk of obesity (Greenwood & Stanford, 2008).

This study was designed to survey a cross section of the American public to look for associations between weight or weight gain and typical eating and exercise habits. Of particular interest is the frequency of consumption of fast foods and other restaurant meals and sugar sweetened beverages. This is a preliminary study with the goal of gathering survey data from a convenience sample of 500 adults. It tests both the feasibility of gathering data via email requests and word-of-mouth as well as looking at the health habits of a segment of the American public.

Following human subjects’ approval, a letter of introduction containing the survey link was emailed to approximately 75 U. S. residents with the request to complete the survey and send the email and survey link forward to other potential respondents 18 years of age or older. Some participants were requested to complete the survey form in-person. Although the ultimate goal was 500 completed responses, it seemed unlikely that this goal would be reached using this methodology. However, within a period of less than 4 weeks there were 451 participants who “agreed” to the survey online. Of these 436 were fully completed and usable. Results were analyzed using Qualtrics, SPSS and Microsoft Excel.

SURVEY PARTICIPANTS

Of the 436 successful respondents, 41% were male and 59% were female. As shown in Table 1, the largest age group of survey participants included respondents 30 years or younger and the smallest participant age group included those over 60 years. This is, perhaps, not surprising considering the survey was conducted online and was generally initiated via email. It is, however, important to keep the age statistic in mind when reading further survey results.

Table 1: Age of Participants by Percent

30 or Under	31-40 years	41-50 years	51-60 years	Over 61 years
54%	14%	11%	13%	9%

n = 436

It is interesting that there was a fairly even distribution of survey participants across educational levels with slightly more participants who are students than who have Bachelor degrees and a surprisingly large number who are high school graduates but are not students. There was a good showing for those with Master and Doctoral degrees as this represents 19% of the total number of usable surveys.

Table 2: Education Level of Participants

High School Graduate	Bachelor’s Degree	Graduate Degree	Student
24%	27%	19%	29%

n = 436

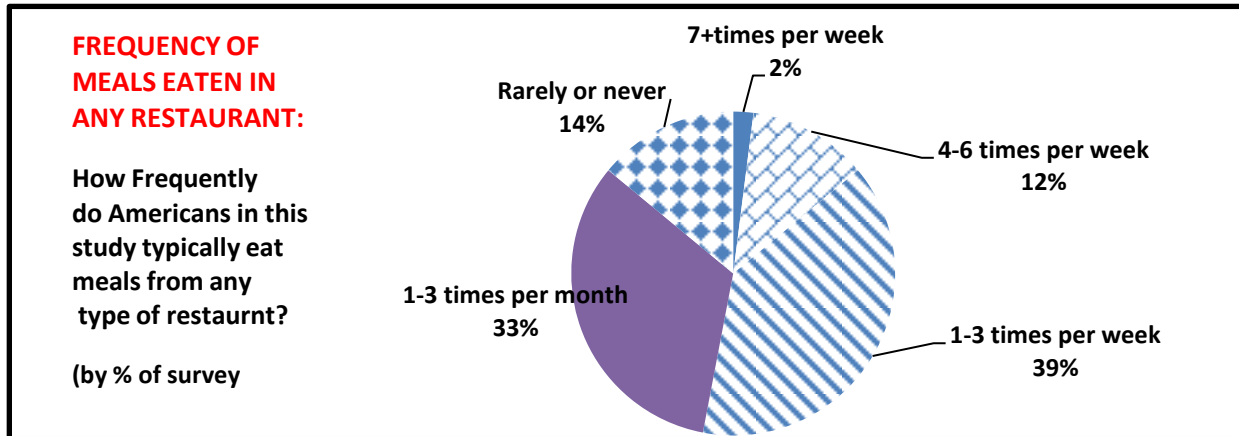
The survey asked participants to indicate the frequency with which they ate from fast food restaurants, consumed takeout food such as Pizza or Chinese, and ate meals in other restaurants. Table 3, below, shows that, although 43% of respondents say they rarely or never eat meals from fast food restaurants, 45% eat in fast food restaurants at least once each week and some of these as much as seven times a week. Seven percent said they eat fast food daily and 11% eat fast foods 4 to 6 times a week. When reading these results, the youthful age demographic should be noted as well as the fact that over a quarter of the respondents were students. Even so, the number of fast food meals consumed each week is notable.

Table 3

Frequency of Eating...	7+ times per week	4-6 times per week	1-3 times per week	1-3 times Per month	Rarely or Never
meals from fast food restaurants	7%	11%	27%	16%	43%
take-out food from pizza or other restaurants	0%	8%	32%	40%	20%
In restaurants other than fast food	2%	12%	45%	34%	7%

n = 436

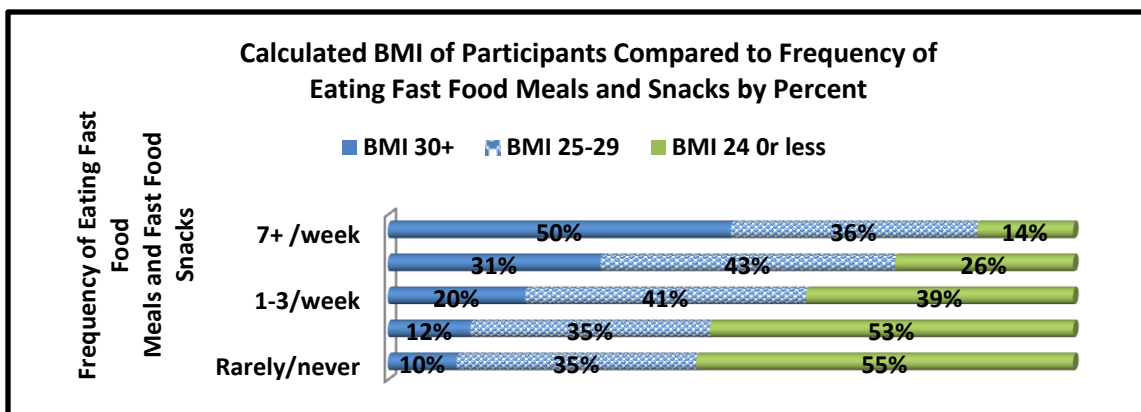
Results of the survey show that 40% of respondents eat take-out food such as pizza at least once a week and another 40% do so at least once a month. The most frequently chosen response for take-out foods was 1 to 3 times per month. Outcomes also indicate that 59% of participants eat meals at restaurants other than fast food at least once each week with 45% of these reporting they eat out 1 to 3 times a week and 2% indicating that they usually eat in restaurants every day of the week. An additional 34% eat in restaurants at least once a month and 7% say they rarely or never eat in restaurants. This is summarized in Table 2, above.



Graph 1
n = 436

Graph 1, above, shows the average frequency with which Americans responding to this survey report they eat meals from restaurants of any kind, including fast food and take-out.

In looking at the possible impact of fast food meals and fast food snacks on the rate of obesity, the outcome was interesting but not surprising. Graph 2 shows that, of the participants who report they eat fast food meals or fast food snacks 7 or more times per week, half of them had a BMI of 30 or more which is considered obese. It is also interesting to note in Graph 3 that the percent of survey respondents whose BMI fell between 25 and 29, overweight but not obese, remained fairly constant. In calculating BMI, a significant number of survey participants appear to have normal weights, and this is inversely proportional to the number of times they consume fast food.



Graph 2
n = 436

Information from the demographics section was used to calculate Body Mass Index (BMI) of respondents, and the results were categorized according to the World Health Organization standard. This standard classifies a BMI of 30 or more as obese, BMI of 25 to 29 as overweight and from approximately 19 up to 24 as normal or healthy weight (WHO, 2013).

SUMMARY AND CONCLUSIONS

Obesity is a problem the world over, and Americans have one of the highest obesity rates of all. Two thirds of Americans are overweight and half of those overweight Americans are obese (U.S. Department of Health & Human Services, 2000). The prevalence of obesity has been increasing in the U.S. for several decades but there has been a surge in the rate of obesity that parallels the growth of the fast food and restaurant industry and the tendency toward a less active and a more sedentary lifestyle.

Although the convenience and low cost of fast foods may be appealing to many lunchtime or dinnertime Americans, this study highlights the potential obesity risk of frequently eating foods that are high in fat and leading a sedentary lifestyle with little or no exercise. The typical eating habits of participants of this study include a high number of meals and snacks and sugar sweetened beverages consumed at fast food and other restaurants every week. A correlation was shown between excess weight and eating fast food, but more in-depth studies need to be done to establish a cause and effect relationship.

This study also looked at the success, or lack thereof, in gathering data via email request and word of mouth for an online survey. While this study received a good response to its call for survey-takers, there is doubt that this method would be viable for a larger sample group unless the original number of emails is significantly increased. In addition, there is need for frequent reminders and survey updates. If these considerations are taken into account and planned for, then this method of gathering data is feasible.

AUTHOR INFORMATION

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