

PHC 4573
Foundations of Food Safety

Labeling

Lecture 16





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Lecture Objectives

- List the agencies responsible for enforcing laws regarding food labeling.
- Explain that laws enforced by the food agencies are binding to both domestic and foreign producers.
- Determine the reasons for which foods can be recalled including misbranding and/or adulteration and the role of labeling in each.
- Discuss labels required by USDA for safe food handling.
- Recognize the role of date labels in food waste.

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What is Required/Regulated on a Food Label?

- Name of the Food
- Net Quantity of Contents
- Ingredients List
- Nutrition Labeling
- Health Claims (optional)

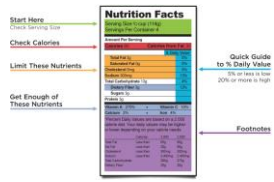


Food safety issues can arise when food is improperly identified, nutrients are present in lower/higher amounts than indicated, items are missing from ingredients lists, or false health claims are stated.

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Note On Lecture

- For the purpose of our class we are only discussing labeling as it relates to food safety.
- Labeling is an important tool for nutrition and a vital resource for the consumer to prevent chronic health conditions. However, the role of labels in nutrition is beyond the scope of this course.




A nutrition label – not a food safety label.

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Food Labeling

- Food labeling is required for the following:
 - Breads
 - Cereals
 - Canned foods
 - Frozen foods
 - Snacks
 - Desserts
 - Drinks,
 - Etc.
- Labeling for the following is voluntary:
 - Raw fruits
 - Raw vegetables
 - Fish



Note: not one single label here guarantees that these foods are organic. The only label which guarantees organic is USDA Organic.

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Food Labeling Regulatory Agencies

- FDA
 - Most packaged foods
 - Food, Drugs, and Cosmetics Act (FD&C).
- FSIS (USDA)
 - Meat, poultry, some eggs
 - Federal Meat Inspection Act
 - Poultry Products Inspection Act
 - Egg Product Inspection Act



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Food Labeling - FDA

- The FDA is responsible for ensuring that foods produced domestically and imported are properly labeled.
- The FDA enforces laws set out in the following two acts (see next slides):
 - Federal Food Drug and Cosmetic Act (FD&C)
 - Fair Packaging and Labeling Act (FPLA)



FDA consumer safety officials, Tyson's, and Andison's location conduct a food safety audit to inspect inspection site in Lake, Virginia on July 10, 2015.

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Federal Food Drug and Cosmetic Act (FD&C)

- The food section of the FD&C includes a broad range of regulations aimed at ensuring that foods are:
 - Safe
 - Pure
 - Wholesome
 - Produced under sanitary conditions.
- For the purpose of our lecture on labeling, we are going to address the following:
 - Misbranded foods
 - Adulterated foods
 - Food Allergen Labeling and Consumer Protection Act
 - Note: this is an amendment to the FD&C



Due to unsanitary conditions at Jensen Farms, 33 people lost their lives.

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Fair Packaging and Labeling Act (FPLA)

- There are several provisions of this act (most of which are enforced by the FTC, see later slides) but for the purposes of this class, the most important is the following:
 - Requires identification of food
 - Prevents consumer deception with respect to identification of ingredients.



The product above claims to include 100% honey. If other ingredients such as water are added, this would be a violation of the FPLA.

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Misbranded Foods

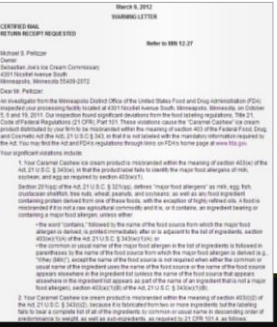
- Refers to falsely or misleadingly packaged or labeled food:
 - Incomplete/missing ingredients list
 - Fails to list major allergens
 - Fails to list common name of product
 - False micronutrient composition
 - Fails to list potentially dangerous contents.
 - Fails to list food additives
 - False nutrition claims.
 - Etc.

Item #	Food Name(s)	Brand/Manufacturer	Reason for Recall	Category #	Product Recall
01102101	Small Cakes, The Best Bakery	Best Bakery	Undeclared allergen	0001-00	Yes
01102102	Small Cakes, The Best Bakery	Best Bakery	Undeclared allergen	0001-00	Yes
01102103	Small Cakes, The Best Bakery	Best Bakery	Undeclared allergen	0001-00	Yes
01102104	Small Cakes, The Best Bakery	Best Bakery	Undeclared allergen	0001-00	Yes
01102105	Small Cakes, The Best Bakery	Best Bakery	Undeclared allergen	0001-00	Yes
01102106	Small Cakes, The Best Bakery	Best Bakery	Undeclared allergen	0001-00	Yes
01102107	Small Cakes, The Best Bakery	Best Bakery	Undeclared allergen	0001-00	Yes
01102108	Small Cakes, The Best Bakery	Best Bakery	Undeclared allergen	0001-00	Yes
01102109	Small Cakes, The Best Bakery	Best Bakery	Undeclared allergen	0001-00	Yes
01102110	Small Cakes, The Best Bakery	Best Bakery	Undeclared allergen	0001-00	Yes

Most FDA recalls are the result of undeclared (labeled) allergens. These are considered misbranded foods.

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Misbranding - Warning Letter



- The food producer at left was given a warning from FDA that their product is considered misbranded for the following violations:
 - Major allergens not listed on label.
 - Label does not contain a list of all of the ingredients in the product.

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Misbranding - Warning Letter



- Misbranding violations for this producer included:
 - No nutrition labels
 - No common or usual food names
 - No place of business listed for manufacturer, packer, or distributor
 - No net quantity
 - Etc.


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Adulterated Foods

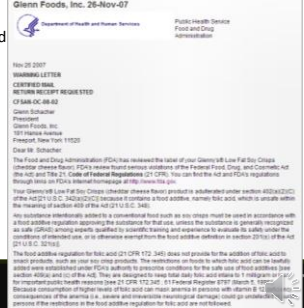


China's biggest milk powder producer has recalled 700 tons of baby formula after a baby died and a food safety official died from bacterial problems.


- In the case at right, milk was adulterated by adding water and the chemical melamine.
 - Melamine can fool standardized test used for protein content.
- Several infants lost their lives
- Several thousand infants were hospitalized.

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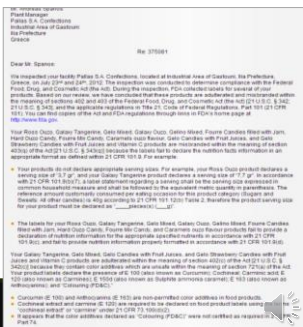
Adulterated Foods – Warning Letter




- This warning letter was sent to indicate this food was adulterated due to the addition of folic acid.
 - Food additive regulations for folic acid do not allow its use in snack foods.

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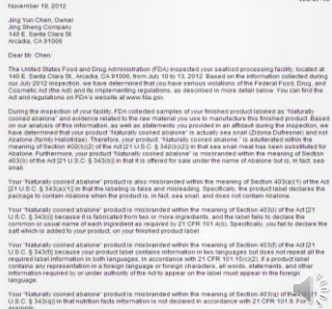
Adulterated Foods - Warning




- This letter includes several issues of misbranding but it is included to illustrate the particular case of adulteration.
 - Addition of color additives not licensed for use in foods.
 - Recall that FD&C allows very few colors to be added to foods.

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Adulterated and Misbranded – Warning Letter



- This food is adulterated because it is labeled alone, but is in fact a different sea snail.
 - Because the label is falsified, it is also considered misbranded.
 - And all ingredients are not listed.
 - And because the labels are in two different languages but they do not match.

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Food Allergen Labeling and Consumer Protection Act

- This amendment to the FD&C was added to help consumers avoid exposure to the eight leading causes of food allergies:
 - Milk
 - Egg
 - Fish
 - Crustacean Shellfish
 - Tree nuts
 - Wheat
 - Peanuts
 - Soybeans
- The act defines a major food allergen as:
 - One of the 5 foods listed
 - One of the 3 food groups listed
 - Fish, shellfish, and tree nuts are food groups.
 - Any ingredient which contains proteins from one of the 8 foods.





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Food Allergen Labeling and Consumer Protection Act (continued)

- Any food that contains an undeclared major allergen is misbranded under the FD&C.
 - Failure to list food allergens is the leading cause of food recalls.
 - Could potentially be fatal.
- Bakery products are the most frequently recalled type of food.
 - Milk is the most common undeclared allergen.

Gendel, et al. (2013) J. Food Prot. Vol. 76(11); 1933-8



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Examples of Some Foods Requiring Labels

- Tree nuts:
 - Almond
 - Beech nut
 - Brazil nut
 - Butternut
 - Cashew
 - Chestnut
 - Chinquapin
 - Coconut
 - Hazelnut
 - Ginkgo nut
 - Hickory nut
 - Lichee nut
 - Macademia nut
 - Pecan
 - Pine nut
 - Pili nut
 - Pistachio
 - Sheanut
 - Walnut
- Crustacean Shellfish:
 - Crab
 - Lobster
 - Shrimp
- Wheat:
 - Common wheat
 - Durum wheat
 - Club wheat
 - Spelt
 - Semolina
 - Einkorn
 - Emmer
 - Kamut
 - Triticale

Lecture Note: Allergies are regulated (what must be labeled) but sensitivities are not (gluten does not have to be labeled but the label gluten-free is permitted).

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Federal Trade Commission (FTC)

- Enforces various laws regarding marketing practices for foods.
- Enforces various laws regarding advertising of foods.



Many people have expressed concerns regarding the marketing of sugar and fast foods to children.

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Federal Trade Commission (FTC)

- FTC ruling can involve misleading claims on foods.
- Often, the foods claim to have health benefits not supported by any data or testing done on that food.
 - This is a relatively new field known as nutri- or nutraceuticals (foods with health benefits)
 - False claims keep the FTC very busy (see next slide).

FTC Charges Gerber with Falsely Advertising its Good Start Gentle Formula Protects Infants from Developing Allergies

Agency Also Alleges Health Claims Were Not Approved by the FDA, as Advertised

FOR RELEASE
October 30, 2015

WASHINGTON, D.C. — Federal Trade Commission (FTC) Consumer Protection, Advertising Practices, and Identity Theft Division, with responsible advertising that leading to Good Start Gentle Formula to infants, with a baby's history of allergies, parents to believe that their baby will develop allergies.


The agency also alleges that Gerber has falsely advertised Good Start Gentle's health claims as FDA-approved. Through its website and promotional activities, the Commission's findings to provide evidence that making the unsubstantiated and unapproved claims.


Parents reported babies that had to be hospitalized for health reasons because of the health claims made on the label for the baby's milk formula. The FTC's Bureau of Consumer Protection, Gerber did have evidence to back up its claim that Good Start Gentle Formula reduces the risk of babies developing these allergic ailments.

The FTC alleges that since 2011, Gerber has advertised its Good Start Gentle Formula through advertisements that are in television, magazines, at retail and display units, and other promotional materials. Good Start Gentle calls for about \$20 for a 2.13 liter package of powdered formula.

Good Start Gentle is made with partially hydrolyzed whey protein (PHWP). Gerber claims that feeding babies the formula, instead of formula made with whole (100% whole) protein, will prevent or reduce the risk that they will develop allergies. It is with Gerber's promotion Good Start Gentle's claims to consumers.

"The good news baby to have your imagination," that while "that" again, "that your allergies."



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FTC Commissioners Uphold Trial Judge Decision that POM Wonderful, LLC, Stewart and Lynda Resnick; Others Deceptively Advertised Pomegranate Products by Making Unsupported Health Claims

FOR RELEASE
October 15, 2015

FTC Charges Second "Affiliate Network" of Internet Advertisers with Deceiving Consumers by Using Fake News Sites to Market Acai Berry Weight-Loss Products and Colon Cleansers

FOR RELEASE
September 12, 2015

Dannon Agrees to Drop Exaggerated Health Claims for Activia Yogurt and DanActive Dairy Drink

FOR RELEASE
December 16, 2010

FTC Charges that Evidence Supporting Benefits of Probiotics Falls Short

FOR RELEASE
December 16, 2010

FTC Investigation of Ad Claims that Rice Krispies Benefits Children's Immunity Leads to Stronger Order Against Kellogg

FOR RELEASE
June 9, 2010

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USDA Inspection Legend

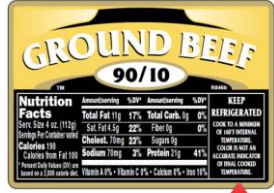
- USDA regulations require an inspection legend on all federally inspected meat and poultry product containers.
- The product will be declared misbranded if the legend is missing.




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USDA – Handling Statements

- Packaged products that require special handling to maintain their wholesome condition must have prominently displayed the applicable handling statement:
 - "Keep Refrigerated"
 - "Keep Frozen"
 - "Perishable – Keep Refrigerated or Frozen"
 - Etc.



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USDA Safe Handling Instructions

- Safe handling instructions are required for the following:
 - Raw meat and poultry
 - Partially cooked meat and poultry
 - Eggs
- "This product was prepared from inspected and passed meat and or poultry. Some food products may contain bacteria that could cause illness if the product is mishandled or cooked improperly. For your protection, follow these safe handling instructions."

SAFE HANDLING INSTRUCTIONS:
To prevent illness from bacteria:
keep refrigerated, cook eggs until
yolks are firm, and cook foods
containing eggs thoroughly.

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Consumer Advisory

- Food establishments that sell or serve raw or undercooked animal foods or ingredients must inform customers about the increased risk associated with eating these foods:
 - Meat
 - Eggs
 - Seafood
- Signs on doors and reminders on menus are also used.
- Items should also be described fully in menu.

WARNING

THIS FACILITY OFFERS RAW OYSTERS FROM THE GULF OF MEXICO.

EATING THESE OYSTERS MAY CAUSE SEVERE ILLNESS AND EVEN DEATH IN PERSONS WHO HAVE LIVER DISEASE (FOR EXAMPLE, ALCOHOLIC CIRRHOSIS), CANCER OR OTHER CHRONIC ILLNESSES THAT WEAKEN THE IMMUNE SYSTEM. If you eat raw oysters and become ill, you should seek immediate medical attention. If you are unsure if you are at risk, you should consult your physician.

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Product Dating Labels

- Product dating labels are not required by Federal regulations with the exception of infant formula.
- However, calendar dates (known as open dating) often appear on foods.
 - There is no uniform or universally accepted system for dating foods in the United States.
 - If a calendar date is used, there must be a phrase immediately adjacent explaining the meaning of that date.

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Product Dating Labels

- Phrases used on calendar date:
 - Use by
 - Best before
 - Sell by
 - Enjoy by
 - Born on
 - Discard by
 - Expired
 - Best by
 - Packed on
 - Best if used by
 - Safe if used by
 - Pull date
 - Etc.
- There is no standard use for any of these terms but the following tend to be defined:
 - Sell-by = this date tells the store how long to display the product for sale.
 - Best if used by (or before) = recommended for best flavor or quality.
 - Use-by = last date recommended for peak quality.
- IMPORTANT: NONE OF THESE DATES HAVE ANYTHING TO DO WITH THE SAFETY OF THE FOOD!**

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Product Dating Labels – Infant Formula

- Federal regulations require a "use-by" date on the product label of infant formula under FDA inspection.
- This date is the last date at which the formula contains the exact nutrients listed on the label.
 - Note: nutrient content of many foods drops over time, and this can be deadly to an infant.

The Use-by date will be printed on the bottom of this bottle.

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Product Dating Labels - Florida

- The federal government does not regulate product dating labels but many states have chosen to enforce some dates.
 - Not consistent state to state.
- Florida requires dates on dairy and shellfish.
 - Cannot sell after date has passed.

Viral internet image: (please note instructor has removed a certain word so as not to offend!) While somewhat crude, this illustrates the point that no one is enforcing the dating on products.


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Product Dating Labels

- The USDA and FDA do have it within their authority to declare the current dating system "misbranding" and enforce dates.
- Legislation has attempted to address this issue and failed.
- It is a critical issue because nearly 40% of foods are discarded due to these dates even though they are perfectly safe for consumption.




Was this the date the beer was brewed? Bottled? The hops were harvested?

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Final Thoughts

- Many of the things you see are food labels have nothing to do with food safety and nutrition.
- Some labels are used to mislead the consumer who believes they are making a healthy choice, including:
 - Natural
 - Local
 - Fresh
 - Supports a healthy immune system
 - None of the above phrases are regulated by the food industry. In other words, legally, all of these phrases could appear on a bottle of soda.



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Lecture Summary

- The FDA, USDA, and FTC enforce regulations regarding food labeling.
- Omission of ingredients, particularly allergens is the leading cause of food recalls.
- Failure to follow laws regarding labeling can result in charges of both misbranding and adulteration.
- Safe handling instructions and consumer advisories are critical to prevent foodborne illnesses from potentially raw meats and eggs.
- Food date labels are meaningless (except infant formula) and lead to considerable food waste.

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