Truth in Food Labeling: It's Anyone's Guess

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Week 5

Instructor -

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Overview

Intentional mislabeling -

- Outright economic adulteration.
- Questionable labeling
 - · Wording seems misleading.
- Handling issues ---
 - · Explicit warnings,
 - Implied warnings,
 - · General handling,
 - · Humor, and
 - Where to get help.



...deception and handling...

Week 5 – Topics

- Slide #1E major topics...deception and handling...
 - Week 5 –
 - Major topic deception and handling --
 - Overview
 - Intentional mislabeling
 - Outright economic adulteration.
 - Questionable labeling
 - · Wording seems misleading.
 - Handling issues ---
 - Explicit warnings,
 - · Implied warnings,
 - · General handling,
 - Humor, and
 - Where to get help.

...intentional mislabeling...adulteration...

- Economic adulteration
 - · For financial gain.
 - · Occasional health threat.
 - Disguised to hide deceit.
 - Estimated at \$15 B annual cost.
 - Leading targets worldwide
 - · Olive oil,
 - Fish,
 - Milk, and
 - Honey.



...deception - 1

Week 5 - Topic

- Slide #2E major topic...deception 1...intentional misbranding...adulteration...
 - Week 5 -
 - Major topic -- deception 1 intentional misbranding adulteration --
 - From "Food Fraud and 'Economically Motivated Adulteration' of Food and Food Ingredients;" RJohnson; Congressional Research Service; January 2014 —
 - Food fraud -
 - Intentional substitution or addition of a substance in a product to either increase the value of the product or reduce cost of productions to achieve fraudulent economic gain.
 - Much uncertainty with how widespread food fraud is in the U.S. or worldwide.
 - Those who commit food fraud want to avoid detection.
 - The fraudulent substance often is well masked, appearing similar enough to the real thing.
 - Generally, there is no intentional cause of physical harm to individuals.
 - Ingestion of affected product over long periods of time can lead to identification of the situation.
 - The situation more likely is uncovered by a disgruntled employee or competitor.
 - In most cases, the situation can be verified by analytical testing, usually by the government while investigating.
 - The Grocery Manufacturers Association estimates that fraud may cost the global food industry between \$10 billion and \$15 billion annually, affecting approximately 10 % of all commercially sold food products.
 - For fish and seafood fraud whereby, there is substitution of a higher-valued species with some inferior species could lead to exposure to toxin poisoning and certain allergens.
 - Types of economic adulteration/food fraud worldwide
 - Replacement or substitution of a valuable food ingredient with a less expensive ingredient, usually achieved through the addition, dilution, or extension of an authentic ingredient with an adulterant-
 - Melamine for milk to artificially increase protein content;
 - Addition of water and citric acid to lemon juice to increase the acidity of juice;

- Replacing beef meat with equine meat in Europe due to short supply of meat from beef and over supply of equine;
- Substitution of less expensive cow's milk for sheep's or goat's milk;
- Substitution of common wheat for durum wheat;
- Substitution of Greek or Turkish olive oil labeled as Italian olive oil;
- Substitution of synthetically produced vanillin for botanically-derived natural vanillin;
- Farmed salmon sold as wild; and
- Sale of meat from animals that have been stolen and/or illegally slaughtered (e.g., wild game animals that may have been poached).
- False declaration of origin to evade taxes/tariffs
 - U.S. import of catfish from Vietnam labeled as grouper to avoid anti-dumping duties;
 - Trans-shipment of Chinese products (e.g., shrimp and honey) through other Asian nations to avoid anti-dumping duties or to mask the true origin of potentially unsafe products.
 - Fraudulent labeling of a synthetically derived flavor chemical as being "naturally" derived;
 - · Food falsely labeled or certified as organically produced; or
 - Poor quality filtered honey or a honey substitute product labeled as raw honey that reportedly has medicinal properties.
- Removal —
- Removal of non-polar constituents from paprika (i.e., lipids and flavor compounds) to produce paprika-derived flavoring extracts or "defatted" paprika; or
- Poor quality honey that has been filtered to remove pollen or other residue from the beehive in order that it becomes difficult to determine the botanical and geographical origin or to circumvent the ability to trace and identify the actual source of the honey.
- Addition
 - Mixing a color additive (i.e., Sudan red dye) to enhance the color of poor quality paprika.
- Leading food categories of economic adulteration worldwide
 - Olive oil
 - Often a branded (e.g., Italian) substituted with a lower cost variety from Greece or Turkey, or with oil from another seed or nut.
 - The European Union has a farm support program that provides support for olive oil as part of the Common Agricultural Policy (CAP).
 - Alternative seed or nut oil was used to thin out olive oil with hazelnut, soybean, corn, peanut, sunflower, safflower, walnut, vegetable, canola, or palm oil, and even lard or non-food-grade oil like rapeseed.
 - Fish and seafood
 - Fish samples purchased at grocery stores, restaurants, and sushi bars in major cities were often mislabeled, including —
 - Red snapper (actually tilefish);
 - White tuna and butterfish (actually escolar);
 - Wild Alaskan salmon (actually farmed Atlantic salmon);
 - Caviar (actually catfish roe); and
 - Monkfish (actually puffer fish).
 - Other fish commonly found to not be what the label says includes
 - Halibut,
 - Sole,
 - · Grouper, and
 - Striped bass.
 - Milk and milk-based products
 - Cow's milk has been found to have –

- Milk from other animals added;
- Adulterated with reconstituted milk powder, urea, and rennet, oil, detergent, caustic soda, sugar, salt, and skim milk powder.
- Adulterated milk and infant formula may also be
 - Watered down and then supplemented with melamine to raise the protein content.
 - A common target for retail fraud includes
 - Tampering with the sell-by codes to move expired product;
 - Note: The "use by" date for baby food is a concern due to the deterioration of nutritional components that may not properly support growth and development of infants.
- Honey, maple syrup, and other natural sweeteners
 - Honey might have added sugar, syrup, corn syrup, fructose, glucose, high-fructose corn syrup, and beet sugar without being disclosed on the label.
 - Honey from a "non-authentic geographic origin" is also common
 - Honey from China transshipped through another Asian-country and falsely sold as honey from the second country –
 - Usually, to avoid higher customs duties and tariffs placed on product from China.
 - Some of this honey might also contain unapproved antibiotics or other additives and heavy metals.
 - Maple syrup is sometimes thinned out with sugar or corn syrup.
- Fruit juice
 - Juices might be -
 - Watered down, or
 - A more expensive juice (e.g., pomegranates) might be cut with a cheaper juice (e.g., apple or grape).
 - Some juice may be only water, dye, and sugary flavorings, although fruit is the listed ingredient on the label.
 - Orange juice has been shown to sometimes contain added unlisted
 - Lemon juice,
 - · Mandarin juice, Grapefruit juice,
 - High fructose corn syrup,
 - Paprika extract, and
 - · Beet sugar.
 - Apple juice has been shown to have added unlisted –
 - Grape juice,
 - High fructose corn syrup,
 - Pear juice,
 - Pineapple juice,
 - Raisin sweetener,
 - Fig juice,
 - Fructose, and
 - Malic acid.
- Coffee and tea
 - Ground coffee might be cut with -
 - Leaves,
 - Twigs,
 - Roasted corn,
 - Ground roasted barley, and
 - Roasted ground parchment.
 - Instant coffee may include
 - Chicory,

- Cereals,
- · Caramel,
- Parchment,
- Starch,
- Malt, and
- Figs.
- Teas may contain
 - Leaves from other plants,
 - · Color additives, and
 - · Colored saw dust.
- Spices
 - Saffron, being the most expensive spice in the world, has been found to have added
 - Glycerin,
 - Sandalwood dust,
 - Tartrazine (a yellow dye),
 - · Barium sulfate, and
 - Borax.
 - Ground black pepper
 - Starch,
 - Papaya seeds,
 - Buckwheat,
 - Flour,
 - Twigs, and
 - Millet.
 - Chili powders, curries, and paprika
 - Sudan red dyes have been used to color but are also known carcinogens and are banned for use in foods.
- Organic food
 - Fraudulent certificates have been presented on the market to sell non-organic (conventionally produced) agricultural products.
 - When purported to be U.S. Department of Agriculture (USDA)-certified "organic" but a
 false certification is substituted, this is a violation not only of U.S. law but also the
 Federal National Organic Program regulations.
 - Products fraudulently labeled as "organic" have been detected by USDA for a range of foods and food ingredients from both domestic and international suppliers.
- Clouding agents
 - These are food processing aids to enhance the appeal or utility of a food
 - Palm oil is added to fruit juices and jams.
 - Of particular concern is the fraudulent addition of the plasticizer Di(2-ethylhexyl) phthalate (DEHP) and other related phthalates
 - DEHP may also be used in food contact materials such as seals and packaging.
 - DEHP is associated with public health risks, including cancer and reproductive concerns.
- Specific litigated examples of economic adulteration
 - Shrimp economic adulteration
 - In USA (plaintiff) versus Randazzo (defendant)
 - Randazzo's company imported, processed, and distributed shrimp. A high-ranking company
 official testified that he had discussed with Randazzo that use of the ingredient sodium
 tripolyphosphate had to be disclosed on the ingredient statement. Randazzo nevertheless
 ordered that the ingredient be added without disclosure, making clear the aim was higher

profits because this food additive would cause the shrimp to retain moisture. Randazzo also added saccharin to mask the taste of the sodium tripolyphosphate that also was not declared on the ingredient statement. Finally, Randazzo ordered the use of sodium hydroxide to give the shrimp a pinkish color; a color resembling a more expensive and rarer variety of shrimp sold at a higher price. Again, this food additive was deliberately not listed on the ingredient statement. The majority of the shrimp was sold by contract to the U.S. military. All the added, undeclared ingredients were incorporated contrary to the contract specifications between Randazzo and the military.

- The court found Randazzo guilty of numerous charges, including misbranding and economic adulteration.
- Economic adulteration of frozen foods
 - U.S. (plaintiff) versus Cintrón-Fernández (defendant)
 - Defendant was convicted of adulteration and misbranding.
 - Defendant was warned by the Food and Drug Administration twelve years earlier that food labeled as "ice cream" must contain not less than 10 percent milk fat (21 CFR 135.110(a)(2)). However, defendant continued to sell product with less than 10 percent milk fat and employees were also instructed to add a mixture of coconut oil and milk fat for the "Caparra Ice Cream" brand. The publicly sold product did not list the coconut oil on the ingredient list nor did the product identify that the product was not ice cream (i.e., it contained less than 10 percent fat as required by the standard of identity).
 - Customer loss was valued at just under \$108,000.
 - Defendant was fined approximately \$6,000 and was ordered to serve time in jail.
- Economic adulteration of pet and baby foods; public health threat
 - In 2007, the Food and Drug Administration learned that certain pet foods were sickening and killing a large number of cats and dogs.
 - Contaminants (i.e., wheat gluten contaminated with melamine) were found in vegetable proteins imported into the U.S. from China and used as ingredients in pet food. A portion of contaminated pet food was used to produce farm animal feed and fish feed. Some of the animals consuming the contaminated feed had been processed into human food. Through risk assessment analytical procedures, government officials determined the risk to human health was very low if any of the meat from food animal that had consumed contaminated feed had been consumed. All contaminated pet food, animal feed and fish feed, and vegetable proteins were recalled and destroyed.
 - At the same time in China, at least six infants suffered kidney damage and died and an estimated 300,000 children were sickened from melamine-contaminated baby food formula. Milk producers added melamine to achieve a higher protein content.
 - Two Chinese nationals and the businesses they operated, along with a U.S. company and its
 president and chief executive officer, were indicted by a Federal grand jury for their roles in a
 scheme to import products purported to be wheat gluten into the U.S.
 - In China, the two officials were executed in November 2009.
- Peanut butter economic adulteration; public health threat
 - Peanut Corporation of America intentionally ignored findings of Salmonella, a pathogen, in product that should have caused the company to destroy contaminated product and clean their facility. The peanut butter and peanut butter paste was used to make 3,912 different products including cookies, crackers, cereal, candy, ice cream, and pet treats manufactured by more than 200 companies.
 - Instead, contaminated product was produced and distributed. Nine people died and 700 were sickened.
 - Consequently, the company was left bankrupt with at least four company officials indicted, one official pleading guilty, and \$12 million awarded to victims.

...intentional misbranding...court involvement...

- Nestlé owned beverage cases
 - Settlement out-of-court for \$10M;
 - Follow-up suit not resolved; but
 - USA firms sold for \$4.3B in 2021 and still active in EU.
- Pepsico infringed on a pending Polar trademark
 - · Polar won the case.
- "Simply Potatoes" with butter -
 - Court found full context of label deceptive.
- Cheez-It" whole grain crackers -
 - Court found ad deceptive based on order of predominance of ingredients.



Week 5 – Topic

...deception - 2

- Slide #3E major topic...deception 2...intentional misbranding...court involvement...
 - Week 5 –
 - Major topic deception 2 intentional misbranding court involvement --
 - The brand name of a food product leading to trademark infringement
 - In Polar Corporation (plaintiff) versus Pepsico, Inc, and the Concentrate Manufacturing Co. of Ireland (defendants), --
 - The introduction and sale of frozen slush-like drinks under the name "Polar Shock" by the defendant resulted in an injunction against further production and sale. The plaintiff had trademarks for a variety of beverage products sold with the term Polar in the name (e.g., drinking water, iced teas, seltzer waters, carbonated sodas, and fruit and seltzer blends). The defendant had applied for trademark protection for its Polar Shock brand products. While the defendant was awaiting approval for trademark protection, product was being sold. Defendant's product was sold primarily through vending machines; the plaintiff's product was sold through grocery stores and convenience stores.
 - Ultimately, the plaintiff was successful in stopping further sale of the defendant's product.
 - A branded product can be negatively impacted when deception is alleged
 - Poland Spring Water (owned by Nestlé)
 - In 2003, Nestlé settled a lawsuit claiming Poland Spring water was not sourced from deep within the woods in Maine, paying \$10 million to a charity to end that false advertising litigation. Meanwhile, company advertisements continued to promote Poland Spring as spring water from Maine.
 - In 2017, another lawsuit initiated. This second lawsuit alleged again that Poland Spring water was not spring water. The plaintiffs were seeking \$5 million due to false and deceptive product labels resulting in overcharges since the company began bottling Poland Spring in 1993. The plaintiffs alleged that regular ground water and not spring water was being used due, in part, to the spring water source in Maine running dry nearly 50 years ago. Nestlé contended that State regulators in Maine verified that the Poland Spring brand's sources qualify was spring water. The definition for "spring water" was different in Vermont than that of the Food and Drug Administration.

- Regardless, the litigation was still pending in 2019 but by 2021, Nestlé sold the Poland Spring brand and other U.S.-based products for \$4.3B.
- A branded product can be negatively impacted when adulteration is determined
 - Perrier, originally a French mineral water brand, entered the U.S. market in the 1970s.
 - In 1990, bottles of Perrier in North Carolina were found to contain traces of benzene, an agent known to cause cancer in animals when fed at high doses. Although the chemical is made from petroleum, it does occur naturally in drinking water and groundwater at low concentrations. Although the company concluded that a worker contaminated a bottling machine by inadvertently cleaning the machine with benzene, more unrelated product was found overseas to contain benzene.
 - The company was sold to Nestlé in 1992.
- Ingredient expectation from an advertisement
 - What is said in advertisements about a product may entice consumers to purchase the product. However, the advertisement is just one piece of the critical information to consider about whether labeling is misleading.
 - Advertising of food with honey
 - In Lima/Wrublewski (plaintiffs) versus Post (defendant) --
 - Plaintiffs contended that they purchased food items based on several television commercials and the defendant's branding and packaging that emphasized the presence of honey. The plaintiffs claimed that the packaging and marketing led them to expect that honey was a much more prominent ingredient in the "Honey Bunches of Oats with Almonds" cereal they purchased. The plaintiffs further clarified that they were under the mistaken belief that honey was the cereal's exclusive or primary sweetener based on the marketing and did not consider that honey was present as a flavoring. The plaintiffs asserted seven counts, including violations of State consumer protection laws and unjust enrichment.
 - In this case, several other helpful pieces of information were clarified. From a litigation perspective, courts often assign a jury panel to make determinations when a question is raised as to whether a label is misleading. However, Courts first consider whether the complaint's allegations make it plausible that, on a full factual record, a factfinder could reasonably regard the label as having the capacity to mislead. If the facts are not misleading, then a jury is not necessary, and a determination of the facts can lead to deciding that the issue was not objectively misleading as a matter of law.
 - A jury was not called for this action because, in actuality, the plaintiffs did not take into
 account the ingredient statement, which disclosed that honey was just one of the
 sweeteners incorporated and was the fifth most prominent ingredient.
 - The Court further identified that 21 CFR 101.22 defined artificial flavor as including natural sources (e.g., honey). Moreover, the Court found that 21 CFR 101.18 provides guidance on misbranding associated with packaging and its relationship to the ingredient statement.
 - Advertising of food with butter
 - In Kamara (plaintiff) versus Pepperidge Farm (defendant)
 - Plaintiff contended that "Golden Butter" crackers were purchased with the expectation
 that "wherever butter could be used in the product, it would be used instead of using its
 synthetic substitutes, vegetable oils." The crackers were indeed made with butter, but
 also included a lesser quantity of vegetable oils. Plaintiff asserted that the presence of
 vegetable oils rendered the "Golden Butter" packaging misleading or deceptive because
 a reasonable consumer would have falsely concluded that the crackers were "all
 predominantly made of butter." Plaintiff further asserted that "the meaning of
 compound words is greater than the sum of its parts, such that "butter cracker" does

not mean "a cracker made with butter" but a cracker which is all or predominantly made with butter." The ingredient statement stated: Enriched wheat flour (flour, niacin, reduced iron, thiamine mononitrate, riboflavin, folic acid), butter (milk), vegetable oils (canola, sunflower, and/or soybean)...." According to the plaintiff: "...consumers prefer butter-based products over those containing vegetable oils; butter tastes better; is rich in nutrients like calcium and vitamins A and D; does not contain trans fats, is more expensive, and is less processed, since it is made by churning cow's milk instead of chemical reactions to make vegetable oil; the Golden Butter crackers may use vegetable oil as a shortening agent and that many crackers are also sprayed with a warm vegetable oil to give them a pleasing appearance; the use of vegetable oil in this way is misleading because the result is consumers will expect the product to have more butter; vegetable oils are susceptible to oxidation, which can detract from a butter flavor and result in a beany, powdery, or fishy taste...". Plaintiff did not allege that the crackers have a displeasing taste or are not butter-flavored. Plaintiff alleged that "marketing the crackers as "Golden Butter" misrepresents the product through affirmative misstatements, half-truths and omissions, and deceives, misleads, and defrauds consumers about the crackers." In response, the court identified that a rule that a viable complaint must contain sufficient factual matter, accepted as true, to state a claim for relief that is plausible on its face. In assessing the sufficiency of a claim, a court must disregard legal conclusions which are not entitled to the presumption of truth. Instead, the court must examine the factual allegations and determine whether they plausibly give rise to relief. A complaint can be dismissed when it is clear from the face of the complaint that the plaintiff's claims are barred as a matter of law because the complaint does not plausibly present a deceptive leading to a reasonable consumer being misled when acting reasonably under the circumstances.

- · The court dismissed the claim.
- Additional advertising of food with butter
 - In Berger (plaintiff) versus MFI Holding Corporation (defendant)
 - The court concluded plausible alleged deceptive packaging of a "Simply Potatoes" product that claimed to be "fresh" and "made with real butter and milk" but also included margarine. While emphasizing "real butter," the packaging also prominently incorporated the words "simply," "simple," and "simplest." The court concluded that in the full context of the package, a reasonable consumer could be misled into believing that the potatoes were made only with butter and did not include margarine, noting "surrounding representations including Simply Potatoes, simply, fresh, and one of nature's simplest foods...."
 - In this case, the ingredient statement did include margarine.
 - Still, the court concluded that a reasonable consumer would be misled by the advertising statements.
- Advertising of whole grain food
 - In Mantikas (plaintiff) versus Kellogg Co. (defendant)
 - Plaintiff had plausibly alleged Cheez-It brand crackers were deceptively labeled as
 "whole grain" and "made with whole grain" when enriched flour was actually the
 principal grain ingredient in the crackers. Enriched flour predominated over whole grain
 in the ingredient list, which contradicted the package's prominent "whole grain"
 labeling. Plaintiff contended that a reasonable consumer should not be expected to
 scrutinize an ingredient list in order to discover the truth behind a prominent but
 misleading statement on the packaging.
 - Because the packaging's statements "falsely imply that the grain content is entirely or at least predominantly whole grain," a reasonable consumer would not understand that enriched white flour was the product's primary ingredient.

- The court accepted that plaintiff plausibly stated a claim.
- Advertising of natural food
 - In Lee (plaintiff) versus Conagra Brands (defendant)
 - Plaintiff contended that she purchased Wesson brand vegetable oil from grocery stores because it was advertised as "100 % natural." After learning that Wesson Oil contained genetically modified organisms (GMOs), which plaintiff regarded as quite unnatural, plaintiff sued the manufacturer and distributer (defendant). This was a case of unfair or deceptive trade practices. In this case, the lower court agreed with defendant that was unfair or deceptive as a matter of law because the label conformed to Food and Drug Administration labeling policy (i.e., a product can be labeled as "natural" if it does not include added synthetic ingredients like artificial colors or flavors). The court also noted that the Food and Drug Administration does not require the affirmative disclosure of genetically modified organism (GMO) presence.
 - The State court dismissed the action.
 - However, because the court action was initially brought in State court and was determined to have an impact of at least \$5 million at stake, the dismissal action was reversed and was then moved to a Federal appeals court.
 - The Federal appeals court determined that plaintiff plausibly alleged that a reasonable consumer might think that "100 % Natural" means that a product contains no genetically modified organism (GMO), and then base a purchasing decision on that belief. Further, the Federal appeals court noted that the cost of the GMO-free vegetable oil was at a premium cost compared to the vegetable oil containing the GMO, and that evidence was presented to show that consumers are willing to pay a premium for a GMO—free product.
 - Consequently, the Federal appeals court returned the case for further litigation and is unresolved at this point in time.
- Shell egg labeling
 - In United Egg Producers (plaintiffs) versus Department of Agriculture of the Commonwealth of Puerto Rico (defendant) –
 - Defendant passed legislation and issued regulations that required each shell egg from mainland US to be stamped with the two-letter postal code of the State of origin. The legislation was intended to provide for the timely tracing of eggs to their source in the event that the pathogen Salmonella was found in shell eggs within Puerto Rico. The Federal Egg Products Inspection Act expressly prohibits States and local jurisdictions from imposing labeling regulations that impede interstate commerce but exempted those in noncontiguous areas from this prohibition.
 - Ultimately, the Court determined that the defendant's regulation was an impermissible and substantial burden on interstate commerce. The Court issued an injunction against enforcement of the regulations.

...misbranding???...misleading???...

- Read the fine print --
 - Could be comparing apples to oranges.
 - It costs \$\$\$ for every word.
 - The words are meant to entice.
 - Question what is being implied.



Week 5 - Topic

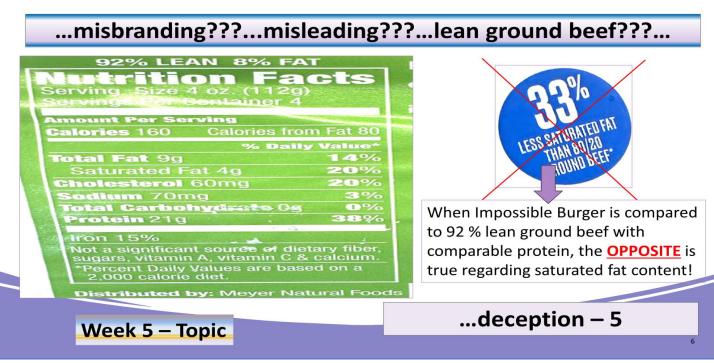
...deception - 3

- Slide #4E major topic...deception 3...misbranding???...misleading???...
 - Week 5 –
 - Major topic deception 3 misbranding??? misleading??? -
 - Our overview will touch on many phrases that need further examination.
 - Remember, every word printed on labeling costs money
 - There are no "extra" words just to fill space;
 - There is a purposeful intent to use phrasing to entice you to select one product over another; and
 - The phrasing, upon closer look, could be comparing apples to oranges.



- Slide #5E major topic...deception 4...misbranding???...misleading???...but truthful...
 - Week 5–
 - Major topic deception 4 misbranding??? misleading??? but truthful
 - Impossible Burger versus Laura's Lean Beef 1 --
 - Impossible Burger
 - This product is labeled in a manner to attack individuals concerned about sustainable agriculture, climate change, and public health concerns.
 - Note the "Join the movement save the planet" wording along with the impacts of consuming beef versus an Impossible Burger relative to water, greenhouse gas emissions, and land use.
 - Comparisons are made on the packaging against beef burgers.
 - The "33 % less saturated fat than 80/20 ground beef" statement (which is on the front package label but has an asterisk to the back package label).
 - Notably, the comparison is to one of the fatter ground beef standards (80 % lean/20 % fat) and isn't the "fairest" comparison to be made.
 - The standard of identify for ground beef allows up to 25 % fat, and even fattier product.
 - There are leaner ground beef options that would be a more representative for nutrient comparisons.
 - All the "Join the movement..." statements remain true regardless of the ground beef standard used for comparison.
 - See next slide for further discussion.
 - The certification logos represent
 - IFANCA Certified Islamic Food and Nutrition Council of America (IFANCA) is a global leader in halal certification.
 - PAREVE A term specific to kashrut, the dietary laws of Judaism, in which the food is neutral (i.e., neither dairy nor meat).
 - Bioengineered One or more components of the product is derived from bioengineering.

- Not shown but is on the back package label is the handling instructions
 - Impossible Burger cooks like ground beef
 - Preheat pan or grill to medium high, then cook for about 2 minutes per side to desired level of doneness.
 - Fully cooked when interior is 160 degrees Fahrenheit.
 - Perishable, keep refrigerated or frozen.
 - If frozen, thaw and keep unopened in refrigerator for up to 14 days.



- Slide #6E major topic...deception 5...misbranding???...misleading???...lean ground beef???...
 - Week 5 –
 - Major topic deception 5 misbranding??? misleading lean ground beef???
 - Impossible Burger versus Laura's Lean Beef 2
 - Laura's Lean Beef
 - This product (92 % lean/8 % fat) makes no comparison to fattier ground beef or to Impossible Burger.
 - Yet, if comparing Laura's Lean Beef to Impossible Burger
 - At essentially the same serving size (112 g versus 113 g) and protein content (both at 38 % DV), when assessing desirable nutrient outcomes, Laura's product has
 - Fewer
 - Calories -- 70 less (160 versus 230);
 - Total fat grams -- 4 less (9 versus 13);
 - Saturated fat grams -- 2 less (4 versus 6) --
 - Importantly, saturated fat is 33 % less in Laura's lean ground beef than in Impossible Burger; completely opposite messaging for what Impossible Burger is marketing;
 - Sodium milligrams 300 (70 versus 370); and
 - Carbohydrate grams 9 less (0 versus 9).
 - Impossible Burger has more desirable nutrient outcomes for the following nutrients
 - Cholesterol milligrams 0 (60 versus 0);
 - Iron and a host of other vitamins of which most all are fortified and not ordinarily contained within a nutrient dense food.
 - My question to Impossible Burger would be "why not focus on the climate change attributes, which are irrefutably more positive for Impossible Burger rather than create a comparison that seems deceptive?"
 - Regardless, unless an individual has a clinically identified medical restriction, there are "no bad foods;" rather, there are bad dietary patterns.
 - The reason for the Daily Value comparison for a 2,000-calorie diet is that the 2,000-calorie diet is for a full day and not for an individual meal or serving of an individual food item.



- Slide #7E major topic...deception 6...misbranding???...misleading???...beef not poultry???...
 - Week 5 –
 - Major topic deception 6 misbranding??? misleading??? beef not poultry??? --
 - Bone broth plus greens hydrolyzed collagen peptides
 - Classic case of the need to read the fine print for answers (and possibly questions).
 - Ingredient statement
 - First ingredient hydrolyzed collagen peptides from grass-fed, pasture-raised bovine sources.
 - Although a poultry carcass and "natural chicken flavor" are featured on the front label, there is no indication that the bone broth is from beef, not poultry.
 - For other ingredients, "all natural flavors" are stated.
 - "Chicken flavoring" is the proper term for a natural flavoring when poultry is used, as is the term "spices" for when spices are used.
 - The regulation provides for when a natural flavoring must be explicitly identified.
 - Generally, "natural flavoring" is a proprietary substance.
 - The allergens statement includes the warning
 - Made in a facility that also processes milk, egg, soy, tree nuts, peanuts, fish, crustaceans, shellfish, and wheat products.
 - Sort of a catchall to possibly defend against allergen litigation rather than invest in production practices to better ensure no cross-contact.
 - Addition warning on packaging states
 - Store in a cool, dry place below 30 degrees C (which is 86 degrees Fahrenheit).
 - Do not expose to excessive heat or moisture.
 - This product is only intended for use in healthy adults 18 years of age or older.
 - Do not use if safety seal is missing or broken.
 - This product is packaged by weight and not volume; some settling may occur and is unavoidable.
 - Variations in aroma, color, and taste may occur.

...warning...understand what is being implied...

- Focus on warnings --
 - Some foods include one or more.
 - These are **not** the government required statements.
 - These are voluntary, cautionary statements.
 - Could be an outgrowth of prior litigation.
 - Are more serious than general handling statements.



Week 5 – Topic

- Slide #8E major topic...read the fine print 1...warning...understand what is being implied...
 - Week 5 –
 - Major topic read the fine print 1 warning understand what is being implied --
 - These explicit warning statements are not the required statements.
 - These statements are voluntary and are cautionary.
 - The warning may be due to a prior litigation.
 - The warning is meant for the consumer to take note and respond accordingly.

...warning - explicit...snack choking hazard...



POWDER, COCOA POWDER (PROCESSED WITH ALKALI), SOY LECTHIN (AN EMULSIFIER), NATURAL FLAVOR, PEANUTS, CHOCOLATE

CONTAINS: MILK, PEANUTS, SOY.

MANUFACTURED ON SHARED EQUIPMENT AND MAY CONTAIN TRACES OF MILK, SOY, PEANUTS AND OTHER TREE NUTS.

SAFETY WARNING: SMALL OBJECTS SUCH AS HARD AND SOFT SNACKS MAY INADVERTENTLY BECOME LODGED IN THE THROAT

Week 5 – Topic

...read the fine print - 2

- Slide #9E major topic read the fine print -1...warning explicit...snack choking hazard...
 - Week 5 Topic –
 - Major topic -- read the fine print 2 -- warning explicit -- snack choking hazard --
 - Naturally Flavored Chocolate Covered Peanuts Crunchy Snack --
 - There is an explicit safety warning on the back label
 - "Small objects such as hard and soft snacks may inadvertently become lodged in the throat."
 - There is an implied warning on the front label
 - Addresses the product characterization because it is not representative of the product and the product is not evident through the packaging –
 - "Not actual size."
 - Ingredient statement
 - It is interesting to note that the second to last ingredient is peanuts, by weight of the formulation.
 - The primary ingredients before peanuts are necessary for making the chocolate coating;
 however, "chocolate" is listed as the final ingredient
 - What this implies is that the added last-entry "chocolate" is a stand-alone ingredient in which all the ingredients used for its manufacture are also used in the larger ingredient list.
 - The stand-alone-chocolate could have been left over from other uses or rework from packages that lost their integrity within the control of the manufacturer.
 - As a snack, the product likely is marketed more to adults than to children.



- Slide #10E major topic read the fine print 3...warning explicit...child choking hazard...
 - Week 5 Topic -
 - Major topic read the fine print 3 -- warning explicit -- child choking hazard --
 - Cracker Jack The Original
 - The front package label identifies the common/usual name of the product is "Cracker Jack;" however, this name does not convey what the product is to an unfamiliar consumer.
 - Thus, on the front package label, the actual product name is stated as "caramel coated popcorn and peanuts."
 - Product advertising is directed at children, with identification of a prize inside
 - Because the product contains peanuts along with the larger popcorn kernels, a choking hazard for smaller individuals is possible –
 - Thus, a choke warning is explicitly stated "do not give to children younger than 4 years old."
 - Generally,
 - Objects larger than 0.8 cm are considered safe from being a choking hazard for any consumer:
 - Objects between 0.2 and 0.8 cm are choking hazards for different age groups, children qualifying for the 0.2 cm size.
 - An object that is 0.8 cm is just greater than 0.3 inch and is about the size of a dime.
 - The front of package label identifies that the picture is of an enlarged product to show texture.
 - An additional instructional statement identifies that peanuts may have settled to bottom during shipping and handling.
 - Note the "smartlabel" QR code
 - Here you can find
 - Nutrition Facts for the product.
 - Ingredients;
 - Allergens;
 - About this product (e.g., health and safety statements, including "best if used by" and "choke waring"); and
 - Company, Brand, and Sustainability information.



- Slide #11E major topic...read the fine print 4...warning explicit...State of CA (but not FDA)...
 - Week 5 Topic –
 - Major topic -- read the fine print 4 -- warning explicit -- State of CA (but not FDA)
 - From the earlier dietary supplement -- Bone broth plus greens hydrolyzed collagen peptides -
 - The explicit warning for CA residents (but not nationally due to the CA legislation)
 - This product can expose you to chemicals including Cadmium which is known to the State of California to cause cancer and birth defects or reproductive harm.
 - From the Total Diet Study https://www.fda.gov/media/159745/download?attachment
 - FDA found cadmium in 39% of samples of
 - · Sunflower seeds;
 - Spinach;
 - Potato chips;
 - · Leaf lettuce; and
 - French fries.
 - For more information: https://www.P65Warnings.ca.gov/.
 - Note that the State of CA has similar warnings on a host of products, including all those in which the product is exposed directly to an open flame (e.g., grilled hamburger).
 - The Food and Drug Administration (FDA) conducts routine analysis of foods for a variety
 of unavoidable physical defects, chemicals, and heavy metals in foods
 - See
 - Environmental Contaminants in Food
 - https://www.fda.gov/food/chemical-contaminants-pesticides/environmental-contaminants-food
 - Food Defect Levels Handbook levels of natural or unavoidable defects in foods that present no health hazards for humans –
 - https://www.fda.gov/food/ingredients-additives-gras-packaging-guidance-documents-regulatory-information/food-defect-levels-handbook
 - Guidance for Industry: Action Levels for Poisonous or Deleterious Substances in Human Food and Animal Feed -- AUGUST 2000 –

- https://www.fda.gov/regulatory-information/search-fda-guidancedocuments/guidance-industry-action-levels-poisonous-or-deleterioussubstances-human-food-and-animal-feed
- Testing Results for Arsenic, Lead, Cadmium and Mercury
 - https://www.fda.gov/food/environmental-contaminants-food/testing-results-arsenic-lead-cadmium-and-mercury
- Total Diet Study (TDS): Results (1991 2007)
 - https://www.fda.gov/food/fda-total-diet-study-tds/fda-total-diet-study-tds-results
- Elsewhere on the package label (not shown her), the allergens statement includes the warning
 - Made in a facility that also processes milk, egg, soy, tree nuts, peanuts, fish, crustaceans, shellfish, and wheat products.
 - Sort of a catchall to possibly defend against allergen litigation rather than invest in production practices to better ensure no cross-contact.
 - Addition warning on packaging states
 - Store in a cool, dry place below 30 degrees C (which is 86 degrees Fahrenheit).
 - Do not expose to excessive heat or moisture.
 - This product is only intended for use in healthy adults 18 years of age or older.
 - Do not use if safety seal is missing or broken.
 - This product is packaged by weight and not volume; some settling may occur and is unavoidable.
 - Variations in aroma, color, and taste may occur.



- Slide #12E major topic...read the fine print 5...warning –implied...dry beans and stuff...
 - Week 5 Topic –
 - Major topic read the fine print 5 warning implied dry beans and stuff
 - 15-bean soup mix --
 - The ingredient statement includes reference to the seasoning packet and its contents.
 - Although this product is gluten free, the label clarifies that the facility is not dedicated gluten-free.
 - There is an implied (since not explicitly stated as a warning)
 - Dry beans/peas/lentils are a natural agricultural product and despite use of modern equipment, foreign material and grains may be present.
 - Please inspect, sort, and rinse product before cooking.
 - With this implied warning, the onus is shifted to the consumer to protect themself against a broken tooth or other injury.

...warning - implied...no refrigeration... The Luxardo Maraschino Cherries are candied cherries with Marasca Syrup. The Marasca Cherry is a fruit cultivated and distilled by Luxardo for its renowned Maraschino Liqueur 50% candied cherries, 50% marasca syrup. For best results, store at room temperature. Once opened keep the jar closed in a cool and dry place. Do not refrigerate, cold temperatures may cause product syrup to crystalize. May contain cherry pits ingredients: Cherries, sugar, Marasca Cherry juice, glucose, citric acid, natural color, Maraschino flavour. Cluten Free Produced by: Luxardo S.p.A. Torreglia (Padova) - Italy Week 5 – Topic ...read the fine print - 6

- Slide #13E major topic...read the fine print 6...warning implied...cherry pits... do not refrigerate handling...
 - Week 5 Topic –
 - Major topic read the fine print 6 warning implied cherry pits -- do not refrigerate handling --
 - Luxardo Maraschino cherries -
 - Additional product labeling information clarifies that the product is 50 % candied cherries and 50 % marasca syrup.
 - An implied warning statement states
 - May contain cherry pits.
 - The handling statement says --
 - For best results, store at room temperature;
 - Once opened keep the jar closed in a cool and dry place; and
 - Do not refrigerate
 - Cold temperatures may cause product syrup to crystalize.
 - Identifies that the product is ideal for cocktails.
 - As an imported product, the label identifies the importer-distributor.

...warning - implied...health impact...not suitable for...





INGREDIENTS: WATER, CORN MALTODEXTRIN, SUGAR, MILK PROTEIN CONCENTRATE, BLEND OF VEGETABLE OILS (CANOLA, CORN), SOY PROTEIN ISOLATE, COCOA POWDER (PROCESSED WITH ALKALI); LESS THAN 0.5% OF: VITAMINS AND MINERALS,† NONFAT MILK, CELLULOSE GEL, NATURAL AND ARTFICIAL FLAVORS, SALT, CELLULOSE GUM, MONOGLYCERIDES, SOY LECITHIN, CARRAGEBNAN, AND SUCRALOSE, †VITAMINS AND MINERALS: POTASSIUM CITRATE, MAGNESIUM PHOSPHATE, CALCIUM CARBONATE, ASCORBIC ACID, SODIUM CITRATE, CALCIUM PHOSPHATE, CHOLINE CHLORIDE, POTASSIUM HYDROXIDE, POTASSIUM CHLORIDE, FERROUS SULFATE, CI-ALPHA-TOCOPHERYL ACETATE, ZINC SULFATE, NIACINAMIDE, CALCIUM PANTOTHENATE, MANGANESE SULFATE, PYRIDOXINE HYDROCHLORIDE, THAMINE HYDROCHLORIDE, COPPER SULFATE, RIBOR, AVIN, VITAMIN A PALMITATE, FOLIC ACID, POTASSIUM IODIDE, SODIUM SELENATE, SODIUM MOLYBDATE, PHYLL OQUINONE, BIOTIN, VITAMIN D3, VITAMIN B12. CONTAINS MILK AND SOY INGREDIENTS.

Vitamin D8	mcg	40% • Calcium 330	Omg	25%
Iron 4.5mg		25% • Potassium 4	170mg	10%
Vitamin A	25% • Vitamin C	80% • Vitamin E	50% • Vitamin K	20%
Thiamin	25% • Riboflavin	30% • Niacin	35% • Vitamin Be	30%
Folate (60m	og Folic Acid)	25% • Vitamin B ₁₂	25% • Biotin	25%
Pantothenic Ad	cid30% • Phosphorus	s 20% • lodine	25% • Magnesiur	n 20%
Zinc	30% • Selenium	25% • Copper	35% • Manganes	e 25%
Chromium	25% • Molybdenum	35% • Chloride	10% • Choline	25%

...read the fine print - 7

- Slide #14E major topic...read the fine print –7...warning implied...health impact...not suitable for...
 - Week 5 Topic –
 - Major topic -- read the fine print -7 -- warning implied -- health impact -- not suitable for --
 - Ensure Original Nutrition Shake, Milk Chocolate
 - Implied warning, since in my opinion, the term "warning" is not used --
 - "Not for people with galactosemia"
 - A rare, hereditary disorder of carbohydrate metabolism that affects the body's ability to convert galactose to glucose.
 - The condition is life threatening and can cause death.
 - Like the more common statement "Phenylketonurics: Contains phenylalanine."
 - A genetic defect called phenylketonuria (PKU) that causes the amino acid phenylalanine to build up in the body.
 - The condition can be life-threatening.
 - The product is suitable for lactose intolerance.
 - Lactose intolerance is an allergic reaction.
 - Milk, which contains lactose, is listed as an allergen for the product.
 - With vitamins and minerals added, note the modified Nutrition Fact panel
 - Most all the vitamins and minerals are above 20 % DV meaning that they are at a high level and
 is the likely rationale for the label statement "Complete, balanced nutrition,: which also is a
 trademark.
 - notification.
 - For handling
 - Shake well serve cold.
 - Refrigerate after opening
 - Product is shelf-stable until opened and then must be refrigerated for safety.
 - Use by date is on the end of bottle.
 - Product cannot be sold in Vietnam or Mexico.

Safe Handling Instructions 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. Keep refrigerated or frozen. Thaw in refrigerator or microwave. Keep raw meat and poultry separate from other foods. Wash working surfaces (including cutting boards), utensils, and hands after touching raw meat or poultry. Cook thoroughly. Keep hot foods hot. Refrigerate leftovers immediately or discard.

Week 5 - Topic

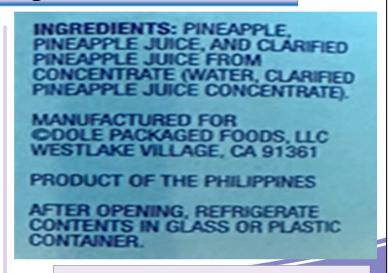
...read the fine print - 8

- Slide #15E major topic...read the fine print 8...warning implied...safe handling...
 - Week 5 Topic –
 - Major topic read the fine print 8 warning implied safe handling --
 - For all U. S. Department of Agriculture (USDA) Food Safety and Inspection Service (FSIS) meat and poultry products that are not-ready-to-eat (i.e., raw)
 - This statement is required along with the specific graphics (e.g., refrigerator, hands under running water at facet, cooking pan, and thermometer).
 - There is a specific format for type font, which must state --
 - "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 safe handling instructions.
 - Keep refrigerated or frozen.
 - Thaw in refrigerator or microwave.
 - Keep raw meat and poultry separate from other foods.
 - Wash working surfaces (including cutting boards), utensils, and hands after touching raw meat or poultry.
 - Cook thoroughly.
 - Keep hot foods hot.
 - Refrigerate leftovers immediately or discard.
 - The statement is the result of a lawsuit in which consumers sued the U.S. Department of Agriculture (USDA) Food Safety and Inspection Service (FSIS) because of illnesses associated with raw poultry.
 - The adulteration clause from the Federal Meat Inspection Act and the Poultry Products Inspection Act administered by the USDA FSIS states –
 - "...Product becomes adulterated...if it bears or contains any poisonous or deleterious substance which may render it injurious to health; but in case the substance is not an added substance, such article shall not be considered adulterated under this clause if the quantity of such substance does not ordinarily render it injurious to health...";
 - The court agreed with USDA FSIS in that raw meat and poultry are expected to be cooked prior to consumption and proper cooking would render naturally occurring pathogens (e.g.,

- *Salmonella*) no longer harmful. Thus, raw poultry contaminated with *Salmonella* is not adulterated.
- The Court, however, required USDA FSIS to mandate the placement of a safe handling instruction on all raw meat and poultry products to describe proper safe handling.
- Note: The Food and Drug Administration does not require such a statement on any of the raw commodities that are under its jurisdiction, including wide game and most seafood that inherently are contaminated with pathogens.

...warning - implied...high acid canned food...

- · High acidity effects --
 - Once shelf-stable, high acid product in metal can is opened –
 - Acid exposure to oxygen initiates breakdown of the can lining, resulting in --
 - · Corrosion of the lining,
 - · Food discoloration, and
 - Taste changes.



Week 5 – Topic

...read the fine print - 9

- Slide #16E major topic...read the fine print 9...warning implied...high acid canned food...
 - Week 5 Topic –
 - Major topic -- read the fine print 9 -- warning implied -- high acid canned food --
 - Tin canned sliced pineapple rings
 - A unique handling statement is added to identify that after opening, refrigerate contents in glass or plastic container.
 - This is due to the can lining discoloring or corroding because of the high acidity of the juice in combination with oxygen after the can is opened.
 - Color changes also can occur to products stored in the opened can.
 - Storage of any product should be in an environment in which as much air (oxygen) is removed as possible because oxygen initiates breakdown of food components.
 - In addition, storage generally should always involve covering the item to prevent drippage and cross-contamination with harmful bacteria.
 - Ingredient statement
 - The term "clarified pineapple juice" is included, which means the added pineapple juice was filtered.
 - In this case, the concentrate was reconstituted with water; other moisture-based items could be used but would be identified in the ingredient statement.



- Slide #17E major topic...read the fine print 10...warning implied...small lettering for safety issues...
 - Week 5 Topic –
 - Major topic -- read the fine print 10 -- warning implied -- small lettering for safety issue --
 - For this Nestlé Toll House Chocolate Chip Cookie Dough product, there are 7 distinct "handling" statements to guide consumers on safe handling and consumptions –
 - For 1, a listing of the known allergens in the product
 - Also includes the allergen catchall liability/sloppy manufacturing statement of potential cross contact and "accidental incorporation of other potential allergens handling in the facility; namely
 - "May contain peanuts, pecans, walnuts, macadamia nuts, coconut."
 - For 2 "Do not consume raw cookie dough" is for food safety purposes.
 - The lettering is amongst some of the smallest on the labeling and, unlike allergens, is not even in bold face font.
 - This product does contain raw eggs and flour, both of which are known to potentially contain harmful pathogens (e.g., *Salmonella*).
 - If pasteurized ingredients where used, the ingredient statement would have stated this material fact.
 - For 3 "Use safe food handling procedures"
 - This statement on Food and Drug Administration (FDA) raw product also has a food safety purpose.
 - Unfortunately, this product's labeling does not provide any guidance on safe handling procedures as was provided in the previous slide for all raw USDA FSIS product.
 - However, such procedures are generally consistently defined as
 - Clean keep all surfaces clean from pathogens.
 - Chill refrigerate or freeze foods at or below 40 degrees Fahrenheit; place leftovers in refrigeration within 2-hours after preparation/serving.
 - Cook attain proper thorough internal temperature as measured by a meat thermometer (e.g., 160 degrees Fahrenheit for ground beef; 165 degrees for poultry).

- Separate keep raw foods separated from ready-to-eat foods; keep foods covered for protection from dripping.
- For 4 The manufacturer added guidance as to "how to best consume" the product
 - The manufacturer translated the Nutrition Facts panel serving size of 2 Tbsp (tablespoons) to one portion or one cookie.
 - Additionally, the manufacturer added the suggestion of consuming the one cookie with a cup of nonfat milk.
- For 5 Baking instruction identify how to best prepare the product for consumption.
 - The preferred method is listed as baking in a conventional oven.
 - The degree of doneness results in an observational state (i.e., golden brown) as opposed to an internal temperature.
- For 6 Guidance on the storage of the food product is provided.
 - Note that the manufacturer suggests freezing the product prior to the "use by" date.
 - In this case, if the "use by" date is exceeded, the product's baking performance may not be optimal (e.g., the dough doesn't rise as much); hence, the suggested added cooking time.
 - There likely would be no safety concern unless the product was left unrefrigerated for more than 2 hours to allow inherent bacteria (including pathogens) to multiply.
- For 7 -- "Serving suggestion -- Keep refrigerated" --
 - The instruction is directed at the product pre-preparation for consumption and not at the prepared (baked) food.
 - In this case, the "raw" product must be refrigerated for best quality because it is not shelf-stable.
 - Once the product is prepared according to the baking instructions, the product is shelf-stable and does not require refrigeration.
 - However, for optimal keeping quality, refrigeration will extend the shelf-life of the product.
- For 8 A "use or freeze by" statement is included although the picture doesn't identify the actual date.
 - If the product is properly handled (i.e., not allowed to be without refrigeration for more than 2 hours), then the "use by" date serves as a protector of best quality of the product.
 - Freezing the product delays any expected chemical changes in the product that may result in reduced optimal functional characteristics.
- For 9 My perspective on the serving size for this product
 - The Nutrition Facts panel provides the serving size for determination of the required nutrient profile.
 - However, the manufacturer additionally added phrasing outside of the Nutrition Facts panel
 - Such as "#4 thoughtful portion size.
 - Note that the baking instructions said to use heaping teaspoons of dough for each "portion" whereas the Nutrition Fact panel is set at 2 tablespoons.
 - This information could be confusing to a consumer that follows the label guidance.



- Slide #18E major topic...read the fine print 11...warning implied...packaging integrity...
 - Week 5 Topic –
 - Major topic -- read the fine print 11 -- warning implied -- packaging integrity --
 - For 1 this Pillsbury Cookie Dough Chocolate Chip product has a different product name
 - This product on blue colored packaging film is identified as "cookie dough chocolate chip."
 - The previous slide example on yellow colored packaging film, made by a different branded manufacturer, was identified as "chocolate chip cookie dough."
 - Even though the ingredient statement for both products (yellow and blue packaging film) have basically the same order of predominance of ingredients, one product's name starts with chocolate chip and the other doesn't.
 - The ingredient listing for both has --
 - · Dough components first,
 - Sugar second,
 - Chocolate "chips" third
 - The product in blue colored packaging film uses "generic" chocolate chips as opposed
 to the product in the yellow packaging film that uses "Nestlé Toll House semi-sweet
 chocolate morsels."
 - The "Toll House" morsels are identified on the product labeling as "100 % real chocolate" due, in part, to the use of milkfat, a required component of semi-sweet chocolate.
 - For 2 "Safe to eat raw eat or bake" --
 - In very prominent text, the consumer is told to do something that every food safety/public health expert has said not to do, but with a twist
 - This product is specially treated to allow for the consumption of "raw" dough except that the dough is actually "ready-to-eat."
 - Thus, the consumer is being mislead about "raw" until the fine print is understood to mean eat the ready-to-eat dough raw without the "required" baking, if desired.

- Note that from the yellow packaging film of the truly "raw" dough, the "do not consume raw
 cookie dough" statement was in extremely small type font compared to the blue packaging film
 labeling.
- For 3 The "keep refrigerated" handling statement is prominently identified in both type font and color. .
- For 4 The allergen statement
 - Includes the allergen catchall liability/sloppy manufacturing statement of potential cross contact and "accidental incorporation of other potential allergens handled in the facility; namely
 - "May contain milk ingredients."
 - Note Even though cocoa butter is an explicit ingredient, this ingredient does not contain milk.
- For 5 Due to a change in ingredients, a nonstick cookie sheet instead of ungreased sheet is recommended.
- For 6 The instruction refers to spooning "tablespoonful" dough, matching the serving size.
- For 7 An additional instruction is provided for letting the baked product cool for 1 minute before further handing.
- For 8 There is an explicit instruction to not microwave the cookie dough.
 - No explanation is given but clearly the optimal outcome is not achieved if microwaved.
- For 9 A unique implied warning is to not use if unsealed.
 - Although not explained, my perspective is that if the integrity of the closed package is jeopardized, then the safety of the product is of concern due to potential for bacterial contamination.

• 10-minute break



Week 5 – Topic

...take a stretch...

- Slide #19E major topic...take a stretch...
 - Week 5 Topic –
 - Major topic -- 10-minute break.



- Slide #20E major topic...get informed 1...know your food what is implied?...
 - Week 5 Topic –
 - Major topic -- get informed 1 -- know your food what is implied? --
 - Labeling includes a combination of regulatory and voluntary handling statements.

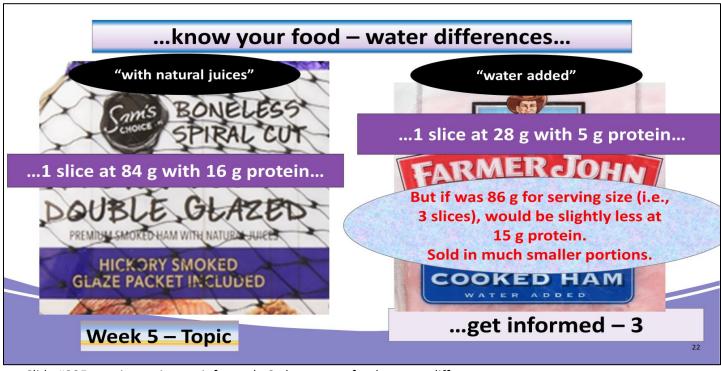
...know your food - cured pork naming...

Type of cured pork product	Minimum meat PFF percent- age 1	Product name and qualifying statements
Cooked ham,	20.5	(Common and usual).
	18.5	(Common and usual) with nat- ural juices.
	17.0	(Common and usual) water added.
	<17.0	(Common and usual) and water product—X% of weight is added ingredients. 3
	-	

Week 5 – Topic

...get informed - 2

- Slide #21E major topic...get informed 2....know your food cured pork naming...
 - Week 5 Topic –
 - Major topic -- get informed 2 -- know your food cured pork naming --
 - Have you ever thought about how cured pork products (e.g., cured pork ham, loin, shoulder, butt, or picnic) are named?
 - The name is dependent upon the percent of natural protein (minus the fat component) in the product after processing whereby some of the moisture is removed (e.g., during smoking).
 - Once the protein-fat-free content is known, then the name is (for example)
 - Ham (Note if from pork, the phrase pork ham is not necessary)
 - Has a minimum meat protein fat free percentage of 20.5.
 - This product is likely only available from specialty meat shops.
 - Product is very firm and flavorful.
 - Product is the most expensive of all
 - types of ham products.
 - Ham with natural juices
 - Has a minimum meat protein fat free percentage of 18.5.
 - Ham water added
 - Has a minimum meat protein fat free percentage of 17.0.
 - Ham and water product X % of weight is added ingredients
 - Has a minimum meat protein fat free percentage of less than 17.0.



- Slide #22E major topic...get informed 3...know your food water differences...
 - Week 5 Topic –
 - Major topic -- get informed 3 -- know your food water differences --
 - Have you ever thought about how cured pork products (e.g., cured pork ham, loin, shoulder, butt, or picnic) are named?
 - The name is dependent upon the percent of natural protein (minus the fat component) in the product after processing whereby some of the moisture is removed (e.g., during smoking).
 - Once the protein-fat-free content is known, then the name is (for example)
 - Ham with natural juices
 - In the picture, the serving size is 84 g (1 slice) at 16 g protein.
 - Ham water added --
 - In the picture, the serving size is 28 g (1 slice) at 5 g protein;
 - If, instead, the serving size was 84 g like the natural juice product, then 15 g protein would be consumed.
 - Still, less protein is available due to the added substances.



- Slide #23E major topic...get informed 4...know your food "seasoning" and nitrite clarifications...
 - Week 5 Topic –
 - Major topic -- get informed 4 -- know your food "seasoning" and nitrite clarifications --
 - Hillshire Farm Black Forest Ham contains up to 28 % of a seasoning solution and caramel colored.
 - Note that rather than say "28 % water added" the labeling says "28 % seasoning solution" added.
 - The front of package label says no artificial preservatives, no artificial flavors, and no nitrates or nitrites added.
 - Both the "no artificial preservatives" and "no nitrates" statements have asterisks to further clarify
 - For "no artificial preservatives,"
 - The clarification is in the ingredient statement that says "vinegar is added to preserve quality."
 - For "no artificial nitrates," the clarification is on the front of package label under the "fully cooked keep refrigerated" handling statement
 - The clarification is that there are no nitrates/nitrites except for those naturally occurring in the celery juice powder and sea salt.
 - Note that nitrate/nitrite do provide a food safety benefit in that certain spores cannot grow in the presence of these compounds (e.g., *clostridium botulinum* and *clostridium perfringens*).
 - Thus, this product requires refrigeration at all times for food safety purposes.
 - Spoilage organism growth is more likely to occur in a shorter period of time due, in part, to the high moisture content in the absence of the nitrate/nitrite.
 - The caramel coloring is added because of no direct addition of nitrate/nitrite; the nitrates/nitrites are the chemicals that impart the "cured" meat color typical of ham.
 - A handling statement says
 - Wash the plastic carrying container before use.
 - Once opened, use within 5 days.

...know your food - texture and cost differences...



- Even though 1 slice at 28 g is lower protein than water added (3 vs 5 g),
- As a chopped product,
 - Texture would be much more tender and moister.
 - This is the least expensive form -
 - \$4.27 per lb vs \$4.48 per lb and up.

Week 5 - Topic

...get informed - 5

- Slide #24E major topic...get informed 5...know your food texture and cost differences...
 - Week 5 Topic –
 - Major topic -- get informed 5 -- know your food texture and cost differences --
 - Ham and water product X % of weight is added ingredients
 - This product has 3 g protein in a serving size of 28 g.
 - The product is chopped and then molded for thin slicing.
 - The product would be extremely tender and moist.

...know your food - comparisons matter...

CANADIAN BACON

WHAT MAKES JONES CANADIAN BACON BETTER?

Jones makes Canadian Bacon with fresh center cut pork loins – pure meat through and through with none of the fillers or trimmings found in some Canadian-style bacon. It's quality you can see. Gentle hickory smoking adds distinctive flavor.

JONES DAIRY FARM STORY

Since 1889, we have been committed to quality, using old family recipes and the choicest cuts of meat. Today, everything is still made on the original farm and our dedication to quality continues on.

Visit www.jonesdairyfarm.com for recipes.



Week 5 – Topic

...get informed – 6

- Slide #25E major topic...get informed 6...know your food comparisons matter...
 - Week 5 Topic –
 - Major topic -- get informed 6 -- know your food comparisons matter --
 - Jones Canadian Bacon Center Cut Pork Loin Hickory Smoked
 - The name "Canadian Bacon" refers to a style of pork from the loin rather than from the belly.
 - The product is whole muscle; meaning that it is not sectioned and formed or composed of ground product.
 - Of note is the descriptor about the manufacturing process whereby reference is made to there being "none of the fillers or trimmings found in some Canadian-style bacon."
 - The manufacturer is comparing their Canadian bacon to Canadian-style bacon, which is like comparing apples to oranges.
 - Canadian-style bacon can have fillers and trimmings incorporated into the product; such
 product is named differently.
 - I think the statement is deceptive. Surely, the manufacturer could have found something positive to say about their Canadian bacon compared to a competitor's Canadian bacon.
 - The labeling includes the GF-Finder.com reference.
 - At this website, information can be found about certified gluten free products.

...know your food -- kit product...



ALWAYS FOLLOW HEATING INSTRUCTIONS: MICROWAVE HEATING INSTRUCTIONS

INSTRUCTIONS DEVELOPED USING AN 1100 WATT OVEN. OVENS VARY; HEAT TIMES MAY NEED TO BE ADJUSTED. IF ADDITIONAL TIME IS NEEDED, MICROWAVE 5 SECONDS AT A TIME UNTIL HOT. STORE REFRIGERATED. READY TO EAT OR HEAT DIRECTLY FROM THE PACKAGE. TO HEAT:

- REMOVE FILM LEAVING ONE END ATTACHED; LAY FILM BACK ONTO TRAY.
- MICROWAVE ON HIGH FOR 30-35 SECONDS OR UNTIL WARMED.
- LET STAND FOR 1 MINUTE.

INGREDIENTS: MINI MAPLE PANCAKE: UNBLEACHED ENRICHED FLOUR (WHEAT FLOUR, MALTED BARLEY FLOUR, NIACIN, REDUCED IRON, THIAMINE MONONITRATE, RIBOFLAVIN, FOLIC ACID), WATER, BUTTERMILK, SUGAR, MAPLE FLAVORED BITS (SUGAR, WHOLE WHEAT FLOUR, SOYBEAN OIL, NATURAL FLAVORS, CELLULOSE GUM), CANOLA AND/OR SOYBEAN OIL, EGGS, CULTURED WHEAT FLOUR, LEAVENING (SODIUM BICARBONATE, SODIUM ACID PYROPHOSPHATE, MONOCALCIUM PHOSPHATE), SALT, NATURAL FLAVOR, CALCIUM PROPIONATE, POTASSIUM SORBATE, MONO-DIGLYCERIDES, SOY LECITHIN. FULLY COOKED MAPLE SAUSAGE BITES, NATURAL AND ARTIFICIAL MAPLE FLAVOR ADDED, CARAMEL COLOR ADDED: PORK, SUGAR, WATER, CONTAINS 2% OR LESS: SODIUM LACTATE, SALT, SPICES, NATURAL AND ARTIFICIA MAPLE FLAVOR (WITH MALTODEXTRIN, MODIFIED CORN STARCH, CARAMEL COLOR, DEXTROSE, MAPLE SYRUP), SODIUM PHOSPHATES, DEXTROSE, CARAMEL COLOR MONOSODIUM GLUTAMATE, SODIUM DIACETATE. CONTAINS: EGG, MILK, SOY, WHEAT. CONTAINS BIOENGINEERED FOOD INGREDIENTS

Week 5 - Topic

...get informed - 7

- Slide #26E major topic...get informed 7...know your food kit product...
 - Week 5 Topic –
 - Major topic...get informed 7...know your food kit product...
 - Jimmy Dean Morning Combos Ready To Heat or Eat Mini Maple Pancakes and Maple Sausage Bites
 - This is a kit product meaning that more than one self-identified food (as opposed to ingredient) is present in the package.
 - Ingredient statement
 - Each product ingredient statement is separately listed within the one ingredient statement.
 - The product ingredient statements are listed by predominant weight of the food products.
 - Since pancake is listed first in the product name, it is presumed to "weigh" more and, thus, is more predominant and is listed first.
 - There is only one combined allergen statement.
 - Allergens are listed alphabetically and not by predominance in the product.
 - The pancake is not listed as cooked or otherwise ready-to-eat; however, by definition, a pancake is ready-to-eat.
 - Pancake batter is not a ready-to-eat product, requiring cooking before consumption.
 - The sausage bites are identified as fully cooked
 - By
 - definition, sausage can be either ready-to-eat or raw; thus, here it must be identified as fully cooked and is ready-to-eat.
 - As a ready-to-eat combined food product, the pancakes and sausage only need to be heated to satisfy culinary preference.
 - There is no cooking required to destroy harmful bacteria.
 - Although the front of package label states "warm 'em up"
 - The back of package label states "always follow heating instructions" --
 - Microwave heating instructions
 - Note that the heating time is based on the wattage of the microwave oven.
 - The instruction states that product is ready-to-eat or can be heated directly from the package –

- To heat, remove film leaving one end attached; lay film back over tray; and let stand for 1 minute.
- Since microwave ovens are highly variable in terms of cooking. placing the film back over the heated item provides an opportunity for more even heat distribution throughout the product during the 1-minute stand (or dwell) time.
- For labeling, use of the term "cooking" implies that the product is not-ready-to-eat (raw) and must be cooked to destroy harmful pathogens for safety.
- Although the product is ready-to-eat, it is not shelf-stable --
 - Hence, the "store refrigerated" handling instruction on the package, which applies to the store-bought product (as well as to any leftovers).



- Slide #27E major topic...get informed 8...know your food mechanically separated poultry...
 - Week 5 Topic –
 - Major topic -- get informed 8 -- know your food mechanically separated poultry --
 - Oscar Mayer Turkey Original Uncured Turkey Franks
 - This turkey frankfurter product is made with mechanically separated turkey
 - Although a different species than the surimi (fish protein) previously discussed, mechanically separated (kind of poultry) –
 - Is product resulting from the mechanical separation and removal of most of the bone from attached skeletal muscle and other tissue of poultry carcasses and parts of carcasses; and
 - Has a paste-like in form and consistency;
 - May or may not contain skin with attached fat; and.
 - Does not have a bone solids content of more than 1 % --
 - At least 98 % of the bone particles has a maximum size of no greater than 1.5
 millimeter (mm) in their greatest dimension and there shall be no bone particles
 larger than 2.0 mm in their greatest dimension.
 - Does not have a calcium content exceeding 0.235 % when made from mature chickens or from turkeys.
 - Is product that does no meet these requirements can only be used for producing poultry extractives, including fats, stocks, and broths.
 - Must be identified in the ingredient statement as "mechanically separated (kind of poultry) –
 - The product name does not have to include the phrase "mechanically separated (kind of poultry).
 - Generally, products containing mechanically separated (kind of poultry) are less expensive than products containing muscle meat derived from hand-deboning.
 - "(Kind) patties" consists of 100 % poultry of the kind indicated, with skin and fat not in excess of natural proportions with fillers or binders.

...know your food - patties vs meat patties...



INGREDIENTS: CHICKEN PAT (Chicken Breast With Rib Water, Isolated Soy Protein, Sodium Phosphates, Autolyzed Yeast Extract, Natural Flavorings) BREADER (Bleached Wheat Flour Salt, Dextrose, Yeast, Extractives of Paprika), Yellow Corn Flour. Salt, Autolyzed Guar Gum. Leavening Acid Pyrophosphate. Sodium Bicarbonate, Monocalcium Phosphate]). Fried in Vegetable Oil CONTAINS: SOY, WHEAT

Week 5 - Topic

...get informed – 9

- Slide #28E major topic...get informed 9...know your food patties vs meat patties...
 - Week 5 Topic –
 - Major topic -- get informed 9 -- know your food patties vs meat patties --
 - Banquet Chicken Breast Patties Breaded Chicken Breast Patties with Rib Meat --
 - "(Kind) patties" consists of 100 % poultry of the kind indicated, with skin and fat not in excess of natural proportions with fillers or binders.
 - Note that this product's name is "chicken breast patties" in large type font with small type font following that clarifies that rib meat also is included.
 - The ingredient statement does state "chicken breast with rib meat."
 - The product cannot be called "ground chicken breast patties" because "ground chicken breast" cannot contain fillers or binders but can contain natural proportions of skin and fat.
 - The product cannot be called "ground chicken breast meat" because ground chicken breast meat" cannot contain fillers or binders, nor can it contain natural proportions of skin and fat.
 - Although this product looks like a traditional "pattie" product, the "pattie" in this situation refers to the standard of identify for "pattie" which is the product and not the form of product.



- Slide #29E major topic...get informed 10...know your food ground poultry issues...
 - Week 5 Topic –
 - Major topic -- get informed 10 -- know your food ground poultry issues --
 - Jennie-O 93 % lean 7 % fat fresh ground turkey
 - Unlike ground beef that has a standard of identify with a regulatory limit of 30 % maximum fat, no
 detectable bone solids (i.e., ground bone), and no added water, phosphates, binders or other meat
 sources, ground poultry is defined much differently
 - Ground poultry
 - Has no standard of identify;
 - Is manufactured from whole muscle material (e.g., drumstick, thighs, breasts, neck) with the skin and adhering fat in natural proportions
 - Chicken
 - Boneless chicken 20 %,
 - Boneless breast 18 %
 - Turkey
 - Boneless turkey -- 15 %,
 - Boneless turkey breast -- 14 %
 - Boneless turkey thigh 8 %,
 - Fat content is self-limiting, based on natural proportions.



- Slide #30E major topic...get informed 11...know your food ground poultry breast issues...
 - Week 5 Topic –
 - Major topic -- get informed 11 -- know your food ground poultry breast issues --
 - Jennie-O 99 % lean/1 % fat fresh ground turkey breast
 - The product is from the breast rather than the entire carcass.
 - This product would naturally have less fat than the "93 %" lean "carcass" product.
 - One major difference for this breast product versus the carcass product is regarding the natural proportion of skin and fat associated with the breast versus the entire carcass.
 - The cost for this product is expected to be higher due, in part, to the product being restricted to just the breast as opposed to the whole carcass.
 - If the product had been labeled "fresh ground turkey breast meat," there would be no natural proportion of skin or fat permitted (i.e., the product would truly be "meat").

...know your food - lean finely textured beef...negative press...

•

- You don't have to know product standards of identity.
- Take time to find answers.
- Meet your lifestyle needs without deceit.



Week 5 - Topic

...get informed - 12

- Slide #31E major topic...get informed 12...know your food lean finely textured ground beef...negative press...
 - Week 5 Topic –
 - Major topic -- get informed 12 -- know your food lean finely textured ground beef negative press --
 - "Pink slim" was the derogatory term used to define this product when it's use was first made known to American consumers.
 - In 2017, BPI won a lawsuit against ABC News that was initiated in 2012 for \$177 M regarding negative reporting about the product.
 - The technical identification of the product is "lean finely textured beef" of LTFB, which must be labeled as such if it is distributed in commerce as a stand-alone ingredient for further processing.
 - Such product is not a sold directly to consumers.
 - Rather, the product is blended into other ground beef trimmings to result in the ultimate lean-to-fat ratio (e.g., 80/20) sold in grocery stores.
 - When blended with other trimmings, the combined product is not distinguished as containing a distinct set of ingredients such as LFTB; the product is labeled as ground beef.
 - The product is made by --
 - Taking boneless beef trimmings and subjecting them to heat (~100 degrees Fahrenheit) to force the separable fat to dislodge from lean tissue;
 - The slurry is centrifuged to remove the fat more completely; and
 - The components are subjected to a treatment with ammonium hydroxide gas to change the pH of the product and to destroy harmful bacteria (e.g., *Escherichia coli O157:H7*).

...know your food - contains 2 % or less ...



Ingredients: Alaska Pollock (MSC Certified),
Water, Egg Whites, Pea Starch, Sugar, Sorbitol,
Potato Starch, Contains 2% or less of: Golden
King Crab Meat, Natural and Artificial Flavor
(Extracts of Blue Crab, Snow Crab, Lobster, and
Alaska Pollock), Refined Fish Oil* (Alaska
Pollock), Rice Wine (Water, Rice, Koji), Modified
Tapioca Starch, Sea Salt, Carrageenan, Yam
Flour, Potassium Chloride, Disodium Inosinate,
Sodium Pyrophosphate, Carmine, Paprika,
Color Added, *Adds a trivial amount of fat
Contains: Fish (Alaska Pollock), Crustacean
Shellfish (Golden King Crab, Blue Crab, Snow Crab,
Lobster), Ess.

Week 5 - Topic

...get informed - 13

- Slide #32E major topic...get informed 13...know your food contains 2 % or less...
 - Week 5 Topic –
 - Major topic -- get informed 13 -- know your food contains 2 % or less --
 - Crab Classic Imitation Crab Flake Style Wild Alaska Pollock with Real Crab Meat added -
 - Ingredient statement
 - First ingredient is Alaska Pollock, then numerous fillers followed by 2 % or less of King Blue Crab.
 - Note
 - Both the picture of the product on the labeling and the wording implies that crab is more predominant than 2 % or less of ingredients.
 - Because surimi (fish protein) is not referenced, the product does contain crab meat and not just the protein squeezed from the shell casing (which is primarily how surimi is derived).



DIENTS: FISH PROTEIN AND/OR PACIFIC WHITING, MSC CERTIFIED), WATER, EGG WHITES, PEA STARCH, SUGAR, SORBITOL, POTATO STARCH, CONTAINS 2% OR LESS OF: MEAT, NATURAL AND ARTIFICIAL CRAB (EXTRACTS OF BLUE CRAB, SNOW CRAB, LOBSTER, AND REFINED FISH OIL* POLLOCK), POLLOCK), RICE VVINE (WATER, RICE, KOJI), MODIFIED TAPIOCA STARCH, SEA SALT, CARRAGEENAN, YAM FLOUR, POTASSIUM CHLORIDE, DISODIUM INOSINATE SODIUM PYROPHOSPHATE, CARMINE PAPRIKA COLOR ADDED. *ADDS A TRIVIAL AMOUNT OFFAT CONTAINS: FISH (ALASKA POLLOCK, PACIFIC WHITING) CRUSTACEAN SHELLFISH (GOLDEN KING CRAB, BLUE CRAB, SNOW CRAB, LOBSTER), EGG.

Week 5 - Topic

...get informed - 14

- Slide #33E major topic...get informed 14...know your food non-specific protein...surimi...
 - Week 5 Topic -
 - Major topic -- get informed 14 -- know your food non-specific protein surimi --
 - Seafood Snackers Crab-flavored seafood, made from surimi, a fully-cooked fish protein --
 - Ingredient statement -
 - The first ingredient is fish protein -
 - Even though the front of package labeling said "surimi, a fully-cooked fish protein," the first ingredient is simply stated as fish protein with an explanation of which protein(s).
 - Surimi protein is derived from pressing (squeezing) all the "meat tissue" from the hard shells and scales, fins, and bones, creating a slurry that is then mixed with the other ingredients, heated forming a gel, and then molded into shapes/colors that resemble whole "muscle" fish tissue.
 - The process of making surimi is like that for "mechanically separated meat" and "mechanically separated poultry" except that there is no addition of other ingredients or heating of the mechanically separated product be no heating of the
 - Importantly, such mechanically-separated products are not classified as "meat;" rather, they are classified as meat by-products because they are not composed solely from skeletal muscle
 - The process is different than the lean finely textured beef (LTFB) in which the LTFB is skeletal muscle tissue and is labeled as "meat.".
 - Of note -
 - Crab flavoring is stated on the front package label, but the ingredient statement includes a host of fish including crab within the "contains 2 % or less of" clarification.
 - The handling statement states, "keep refrigerated to maintain safety."
 - "A Healthy Seafood Snack" is stated without clarification.
 - Omega-3 content is highlighted without clarification on the radio button on the front package labeling

...shelf-stable - until opened...general handling...

- Even though product may not be refrigerated when purchased –
 - Unless the product is shelf stable after opening --
 - All safe handling procedures apply
 - Cook,
 - · Chill,
 - · Clean, and
 - Separate.



Week 5 - Topic

- Slide #34E major topic...shelf-stable issues 1...until opened...general handling...
 - Week 5 Topic –
 - Major topic -- shelf-stable issues 1 -- until opened -- general handling --
 - Handling statements helpful guidance to consumers --
 - Labeling includes a combination of regulatory and voluntary handling statements.



- Slide #35E major topic...shelf-stable issues 2...until opened...heavy metal...
 - Week 5 Topic –
 - Major topic -- shelf-stable issues 2 -- until opened -- heavy metal --
 - Wild Planet Albacore Wild Tuna Sustainably Pole and Line Caught
 - There are a couple of affirmation statements (i.e., "trust us") --
 - On the top label
 - "Research shows that smaller albacore such as used by Wild Planet, contain less mercury than larger albacore."
 - There is no identification of the source of such research, nor assurance that the Food and Drug Administration nor the Vietnamese government have confirmed the research
 - The first ingredient is albacore tuna (Thunnus alalunga)
 - There is nothing at the manufacturer's website to explain how tuna species/size are sorted for processing.
 - 100 % pole and line vessels caught.
 - Statement identifies that product was processed in Vietnam.



- Slide #36E major topic...shelf-stable issues 3...until opened...inferences about ingredients...
 - Week 5 Topic –
 - Major topic -- shelf-stable issues 3 -- until opened -- inferences about ingredients --
 - Starkist Wild Caught Albacore White Tuna in Water
 - The front of package label
 - Shows tuna with mixed fruit and vegetables
 - However,
 - The ingredient statement doesn't state fruit or vegetables.
 - The back of package label does state in very small font
 - "Pictured on front: Spinach and albacore tuna salad" along with a link to recipes.
 - States "in water"
 - However, the ingredient statement states white tuna, water, vegetable broth, salt, pyrophosphate.
 - The statement could be implying that "water" is more advantageous to "oil," which some tuna is packed but there is no clarification for the statement.
 - Handling statement
 - Back of the package label states
 - "Our wild caught albacore tuna is hand-packed in a Flavor Fresh Pouch to retain its mild, delicious flavor. With no draining required, it's easy to enjoy this nutritious, lean protein in a salad or sandwich – just tear, eat, and go!"
 - Do not microwave
 - The implication is to not microwave the pouch.
 - Contains a "best if used by" date.
 - The ingredient statement states the sodium content at 26 % DV; considered by the Food and Drug Administration as "high."

...shelf-stable - until opened...handling instructions...



Microwave Oven Cooking Instructions





STEP 2: **MICROWAVE** for 1 minute. Let stand for 1 minute, if desired.



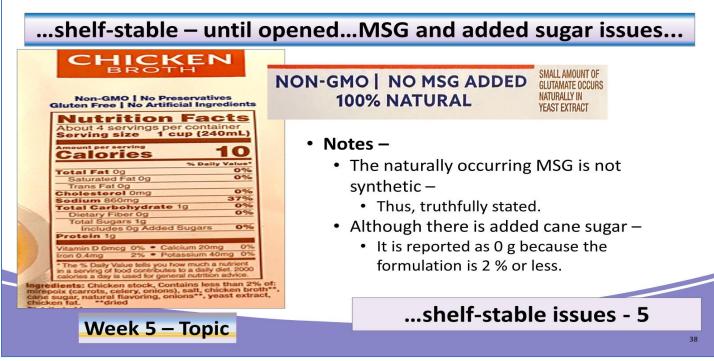
REMOVE film. SERVE & ENJOY!
CAREFUL, contents and tray will be HOT.

No Refrigeration Required

Week 5 – Topic

...shelf-stable issues - 4

- Slide #37E major topic...shelf-stable issues 4...until opened...handling instructions...
 - Week 5 Topic –
 - Major topic -- shelf-stable issues 4 -- until opened -- handling instructions --
 - Dinty Moore ready in 60 seconds Beef Stew --
 - This is a shelf-stable product, meaning that it does not require refrigeration prior to preparation for heating and consuming.
 - This product is found on the non-refrigerated shelfs at the supermarket.
 - This shelf-stable plastic tray product is essentially the same as the more familiar canned beef stew product.
 - The preparation instructions are simple --
 - The "vent tray" instruction is to prevent the steam build-up inside the container and causing the product to "explode" inside the microwave.
 - The "let stand for 1 minute" guidance is to better ensure uniform heat distribution throughout the product because of the microwave cooking process.
 - Unlike the traditional canned product, leftovers can be stored in the microwave container because it will not corrode like a tin can.
 - Always, foods placed in the refrigerator should be covered to prevent drippage and cross-contamination
 - An air-tight container will help reduce the onset of food spoilage.
 - Unfortunately, this product's labeling does not tell the consumer what to do if there are left-overs
 - For safety, leftover product must be refrigerated within 2 hours
 - If product was in an environment above 90 degrees Fahrenheit. after consumption, the product should be discarded.



- Slide #38E major topic...shelf-stable issues 5...until opened...MSG and added sugar...
 - Week 5 Topic –
 - Major topic -- shelf-stable issues 5 -- until opened -- MSG and added sugar --
 - Swanson Chicken Broth Non-GMO/No MSG Added/100 % Natural --
 - The front of package label has a note to explain that the MSG is not synthetic but is naturally
 occurring and unavoidable from the yeast extract
 - Although "100 % natural" is truthful, "no MSG added" still seems misleading.
 - Cane sugar is added but reflected in the Nutrition Fact panel as 0 g
 - This is due to it being present at 2 % or less of the formulation, which allows it to be identified as 0 g.; still, a bit misleading since other nutrients are listed as miliigrams but permitted by regulation.



- Slide #39E major topic...shelf-stable issues 6...until opened...it's just math...labeling tactics...
 - Week 5 Topic –
 - Major topic -- shelf-stable issues 6 -- until opened -- it's just math -- labeling tactics --
 - Kraft Light Mayo (1/2 the fat and calories of regular mayonnaise) --
 - Ingredient statement
 - The unusual issue is the asterisk note
 - The asterisk states that the ingredient is not normally found in mayonnaise.
 - The asterisk applies to
 - Modified food starch,
 - Maltodextrin,
 - · Lactic acid,
 - Phosphoric acid,
 - Beta-carotene although this compound is noted for being added for color, and
 - Potassium sorbate.
 - No explanation on the labeling for why the compound had to be used.
 - It is known that modified food starch thickens and stabilizes foods or serves as an anticaking agent.
 - It is known that maltodextrin serves as a bulking agent and prevents crystallization and the control of freezing, and fat replacement.
 - It is known that lactic acid increases the self-live of food.
 - It is known that phosphoric acid imparts tartness, reduces growth of bacteria, and improves shelf-life.
 - It is known that potassium sorbate prolongs the shelf-life of foods by stopping the growth of mold, yeast, and fungi.
 - Since there is a statement to say that the purpose of beta-carotene is for color, and the purpose of using calcium disodium EDTA is to protect flavor, why not add such a statement relative to the other compounds?
 - Since the product is labeled as "lite," the product must be compared to the regular version of the product.

- Thus, this likely is the real reason for adding the "unusual" compounds.
- A handling statement says to refrigerate after opening but to not freeze the product.
- Because the product states a comparison to other competitor product regarding calories and fat, a comparison chart is provided.
 - The manufacturer would have to have documentation readily available on file for the Food and Drug Administration to review in order to provide support for the lite statement.
- There is an additional comparison that isn't described regarding the labeling statement "10 more than the leading competitor's 20 fl oz."
 - However, the Kraft product is 22 fl oz, which is 10 % more than 20 fl oz.
 - This labeling seems deceptive in a way to get the consumer to but the product.
 - I cannot imagine that the product is 10 % less expensive.



- Slide #40E major topic...shelf-stable issues 7...until opened...pasteurization...kosher...
 - Week 5 Topic –
 - Major topic -- shelf-stable issues 7 -- until opened pasteurization kosher --
 - Manzana SugarBee Apple Cider
 - Ingredient statement
 - The term "pasteurized" is used, meaning that pathogens are destroyed in the product.
 - Some juice are packaged without pasteurization and can lead to foodborne illness.
 - Product is shelf-stable until opened.
 - Once opened, the product is no longer shelf-stable and requires refrigeration for safety.
 - Further, the product includes an additional "use-by" statement that states product should be consumed within 7 days after opening.
 - This "use-by" is for quality and not for safety.
 - The term "unfiltered" is used to signify that there are naturally occurring apple component solids contained in the solution.
 - Thus, product has a handling statement to instruct consumers to shake well before opening.
 - A clarification is included to say may occasionally contain up to 2 % of other apple varietals beyond SugarBee apples.
 - Identifies as Kosher on the label.
 - KSA stands for Kosher Supervision of America a non-profit Kosher certifying agency; the largest certification organization in western USA.
 - KSA certification is for the standards of Kashrus.

...shelf-stable - after opening...handling...

- Non-refrigerated product isn't risk free --
 - You still need to pay attention to the labeling.
 - Unless a product states, "do not refrigerate," refrigeration will extend shelf-life if not crosscontaminated.



...shelf-stable issues - 8

- Week 5 Topic
- Slide #41E major topic...shelf-stable issues 8...after opening...handling...
 - Week 5 Topic –
 - Major topic -- shelf-stable issues 8 -- after opening handling --
 - Labeling includes a combination of regulatory and voluntary handling statements.

...shelf-stable - after opening...catchall allergens...





Week 5 – Topic

...shelf-stable issues - 9

- Slide #42E major topic...shelf-stable issues 9...after opening...catchall allergens...
 - Week 5 Topic –
 - Major topic -- shelf-stable issues 9 -- after opening -- catchall allergens --
 - Deluxe Mixed Nuts Almonds, Cashews, Pistachios, Pecans, and Macadamia Nuts --
 - The allergen statement is concerning
 - Aside from the known nuts present, which are allergens, the statement unexpectedly also states
 - May contain traces of milk, eggs, Brazil nuts, coconut, hazelnuts, pine nuts, walnuts, peanuts, wheat, soy, and sesame.
 - Until consumers pushback on manufacturers to install equipment and production practices to protect against allergen cross-contact, manufacturers will not invest.
 - Consumers with one specific allergy are left with not being able to purchase a host of products for which the consumer is not allergic, but the allergen statement implies that "all" known allergens could be present.
 - There are manufacturers that advertise that specific products are made in dedicated facilities to contain allergens. .
 - Includes the statement on the front of package labeling
 - Enlarged to show texture; Serving suggestion
 - This statement seems oddly placed in that there is only one-half of a cashew by the statement, yet the serving size is 1 oz or about ¼ cup.
 - The origin of the nuts is multi-national
 - Brazil, Ghana, India, Indonesia, Ivory Coast, Mexico, United States, and Vietnam.

...shelf-stable - after opening...honey in the name...

INGREDIENTS: Sugar, whole grain white cornmeal, degermed yellow cornmeal, whole grain millet flour, whole grain sorghum flour, food starch-modified, salt, leavening (sodium acid pyrophosphate, baking soda), xanthan gum, honey.

May contain Milk, Soy.



Week 5 – Topic

...shelf-stable issues - 10

- Slide #43E major topic...shelf-stable issues 10...after opening...honey in the name...
 - Week 5 Topic –
 - Major topic -- shelf-stable issues 10 -- after opening -- honey in the name --
 - Krusteaz Gluten Free Honey Cornbread and Muffin Mix --
 - From my perspective, the product name implies that honey is the most predominant ingredient in the mix.
 - In fact, honey is the very last ingredient in the formulation.
 - However, the Food and Drug Administration has issued clarification on policy for non-standardized "honey breads."
 - The products cannot purport to be a standardized food and enough honey must be used to give the product a characteristic honey flavor.
 - FDA believes that at least 8 % honey (based on weight of flour) should be used in a bread labeled as honey bread.
 - If a lesser amount of honey is used than 8 %, "honey" should not be featured in the labeling.
 - Note
 - The serving size is 1/14 package; 14 servings per container.
 - The front package label states "serving suggestion enlarged to show texture."
 - I find it disturbing that below the ingredient list, there is the statement "may contain milk, soy."
 - With typical allergen statements, there is an additional clarification that the product was made in a facility that handles "some other allergen."
 - Here, there is no explanation as to why the manufacturer is uncertain about the formulation of the product.



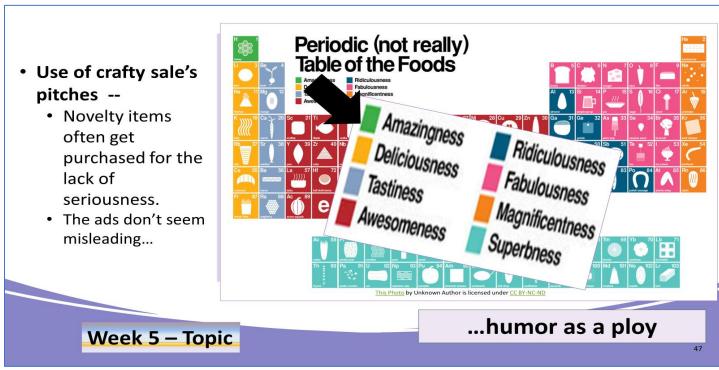
- Slide #44E major topic...shelf-stable issues 11...after opening...certified gluten free...
 - Week 5 Topic –
 - Major topic -- shelf-stable issues 11 -- after opening -- certified gluten free --
 - Nature's Bakery gluten free fig bar raspberry real fruit and ancient grains
 - A gluten free flour mix is identified as amaranth, quinoa, millet, sorghum, and teff.; thus, not certain as to which grains are included as ancient grains.
 - The added sugar is high (i.e., greater than 20 % DV) at 26% DV.
 - As certified gluten free (with logo), there is an unusual (and positive) statement about the company's commitment to gluten free –
 - "made in a dedicated peanut and tree nut free facility."



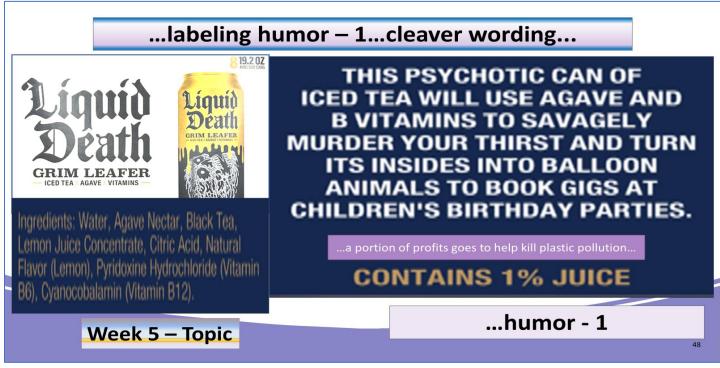
- Slide #45E major topic...shelf-stable issues 12...after opening...peanut butter spread...
 - Week 5 Topic –
 - Major topic -- shelf-stable issues 12 -- after opening -- peanut butter spread --
 - Peanut butter is a standardized food with a regulatory standard of identify (21 CFR, §164.150).
 - Peanut butter spread is a non-standardize food (21 CFR §102,23(a))
 - The common or usual name of a spreadable peanut product that does not conform to 21 CFR, §164.150 and more than 10 % of which consists of non-peanut ingredients, must be identified as "peanut spread" along with the percentage of peanuts.
 - If added ingredients beyond the standard of identify but less than 10 %, then a percentage of peanuts is not required.
 - Thus, since the % of peanuts is not noted, this product would have less than 10 % added ingredients beyond the standard of identify.
 - Oil separation
 - Because peanut butter contains a high amount of fat in the form of inherent oil, the oil may separate especially if stored in a warm environment.
 - Simply mix the oil back into the peanut butter.
 - Fat (oil) is also the source of flavor.
 - Due to the chemical nature of peanut butter, it is a shelf-stable product after opening and does not require refrigeration.



- Slide #46E major topic...shelf-stable issues 13...after opening...not labeled for retail sale...
 - Week 5 Topic –
 - Major topic -- shelf-stable issues 13 -- after opening -- not labeled for retail sale --
 - Haribo Golabears (a gummy bear-type product)
 - Ingredient statement
 - The unusual issue is the number and type of beeswax ingredients used
 - Carnauba wax --
 - Also known as Brazil wax and palm wax, is a wax of the leaves of the carnauba palm *Copernicia prunifera* and is often used in dietary supplements.
 - White beeswax
 - Generally, this is beeswax that is filtered and more refined; and
 - Yellow beeswax
 - Generally, this is beeswax that contains impurities such as pollen, plant material, and propolis.
 - Beeswax is a natural wax produced by honeybees.
 - It is a common ingredient used as a filler and binder.
 - The product labeling states "this unit not labeled for retail sale."
 - 21 CFR, §1.24 specifies that individual serving size packages of foods shall be exempt from the required declaration of net quantity of contents.
 - The labeling must be in type size not less than one-sixteenth of an inch in height.
 - Although the product is labeled as "certified gluten free" and bears a logo for GF-certified (gf-finder.com), the product labeling includes an implied warning
 - May contain wheat, traces of milk.
 - Such labeling seems misleading from my perspective, the product either is or is not certified gluten-free.



- Slide #47E major topic...humor as a ploy...
 - Week 5 Topic –
 - Major topic humor as a ploy --
 - Sometimes, a bit of levity may cause a person to read the label more carefully than usual.



- Slide #48E major topic...labeling humor 1...cleaver wording...
 - Week 5 Topic –
 - Major topic -- labeling humor 1 -- cleaver wording --
 - Liquid Death Grim Leafer
 - Use of humor in labeling likely will get consumers to read the label more closely.
 - Humor likely will entice a consumer to purchase the product as a novelty item.
 - For the ingredients, there is no explanation or marketing emphasis as to why two B vitamins (pyridoxine hydrochloride (Vitamin B6) and Cyanocobalamin (Vitamin B12) are added.
 - Both added vitamins fulfil 100 % of the daily value (DV).
 - Of note, Vitamin B12 (not B6, so much) is lacking in typical vegetarian diets; thus, B12 fortification in this beverage may also be targeted to a vegetarian population.
 - The labeling includes a statement that "We donate a portion of the profits from every can sold to help kill plastic pollution."

Use trusted sources ---

- Search the government websites and use the search features –
 - FDA www.fda.gov,
 - USDA FSIS www.fsis.gov.
 - Use AskFSIS and/or
 - USDA Meat and Poultry Hotline (1-888-674-6854).



Week 5 – Topic

...look for food answers...