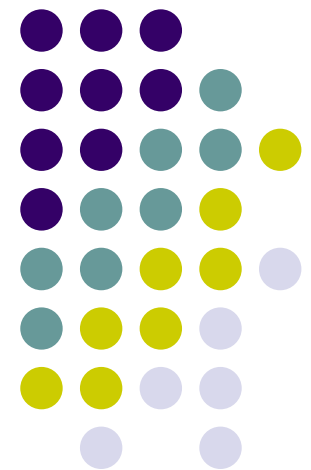


Boston Trans Fat Ban Education for Restaurants

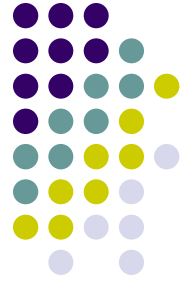
Boston Public Health Commission

August 20, 2008

2:00 – 4:00 pm

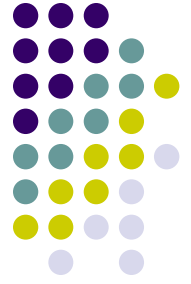


Agenda

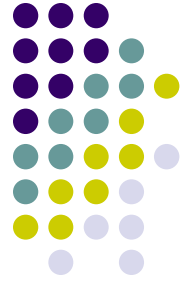


- ❑ Welcome & Introductions
- ❑ Trans Fat Overview
- ❑ Boston Regulation & Enforcement
- ❑ Choosing Alternative Products
- ❑ Q & A
- ❑ Closing

Boston Public Health Commission



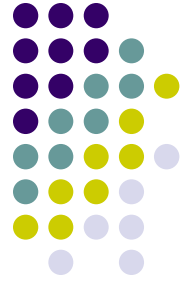
- City Health Department for Boston
- Mission statement:
 - To protect, promote and preserve the health and well-being of all Boston residents, particularly the most vulnerable.
- The Boston Public Health Act of 1995 created the Boston Public Health Commission
 - at the time that Boston City Hospital was converted to Boston Medical Center



Board of Health

- The Boston Public Health Commission is governed by a board of seven members, who also act as the Board of Health.
- The Commission has the powers and performs the duties from time to time conferred or imposed on boards of health of cities of the commonwealth by the General Laws, and the Commission may prescribe rules, regulations and policies in connection with the performance of its functions and duties.

Inspectional Services Dept



- 'Sister' city agency to Commission
- Responsible for administering Mass State Sanitary Code in Boston
- Division of Health Inspections regulates and inspects all food service establishments
- Is coordinating with Commission on trans fat ban monitoring

Baldwin

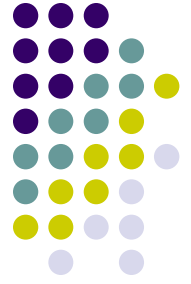
Trans Fat Overview

- Types of Fats
- Why trans fats
- Health Impacts
- Need for Regulation



“It gets worse: ‘Contains partially hydrogenated oils.’”

Types of Fat



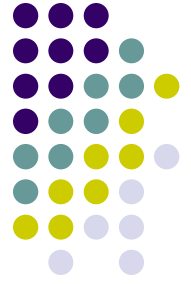
➤ “Good” Fats

- **Monounsaturated** (olive, peanut & canola oil; avocados, most nuts)
- **Polyunsaturated** (vegetable oils – corn, sunflower, soy, cottonseed)
- **Omega 3 Fatty Acids** (fatty cold water fish like salmon; flaxseeds, flax oil, walnuts)

➤ “Bad” Fats

- **Saturated Fats** (animal products – red meat, poultry, butter, whole milk; tropical oils – coconut, palm)
- **Trans Fats** (hydrogenated vegetable oils commonly used for frying & baked good and – margarine, shortenings)

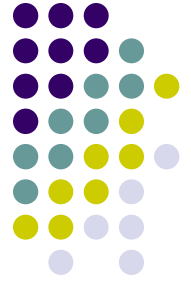
Making Artificial Trans Fats



Vegetable Oil + **Hydrogen** = **Partially Hydrogenated Vegetable Oil**

- Chemical hydrogenation process transforms liquid vegetable oil into a semi-solid state.
- Alteration of chemical structure creates trans fatty acids (trans fat)





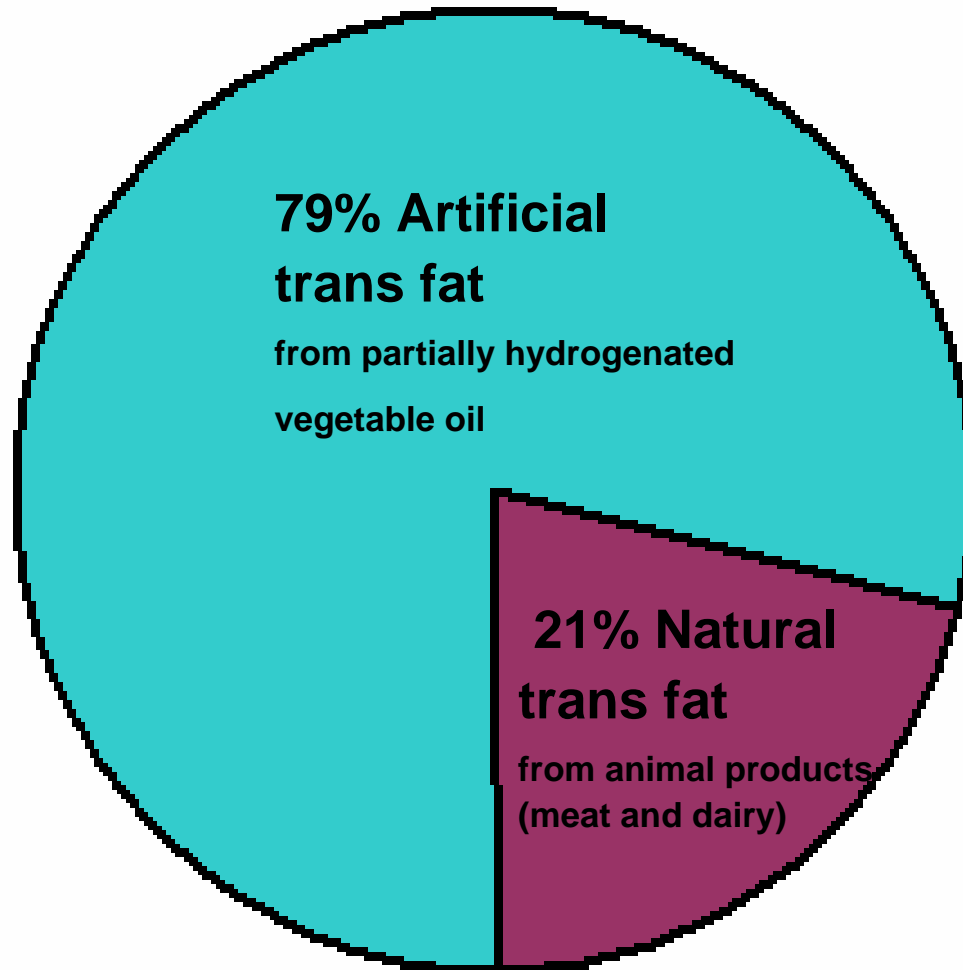
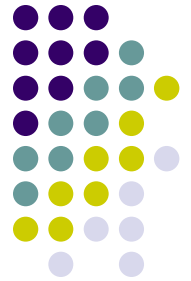
Role of Trans Fat in Foods

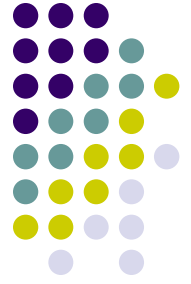
- Frying oil: Doesn't break down as quickly
 - French fries, chicken nuggets, donuts, taco shells, chips
- Baking: Texture to baked goods harder to achieve with liquid oils
 - cakes, crackers, pastries, cookies, pies
- Spreads
 - Margarine is a common butter alternative
- Longer shelf life than other fats
 - Pre-mixed foods: pancake mix, hot chocolate, salad dressing

However... *"Trans fatty acids are not essential and provide no known benefit to human health" **

(*Institute of Medicine. *Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids*. National Academies Press, 2005)

Dietary Sources of Trans Fats



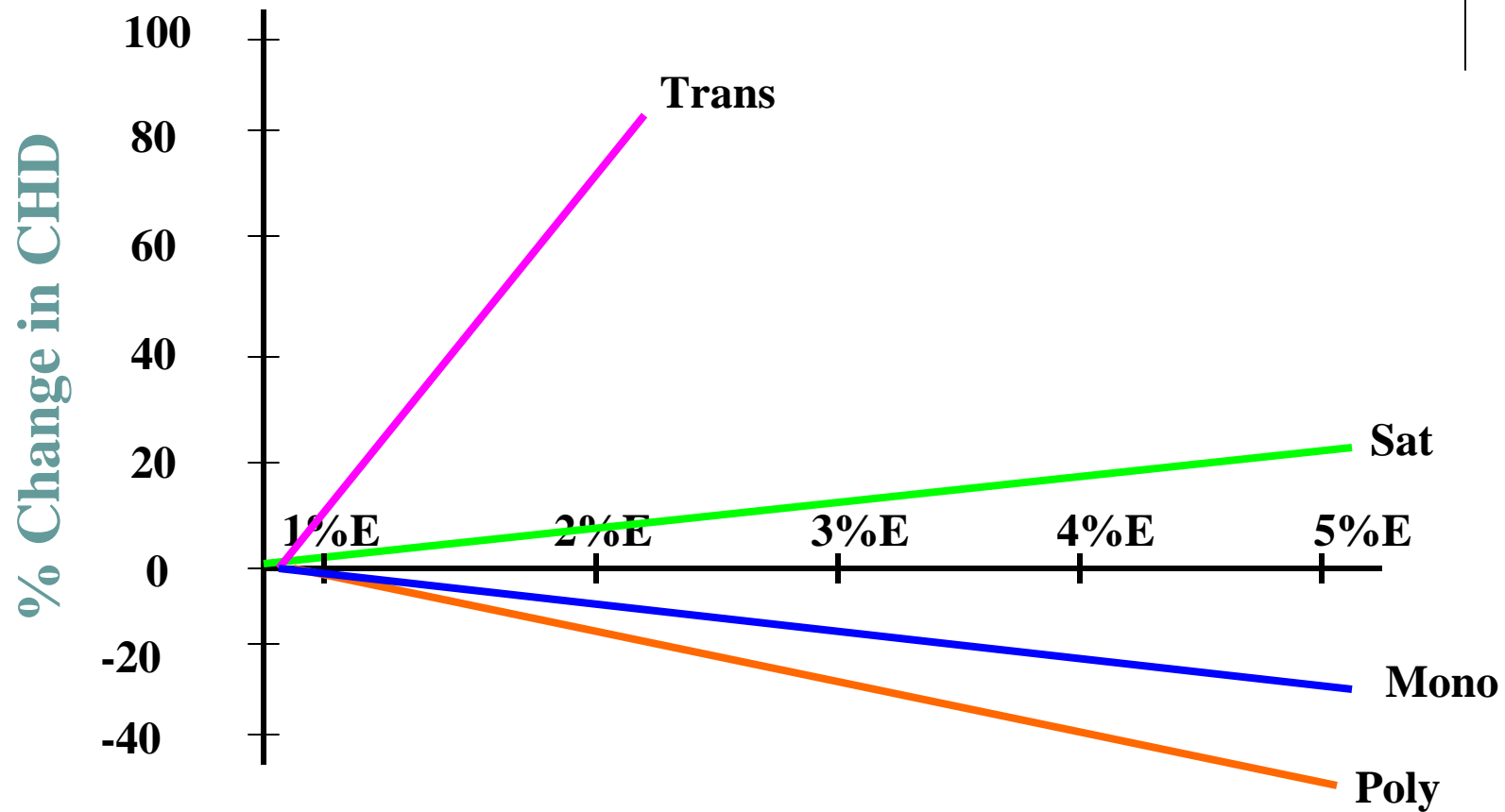


Health Effects of Trans Fats

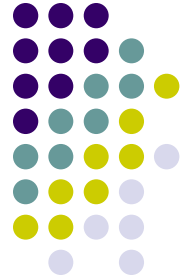
- Raise LDL (“bad”) cholesterol (as do saturated fats)
- Decrease HDL (“good”) cholesterol (unlike saturated fats)
- Increase ratio of total cholesterol to HDL cholesterol
- Increase blood levels of triglycerides and other physiological effects that relate to increased risk of coronary heart disease (CHD)
- Promote systemic inflammatory responses
 - “Because the presence of inflammation is an independent risk factor for atherosclerosis, sudden death from cardiac causes, diabetes, and heart failure, the inflammatory effects of trans fats may account in part for their effect on cardiovascular health.”

(Mozaffarian et al. *Trans Fatty Acids and Cardiovascular Disease*, NEJM: 2006; 354:1601-13)

Impact on Coronary Heart Disease (CHD)



(Hu et al. *Dietary fat intake and the risk of coronary heart disease in women*. NEJM; 337(21):1491-9.1997)



Estimation of Coronary Death **Due to Trans Fatty Acids** **from Partially Hydrogenated Fat** **in US**

~450,000 CHD deaths/year x 7% →
30,000 deaths



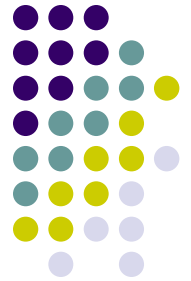
Impact on Diabetes

Data from Nurses Health Study showed a positive association between trans fat consumption and risk of diabetes 2 in women.

- ★ Estimate that replacing just 2% of energy from trans fats with polyunsaturated fats is associated with a 40% lower risk of diabetes

(Salmeron et al. *Dietary fat intake and risk of type 2 diabetes in women*. Am J Clin Nutr. 2001, 73:1019-26)

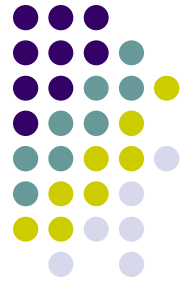
Expert Opinions



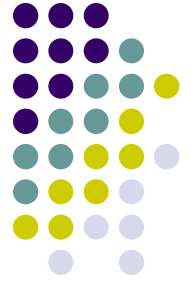
- 2002 Institute of Medicine: ‘Trans fatty acid consumption should be as low as possible while consuming a nutritionally adequate diet.’
- 2005 US Dietary Guidelines Advisory Committee: Trans fat intake should be less than 1% of energy.**
- 2003 WHO ‘Diet, Nutrition, & Chronic Disease’: Population goal for trans fatty acids is <1 percent of energy**
- American Heart Association: Dietary intake of trans fat be kept below 1% of food intake (about 2 grams daily)**
- The USDA recommends that dietary intake of trans fat be “as low as possible”

**1 percent of calories, equivalent to about 2 grams of trans fat per day, is about what the average person consumes from natural trans fat in milk and meat

Regulatory History: Federal Government



- 2003: FDA ruled that trans fat content must be included on food labels, effective 2006.
 - Many retailers began implementing recipe changes in anticipation.
- 2004: FDA Nutrition Subcommittee of the Food Advisory Committee concluded that trans fat is ‘more adverse’ than saturated fat with respect to coronary heart disease
- January 1, 2006: Packaged foods and dietary supplements started listing trans fat content on “Nutrition Facts” label
 - Can list “0 trans fat” if less than .5 grams trans fat per serving
 - Many, but not all, retail products have been changed to be “0 trans fat”



Regulatory History

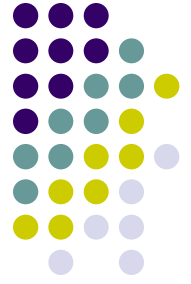
- 2003: Denmark limited artificial trans fat in food
- 2008: Switzerland enacted a trans fat ban

Communities with Current Trans Fat Regulation



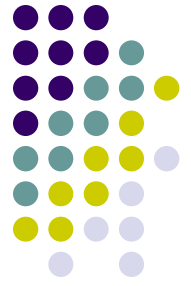
- ☑ *Dec 2006:* New York City Board of Health
- ☑ *Feb 2007:* Philadelphia City Council
- ☑ *May 2007:* Montgomery County Council (Maryland)
- ☑ *May 2007:* Town of Brookline, MA
- ☑ *July 2007:* King County Washington
Board of Health

Voluntary Phase Out Efforts



Many restaurants serving different types of foods have eliminated artificial trans fats:

- ✓ Wendy's
- ✓ Au Bon Pain
- ✓ Legal Sea Foods
- ✓ Dunkin Donuts

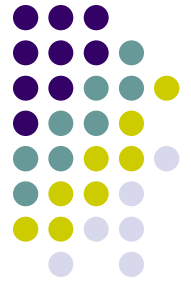


But there's still trans fat from restaurant & retail store foods...

Common fast food items	Trans fat (gm)	Saturated (gm)
Regular order of chicken fingers (8)	2.5	4
Large order of onion rings	4	4.5
Beef taco	4	9
Medium order of French fries	4.5	4.5
Large order of hash browns	13	11
Common baked goods		
Biscuits	1	2
Glazed mini donuts or honey buns	1	5
Small chocolate chip cookie	2	2

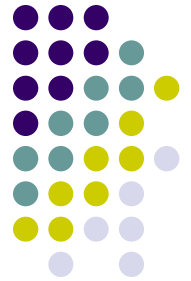
***Many stick margarines have 2.5 grams of trans fat per serving**

Impact of consuming trans fat: Example



- Consumption of trans fat equal to 2% of daily calories (2000 calories/day) = 40 calories
- 40 calories is about 4.5 grams fat
- Medium order of French fries with 4.5 grams fat
- Substituting these calories with unhydrogenated, unsaturated fat could reduce risk of coronary heart disease by more than 50%, for someone who eats this French fries order daily

Boston Regulation & Enforcement



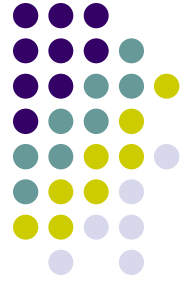
- ❑ Regulation phases
- ❑ Who is affected?
- ❑ Reading labels to eliminate trans fat in your establishment
- ❑ Compliance/Inspections
- ❑ Enforcement

Boston Public Health Commission's Artificial Trans Fat Regulation



- Passed in March 2008
- Prohibits the sale of food or beverage containing artificial trans fat in all food service establishments permitted by the City of Boston.
- Exceptions:
 1. Food served in manufacturer's original sealed package.
 2. Food that is listed as having less than 0.5 grams of trans fat per serving.
 3. Food that has naturally occurring trans fat.

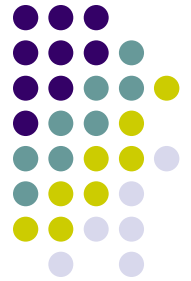
Food Service Establishments (FSE)



Any entity that serves food or beverage for consumption and is required to hold a permit from the City of Boston Inspectional Service Department (ISD). Includes:

- ✓ Restaurants
- ✓ Delis
- ✓ Bakeries
- ✓ Caterers
- ✓ Mobile carts
- ✓ Supermarkets
- ✓ Schools
- ✓ Child care centers
- ✓ Senior centers

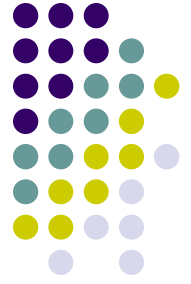
Documentation of Food Required - Labels



FSEs must maintain on site the original nutrition label and ingredients list of food products:

1. that are or contain fats, oils and shortening and;
2. that are required by law to have labels when purchased; and
3. that are currently being stored, held for service, used or served.

Documentation in the Absence of Labels



If a food product does not come with a label, FSEs must provide documentation that contains:

1. The name and address of manufacturer, packer or distributor of the food product
2. The product name, serving size and ingredients
3. Declaration on letterhead indicating trans fat content in grams.*

*A product has artificial trans fat if the ingredients list contains the following terms “partially hydrogenated” or “shortening”.



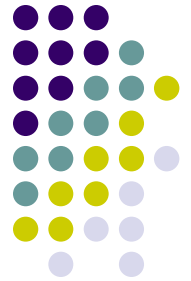
Complying with the Regulation

Step 1: Look at ingredients list to see if “partially hydrogenated” or “shortening” are listed. If so, go to Step 2.

INGREDIENTS: Enriched Flour (Bleached and Unbleached Wheat Flour, Niacin, Reduced Iron, Thiamin Mononitrate, Riboflavin, Folic Acid), Sugar, Vegetable Shortening (Partially Hydrogenated Soybean and/or Cottonseed Oil), Nonfat Milk, High Fructose Corn Syrup, Eggs, Corn Starch, Whole Milk, Biscuits

INGREDIENTS: WHOLE CORN, VEGETABLE OIL (CONTAINS ONE OR MORE OF THE FOLLOWING: CORN, SOYBEAN, OR SUNFLOWER OIL), BUTTERMILK SOLIDS, SALT, TOMATO POWDER, PARTIALLY HYDROGENATED SOYBEAN OIL, CORN SYRUP SOLIDS, CORN STARCH, WHEY, ONION POWDER, GARLIC POWDER, MONOSODIUM GLUTAMATE, CHEDDAR CHEESE

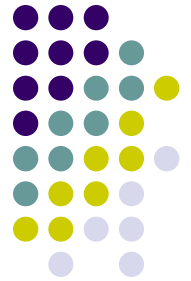
Complying with the Regulation



Step 2: Check the Nutrition Facts Label for trans fat content. If the panel says the product has 0 grams of trans fat or less than 0.5 grams of trans fat per serving, you may use the product.

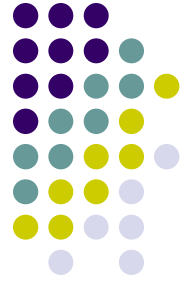
Nutrition Facts	
Serving Size 1 cup (228g)	
Servings Per Container 2	
Amount Per Serving	
Calories 260	Calories from Fat 120
% Daily Value*	
Total Fat 13g	20%
Saturated Fat 5g	25%
<i>Trans Fat</i> 0g	
Cholesterol 30mg	10%
Sodium 660mg	28%

Complying with the Regulation



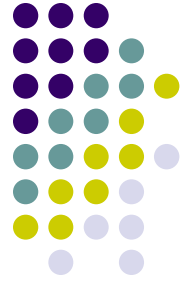
If there is no Nutrition Facts panel on the product, go to Step 3.

Step 3: Ask supplier for a letter from manufacturer listing the product's ingredients. If the ingredients contain the words "partially-hydrogenated" or "shortening", the letter must also contain information about the amount of trans fat per serving.



Implementation Schedule

Phase I: Beginning September 13, 2008, FSEs shall not use or store partially hydrogenated vegetable oils or shortening for frying, pan-frying, grilling or as a spread unless the label or other acceptable documentation shows that these ingredients contain less than 0.5 grams of trans fat per serving.

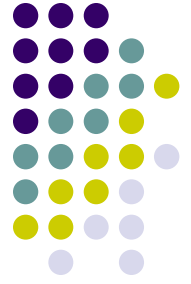


Implementation Schedule

Phase II: Beginning March 12, 2009

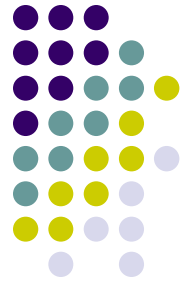
FSEs shall not use or store any food product in the preparation of a menu item if it contains partially hydrogenated vegetable oil or shortening and has 0.5 grams or more of trans fat per serving.

This includes food prepared on or off premises. It also includes the use of partially hydrogenated vegetable oils or shortening used to deep fry yeast dough or cake batter as well as mixes, pre-prepared or partially prepared items.



Enforcement

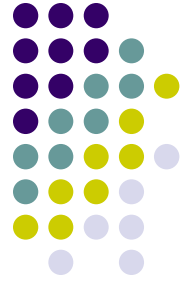
- The Regulation will be enforced by the Boston Public Health Commission and ISD.
- ISD will initially inspect FSEs for compliance with the regulation during routine food inspections.
- Inspectors will inspect areas of food storage, preparation and service looking for products suspected of containing trans fat and looking at labels.



Enforcement and Violations

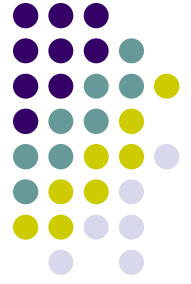
- If a FSE is found using restricted artificial trans fat or does not have required labels or other suitable documentation for its food products, ISD will note that on its inspection form.
- Subsequently, a follow-up inspection will be conducted by the Boston Public Health Commission, which may issue a citation and fine.
- Fines can range from \$100 to \$1000 depending on the number of violations within a 24 month period.

Alternative Products



- ❑ What to look for
- ❑ Available products / options
- ❑ Cost
- ❑ Distributors/vendors

Thank you for coming!



- Visit our website www.bphc.org/transfat
 - ✓ Links to resources
 - ✓ Regulation fact sheet in other languages
 - ✓ Listen to a pod cast about trans fat ban
- Call us at 617-534-5557 for more information or technical assistance.