

## Fact Cards for 'Diabetes Statistics Scavenger Hunt'

### Card 1

# Complications of Diabetes in the United States

Diabetes is associated with an increased risk for a number of serious, sometimes life-threatening complications. Management of blood glucose levels can reduce the risk of diabetes-related complications. However many people are not even aware that they have diabetes until they develop one of its complications.

### Heart disease and stroke

- Heart disease and stroke account for about 65% of deaths in people with diabetes.
- Adults with diabetes have heart disease death rates about 2 to 4 times higher than adults without diabetes.
- The risk for stroke is 2 to 4 times higher and the risk of death from stroke is 2.8 times higher among people with diabetes.

In women with diabetes, deaths from heart disease have increased 23 percent over the past 30 years compared to a 27 percent decrease in women without diabetes. Deaths from heart disease in men with diabetes have decreased by only 13 percent compared to a 36 percent decrease in men without diabetes.

### High blood pressure

- About 73% of adults with diabetes have blood pressure greater than or equal to 130/80 millimeters of mercury (mm Hg) or use prescription medications for hypertension.

## Card 2

# Complications of Diabetes in the United States

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## Blindness

- Diabetic retinopathy causes 12,000 to 24,000 new cases of blindness each year making diabetes the leading cause of new cases of blindness in adults 20-74 years of age.
- Mexican Americans and non-Hispanic blacks are almost twice as likely to develop diabetic retinopathy as non-Hispanic whites.

## Kidney disease

- Diabetes is the leading cause of kidney failure, accounting for 44% of new cases in 2005.
- In 2005, 46,739 people with diabetes started dialysis, the treatment for end-stage renal disease (ESRD).

## Card 3

# Complications of Diabetes in the United States

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## Amputations

- In 2004, about 71,000 non-traumatic lower-limb amputations were performed in people with diabetes. More than 60% of non-traumatic lower-limb amputations are caused by diabetes
- The rate of amputation for people with diabetes is 10 times higher than for people without diabetes.
- Mexican Americans are 1.8 times as likely to have a lower-limb amputation as non-Hispanic whites.
- Non-Hispanic Blacks are 2.7 times as likely to have a lower-limb amputation as non-Hispanic whites.
- American Indians are 3 to 4 times as likely to have lower-limb amputations as non-Hispanic whites..
- Amputation rates are 1.4 to 2.7 times higher in men than women with diabetes.

## Card 4

# Total Prevalence of Diabetes & Pre-diabetes

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**Total:** 23.6 million children and adults -- 7.8% of the population -- have diabetes.

**Diagnosed:** 17.9 million people

**Undiagnosed:** 5.7 million people

**Pre-diabetes:** 57 million people

### Under 20 years of age

- 186,300 or 0.22% of all people in this age group have diabetes.
- About one in every 400 to 600 children and adolescents has type 1 diabetes.
- Two million adolescents (or 1 in 6 overweight adolescents) aged 12-19 have pre-diabetes.
- Type 2 diabetes, although still rare, is being diagnosed more frequently in children and adolescents, particularly in American Indians, African Americans, and Hispanic/Latino Americans.

### Age 20 years or older:

- 23.5 million or 10.7% of all people in this age group have diabetes.
- In 2007, 1.6 million new cases of diabetes were diagnosed in people aged 20 years or older.

## Card 5

# Total Prevalence of Diabetes & Pre-diabetes

Total prevalence of diabetes by race/ethnicity

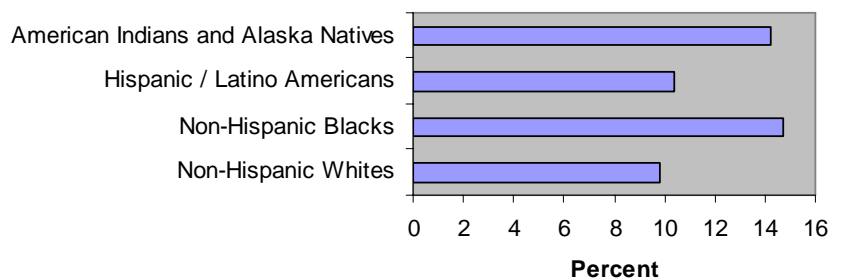
**Non-Hispanic Whites:** 14.9 million or 9.8% of all non-Hispanic whites aged 20 years or older have diabetes.

**Non-Hispanic Blacks:** 3.7 million or 14.7% of all non-Hispanic blacks aged 20 years or older have diabetes.

**Hispanic/Latino Americans:** 10.4% of Hispanics aged 20 years or older have diabetes. Among Hispanics, rates were 8.2% for Cubans, 11.9% for Mexican Americans, and 12.6% for Puerto Ricans.

**American Indians and Alaska Natives:** 16.5% of the American Indians and Alaska Natives aged 20 years or older receiving care from IHS have diabetes. Rates vary by region from 6.0% among Alaska Native adults to 29.3% among American Indian adults in southern Arizona.

**Estimated age-adjusted total prevalence of diabetes in people aged 20 years or older, by race/ethnicity-United States, 2008**



## Card 6

# The Dangerous Toll of Diabetes

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## What is diabetes?

Diabetes is a disease in which your body stops producing or is unable to use the hormone, insulin. This causes blood glucose levels to rise to dangerously high levels. Blood glucose levels that stay high for an extended period of time can lead to serious complications and premature death. Fortunately people with diabetes can take steps to control the disease and lower the risk of complications.

Diabetes is a chronic disease that has no cure. Of the 23.6 million children and adults in the United States who have diabetes, 5.7 million people do not know they have this disease and 57 million people have pre-diabetes, or are at increased risk for developing diabetes.

If present trends continue, one in three Americans, and 1 in 2 minorities, born in 2000 will develop diabetes in their lifetime. Each day, approximately 4,383 people are diagnosed with diabetes. In 2007 1.6 million new cases of diabetes were diagnosed in people age 20 years or older.

Card 7

# The Dangerous Toll of Diabetes

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Diabetes is the seventh-deadliest disease in the United States. Since 1987 to 2002, the death rate due to diabetes has increased by 45 percent, while the death rates due to heart disease, stroke, and cancer have declined.

Based on death certificate data, diabetes contributed to 233,619 deaths in 2005. Studies indicate that diabetes is generally under-reported on death certificates, particularly in the cases of older persons with multiples chronic conditions such as heart disease and hypertension. Because of this, the toll of diabetes is believed to be much higher than officially reported.

Many people first become aware that they have diabetes when they are affected by one of its serious and life-threatening complications such as:

- Heart Disease and Stroke
- High Blood Pressure
- Blindness
- Kidney Disease
- Nervous System Damage
- Amputations
- Dental Disease
- Pregnancy Complications
- Sexual Dysfunction
- Others

Card 8

# The Dangerous Toll of Diabetes

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## Types of Diabetes

**Type 1 diabetes** was previously called insulin-dependent diabetes mellitus (IDDM) or juvenile-onset diabetes. Type 1 diabetes develops when the body's immune system destroys pancreatic beta cells – the cells that make the hormone, insulin. Your body needs insulin in order to use the food you eat as energy. To survive, people with type 1 diabetes must give themselves insulin through a syringe or an insulin pump. Type 1 diabetes is usually diagnosed in children and young adults, although disease onset can occur at any age.

Type 1 diabetes accounts for 5-10% of all diagnosed cases of diabetes. The cause of type 1 diabetes is unknown but scientists believe risk factors are genetic as well as environmental. There is no known way to prevent type 1 diabetes.

**Type 2 diabetes** was previously called non-insulin-dependent diabetes mellitus (NIDDM) or adult-onset diabetes. Type 2 diabetes is more common than type 1 diabetes and accounts for about 90% to 95% of all diagnosed cases of diabetes.

In type 2 diabetes, your pancreas may produce insulin, but for some reason, your body's cells are not able to use it. This is called insulin resistance.

Type 2 diabetes in children and adolescents is not common but with the rising number of overweight and obese youth, the diagnosis of type 2 diabetes has increased.

### Who is at Greater Risk for Type 1 Diabetes?

- Siblings of people with type 1 diabetes
- Children of parents with type 1 diabetes

### Who is at Greater Risk for Type 2 Diabetes?

- People with impaired glucose tolerance (IGT) and/or impaired fasting glucose (IFG)
- People over age 45
- People with a family history of diabetes
- People who are overweight
- People who do not exercise regularly
- People with low HDL cholesterol or high triglycerides, high blood pressure
- Certain racial and ethnic groups (e.g., Non-Hispanic Blacks, Hispanic/Latino Americans, Asian Americans and Pacific Islanders, and American Indians and Alaska Natives)
- Women who had gestational diabetes, or who have had a baby weighing 9 pounds or more at birth

# The Dangerous Toll of Diabetes

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## Warning Signs of Diabetes

### Type 1 Diabetes

- Frequent urination
- Unusual thirst
- Extreme hunger
- Unusual weight loss
- Extreme fatigue
- Irritability

### Type 2 Diabetes\*

- Any of the type 1 symptoms
- Frequent infections
- Blurred vision
- Cuts/bruises that are slow to heal
- Tingling/numbness in the hands/feet
- Recurring skin, gum, or bladder infections

\*Often, symptoms of type 2 diabetes are harder to recognize.

### Treating diabetes

- To survive, people with type 1 diabetes must have insulin delivered by a syringe or an insulin pump.
- Many people with type 2 diabetes can manage their blood glucose by following a healthy meal plan and exercise program, losing excess weight, and taking oral medication.
- Many people with diabetes also need to take medications to control their cholesterol and blood pressure.
- Diabetes self-management education (DMSE) is an integral component of medical care.

Among adults with diagnosed diabetes, 14% take insulin only, 13% take both insulin and oral medication, 57% take oral medication only, and 16% do not take either insulin or oral medications.

## Card 10

# Direct and Indirect Costs of Diabetes in the United States

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The total annual economic cost of diabetes in 2007 was estimated to be \$174 billion. Medical expenditures totaled \$116 billion and were comprised of \$27 billion for diabetes care, \$58 billion for chronic diabetes-related complications, and \$31 billion for excess general medical costs. Indirect costs resulting from increased absenteeism, reduced productivity, disease-related unemployment disability, and loss of productive capacity due to early mortality totaled \$58 billion. This is an increase of \$42 billion since 2002. This 32% increase means the dollar amount has risen over \$8 billion more each year.

- The 2007 per capita annual costs of health care for people with diabetes is \$11,744 a year, of which \$6,649 (57%) is attributed to diabetes.
- In 2007 one out of every five health care dollars was spent caring for someone with diagnosed diabetes, while one in ten health care dollars was attributed to diabetes.

## Card 11

# Direct and Indirect Costs of Diabetes in the United States

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### **DIRECT COSTS OF DIABETES:**

- Estimated at \$116 billion, including \$27 billion for care to directly treat diabetes, \$58 billion to treat diabetes-related chronic complications, and \$31 billion in excess general medical costs.
- In 2007 the average cost of medical expenditures for people with diabetes was approximately 2.3 times higher than for those without diabetes. Patients diagnosed with diabetes accounted for 5.8 percent of the total U.S. population.
- \$58.3 billion was spent on inpatient hospital care and \$9.9 billion on physician's office visits directly attributed to diabetes.
- Diabetes-related hospitalizations totaled 24.3 million days in 2007, an increase of 7.4 million from the 16.9 million days in 2002. The average cost for a hospital inpatient stay due to diabetes is \$1,853 and \$2,281 due to diabetes-related chronic complications, including neurological, peripheral vascular, cardiovascular, renal, metabolic, and ophthalmic complications.

### **INDIRECT COSTS OF DIABETES:**

- Estimated to be \$58 billion in 2007.
- In 2007, diabetes accounted for 15 million work days absent, 120 million work days with reduced performance, 6 million reduced productivity days for those not in the workforce, and an additional 107 million work days lost due to unemployment disability attributed to diabetes.
- Diabetes caused 445,000 cases of unemployment disability in 2007.



- 284,000 deaths were attributed to diabetes in 2007. The value of lost productivity due to premature death is \$26.9 billion.



## Attachments for Lesson Plan Day 3

# Article for 'Reading, Chunking, and Discussing'

## Fat & Politics: Suing Fast Food Corporations



by Michael Stephens  
PopMatters Music Columns Editor

Anti-tobacco lawyer John Banzhaf is presently building more solid test cases against food corporations for knowingly selling products that are injurious to consumers' health. Banzhaf will send a letter to McDonald's, Wendy's, Burger King, Pizza Hut, Taco Bell and Kentucky Fried Chicken this month, demanding that they label their food as containing substances that may be as addictive as nicotine.



At the same time, there is talk of imposing a "fat tax" and/or forcing manufacturers to put health warnings on certain foods, similar to the warnings on tobacco products. McDonalds is apparently feeling the pressure. They have recently issued a request to their meat suppliers to reduce the quantity of antibiotics in their meat, perhaps a pre-emptive measure, intended to demonstrate concern about the health impact of their products in case of future lawsuits.



Many issues are bundled in the politics of fat: government responsibility versus individual responsibility; free enterprise versus government regulation; industrial profit versus public health. A fair debate is made more difficult because the media, influenced by the enormous revenue it derives from fast food corporations, typically treats the issue in a derisory fashion: it's all about greedy lawyers, a sue-happy culture and irresponsible consumers. Yet there is more to the fat issue than is suggested by these pre-digested media reductions.

Because it affects people on so many levels, fat is moving to the center-stage of American politics. First there is the issue of health. 36% of Americans are overweight and about two thirds of these are obese. Obesity greatly increases the individual's risk of developing diabetes, heart disease, cancer, and other chronic diseases. Diet is so important to health that 80% of heart disease and cancer could be eliminated by simple changes in our eating habits, such as reducing meat consumption and increasing fresh fruit and vegetable consumption. Yet, despite these known facts, in 1996 only 22.7% of American adults ate the recommended five servings a day of fruit and vegetables.

The economic consequences of fat in the American diet are equally dramatic. The medical costs of obesity were conservatively estimated at \$51.6 billion in 1994. By now this figure would at least have doubled. More recent studies show that obesity is associated with higher costs for chronic health problems than either smoking or drinking. Only aging is associated with higher medical costs. Heart disease, the number one killer in America, is closely linked to diet, and cost over \$300 billion in medical care in 2002. The medical cost of diabetes, also directly linked to obesity, rose from \$44 billion in 1997 to \$91.8 billion in 2002. These figures do not include the hundreds of billions lost in American productivity every year to fat-related health problems.

But food preferences are so personal and so emotionally charged that they are highly resistant to rational arguments about change. Dietary choices are developed from early childhood through cultural, regional, ethnic, familial and commercial influences. To challenge these habits is, in many ways, to challenge our very identity. Hot dogs and mustard at baseball games, turkey and gravy at Thanksgiving, hamburgers and steaks on the grill in summertime: our national foods and the cultural contexts in which they are eaten are indivisible.

Indeed, they are more than just "choices" — they are a part of the American identity. Shrimp and grits and collard greens and fatback are distinct, traditional elements in southern African American culture. Individual variations on recipes and cooking styles are still passed down through families and are important to our familial and personal history. We *are* what we eat on so many interwoven levels that woe betide the politician who wants to regulate the contents of our refrigerators.

Yet the balance of influences on our dietary choices has changed dramatically over the last two centuries. Two hundred years ago, people tended to stay in one small region for most of their lives and had little or no access to the world outside. The influences on their diet were predominantly regional and familial. They ate the foods that were home grown, hand reared, or caught in their locale. Fresh meat, seafood, vegetables and fruits could not be transported thousands of miles in a few hours, so people tended only to eat locally grown, seasonal produce and locally butchered meat. All the crops, vegetables and fruits were organic, because chemical fertilizers and pesticides had not been invented. All the eggs and chickens were "free range", and growth hormones, antibiotics and steroids were not fed to livestock, so all meat and dairy produced was chemical free. Supermarkets, mass media, and industrial food production techniques did not exist. Even eating in restaurants was a rare experience for most, since the majority population lived in rural areas and the few restaurants that existed were in cities.

In the 20th century, however, the forces that influenced the 18th and 19th century American diet were radically transformed by industry, corporate franchising, and the media. The invention of the automobile, the development of superhighways and urbanization helped to spread fast food franchises, supermarkets, and convenience foods. Regional, cultural, ethnic and familial influences on diet faded as all regional and ethnic preferences were homogenized by the universal presence of fast food franchises. Modern children's food preferences are more powerfully influenced by television advertising than by familial or regional influences. Moreover, modern parents, who were raised on television, supermarket shopping, and convenience foods pass on to their children the food preferences that they developed under these commercial influences. Eating cereal for breakfast, for example, is a manufactured food tradition created by industry and the media.

Breakfast cereals like Froot Loops, Cap'n Krunch, Cocoa Puffs, and Lucky Charms, and many other children's foods such as Oreo Cookies, Eggo Waffles, Jif Peanut Butter, frozen pizza, frozen french fries, and hundreds of breads and baked goods, contain trans fats. Trans fats, or partially hydrogenated oils, increase shelf life and are cheap, so their use is advantageous to manufacturers. However, epidemiological evidence suggests that trans fats account for about 100,000 premature deaths from cardiological disease in the United States each year. Some health care professionals consider trans fat consumption as serious a health risk as smoking, and it has been argued that eating a McDonald's Happy Meal is as damaging as smoking three cigarettes.

The opponents of lawsuits against the fast food industry argue that "everyone knows" that McDonalds and Burger King sell high-fat foods and that those who eat these foods do so by their own free choice. Yet, knowledge alone is not enough to combat the power of life-long exposure to the media and to the omnipresence of fast food franchises and convenience foods. Partially hydrogenated oils have been used in American food manufacture since the 1920s: time for several generations of Americans to incorporate trans fats into their everyday diet and to normalize the consumption of hundreds of foods containing trans fats. Precisely because food preferences are formed over time and are deeply ingrained in our lifestyle, it is difficult for people to change their dietary habits, even when it is revealed that some ingredients in these foods are unhealthy or dangerous.

What is really at stake in the politics of fat is the extent to which government should restrict corporate and media influences on the American diet. There is no choice for consumers when every street corner and highway is crowded with fast food franchises and no healthy alternatives are available. There is no possibility of informed consumer decisions, when saturation advertising entirely overwhelms the cautionary messages of doctors and health professionals.

Only the food manufacturers have the resources and the media access to balance their own marketing and distribution power with cautionary labels and informational campaigns. Only economic pressure can force food manufacturers to eliminate their use of trans fats and other dangerous ingredients, especially in foods that are aggressively marketed to children. As John Banzhaf constructs his case, instead of pursuing the unproven notion that fast foods contain addictive ingredients, he should consider the more insidious and pervasive power of the media and commerce to create unhealthy dietary preferences and to eliminate real consumer freedom of choice.

## Advertisement for NO TITLE



...to make your own food choices. At least according to the food police and government bureaucrats who have proposed "fat taxes" on foods they don't want you to eat. Now the trial lawyers are threatening class-action lawsuits against restaurants for serving America's favorite foods and drinks.

We think they're going too far.



*It's your food. It's your drink. It's your freedom.*

*Find out more about attacks on your favorite foods and drinks at:*

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