

# Diabetes, Heart Disease, and the “Weight of the Nation”

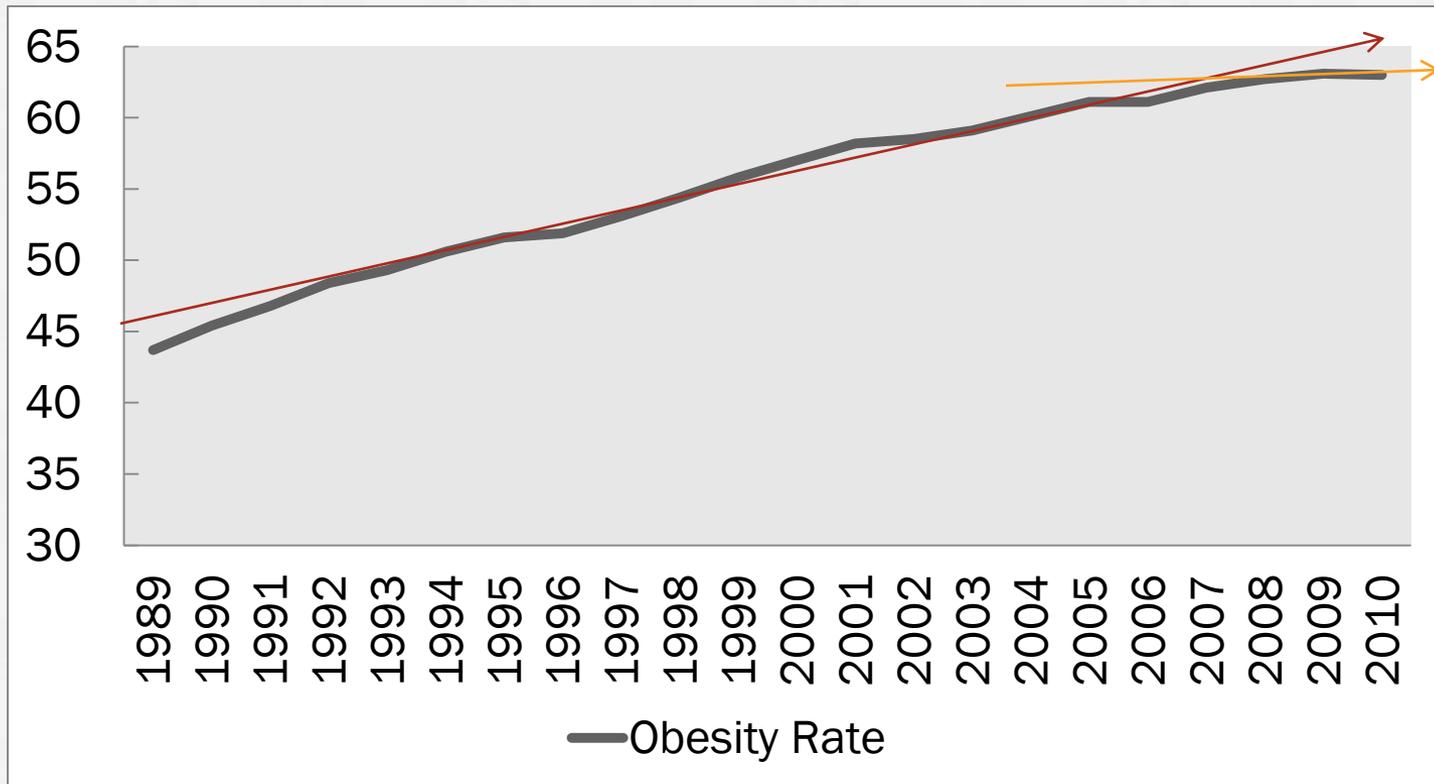
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# Weight, Weight, Don't Tell Me...

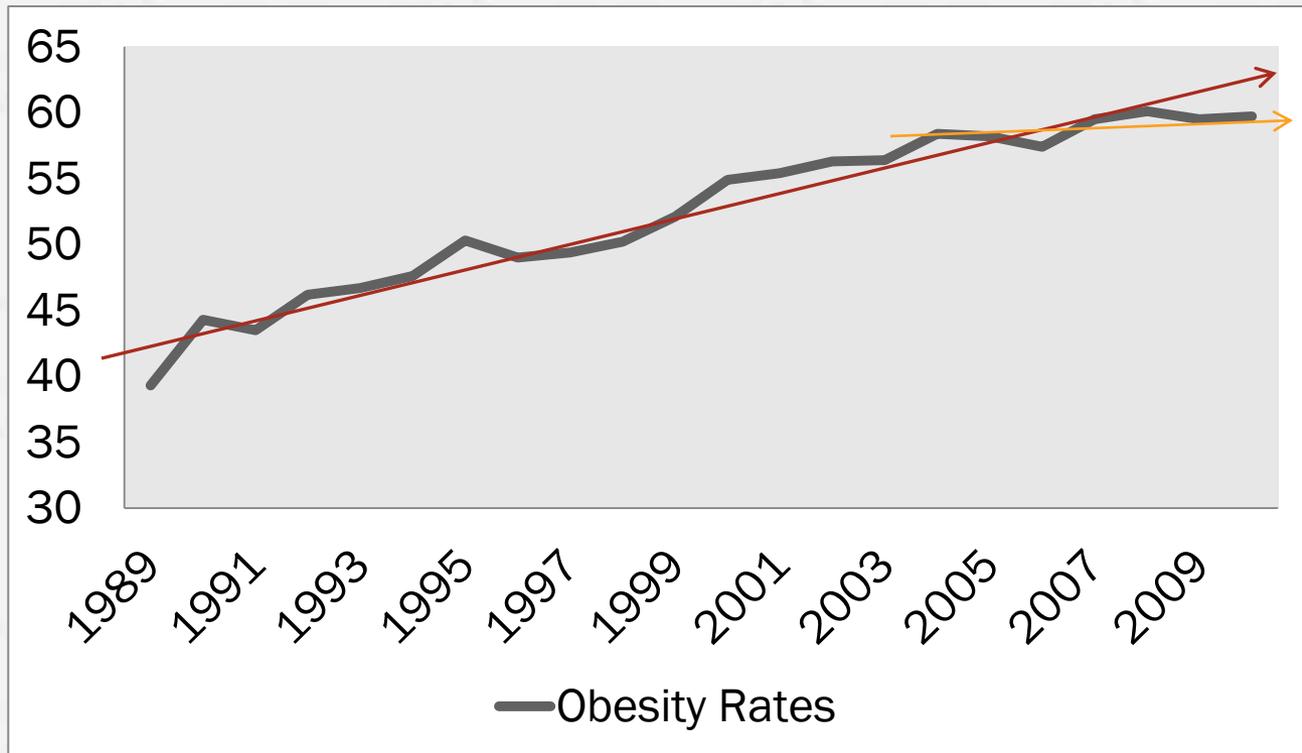
- o If I told you about a condition:
  - o Had a prevalence rate of almost 70%
  - o Cost over \$190 billion in health care costs
  - o Had doubled and in some cases tripled since 1980
- o Contributed to five of the 10 leading causes of death
- o Affected all walks of life, but particularly impacted those least capable of protecting themselves.

Wouldn't you do everything  
in your power to stop it?

# Overweight and Obesity Rates in U.S., 1989-2010



# Overweight and Obesity Rates in Utah, 1989-2010



YOU KNOW CHILDHOOD OBESITY HAS REACHED EPIDEMIC PROPORTIONS IN THIS COUNTRY WHEN...





Of the 10 states with the highest obesity rates, 9 rank among our nation's poorest.

# A rich nation, a poor quality of life

- o Our typical approaches for addressing obesity are reaching their maximum effectiveness, we need a new paradigm:
- o Go to the gym → PA for daily tasks
- o Go on a diet → Change way we eat
- o Change your body → Change your mind
- o Don't do this → Do that

# Physical Inactivity



Currently in the United States, 4% of elementary schools, 8% of middle schools, and 2% of high schools provide daily physical education or its equivalent.



Today, there is no federal law requiring physical education in American schools.

# Exercise Needed to Burn Off a Serving of French Fries



Average Serving of  
French Fries:  
**610 Calories**  
6.9 Ounces

## Running at 5 MPH



**1:05** hrs  
150 lb Adult



**0:49** hrs  
200 lb Adult

## Swimming



**1:32** hrs  
150 lb Adult



**1:09** hrs  
200 lb Adult

## Leisure Bicycling



**2:14** hrs  
150 lb Adult



**1:41** hrs  
200 lb Adult

## Walking at 2 MPH



**3:13** hrs  
150 lb Adult



**2:24** hrs  
200 lb Adult

## Singles Tennis



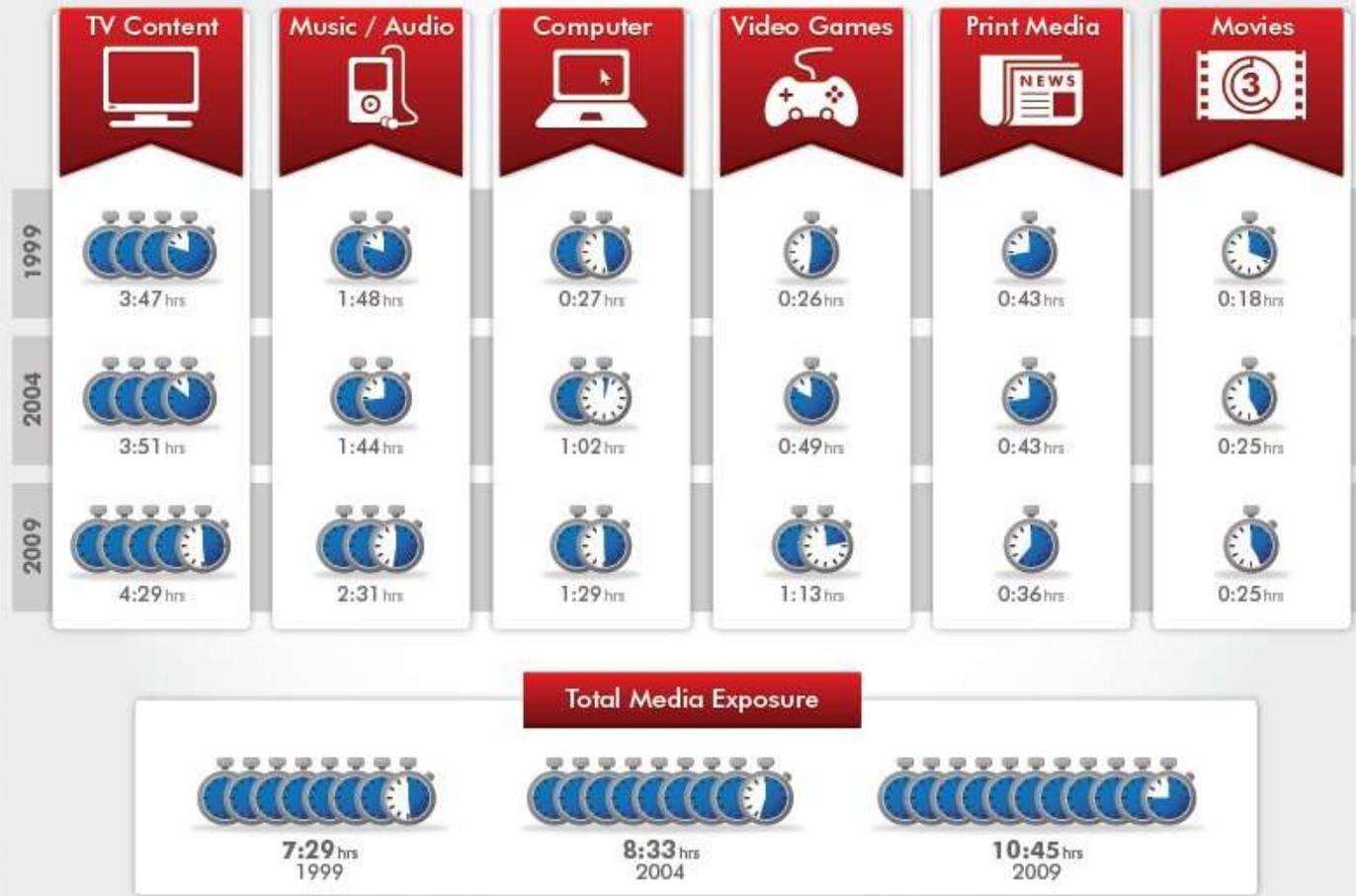
**1:07** hrs  
150 lb Adult



**0:50** hrs  
200 lb Adult

SOURCE: <https://sites.google.com/site/compendiumofphysicalactivities/>

## Average Per Day Media Use: 8 To 18 Year Olds



SOURCE: <http://www.kff.org/entmedia/upload/8010.pdf>

# Sitting Time and Mortality from All Causes, Cardiovascular Disease, and Cancer

PETER T. KATZMARZYK<sup>1</sup>, TIMOTHY S. CHURCH<sup>1</sup>, CORA L. CRAIG<sup>2</sup>, and CLAUDE BOUCHARD<sup>1</sup>

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## ABSTRACT

KATZMARZYK, P. T., T. S. CHURCH, C. L. CRAIG, and C. BOUCHARD. Sitting Time and Mortality from All Causes, Cardiovascular Disease, and Cancer. *Med. Sci. Sports Exerc.*, Vol. 41, No. 5, pp. 998–1005, 2009. **Purpose:** Although moderate-to-vigorous physical activity is related to premature mortality, the relationship between sedentary behaviors and mortality has not been fully explored and may represent a different paradigm than that associated with lack of exercise. We prospectively examined sitting time and mortality in a representative sample of 17,013 Canadians 18–90 yr of age. **Methods:** Evaluation of daily sitting time (almost none of the time, one fourth of the time, half of the time, three fourths of the time, almost all of the time), leisure time physical activity, smoking status, and alcohol consumption was conducted at baseline. Participants were followed prospectively for an average of 12.0 yr for the ascertainment of mortality status. **Results:** There were 1832 deaths (759 of cardiovascular disease (CVD) and 547 of cancer) during 204,732 person-yr of follow-up. After adjustment for potential confounders, there was a progressively higher risk of mortality across higher levels of sitting time from all causes (hazard ratios (HR): 1.00, 1.00, 1.11, 1.36, 1.54; *P* for trend <0.0001) and CVD (HR: 1.00, 1.01, 1.22, 1.47, 1.54; *P* for trend <0.0001) but not cancer. Similar results were obtained when stratified by sex, age, smoking status, and body mass index. Age-adjusted all-cause mortality rates per 10,000 person-yr of follow-up were 87, 86, 105, 130, and 161 (*P* for trend <0.0001) in physically inactive participants and 75, 69, 76, 98, 105 (*P* for trend = 0.008) in active participants across sitting time categories. **Conclusions:** These data demonstrate a dose–response association between sitting time and mortality from all causes and CVD, independent of leisure time physical activity. In addition to the promotion of moderate-to-vigorous physical activity and a healthy weight, physicians should discourage sitting for extended periods. **Key Words:** PHYSICAL ACTIVITY, SEDENTARY BEHAVIOR, COHORT, DEATH, SURVIVAL

# Poor Nutrition

# Portion Distortion in Snack Foods

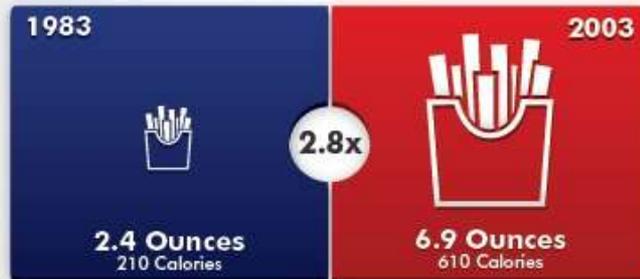
## Bagel



## Muffin



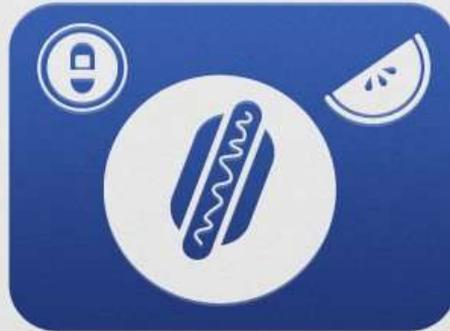
## French Fries



## Chocolate Chip Cookie



SOURCE: <http://hp2010.nhlbi.nih.gov/portion/index.htm>



**Food consumed at school represents  
40-50% of children's daily caloric intake.**

# Sugar Sweetened Beverages

- Percent of weight increase in the U.S between 1977 and 2007 is attributed to sugar sweetened beverages?

○ 87%





Open Late

FOURTHMEAL.COM

**FOURTHMEAL**

**THE MEAL BETWEEN  
DINNER & BREAKFAST.**

SU

more  
day, the  
l.



Sugar-sweetened beverages, juices, and juice drinks are the largest source of sugar in the diets of children and adolescents.

For a better start in life  
start COLA earlier!



- Promotes Active Lifestyle!
- Builds Personality!
- Gives body essential sugars!

### How soon is too soon?

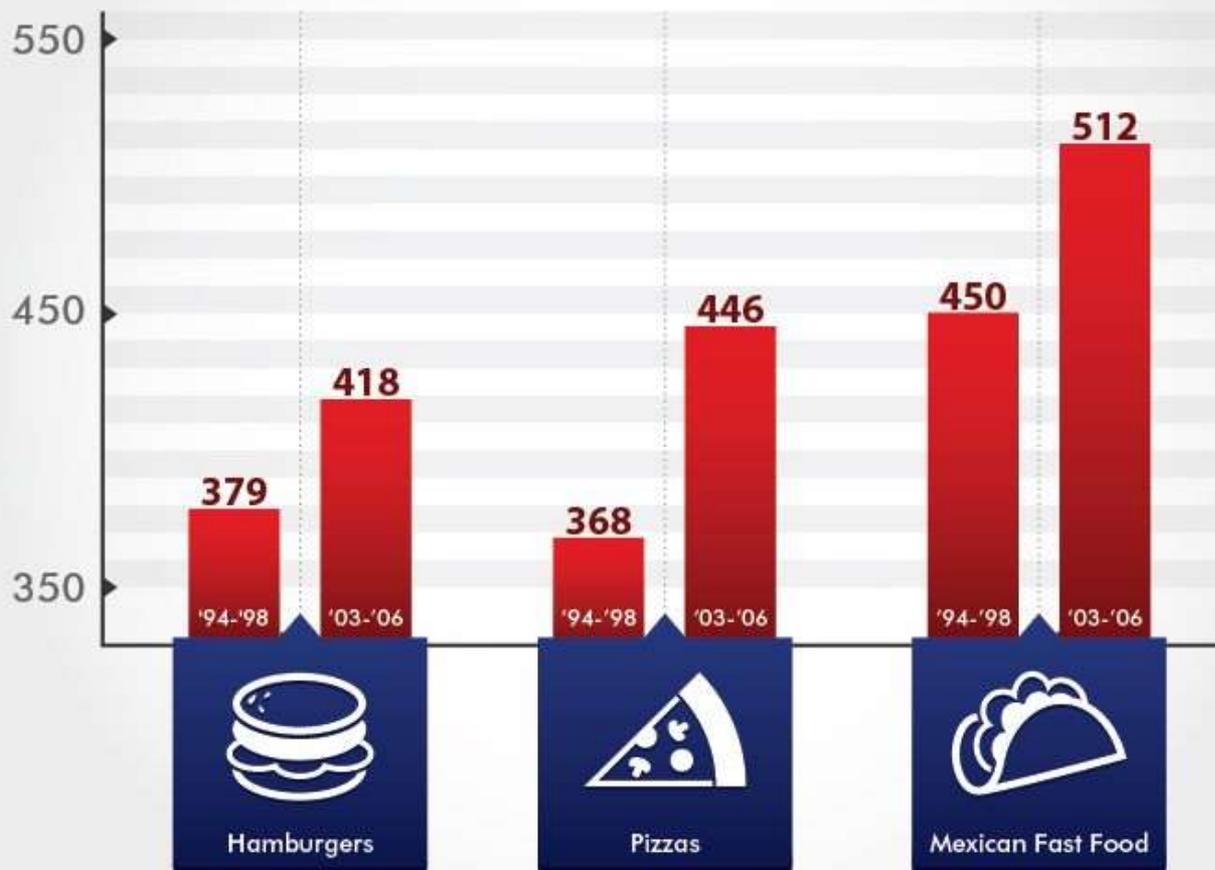
Not soon enough. Laboratory tests over the last few years have proven that babies who start drinking soda during that early formative period have a much higher chance of gaining acceptance and "fitting in" during those awkward pre-teen and teen years. So, do yourself a favor. Do your child a favor. Start them on a strict regimen of sodas and other sugary carbonated beverages right now, for a lifetime of guaranteed happiness.

**The Soda Pop Board of America**  
1515 W. Hart Ave. - Chicago, ILL.



A recent analysis showed that 20% of the rise in the BMI of teens is associated with the increased availability of junk food in schools.

## Trends in Portion Sizes in Children's Foods (ages 2 to 18, in calories)



SOURCE: [http://jn.nutrition.org/content/suppl/2011/05/23/jn.111.138727.DC1/nut\\_138727\\_T1-2.pdf](http://jn.nutrition.org/content/suppl/2011/05/23/jn.111.138727.DC1/nut_138727_T1-2.pdf)

# Medical Complications



**69% of people suffering their first heart attack and 74% of stroke victims have high blood pressure.**

# Obesity and Hypertension

- Hypertension is attributable to obesity in 75% of men and 65% of women
  - Adiposity is a major controllable risk factor for hypertension
- Minor changes in weight status dramatically affect blood pressure control, particularly when coupled with regular PA



More than 25 million Americans have diabetes. Another 79 million are prediabetic.

# Diabetes

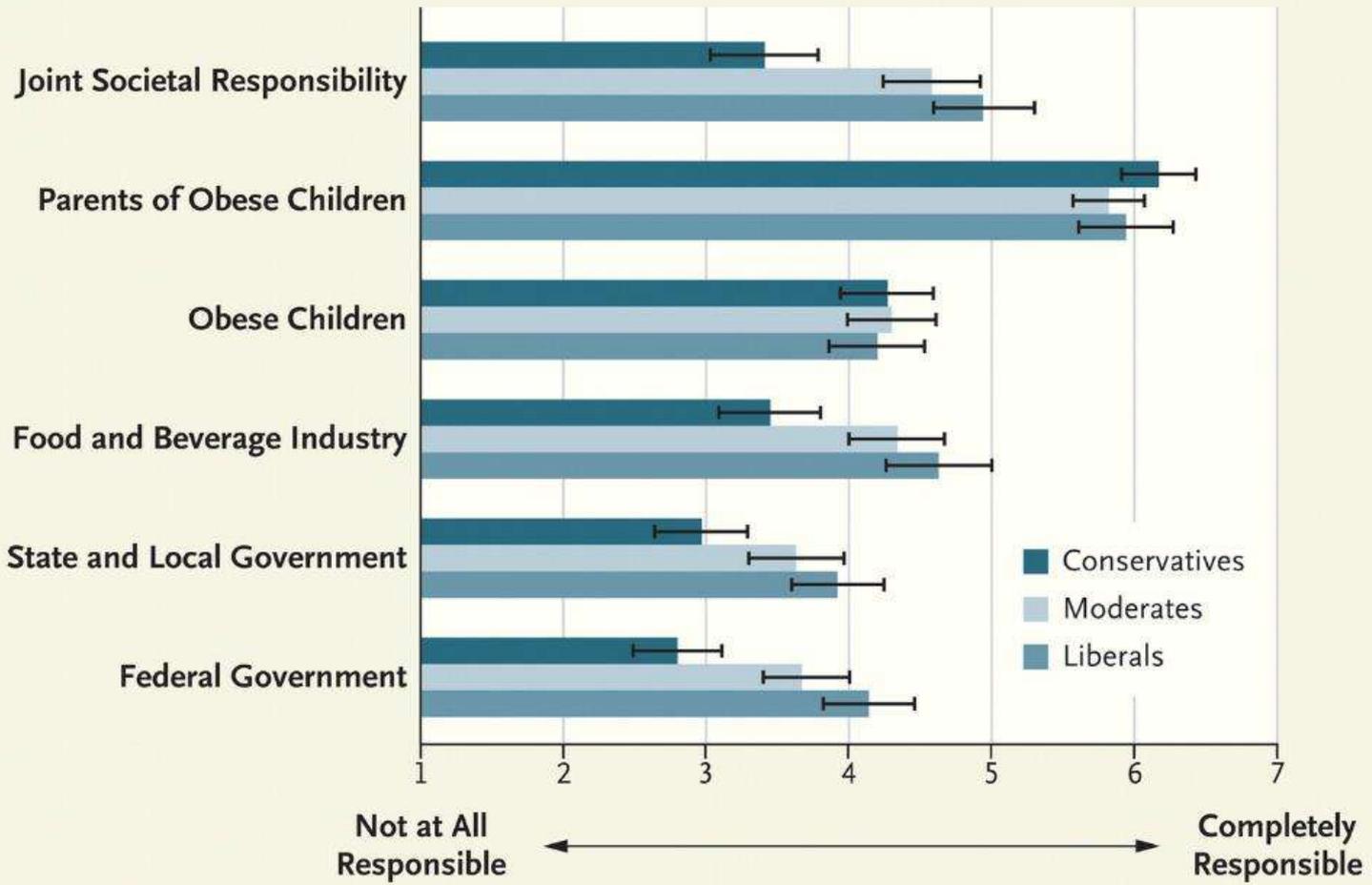
- While genetics does play a role, the most influential factor for getting type II diabetes is overweight and obesity
- Lifestyle interventions that support blood glucose level control through physical activity and nutrition are highly effective



**Only 10% of parents seek medical help for their obese children.**



What WE can do



# The Movement

SURPRISING LESSONS ABOUT DIETS, FOOD, AND FAT  
FROM THE EXTRAORDINARY SERIES FROM **HBO** DOCUMENTARY FILMS.

## The Weight of the Nation

**To Win We Have to Lose**

**John Hoffman & Judith A. Salerno, M.D., M.S.**  
with Alexandra Moss

Foreword by **Kelly D. Brownell, Ph.D.**  
Afterword by **Harvey V. Fineberg, M.D., Ph.D.**



- o HBO series
  - o The Weight of the Nation
- o Physical activity as a vital sign
- o Federal, State, and Local activities
- o Health Care providers

# Patient history and physicals

- o All patients should be asked about their PA and nutrition
  - o How many days a week are you physically active?
  - o How healthy is your diet? Tell me about it.
- o The last thing mentioned is the most remembered:
  - o “See you next time, eat healthy!”
  - o Prescriptions for PA

## 5 SOLUTIONS FOR CHANGING OUR COMMUNITIES

INTEGRATE PHYSICAL ACTIVITY  
EVERY DAY IN EVERY WAY.



STRENGTHEN SCHOOLS AS  
THE HEART OF HEALTH.

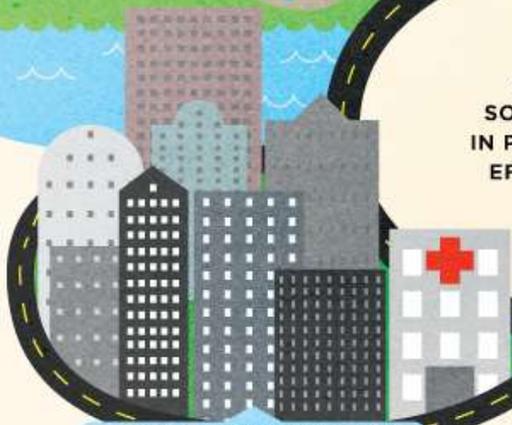


MARKET WHAT MATTERS  
FOR A HEALTHY LIFE.



ON THEIR OWN, ANY ONE OF THESE FIVE  
SOLUTIONS MIGHT HELP SPEED UP PROGRESS  
IN PREVENTING OBESITY, BUT TOGETHER, THEIR  
EFFECT WOULD BE REINFORCED, AMPLIFIED,  
AND MAXIMIZED.

ACTIVATE EMPLOYERS AND  
HEALTH CARE PROFESSIONALS.



MAKE HEALTHY FOODS  
AVAILABLE EVERYWHERE.



# Questions?

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