Strategies to Reduce Obesity: The Portion Cap Rule

Maura Kennelly, MPH
Director, Policy
NYC Department of Health & Mental Hygiene
Bureau of Chronic Disease Prevention & Tobacco Control

NYC Health

The Portion Cap Rule

- Amendment to Article 81 of the New York City Health Code
- Impacts all Food Service Establishments
- Limits sugary drink portion sizes to 16 ounces
  - "Sugary drinks" include beverages with greater than 25 calories per 8 ounces and sweetened with sugar or another caloric sweetener
  - Pure fruit juice, drinks with more than 50% dairy, alcohol not covered
  - All self-service cups limited to 16 ounces for enforcement feasibility

NYC Health

Understanding the Rule

Fruit juice	• Pure fruit juice contains no added sugar • Provides many of the nutritional benefits of whole fruit
Dairy	• Contains calcium, vitamin D, potassium • Dairy has effect on satiety[1]
Alcohol	• Service of alcohol regulated by the State
Non-FSE food retail	• Supermarkets, bodegas, pharmacies regulated by the State
Calorie threshold	• Captures calorie-dense beverages, allows for lightly sweetened drinks • Consistent with other NYC standards
16 ounce maximum	• Balances health impact and feasibility • 16 ounce drinks already available at some FSEs • Manufacturer-sealed products smaller than 16 ounces are available

Rationale

- Obesity is epidemic among New Yorkers
- Sugary drinks are associated with weight gain in both adults and children[1,2,3,4]
- Consumption of sugary drinks is excessive
- High consumption of sugary drinks associated with increased risk of heart disease & diabetes[5,6]
- Sugary drinks contain almost no nutrients and do not satiate like solid food[7]
- Portion sizes have exploded in recent decades
- People consume more when given larger portion sizes [8,9,10,11,12,13]

NYC Health

Evidence of Links Between Sugary Drinks and Obesity

Observational Studies and Controlled Trials

- 2012 – Tate et al., *American Journal of Clinical Nutrition*
- 2012 – Ruyter et al., *New England Journal of Medicine*
- 2012 – Ebbeling et al., *New England Journal of Medicine*
- 2011 – Mozaffarian et al., *New England Journal of Medicine*
- 2009 – Chen et al., *American Journal of Clinical Nutrition*
- 2006 – Ebbeling et al., *Pediatrics*
- 2004 – Schulze et al., *JAMA*
- 2004 – James et al., *British Medical Journal*
- 2004 – Berkey et al., *Obesity Research*
- 2001 – Ludwig et al., *Lancet*

Reviews and Meta-Analyses

- 2010 – Woodward-Lopez et al., *Public Health Nutrition*
- 2010 – Malik et al., *Circulation*
- 2007 – Vartanian et al., *American Journal of Public Health*
- 2006 – Malik et al., *American Journal of Clinical Nutrition*

NYC Health

How Sizes Have Changed

Original 1920s size: 6.5 ounces

12 ounce cans introduced in the 1960s

20 ounce contour bottles introduced in the early 1990s

1 liter (34 oz) contour bottles introduced in late 1990s

NYC Health

A 64 Ounce Sugary Drink Has:
The Equivalent of 54 Teaspoons of Sugar!

7 ounces	12 ounces	16 ounces	24 ounces	32 ounces	64 ounces
82 calories	140 calories	180 calories	281 calories	374 calories	780 calories
22g sugar	38 g sugar	49 g sugar	77g sugar	102g sugar	217g sugar

Note: values based on fountain Pepsi-Cola product; using 2.5g sugar cubes

NYC Health

Coca-Cola Museum, Atlanta, Georgia

NYC Health

Timeline

Date	Event
May 31, 2012	Mayor Bloomberg announces proposal to the public and media
June 12, 2012	Board of Health Meeting Proposal officially introduced through Notice of Intent
June 12 – July 24	Public comment period
July 24, 2012	Public hearing
September 13, 2012	Board of Health Meeting DOHMH response to comments Board of Health votes on proposal
March 2013	Rule takes effect

Response: Media

"It was gigantic enough for a small marine mammal to do laps in, and its only value is in speeding you toward a double bypass"

- Frank Bruni, NYT Op-Ed Columnist, on a super-sized drink from KFC

"No more giant sodas? C'mon! This is America, land of the plenty; we haven't even achieved Type III diabetes yet"

- Steven Colbert, The Colbert Report, 5/31/12

http://www.nytimes.com/2012/06/03/opinion/sunday/bruni-trimming-a-fat-city.html

NYC Health

Response: Media

Response: Comments and Testimony

Over **38,000** written comments

- 32,000 supported
- 6,000 opposed
  - Including a petition from *New Yorkers for Beverage Choices*, a coalition funded by the American Beverage Association

55 public hearing participants

- 28 supported
- 25 opposed
- 2 position unclear

NYC Health

Select Organizations in Support

Supportive Comments: Major Themes

- Sugary drink consumption among children and adults is excessive
- Health consequences of sugary drink consumption are devastating
- Reducing the size of sugary drinks will help reduce burden of obesity and chronic disease
- Rule will expand options for healthy size drinks and reintroduce reasonable portions
- Sugary drink marketing is a problem
- Government has a responsibility to act

NYC Health

Select Organizations in Opposition

Opposition Comments: Major Themes

1. Health Impact
   - Associations between sugary drinks, obesity and chronic disease disputed
   - Won't work
2. Choice
   - Consumer demand drives large portions
3. Feasibility
   - Impact to business
   - Customization
4. Rationale
   - Proposal exclusions/guidelines are arbitrary
   - Government overreach
5. Anti-Obesity Strategy

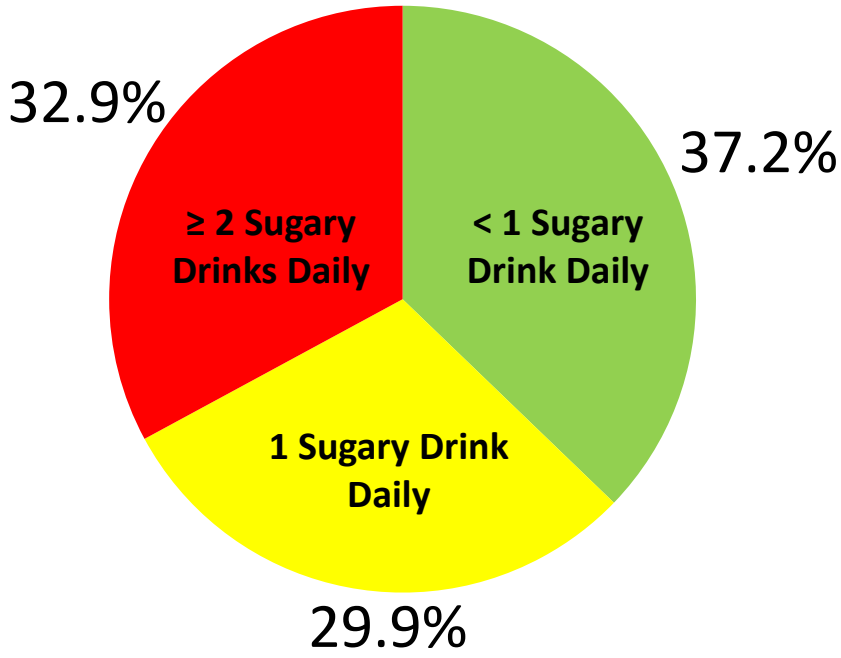
NYC Health

Understanding the Counterarguments

COMMENT	RESPONSE
Sugary drinks comprise 7% of the average American's diet	• 7% = 140 calories per day; if no other changes could lead to a yearly **15 pound weight gain** • 12-17 year olds consume nearly **200 calories a day** from sugary drinks[14]
Food accounts for majority of added sugars in diet	• >40% of added sugars come from beverages; **more than any other single food source**[15]
Sugary drink consumption is declining; obesity rates are rising	• Increases in obesity prevalence are slowing;[16] plateau *may* be related to reduced consumption • Trends aside, consumption is excessively high; further reductions are needed

Understanding the Counterarguments

Consumption of Sugary Drinks by U.S. High School Students[17]



COMMENT	RESPONSE
"Only 32.9% of the students reported drinking any combination of these [sugary drinks] two or more times per day." [18]	**One third** of high school students consuming two or more sugary drinks per day is a health issue
"…almost 70% [67.1%] of high school students are consuming 1 or less SSB per day." [19]	**62.8%** of high school students are consuming at least one or more sugary drinks per day

Consumer Freedom is Preserved

- The proposal is not a ban on sugary drinks
- Individuals are free to consume more than 16 ounces of sugary drink
- Currently consumers have limited choices of portion sizes, determined by restaurants or beverage companies
- Options for smaller, healthier drinks are enhanced by the proposal

NYC Health

Portion Size Influences Consumption

Unit Bias:

- A sense that a single entity is the appropriate amount to consume

Different units:

20, 16 and 12.5 ounce bottles

Commercial Impact Of Policies Is Often Overestimated

- Same concerns raised during calorie labeling, trans fat
  - Starbucks receipt study following calorie labeling implementation showed no profit loss[20]
  - To DOHMH's knowledge, no evidence suggests profit loss as a result of trans fat
- Consumers prefer 'one-stop' shopping[21,22]
- Proposal does not affect pricing or promotion

NYC Health

Obesity Costs Are Massive

Costs associated with the proposal small in comparison to obesity-related healthcare costs:

- **$4.7 billion:** Annual obesity-related direct medical costs in NYC[23]
- **$1,500:** Annual cost of obesity to each NYC household[24]
- **$1,429:** Increase in medical spending for obese vs. normal weight adult[25]

NYC Health

Many Widely Accepted Policies Were Once Controversial

Many policies integral to public health initially aroused similar debates:

- Smoke-free restaurants
- Restriction on trans fats
- Removal of lead from paint
- Seatbelt laws

BANNING TRANS FATS:
SHOULD UNCLE SAM RUN THE KITCHEN?

Newsday

BAN LIGHTS GROUP'S FIRE

Smokers plan to take business to NJ

March 10, 2003

Stossel: Trans Fat Ban Is 'Nanny State' Intrusion

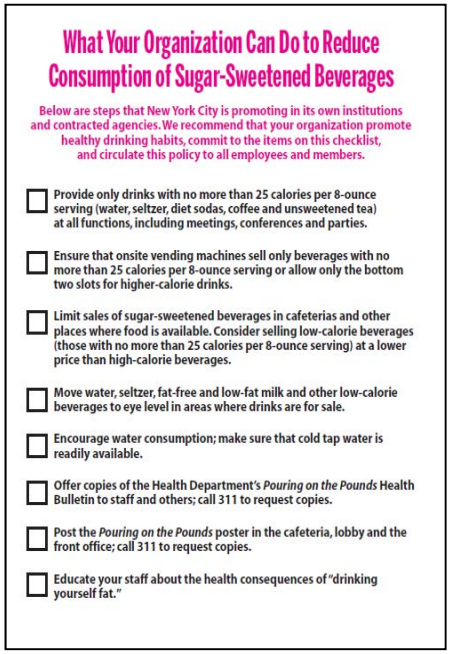
NYC Health

Physical Activity Is Not Enough

To reduce obesity, physical activity must be complemented by reduced caloric intake

NYC Health

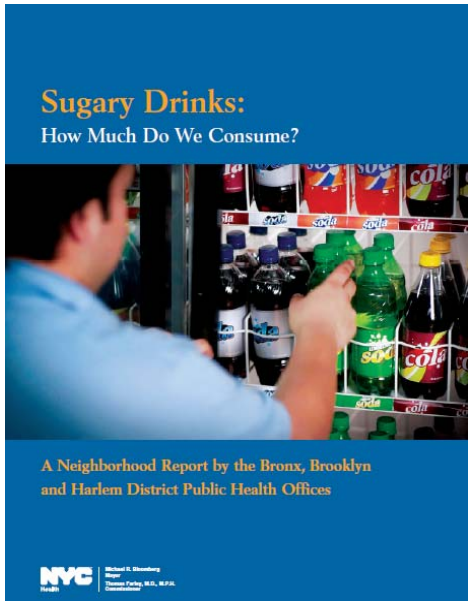
Policy Is Part Of A Comprehensive Plan

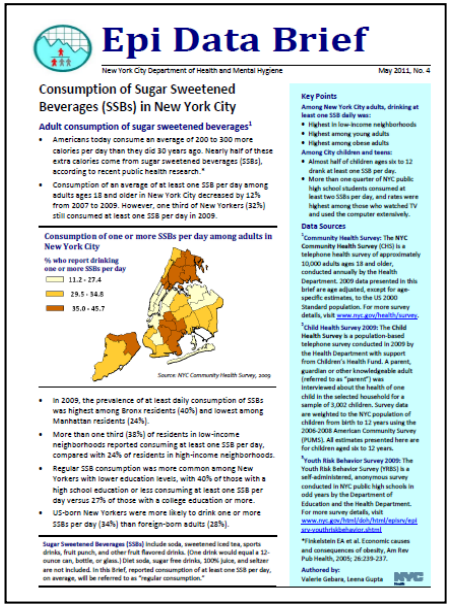


What Your Organization Can Do to Reduce Consumption of Sugar-Sweetened Beverages

Below are steps that New York City is promoting in its own institutions and contracted agencies. We recommend that your organization promote healthy drinking habits, commit to the items on this checklist, and circulate this policy to all employees and members.

- ☐ Provide only drinks with no more than 25 calories per 8-ounce serving (water, seltzer, diet sodas, coffee and unsweetened tea) at all functions, including meetings, conferences and parties.
- ☐ Ensure that onsite vending machines sell only beverages with no more than 25 calories per 8-ounce serving or allow only the bottom two slots for higher-calorie drinks.
- ☐ Limit sales of sugar-sweetened beverages in cafeterias and other places where food is available. Consider selling low-calorie beverages (those with no more than 25 calories per 8-ounce serving) at a lower price than high-calorie beverages.
- ☐ Move water, seltzer, fat-free and low-fat milk and other low-calorie beverages to eye level in areas where drinks are for sale.
- ☐ Encourage water consumption; make sure that cold tap water is readily available.
- ☐ Offer copies of the Health Department's *Pouring on the Pounds* Health Bulletin to staff and others; call 311 to request copies.
- ☐ Post the *Pouring on the Pounds* poster in the cafeteria, lobby and the front office; call 311 to request copies.
- ☐ Educate your staff about the health consequences of "drinking yourself fat."





Epi Data Brief

New York City Department of Health and Mental Hygiene — May 2011, No. 4

Consumption of Sugar Sweetened Beverages (SSBs) in New York City

Adult consumption of sugar sweetened beverages[1]

- Americans today consume an average of 200 to 300 more calories per day than they did 30 years ago. Nearly half of these extra calories come from sugar sweetened beverages (SSBs), according to recent public health research.*
- Consumption of an average of at least one SSB per day among adults ages 18 and older in New York City decreased by 12% from 2007 to 2009. However, one third of New Yorkers (32%) still consumed at least one SSB per day in 2009.

Consumption of one or more SSBs per day among adults in New York City

% who report drinking one or more SSBs per day
11.2 - 27.4
29.5 - 34.8
35.0 - 45.7

Source: NYC Community Health Survey, 2009

- In 2009, the prevalence of at least daily consumption of SSBs was highest among Bronx residents (40%) and lowest among Manhattan residents (24%).
- More than one third (38%) of residents in low-income neighborhoods reported consuming at least one SSB per day, compared with 24% of residents in high-income neighborhoods.
- Regular SSB consumption was more common among New Yorkers with lower education levels, with 40% of those with a high school education or less consuming at least one SSB per day versus 27% of those with a college education or more.
- US-born New Yorkers were more likely to drink one or more SSBs per day (34%) than foreign-born adults (28%).

Sugar Sweetened Beverages (SSBs) include soda, sweetened iced tea, sports drinks, fruit punch, and other fruit flavored drinks. (One drink would equal a 12-ounce can, bottle, or glass.) Diet soda, sugar free drinks, 100% juice, and seltzer are not included. In this Brief, reported consumption of at least one SSB per day, on average, will be referred to as "regular consumption."

Key Points

Among New York City adults, drinking at least one SSB daily was:
- Highest in low-income neighborhoods
- Highest among young adults
- Highest among obese adults

Among City children and teens:
- Almost half of children ages six to 12 drank at least one SSB per day.
- More than one quarter of NYC public high school students consumed at least two SSBs per day, and rates were highest among those who watched TV and used the computer extensively.

Data Sources

[1]**Community Health Survey:** The NYC Community Health Survey (CHS) is a telephone health survey of approximately 10,000 adults ages 18 and older, conducted annually by the Health Department. 2009 data presented in this brief are age adjusted, except for age-specific estimates, to the US 2000 Standard population. For more survey details, visit www.nyc.gov/health/survey.

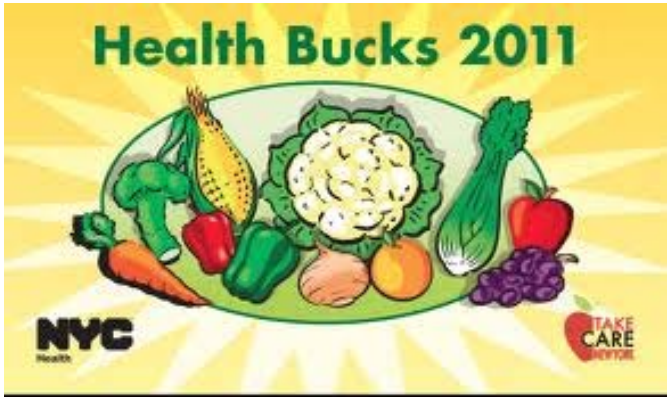
[2]**Child Health Survey 2009:** The Child Health Survey is a population-based telephone survey conducted in 2009 by the Health Department with support from Children's Health Fund. A parent, guardian or other knowledgeable adult (referred to as "parent") was interviewed about the health of one child in the selected household for a sample of 3,002 children. Survey data are weighted to the NYC population of children from birth to 12 years using the 2006-2008 American Community Survey (PUMS). All estimates presented here are for children aged six to 12 years.

[3]**Youth Risk Behavior Survey 2009:** The Youth Risk Behavior Survey (YRBS) is a self-administered, anonymous survey conducted in NYC public high schools in odd years by the Department of Education and the Health Department. For more survey details, visit www.nyc.gov/html/doh/html/episrv/epiarcyouthriskbehavior.shtml.

*Finkelstein EA et al. Economic causes and consequences of obesity. Am Rev Pub Health. 2005; 26:239-257.

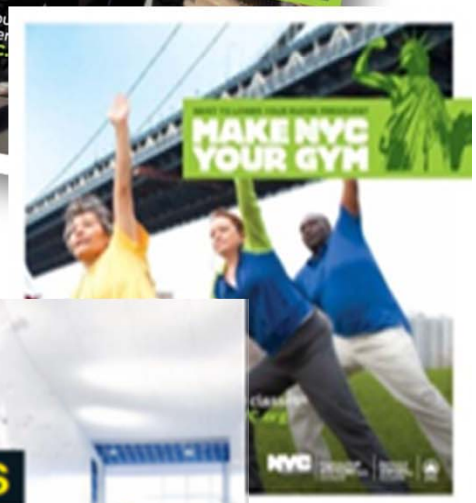
Authored by: Valerie Gebara, Leena Gupta

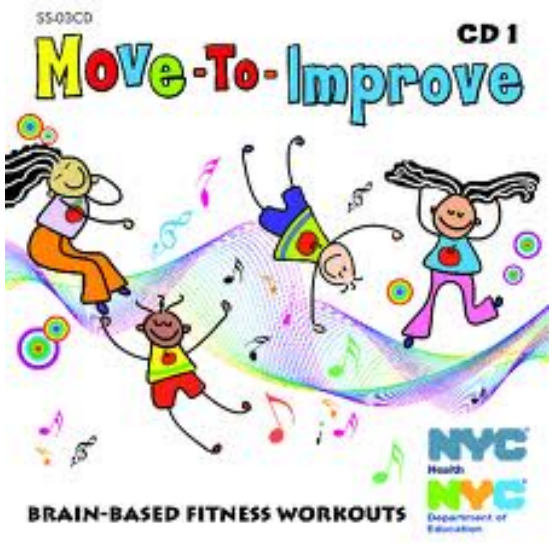
Policy Is Part Of A Comprehensive Plan



FOOD
RETAIL
EXPANSION to
SUPPORT
HEALTH

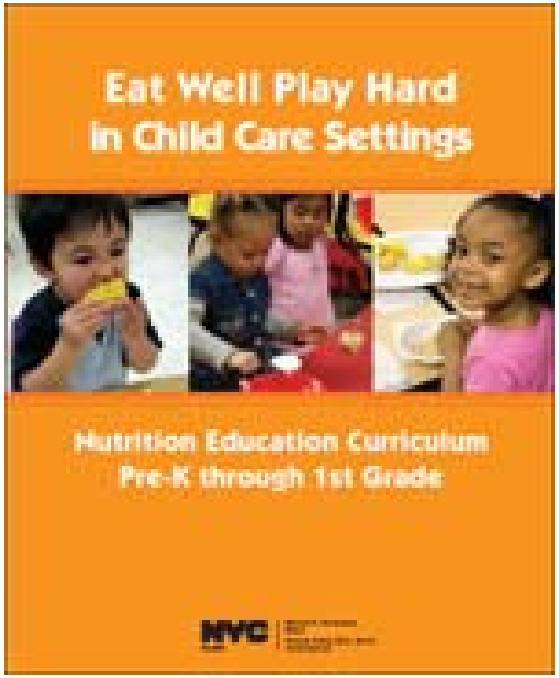
Policy Is Part Of A Comprehensive Plan

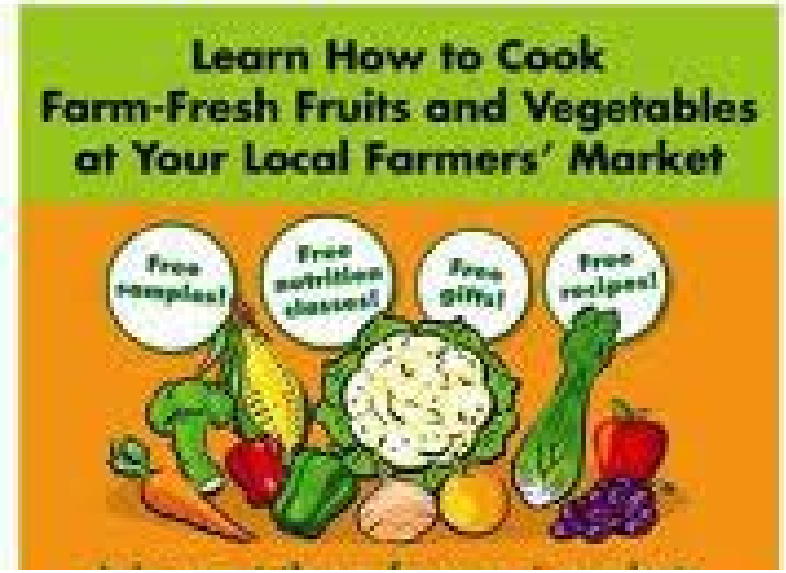


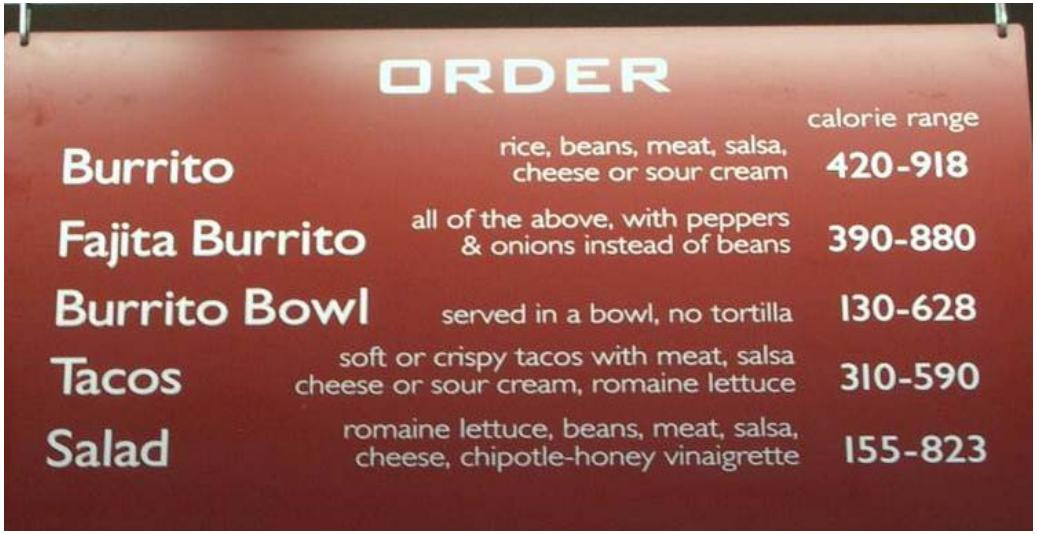


NYC Health

Policy Is Part Of A Comprehensive Plan







For More Information:

Maura Kennelly
Policy Director
NYC DOHMH
mkennell@health.nyc.gov

Additional information on NYC's obesity initiatives can be found at:

http://www.nyc.gov/html/om/pdf/2012/otf_report.pdf

NYC Health

Citations

1. Malik VS, Schulze MB, Hu FB. Intake of sugar-sweetened beverages and weight gain: A systematic review. *American Journal of Clinical Nutrition* 2006;84(2):274-88.
2. Mozaffarian D, Hao T, Rimm EB, Willett WC, Hu FB. Changes in diet and lifestyle and long-term weight gain in women and men. *New England Journal of Medicine* 2011;364:2392-404.
3. Ebbeling CB, Feldman HA, Osganian SK, ChomitzVR, Ellenbogen SJ, Ludwig DS. Effects of decreasing sugar-sweetened beverage consumption on body weight in adolescents: a randomized, controlled pilot study. *Pediatrics* 2006;117:673-80.
4. Chen L, Appel LJ, Loria C, Lin PH, Champagne CM, Elmer PJ, Ard JD, Mitchell D, Batch BC, Svetkey LP, Caballero B. Reduction in consumption of sugar-sweetened beverages is associated with weight loss: the PREMIER trial. *American Journal of Clinical Nutrition* 2009;89(5):1299-306.
5. Malik VS, Popkin BM, Bray GA, Despres J-P, Hu FB. Sugar-sweetened beverages, obesity, type 2 diabetes mellitus, and cardiovascular disease risk. *Circulation* 2010;121(11):1356-64.
6. Schulze MB, Manson JE, Ludwig DS, Colditz GA, Stampfer MJ, Willett WC, Hu FB. Sugar-sweetened beverages, weight gain, and incidence of type 2 diabetes in young and middle-aged women. *Journal of the American Medical Association* 2004;292(8):927-34.
7. Mattes RD. Dietary compensation by humans for supplemental energy provided as ethanol or carbohydrate in fluids. *Physiology & Behavior* 1996;59(1):179–87.
8. Wansink B, Cheney MM. Super Bowls: Serving bowl size and food consumption. *Journal of the American Medical Association* 2005;293(14):1727-28.
9. Wansink B. Environmental factors that increase the food intake and consumption volume of unknowing consumers. *Annual Review of Nutrition* 2004;24:455-79.
10. Rolls BJ, Roe LS, Meengs JS. Larger portion sizes lead to a sustained increase in energy intake over 2 days. *Journal of the American Dietetic Association* 2006;106(4):543-49.
11. Ledikwe JH, Ello-Martin JA, Rolls BJ. Portion sizes and the obesity epidemic. *The Journal of Nutrition* 2005;135(4):905-9.
12. Diliberti N, Bordi PL, Conklin MT, Roe LS, Rolls BJ. Increased portion size leads to increased energy intake in a restaurant meal. *Obesity Research* 2004;12(3):562-68.
13. Rolls BJ, Morris EL, Roe LS. Portion size of food affects energy intake in normal-weight and overweight men and women. *American Journal of Clinical Nutrition* 2002;76(6):1207-13.
14. Welsh JA, Sharma AJ, Grellinger L, Vos MB. Consumption of added sugars is decreasing in the United States. *American Journal of Clinical Nutrition* 2011;94(3):726-34.
15. Ervin RB, Kit BK, Carroll MD, Ogden CL. Consumption of added sugar among U.S. children and adolescents, 2005-2008. NCHS data brief no 87. Hyattsville, MD: National Center for Health Statistics. 2012.
16. Flegal KM, Carroll MD, Kit BK, Ogden CL. Prevalence of obesity and trends in the distribution of body mass index among US adults, 1999-2010. *Journal of the American Medical Association* 2012;307(5): 491-97.
17. Centers for Disease Control and Prevention. Beverage consumption among high school students – United States 2010. *Morbidity and Mortality Weekly Report*. 2011; 60(23):778-780.
18. American Beverage Association. Comments on the proposed rule to amend Article 81 of the New York City health code. Retrieved September 10, 2012 from http://www.nyc.gov/html/doh/downloads/pdf/comment/comment_00081a.pdf.
19. American Beverage Association. Comments on the proposed rule to amend Article 81 of the New York City health code. Retrieved September 10, 2012 from http://www.nyc.gov/html/doh/downloads/pdf/comment/comment_00081a.pdf.

NYC Health

Citations

20. Bollinger B, Leslie P, Sorensen A. Calorie Posting in Chain Restaurants. National Bureau of Economic Research. Working Paper 15648. January 2010.
21. Messinger PR, Narasimhan, C. A model of retail formats based on consumers' economizing on shopping. *Marketing Science* 1997;16(1):1-23.
22. Strople M. From supermarkets to supercenters: Employment shifts to the one-stop shop. *Monthly Labor Review* 2006;2:39-46.
23. Trogdon JG, Finkelstein EA, Feagan CW, Cohen JW. State- and payer-specific estimates of annual medical expenditures attributable to obesity. *Obesity* 2012;20(1):214-20.
24. Calculated based on the New York State estimate from Trogdon et al and the ratio of New York City adults to New York State adults (0.426 using US Census Bureau data). *n.b.* the prevalence of obesity is similar in New York State and New York City (24.5% versus 23.4% using CDC and DOHMH data).
25. Calculated based on estimate of 3,047,249 households in New York City.
26. Finkelstein EA, Trogdon JG, Cohen JW, Dietz W. Annual medical spending attributable to obesity: Payer-and service-specific estimates. *Health Affairs* 2009;28(5):w822-31.

NYC Health