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Increasing Trends in the Consumption of Fast-Foods in Nigeria

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Abstract

Fast-food eating is a dietary pattern that used to be foreign but has gradually become a part of the lifestyle of people in Nigeria especially those in urban areas. Judging from the uncontrollable rate and manner at which fast food restaurants are opening almost everyday in every nook and cranny of the country, the consumption of these foods may continue to increase. An examination of the factors involved in weight gain and obesity in the developed countries is crucial for prediction about the future of countries in early stages of frequently dramatic socio-economic changes like Nigeria. This paper therefore examined the increase in the trend of consumption of fast food, the factors that lead to the increase and the effect it could have on the people. While calling for health education intervention on educating the

people on how to reduce the amount of fat in the foods they consumed so that the nation would not have to start battling with health problems relating to diet like it is happening in some advanced countries.

Introduction

Fast food eating, a dietary pattern that used to be uniquely foreign has gradually become part of the lifestyle of people in Nigeria, especially those in urban centres (Moronkola, 2003; Adeniyi, 2005; Akinbile, 2008). In many cities in Nigeria, one can find numerous fast food restaurants where most of the foods sold are usually snacks, burgers, fries, chicken, cola drinks, ice cream, fruit drinks and other foods that are high in fat, sodium and sugar (Ajala, 2006; Aladelokun, 2006). The growth of this business can be noted in the fact that the number of fast food eating establishments scattered all over major streets of big cities increased in the past few years with different exotic and enticing names.

The concept of fast food eating has also expanded into food sales in schools. For many students the day is incomplete without observing the "daily ritual" of visiting a fast food joint and most of the fast food restaurants in the cities have began to open centres within and very close to schools especially university campuses. Some meals available for refreshment during celebrations, meetings and conferences are also now being prepared by fast food chains instead of the natural foods. These have increased the numbers of times people feed on these foods.

Carroll and Miller (1982) affirmed that young people enjoyed fast food eating centres because it usually provides a place for socialization. They projected that most young people and adolescents would eat many meals in the coming years in fast food restaurants. Hawks, Mananat, Merill, Goudy and Miyagawa (2002) also reported that the practice of skipping meals, frequent snacking and indulgence in fast food was very common among young people.

Nutritionally, the fast food diet has been questioned by some health educators and nutritionist (Carroll & Miller, 1982; Corbin & Lindsey, 1988; Payne and Hahn 1997; BBC News, 2003; Moronkola, 2003; Ajala, 2006). Most fast food meals are high in protein (especially the meat and diary products) but the major concern now is that they are also usually high in fat, sugar and sodium; thus contributing additional calories, excess body fat and increase body weight. Being overweight or obese increases the likelihood of suffering

from cancer, coronary heart diseases, diabetes, hypertension, osteoarthritis, strokes and obesity reduces life expectancy by an average of nine years [World Health Organisation (WHO) 2000].

The British Broadcasting Corporation (B.B.C,2003) taking note of the report of Medical Research Council (MRC), confirmed that most fast foods are very dense in calorie and that a small amount taken can bump up calorific intake. They also found that these energy dense foods can fool people into consuming more calories than the body needs because of the satisfying taste. The MRC concluded that diet high in fast foods will increase a person's risk of weight gain and obesity – even though they may feel that they are eating no more than they would if they ate natural meal.

Concept of fast food / Junk food

Fast food is the term given to foods that can be prepared and served very quickly and refers to food sold in a restaurant or store with preheated or precooked ingredients and served to the customers in a packaged form for take-out or take away (Wikipedia). Wart (2006) described fast food or junk food as those foods that do not belong to a major food group. The major food groups according to him are breads and grains, vegetables, fruits, dairy meat and beans. He described junk food as visible fats (butter, margarine, oils, dressing and gravies); sweetness (sugar, syrup, candy and sweetened beverages); deserts (cookies, cakes, pastries, ice cream, pudding); salty snacks (potato drips, corn chips, plantain chips e.t.c.) miscellaneous (coffee, tea). He further stated that any food item that is high in sugar, salt and fat is junk. Hence a salad could be junk food if you drown it in dressing, bread becomes a junk food if one smothers them in butter, season them with bacon or douse them with salt. According to him, junk foods don't just come from a fast food restaurant or pastry shops, many of the quick to fix foods sold in grocery stores are also junk food. Even some foods cooked at home could be classified as junk food.

Wikipedia (2006) described junk food as a common term used for any food item that is perceived to be unhealthy or to have poor nutritional value. Examples of junk food listed are those that may include, but are not limited to hamburgers, pizza, candy, soda and salty foods like potato chips and french fries. It includes chewing gum and bubblegum which are not swallowed but usually contains sugar or sugar alcohol which may not cause tooth decay but have calories.

Trend in the consumption of fast food in Nigeria

Fast foods otherwise referred to as junk food is one of the commonest consumable products in Nigeria today, especially amongst urban dwellers. The situation is not only becoming uncontrollable but also alarming. Adeniyi (2005) reporting the remark of a renowned nutrition expert, confirmed that Nigeria is fast becoming popular when it comes to fast non-nutritious food consumption. Judging from the uncontrollable rate and manner at which fast food centres are opening almost everyday in every nook and cranny of the country, particularly urban centres, he concluded that the consumption of these foods will continue to increase.

Fast food business started in Britain by the McDonald Brothers in the early 20th century. They started the novel deed by selling roasted bread and tea to passengers at Railway stations. This they later developed into a standard business out fit with variety of menu. In Nigeria, fast food sales began with the U.A.C, Kingsway, Leventist and UTC. The foreign investors had this business and it was a quick food for the affluent, those who are not yet at home but needed a lunch and those who preferred it to local food restaurant possibly because of hygiene and some who wanted to identify with the affluent. Later indigenous people started delving into the business.

The modern fast food business seen around started with the more popular Mr. Biggs in 1986. This evolved from the coffee shops of the old Kingsway Rendezvous, which was run by UACN, its parent company in 1960's. Since then there has been increase in the number of joints opening up to the extent that many available landed properties especially highways have been and are being taken over by fast food producers/ providers (Adeniyi, 2005). As at 2006, there were about one hundred and seventy one Mr. Biggs restaurants scattered around major cities in Nigeria (Mr.Biggs Newsletter, 2006)

Igbokwe (2005) also observed that fast food business is growing. According to him the business keeps expanding and gaining new outlets. He pointed out that many Nigerians have either established or planned to establish a fast food business. Carroll and Miller (1982) projected that the fast food phenomenon would continue to be part of Americans in the future. This may also become the case of Nigeria because of the way people now patronize fast food joints and are becoming "addicted" to fast foods.

The past decade has seen a particular growth in the development of fast food since in any metropolitan area of Nigeria, one can find numerous fast food restaurants. The rate at which people now consume such foods is on the increase. Akingbile (2008) confirmed this when he stated that there is increased marketing of fast food and fast food advertisement to children and that the number of high income households due to upward review of salary correspondingly increased the number of restaurant and take home meals. Konwea and Akindutire (2006), in a study to examine the perceived effect of consumption of fast foods among urban residents in Nigeria reported that the frequency of fast food consumption of both male and female was high.

Factors responsible for increase consumption of fast food diet

The nutritional make up of fast foods seem to encourage people to gorge on it unintentionally with a possibility of increasing their risk of weight gain or obesity as a result of consuming more calories than the body needs. In Nigeria, it has been noted that nutritional deficiencies as well as chronic diet related diseases affect the populace and that diet-related non-communicable diseases such as obesity, cardiovascular diseases, diabetes and others hypokinetic diseases exist or are emerging as public health problems (Ojo, 2003).

Eating out has become a routine for many people partly because the time for preparing meals at home has reduced due to changing lifestyle. Also some Nigerians seem to associate the eating of fast foods with high prestige or a high class value and as a lifestyle of the affluent or a way of displaying affluence. According to Wikipedia, the concept of ready-cooked food for sale is closely connected with urban development. The fast-food outlets are takeaway or take-out providers, often with a "drive through" service which allows customers to order and pick up food from cars; but most also have a seating area in which customers can eat the food on the premises. Many petrol stations have convenience stores which sell pre-packaged sandwiches, doughnuts and hot foods. Also traditional street food and snacks are available from small operators and independent vendors operating from a cart, table, portable grill or motor vehicles.

Today's fast-paced, technological society has contributed to drastic changes in the way people eat. The dual- career and single parent families are becoming more common. As people juggle careers, child care, social and professional meetings, education and recreation, the traditional meals at home are often skipped, eaten on the run or thrown together quickly. As a result, food preparers in fast food centres have taken over the responsibility

of preparing foods for families and those who do not have time to prepare foods.

One of the most remarkable social changes in Nigeria since the turn of this century has been the rapid rate of urbanization. The main consequence of this has been the creation of a number of social, environmental and economic problems. The most critical among the social has been the inability of the country to provide adequate housing .The constant attempt by both the public and private developers to solve the housing problems led to the sub-urban residential developers in major cities. The resultant effect of this is reflected in the very wide separation between the places of residence and those of work and schools. This coupled with long hours at work or school and the insufficient or inadequate transportation system, most Nigerians had to rely on the consumption of foods prepared outside the home.

Igbokwe (2005) observed that in the past whenever a woman wanted to get something from her husband, she would prepare a delicious meal for him and use it as an opportunity when the man is satisfied. The situation, these days is that whenever a man agree to give his wife a threat, in most cases it is to a fast food outlet that he takes her to. He observed that Nigerians appreciate quality; they now cultivate the culture of driving out with their family to eat. Also children when celebrating birthdays or want to be rewarded for good performance in exams or good behaviour at home want to be taken to a fast food restaurant.

Adeniyi (2004) pointed out that fast food joints are opened as money making ventures. Igbokwe (2005) was also of the view that companies and individuals went into the fast food business because they realized the place of food as one of the basic necessities of man and that the business is booming and is a goldmine if well managed. He concluded that Fast food is one of the fastest growing industries in Nigeria today. Comparatively, Caroll and Miller (1982) and Robbin, Powers and Burgress (1999) submitted that fast food eating is big business and that one fourth of what Americans spend to eat away from home was spent on fast food. As at that time it was estimated that by the end of the 80's half of all expenditures for food would go to fast food chains.

Some people complain about enough time for preparing meals at home as a reason for consuming fast food. Robbin, Powers, and Burgress (1999) confirmed that the time at home has decreased because of changing lifestyle.

According to them the trend is not likely to change. As adults eat roughly 30% of their calories away from home and fast food restaurant serve four out of ten meals eaten at away from home eating establishments, though one is not sure of the rates in Nigeria.

In the traditional African societies, food was always prepared at home. However, urbanization and office work in which women are now involved has led to longer hours of staying off home. Thus wives and children can not prepare food. Some people are more enveloped or engrossed with their chores or work, which tend to affect the normal routine of purchase, and preparation of food at home. Fast foods serve as a fast means of getting something to eat to suppress hunger before the main course. These people consequently become regular patronage of fast food restaurants.

There are those who eat fast food because of the sweet and delicious taste. This was why the B.B.C news (2003) stated that the nutritional make up of fast food encourages people to gorge on it unintentionally. People of all ages subscribe to its patronage passionately; children cannot resist the sweet and delicious taste of some of the items sold. Some youths or adolescents and elders see patronage as a means of boosting their social status and giving good impression of themselves financially. The lower class people get their share of fast food (though not in exotic eating centres which could be found all over the street) with various food vendors. Some in low-keyed shop sell fast food and people do patronize them to satisfy hunger.

Business executives prefer fast foods because of the hygienic environment it is served. The Mr. Biggs Newsletter (2006) stated that they offered unique eating experience to everybody in the highest state of hygiene, menu variety, attractive decoration and excellent customer service. This was why Igbokwe (2005) said fast food preparers treat customers like a woman who serves her husband his favourite food in his bedroom in the night and wins his heart. This is what the fast food chains do by trying to excel in customer service.

Some people eat fast food as appetizer before a meal or as a desert after meal. It is very easy to serve to a large number of people. They are also served in very clean environment so it is assumed that it is very hygienic with little risk of contaminating disease.

A neurologist in Awake (2004) while warning about the danger of type 2 diabetes for young people who are obese said a contributing factor is that they can afford super sized burgers and fries and so they get them.

further noted that there is no one out there telling them it is wrong – certainly not the fast-food companies and that most physicians cannot tell them because they are not trained in nutrition.

Effect of consuming fast foods and fat related diets

In the agricultural lifestyle of the past most people grew and prepared their own meal. People consume a greater amount of fresh fruits, vegetables and grains and fewer amounts of salts, fats and refined sugar. Most of the foods now lined up in fast food chains bear little remembrance to the original farm product

According to B.B.C News (2003) experts at the Medical Research Council found that most fast food is very dense in calories so that people need only a small amount to bump up their calorie intake. Most of these foods are highly processed, often stripped of key nutrients and the result of this is malnutrition. James a renowned expert in nutrition pointed out that hunger, which used to be the number one nutritional problem globally is no longer the world's only nutrition problem. He presented the result of the recent report of World Health Organisation which revealed that more than one billion adults worldwide are overweight and at least 300 million people clinically obesed. This was attributed to the consumption of junk or refined food. He therefore linked the alarming figures of obesed people to the high preference for fast food and consumption of non-nutritious diets. (Adeniyi, 2005)

Robbins et al. (1999) also emphasised that the problem of the world has changed from lack of food to eating too much of the wrong foods. Most of the junk foods like hamburgers, cheese doughnut, meat pie, and sugar that people are spending on will at the end create health problems for those consuming them since they are not beneficial to the body but create problems for some body organs. The higher people take junk foods, the less likely they would have an adequate intake of essential vitamins and minerals. They would also gain weight but be malnourished (Wart, 2006)

Adeniyi (2004) reporting the remark of a nutrition experts about Nigeria pointed out that there are different nutritional diseases that are now plaguing the society. According to him nutrition experts have linked such diseases to abuse of certain foods. He further explained that diseases like diabetes, obesity are linked to high rate of sugar consumption as well as the craze for sugary foods both by the young and adults.

The BBC News (2003) reported that a typical fast food meal has a very high energy density that is more than one and a half higher than an average traditional British meal and two and a half times higher than a traditional African meal. The higher people take of junk foods, the less likely they would have an adequate intake of essential vitamins and minerals. They would also gain weight but be malnourished.

William James in Adeniyi (2004) was of the opinion that many people in Nigeria are digging their graves with their own mouth as a result of what they consume. He warned that Nigerians be weary of sugar and other sugary foods in order to stern the prevalence of nutritional- related ailments and diseases so as not to cut down their life span with what goes into their mouths.

Prentice in BBC News (2003) pointed out that we all possess a weak innate ability to recognize foods with high energy density and tend to assess food intake by the size of the portion, but fast food meals contain many more calories than a similar –sized portion of a healthy meal. These foods only add excess load to the body, they are not easily digested, they contain high calories and at the end may increase the fat content and cholesterol level of the body (Adeniyi, 2005). Yet our bodies were never designed to cope with the dense food consumed, this will contribute to a major rise in obesity.

Schlosser (2001) complained about the factory condition in which fast food hamburgers and fries are made. He said one of the problems with fast food is that it has created a centralized, industrialized food system, which is very vulnerable to spreading pathogens. According to him, about 200,000 people in American are sickened each day by food borne pathogens that are often found in ground meat. Of those people who get sick, 900 are hospitalized and 14 die annually. Another problem Schlosser mentioned is the fact that fast food chains tend to hire unskilled labourers who end up working in unsafe condition, but do not know how to ask for improvements.

Rogers (2003) pointed out that what one gets from burgers and fries is usually more then you bargain for in fat. Bowman, Gortmaker, Ebbeling, Pereira and Ludwig (2004) also confirmed that several dietary factors inherent in fast food may cause excessive weight gain such as massive portion size, high energy density, palatability (appealing to primodial taste preferences for fats, sugar, and salt) high content of saturated fats and trans fat, high glycemic load and low content fibre.

The Coronary Artery Risk Development in Young Adult's (CARDIA) study suggested that eating fast food regularly increases the odds of becoming obese and or type two diabetes (Health Fast, 2005). The CARDIA study found that there was strong association between frequent consumption of fast food and increase weight and insulin resistance in young adults. Those who ate more fast food meals showed a higher weight gain (about 10-pounds) at 15 years of follow up than those who ate infrequently at fast food restaurants. The researchers determined these findings to be independent of other potentially important lifestyle facts such as physical activity and TV viewing. As for insulin resistance and increase in risk of diabetes, the researchers suggested that certain fast food contain amounts of partially hydrogenated oils and this class of fatty acid can cause insulin resistance and the risk of type 2 diabetes.

Childhood obesity has also been linked to fast food. A study of 6212 youngsters found that nearly one third of U.S children aged 4 to 19 eat fast food and that it likely packs on about six extra pounds per child per year and increases the risk of obesity (Bowman, Gortmaker Ebbeling, Pereira and Ludwig, 2004). The findings of the study suggested that fast food consumption had increased five fold among children since 1970. Bowman et al (2004) was of the opinion that the number was alarming but not surprising since so much money was spent each year on fast food advertising directed at kids. They were also of the view that children's current levels of fast food consumption are higher probably because of an increase in the number of fast food restaurants and in fast food marketing since the late 1990's. The result of the study bolster evidence that fast food contributes to increased caloric intake and obesity risk in children. Fast food lovers consumed more fats, sugars and carbohydrates, and fewer fruits, non-starchy vegetables than youngsters who didn't eat fast food. They also consumed 187 more calories.

Lawbow, an expert in nutritional, non-toxic and environmental medicine in Aladetokun (2006) was of the opinion that fast foods are fast death. According to her, fast foods are bad because the natural nutrients, vitamins and minerals that help to build the body and protect it against preventable ailments like diabetes, cancer, heart diseases, hypertension, obesity and cardiovascular diseases have been reduced. She also expressed growing concern over that rate at which people die accidentally during surgical operations on ailments such as cancer and other diseases that are better prevented through good dietary intake.

Black (2004) however pointed out that if one eats well at home, there is nothing wrong with "splurging" when eating out. According to her, a slice of pizza or fast food once in a while won't do any harm but if fast food is all you eat it can lead to problems. If meals were only eaten out occasionally it would make a big difference to health. But Wired for Health (2004) lamented that on the average, young people eat at least a third of their food out of the home, so it will be a major influence to the over all diet.

Black (2004) quoting the U.S. Food and Drug Administration (FDA) stated that what is important is a person's average food intake over a few days, not just a single meal. She advised that one should try to balance with healthier foods the rest of the day if one ate a meal consisting of only junk food. Wired for Health (2004) suggested that small changes in the choices made can make a big difference to the overall balance of nutrients in a meal and Black (2004) confirmed that it is actually easier than one thinks to make good choices while eating at a fast food restaurant, the mall or even the cafeteria.

Need for education on healthy eating in Nigeria

Occasional visits to fast food restaurants will have little effect on the nutritive value of ones total diet. Eating out is not all bad, what really matter is how often people rely on these foods and what other foods people are eating during the day. It can be easy to achieve a healthy diet even on the run, if people develop the skills to make healthy choices. There is therefore an urgent need to health educate the populace on ways of making healthy choices of foods whether in a fast food restaurant or while preparing food at home .

To control the amount and kind of fat one eats and help people avoid junking up the food they eat, Robbins et al (1999), Ajala (2006), and Wart (2006) offered few ideas which if incorporated into an health education intervention package or included in the school curriculum can help people reduce the amount of fat in the foods they consume. These included;

- 1. Limiting intake of meat, seafood and poultry to not more than five to seven ounce per day.
- Eating chicken or turkey (without skin) or fish in most of your meals.

- Choose lean cuts of meat, trim all the fats you can see and throw away that fat that cooks out of meat.
- 4. Eat not more than a total of five to eight teaspoons of fats and oils per day for cooking, baking and salads.
- 5. Eat only low fat dairy products.
- 6. Preparing foods broiled, boiled or baked not fried.
- 7. Trying cooking with canola or olive oil instead of vegetable shortening, butter or magazine.
- 8. Drinking water instead of soft drinks, tea or fruit juice drinks.
- 9. Eating dessert in moderation take one cookie instead of two
- 10. Buying processed foods that are lower in calories, fats, cholesterol, sodium and sweeteners (including corn syrup, honey and concentrated fruit juice.
- 11. Switch to whole grain breads and cereals.
- 12. Substitute two egg whites for one whole egg
- 13. Eating fish once or twice a week (baked or broiled, not fried or breaded)
- 14. Selecting oils, cooking oils and margarines made with unsaturated fats
- 15. Replacing snack items such as potato chips, salted nuts and crackers with fresh fruit, unsalted, unbuttered popcorn.
- 16. Reading labels; learn about what you are eating.

Conclusion

Occasional visits to fast food restaurants would not pose much problem but if all what people ate is fast food the foundation for nutritional problem is being laid. Part of self-responsibility is becoming a nutrition wise consumer. By incorporating the suggested fat reduction practices while eating either in fast food restaurant or while making food choices, Nigerians would be able to reduce the amount of fat consumed. This will help to avoid the need to start

battling with health problems related to over consumption of fast food as it is in most advanced countries presently.

References

- Adeniyi, S. (2004). Soft drinks in Nigeria are dangerous to public health. *Nigerian Tribune*. November 10: 23.
- Adeniyi, S. (2005). Nigeria is fast becoming a junk food nation. *Nigerian Tribune* January, 27: 24.
- Ajala, J. A. (2006). *Understanding food and nutrition*. Ibadan: MayBest Publications.
- Akinbile, P. O. (2008). Obesity and overweight in children: strategies for prevention. *Journal of Nigeria Association of Sports Science and Medicine*. 1(2): 1-5.
- Aladelokun, D. (2006). Health freedom activists warn of the dire consequences of abandoning natural foods. *Saturday Punch*. June 24: A5
- Nigerian Tribune (2005). Why buggers are bad for you. *Nigerian Tribune*. March 3: 20.
- Black J. O. (2004). Eating well while eating out .*The Nemours Foundation*. Retrieved December 14, 2004 from http /kids health .org.
- Bowman, S.A., Gortmaker, S.L., Ebbeling, C.B., Pereira, M.A. and Ludwig, D.S. (2004). Effects of fast food consumption on energy intake and diet quality among children in a national household survey. *Pediatrics*. 113 (1): 112-118.
- British Broadcasting Corporation (B.B.C, Oct. 22, 2003) Why fast food makes you grow fat. Retrieved December 14, 2004, from http/news/bbc.co.uk/i/hr/health/3210750.stm.
- Caroll, C. and Miller, D. (1982). *Health: The science of human adaptation*. Dubuque: Web/Winc Brown Company.
- Corbin, C. B. and Lindsey, R. (1988). *Concept of physical fitness with laboratory*. 6th ed. Dubuque: MWC Brown Publishers.

- Health Fast (2005) Health consequences of too much fast food. March 20. Retrieved on March 12, 2006 from http://www.findarticles.com/p/articles/.m-m0815/15-3-30/ai-1713.
- Hawks, S. R.; Madanat, H. N.; Merrill, R. M.; Goudy, M. B. and Miyagawa, T. (2002). A cross-cultural compassion of health promoting behaviours among college students. *International Electronic Journal* of Health Education 5:84-92.
- Igbokwe, C. (2005). Bitter-sweet experience of running a fast food business. *The Punch*. November, 21: 4.
- Konwea, E. P. and Akindutire, I. O. (2006). Perceived effects of consumption of fast Food on weight-gain among urban residents in Nigeria. *Journal of International Council for Health, Physical Education, Recreation, Sports and Dance.* 1 (2), 136-141.
- Moronkola, O. A. (2003). Essays on issues on health. Ibadan: Royal People Ltd. 26-27.
- Mr. Biggs Newsletter (2006). Mr Biggs restaurants. August 29. Retrieved August 30, 2006 from http://www.mrbiggsonline.com/locate.htm.
- Obayuwana, C. (2001). Nutrition productivity and nation building. Sunday Champion. August 19: 21.
- Ojo, R. A. (2003). Nutrition as correlate of productivity and nation building. *West African Journal of Physical and Health Education*. 7: 219-227.
- Payne, W. A. and Hahn, D. B. (1997). *Understanding your health*. 5th ed. New York: McGraw-Hill. 135.
- Robbins, G.; Powers, D and Burgress, S. (1999). A wellness way of life. 4th ed. Toronto: McGraw-Hill.
- Rogers, S. (2003). Fast food choices...you are what you eat! Retrieved February 17, 2005 from http://www.can-do.com/uci/lesson 98.nutrition.html.
- Schlosser, E. (2001). Fast food nation: The dark side of the all-American meal. Boston: Houghton Miltlins.

- Wart, P. J. (2006). What is junk food? *Health Plus*. September, 3. Retrieved September 8, 2006 from http://vanderbiltowc.wellsource.com/dh/content.asp?ID = 260
- Wikipedia (2006). Junk food. Retrieved August 24, 2006 from http://en.wikipedia.org/wiki/junk-food.
- Wikipedia Fast-food (2010). Retrieved March 24, 2010 from mhtml:file://C:\
 Documents and settings\ user2\Mv Documents\Fast food-Wikipedia.
- Wired for Health (2004). Fast food and healthy eating. www.wired forhealth. gov.uk/eat.php?catio= 887 & docid 7220.2004.
- World Health Organisation (2000). Obesity: Preventing and managing the global epidemic. WHO Technical Report Series. 894. Geneva: WHO.