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Chapter 207: California's Fight Against Trans Fats

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Code Section Affected

Health and Safety Code § 114377 (new).
AB 97 (Mendoza); 2008 STAT. Ch. 207.

I. INTRODUCTION

Cardiovascular diseases are the number one killer in America.[1] Currently, they are responsible for over one-third of the deaths in America each year—more than cancer, HIV, and accidents combined.[2] Over 1.2 million Americans suffer yearly from new or recurrent bouts of coronary heart disease, including heart attacks and angina.[3] While multiple risk factors are associated with cardiovascular disease, a recent study suggests that close to a quarter-million of these events could be avoided each year by substituting unsaturated fats for artificially-produced *trans* fatty acids.[4]

Trans fats have come to the forefront of America's health and dietary concerns over the past decade.[5] Today, a majority of Americans understand the negative health effects associated with *trans* fats,[6] and the Food and Drug Administration (FDA) requires that manufacturers include *trans* fats in the dietary information listed on prepackaged foods.[7] In response, manufacturers reformulated their recipes to exclude these fats.[8] Many restaurants, however, do not provide any nutritional information. This leaves consumers who wish to avoid *trans* fats with few options short of inquiring into the chef's ingredient list and cooking techniques.[9]

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1. *See* American Heart Association, Cardiovascular Disease Statistics, http://www.americanheart.org/presenter.jhtml?identifier=4478 (last visited Nov. 7, 2008) (on file with the *McGeorge Law Review*) (providing statistics from 2004).

2. *Id.* (stating that cardiovascular diseases killed 869,724 people in 2004).

3. *Id.* Over 450,000 deaths result from coronary heart disease every year, making it "the single leading cause of death in America today." *Id.*

4. Dariush Mozaffarian et al., *Trans Fatty Acids and Cardiovascular Disease*, 354 NEW ENGL. J. MED. 1601, 1611 (2006).

5. *See* Susan Okie, *New York to Trans Fats: You're Out!*, 356 NEW ENGL. J. MED. 2017, 2018 (2007) ("[A] Washington-based advocacy group . . . has been urging restaurants and manufacturers to eschew artificial trans fats since the early 1990s.").

6. Meghan Vivo, *In Need of a Helping Hand*, DYNAMIC CHIROPRACTIC, Aug. 13, 2007, at S1, *available at* http://findarticles.com/p/articles/mi_qa3987/is_/ai_n19467125 (on file with the *McGeorge Law Review*).

7. Food and Drug Administration, Food Labeling, 21 C.F.R. § 101.9(a)(1) (2003).

8. Mozaffarian et al., *supra* note 4, at 1610.

9. Jim Sanders, *Schwarzenegger Requires Menu Postings*, SACRAMENTO BEE, Sep. 30, 2008, http://www.sacbee.com/111/story/1277571.html (on file with the *McGeorge Law Review*). After enacting the Trans Fat Bill, California passed legislation requiring chain restaurants to post calorie counts on their menus. Approximately ten percent of California restaurants will meet the specifications and be required to comply. *Id.*

Due to the rising health epidemic in America, the people of California enacted Chapter 207, the first statewide ban of *trans* fats in prepared foods.[10] With the new restriction on *trans* fats, the Legislature hopes to improve the health of California's citizens and ultimately save lives and reduce health-care expenses.[11]

II. BACKGROUND

Although *trans* fats are generally thought of as unhealthy, there was a time not long ago when they were viewed as a healthier alternative to other types of fats.[12] In the early part of the twentieth century, scientists developed methods to hydrogenate oils for human consumption, thereby making them solid at room temperature and less prone to spoilage.[13] In 1911, Proctor and Gamble began marketing Crisco (hydrogenated oil) in the United States; its low cost and long shelf-life convinced many consumers to switch from lard.[14] The partially hydrogenated oils in products like Crisco contained *trans* fats, just one of many types of fatty acids discussed below.[15]

A. *What are* Trans *Fats?*

Animal fats and vegetable oils are composed of fats known as triglycerides.[16] All fats contain three long hydrocarbon chains comprised of carbon and hydrogen atoms.[17] Fats are distinguished by the shape and composition of their hydrocarbon chains.[18] Saturated fat, for example, contains the maximum amount of hydrogen per carbon atom in the chain, and is thus "saturated" with

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10. *See* CAL. HEALTH & SAFETY CODE § 114377 (enacted by Chapter 207) (providing numerous limitations on the use of *trans* fats in prepared foods).

11. Patrick McGreevy, *State Bans Trans Fats*, L.A. TIMES, July 26, 2008, at A1.

12. Okie, *supra* note 5, at 2018.

13. *See* William Shurtleff & Akiko Aoyagi, *History of Soy Oil Hydrogenation and of Research on the Safety of Hydrogenated Vegetable Oils*, SOY DAILY, http://web.archive.org/web/20051018105337/http://www.thesoydailyclub.com/SFC/MSPproducts501.asp (last visited Nov. 7, 2008) (on file with the *McGeorge Law Review*) (discussing the history of hydrogenated oil).

14. *See* Janet Patton, *J.M. Smucker Buys Jif, Crisco from Procter & Gamble*, LEXINGTON HERALD-LEADER, Oct. 11, 2001, http://findarticles.com/p/articles/mi_hb5553/is_200110/ai_n21550098 (on file with the *McGeorge Law Review*); Press Release, Crisco, Crisco Shortening Products Reformulated to Contain Zero Grams Trans Fat Per Serving (Jan. 24, 2007), *available at* http://www.crisco.com/Promotions_News/Press_Releases/2007/zero_grams_trans_fat.aspx (on file with the *McGeorge Law Review*).

15. *But see* Press Release, Crisco, *supra* note 14 ("Crisco oils and sprays have always contained zero grams trans fat . . . .").

16. *See* Lipids & Fats, Oregon State University Food Resource, http://food.oregonstate.edu/learn/fat.html (last visited Nov. 7, 2008) (on file with the *McGeorge Law Review*) (discussing various fats, their properties, and use in foods).

17. *Id.* Triglycerides break down into three fatty acids and a glycerol molecule. *Id.*

18. *Id.*

hydrogen.[19] Whereas unsaturated fats do not contain the maximum number of hydrogen atoms per carbon because they contain one or more carbon-carbon double bonds.[20] The most observable effect of these double bonds is on the melting point of the fat: generally, a higher level of unsaturation, results in a lower melting point for the fat.[21] Therefore, unsaturated fatty acids, such as those in olive oil, are liquid at room temperature, whereas saturated fatty acids like coconut oil may be a solid at room temperature.[22]

A partially hydrogenated fat, such as the original formulation of Crisco,[23] adds hydrogen to remove some of the double bonds, thus making unsaturated fats solid at room temperature.[24] During the hydrogenation reaction, many double bonds are destroyed; however, the proper consistency requires that some be left intact.[25] Of these remaining double bonds, many are "*cis*" double bonds, but some become "*trans*" double bonds.[26] The only physical difference between the two types of bonds is the geometric configuration of the molecule: *cis* bonds contain two hydrogen atoms on the same side of a double bond, while *trans* bonds have hydrogen on opposite sides.[27] This minor distinction, however, makes a significant difference between healthy unsaturated fats like olive oil, which contain *cis*-bonds, and the unhealthy *trans* fats.[28]

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19. *See id.* (listing saturated fats, their chemical structures, and nomenclature); The Structure and Function of the Cell Membrane, http://telstar.ote.cmu.edu/biology/downloads/membranes/index.html (last visited Nov. 7, 2008) (on file with the *McGeorge law Review*) (discussing fatty acids and the structure of triglycerides).

20. The Structure and Function of the Cell Membrane, *supra* note 19 (explaining that unsaturated fats may contain up to four double bonds).

21. Lipids & Fats, *supra* note 16 (stating that additional factors significantly contribute to the melting point, including carbon chain length, and shape of double bonds).

22. Know Your Fats, American Heart Association, http://www.americanheart.org/presenter.jhtml?identifier=532#polymono (last visited Nov. 7, 2008) (on file with the *McGeorge Law Review*) (listing coconut oil as high in saturated fat). Coconut oil has a melting point of approximately 23-26 degrees Celsius (73 to 78 degrees Fahrenheit). Dr. P. Rethinam & Muhartoyo, *The Plain Truth About Coconut Oil*, http://www.apccsec.org/truth.html (last visited Nov. 7, 2008) (on file with the *McGeorge Law Review*).

23. Crisco's formula was recently altered to remove the partially hydrogenated *trans* fats. *See* Press Release, Crisco, *supra* note 14.

24. Lipids & Fats, *supra* note 16. Melting point may also be raised by converting *cis* unsaturated fat into *trans* unsaturated fat. Shurtleff & Aoyagi, *supra* note 13.

25. Shurtleff & Aoyagi, *supra* note 13 (noting that different numbers of double bonds create different melting points for the fatty acids).

26. *Id.*

27. Chemguide: Helping You to Understand Chemistry, Stereoisomerism—Geometric Isomerism, http://www.chemguide.co.uk/basicorg/isomerism/geometric.html (last visited Nov. 7, 2008) (on file with the *McGeorge Law Review*) (noting that *cis* is Latin for "on this side" and *trans* means "across").

28. Fats, Oils, Fatty Acids, Triglycerides, http://www.scientificpsychic.com/fitness/fattyacids.html (last visited Nov. 7, 2008) (on file with the *McGeorge Law Review*). Olive oil is composed largely of Oleic Acid which contains one cis double bond per carbon chain. *Id.*

B. Discovery of Harmful Effects and Subsequent Regulation

Recent studies show that eating five grams of *trans* fats per day, for ten years, increases the chance of cardiovascular disease by twenty-five percent.[29] The FDA estimates that, on the average, Americans eat over five grams of *trans* fats each day—approximately 4.7 pounds of *trans* fats per year.[30] With new studies coming out all the time,[31] the health effects of *trans* fat consumption seems ominous at best; however, it was not always this way.[32]

Scientists have studied the health effects of *trans* fats for the past half-century.[33] In 1961, a study linked *trans* fat to a modest elevation of cholesterol.[34] A study in 1975, however, refuted those findings.[35] In the 1980's, many doctors urged consumers to switch from the saturated fats in butter to margarine, which contains partially hydrogenated fats, including *trans* fats.[36]

By 1990, artificial *trans* fats were linked to the elevation of "bad" cholesterol or low-density lipoproteins (LDL) and the reduction of "good" cholesterol or high-density lipoproteins (HDL).[37] Subsequent studies linked *trans* fats to an increased risk of coronary heart disease.[38] By 2001, the scientific community recognized *trans* fats as harmful,[39] a recognition that soon spread to the general public. Foreign countries like Denmark banned *trans* fats altogether.[40] Additionally, some manufacturers removed *trans* fats from products such as margarine.[41]

In 2003, the government began to regulate *trans* fats when the FDA announced that food labels must list the amount of artificial *trans* fats by January 2006.[42] In 2006, New York City announced a city-wide ban of artificial fats in restaurants.[43] The following year, California enacted legislation banning *trans* fats from public schools.[44]

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29. Claudia M. Oomen et al., *Association Between Trans Fatty Acid Intake and 10-year Risk of Coronary Heart Disease in the Zutphen Elderly Study: A Prospective Population-Based Study*, 357 LANCET 746 (2001).

30. *New York City Passes Trans Fat Ban*, MSNBC, Dec. 5, 2006, http://www.msnbc.msn.com/id/16051436/ (on file with the *McGeorge Law Review*).

31. *See, e.g.*, Mozaffarian et al., *supra* note 4 (discussing various deleterious effects of *trans* fats).

32. *See* Okie, *supra* note 5, at 2018.

33. *See id.* at 2018-19.

34. *Id.* at 2018.

35. *Id.*

36. *Id.*

37. *Id.* at 2019.

38. *See, e.g.*, Mozaffarian et al., *supra* note 4 (discussing various deleterious effects of *trans* fats).

39. *See* CAL. EDUC. CODE § 49431.7(b) (West Supp. 2008) ("In 1997, a New England Journal of Medicine study found eating one gram of trans fats a day for a decade increased the risk of cardiovascular disease by 20 percent.").

40. Okie, *supra* note 5, at 2019.

41. *Id.* (stating that in 1994 Unilever announced it would remove *trans* fats from its margarines).

42. 21 C.F.R. § 101.9(c)(2)(ii).

43. Press Release, N.Y. City Dep't of Health and Mental Hygiene, Board of Health Votes to Phase Out Artificial Trans Fats from New York City's Restaurants (Dec. 5, 2006), *available at* http://www.nyc.gov/

Due to recent discoveries linking *trans* fats to serious health problems, many manufacturers drastically reduced the *trans* fat content of their products. Through advances in chemistry and development processes, the maker of Crisco recently eliminated *trans* fats from its formula.[45] However, only four percent of America's consumption of *trans* fats comes directly from shortenings like Crisco.[46] A substantial majority arises from commercial baked goods and fried foods, such as chips and French fries.[47]

Increasing regulation and public awareness of *trans* fats has led many chain restaurants to remove partially hydrogenated oils from their menus.[48] For example, McDonalds recently began using oils without artificial *trans* fats to cook deep fried foods.[49] Interestingly, McDonalds switched to partially hydrogenated oils in the 1980's following a wave of public awareness of the negative effects of saturated fats.[50] By the time the Legislature enacted Chapter 207, many national chain restaurants either eliminated, or were in the process of eliminating, *trans* fats from their menus.[51]

III. CHAPTER 207

Chapter 207 regulates the use of fats by retail food facilities in three distinct ways.[52] First, Chapter 207 requires the facilities to maintain labels for any food containing fats, oil, or shortening, which is stored, distributed, served, or used by the facility.

Second, Chapter 207 regulates the use of *trans* fats in retail food facilities.[53] Specifically, Chapter 207 bans foods and food additives that contain more than half a gram per serving of artificial *trans* fats derived from partial hydrogenation of vegetable oil.[54] Food facilities must cease the use, storage, and distribution of

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html/doh/html/pr2006/pr114-06.shtml (on file with the *McGeorge Law Review*).

44. *See* CAL. EDUC. CODE § 49431.7 (banning schools from making available, serving, or preparing foods with *trans* fats as of July 1, 2009).

45. David Colker, *Crisco's Trans Fats are Transformed*, L.A. TIMES, Jan. 25, 2007, at C1.

46. *New York City Passes Trans Fat Ban*, *supra* note 30.

47. *See id.* (noting that 40% of *trans* fats come from commercial baked goods).

48. *See id.* ("Already, McDonald's Corp. has been quietly experimenting with more than a dozen healthier oil blends . . . .").

49. *McDonald's Fries are Now Trans Fat-free in U.S., Canada*, USA TODAY, May 22, 2008, http://www.usatoday.com/money/industries/food/2008-05-22-mcdonalds-trans-fat_N.htm [hereinafter McDonald's article] (on file with the *McGeorge Law Review*).

50. *See* Okie, *supra* note 5, at 2018 ("In the 1980's, . . . CSPI led a successful campaign to get McDonald's to switch from beef tallow to vegetable oil for frying its french fries.").

51. Nancy Luna, *Is Fast-Food Complying With the New California Trans-fat Ban?*, OC REG., July, 30, 2008, http://fastfood.freedomblogging.com/2008/07/30/is-fast-food-complying-to-the-new-california-trans-fat-ban/1707/ (on file with the *McGeorge Law Review*) (listing major fast-food restaurants and their progress toward the elimination of *trans* fats).

52. CAL. HEALTH & SAFETY CODE § 114377 (enacted by Chapter 207).

53. *Id.* §§ 114377(b)-(d) (enacted by Chapter 207).

54. *Id.* § 114377(d) (enacted by Chapter 207).

these food products by 2010.[55] Finally, Chapter 207 provides two exceptions to the *trans* fat ban.[56] First, public school cafeterias are exempt because California previously enacted legislation banning the use of *trans* fats in these facilities.[57] Second, Chapter 207 does not apply to foods that are sold or served in sealed, original packaging from the manufacturer.[58]

IV. ANALYSIS OF CHAPTER 207

Chapter 207 addresses health concerns associated with *trans* fats by eliminating them from foods prepared in California restaurants.[59] In support of this law, Governor Schwarzenegger issued a press release, announcing that California's position as a leader in promoting health and nutrition warranted imposition of such a ban.[60] However, support for the ban was not universal. AB 97, the bill creating Chapter 207, passed through the California State Assembly largely along party lines[61]—only two Republican members voted for the measure.[62] Not one Republican Senator voted for the bill.[63] In signing the bill into law, however, Governor Schwarzenegger cited it as a "strong step toward creating a healthier future for California."[64]

Both supporters and opponents of Chapter 207 agree that excess consumption of artificial *trans* fats is harmful.[65] While the disagreement may boil down to the philosophical question of who should regulate this type of consumption—the individual or the State[66]—the arguments set forth by both sides

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55. *Id.* § 114377(b)(1) (enacted by Chapter 207); *see also id.* § 114377(b)(2) (enacted by Chapter 207) (noting that Chapter 207 delays this ban for food products used in the deep-frying of yeast dough or cake batter for an additional year).

56. *Id.* §§ 114377(c), (e) (enacted by Chapter 207).

57. *Id.* § 114377(e) (enacted by Chapter 207); CAL. EDUC. CODE § 49431.7 (West Supp. 2008).

58. CAL. HEALTH & SAFETY CODE § 114377(c) (enacted by Chapter 207). Violations of the enumerated provisions in Chapter 207 are punishable by a fine ranging from twenty-five to one thousand dollars. *Id.* § 114377(f) (enacted by Chapter 207).

59. *See id.* § 114377 (enacted by Chapter 207) (providing limitations on the use of *trans* fats in prepared food).

60. Press Release, Office of the Governor, Governor Schwarzenegger Promotes Health and Nutrition by Signing Nation-Leading Trans Fat Bill (July 25, 2008), *available at* http://gov.ca.gov/index.php?/print-version/press-release/10291 (on file with the *McGeorge Law Review*).

61. *See* UNOFFICIAL BALLOT, ASSEMBLY FLOOR VOTE FOR AB 97 (July 14, 2008) (listing the "ayes" and "noes" for Assembly Bill 97).

62. *See id.* (listing Aghazarian and Garcia, two republican Assembly Members, as voting for AB 97).

63. *See* UNOFFICIAL BALLOT, SENATE FLOOR VOTE FOR AB 97 (July 2, 2008) (providing a listing of "aye" votes; no republican senators are listed).

64. Press Release, Office of the Governor, *supra* note 60.

65. *See, e.g.*, Letter from Glennah Trochet, President, Cal. Conference of Local Health Officers, to Tony Mendoza, Assembly Member, Cal. State Assembly (Aug. 1, 2007) (on file with the *McGeorge Law Review*) (supporting Chapter 207); Letter from Cal. Restaurant Ass'n et al., to Senate Health Committee (July 1, 2007) [hereinafter CRA Letter] (on file with the *McGeorge Law Review*) (opposing Chapter 207, but recognizing that trans fats are harmful).

66. *See* Michelle M. Mello, David M. Studdert & Troyen A. Brennan, *Obesity—The New Frontier of*

are more pragmatic: the effectiveness of a mandatory ban and the economic burdens on small businesses.[67]

A. *Potential Financial Impact of the Ban*

One opponent of Chapter 207 argues that the *trans* fat ban will create a disproportionate burden on small ethnic-food establishments.[68] Such establishments use shortening to cook many of their dishes and may not have the resources to convert to a different cooking fat.[69] Although cities and even small countries have implemented a similar ban,[70] some worry that the sheer population of California will cause a spike in demand for alternative fats that cannot be met.[71]

The Grocery Manufacturer's Association predicted a six billion pound shortage for a type of *trans*-fat-free oil in 2007 and urged that any ban on *trans* fat be implemented in phases.[72] Several other groups, however, note that *trans*–fat–free shortenings and cooking oils are available in excess of California's consumption and are basically cost-neutral.[73] Additionally, cooking-oil producers are attuned to developing legislation and are "expanding rapidly to meet the growing demand."[74]

Due to the extended period of time before the actual ban takes place in California,[75] the relative success of the transition in New York City,[76] and the

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Public Health Law, 354 NEW ENGL. J. MED. 2601 (2006) (discussing the policy of public health law as it relates to obesity).

67. *See* CRA Letter, *supra* note 65. (describing that only the larger food establishments (e.g. McDonalds, Taco Bell, etc.) have already "fully or partially eliminated trans fat[s] or are committed to doing so").

68. *See id.* (noting that smaller restaurants lack the resources to change oil formulations).

69. *Id.*

70. *See* Okie, *supra* note 5, at 2018 (noting that New York City and Denmark have implemented similar bans).

71. *See* GROCERY MFR. ASS'N, BAN ON TRANS FATS UNNECESSARY AND UNFEASIBLE (on file with the *McGeorge Law Review*) (predicting a shortfall for alternative oils in 2007).

72. *Id.*

73. *See, e.g.*, Letter from Gerald P. Mcneill, Vice President of Research & Mktg., Loders Crokklaan, to Stephen L. Joseph, Frytest.com LLC (Mar. 26, 2007) (on file with the *McGeorge Law Review*) (stating that there is no limit to oil supplies and it is cost neutral); Letter from Sally Beaton, Managing Dir., U.S. Food Group, to Tony Mendoza, Assembly Member, Cal. State Assembly (Mar. 23, 2007) [hereinafter U.S. Food Letter] (on file with the *McGeorge Law Review*) (stating that U.S. Food Group would be able to quickly distribute alternative oils).

74. U.S. Food Letter, *supra* note 73.

75. CAL. HEALTH & SAFETY CODE § 114377(c) (enacted by Chapter 207) (stating that ban does not take effect until 2010).

76. Sewell Chan, *Trans-Fat Police Find 94 Percent Compliance*, N.Y. TIMES, Sept. 17, 2007, http://cityroom.blogs.nytimes.com/2007/09/17/trans-fat-police-find-94-percent-compliance/a (on file with the *McGeorge Law Review*).

assurances that costs will not be adversely affected,[77] it appears unlikely that the impact of the ban on small business, such as local restaurants, will be substantial.

B. Potential Health Impact by the Ban

This article considers two types of evidence in examining the health benefits of the *trans* fat ban. First, the actual health effects on other populations that have implemented similar bans may give sound evidence as to the practical effects of the ban.[78] Second, studies that have hypothesized or predicted the deleterious effects of *trans* fats may suggest potential benefits of such a ban.[79] The latter evidence, however, is disputed by some of Chapter 207's opponents as not reflective of the real world effects of a ban.[80]

California is not the first to ban artificial *trans* fats, and an analysis of other cities and countries may provide insight regarding potential health benefits of *trans* fat bans.[81] Unfortunately, other bans are still in their infancy, and thus have not yet provided conclusive health results.[82] New York City's ban on *trans* fat in frying and baking was effective in 2007 and 2008 respectively.[83] Denmark, the first country to ban artificial *trans* fats, began the program in 2004.[84] While health data is not yet available, the program's efficacy is evidenced by the difference in *trans* fat content in McDonald's fries and Chicken Nuggets.[85] In Denmark, the meal contains less than one gram of artificial *trans* fat, whereas the same meal in New York and Atlanta contains more than ten grams.[86] However, such data is quickly becoming obsolete now that McDonald's is converting to *trans*–fat–free oils.[87]

Although no concrete data is available from other locations that have banned artificial *trans* fats, many Chapter 207 supporters note that merely analyzing the

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77. *See* U.S. Food Letter, *supra* note 73 ("[Alternate oils] ha[ve] been shown in many studies to save . . . customers money due to [their] long fry life.").

78. *See generally* Okie, *supra* note 5 (discussing the potential benefits of the New York City *trans* fat ban).

79. *See id.* at 2019 ("Prospective cohort studies suggest that a high trans fat intake is associated with a much greater increase in heart disease rates . . . .").

80. CRA Letter, *supra* note 65.

81. *See* Miranda S. Spivack, *Montgomery Bans Trans Fats in Restaurants, Markets*, WASH. POST, May 16, 2007, at A1 (listing New York, Philidelphia, and Montgomery County as places banning artificial *trans* fats).

82. *See New York City Passes Trans Fat Ban*, *supra* note 30 (describing the new *trans* fat ban after its implementation in 2006).

83. *Id.*

84. Okie, *supra* note 5.

85. *See* Steen Stender, Jørn Dyerberg & Arne Astrup, *High Levels of Industrially Produced Trans Fat in Popular Fast Foods*, 354 NEW ENGL. J. MED. 1650, 1651 (2006).

86. *Id.*

87. *See McDonald's Finally Picks Trans-Fat-Free Oil*, MSNBC, Jan. 30, 2007, http://www.msnbc.msn.com/id/16873869/ (on file with the *McGeorge Law Review*) (noting McDonald's shift towards trans-fat-free oils); McDonald's article, *supra* note 49 (same).

available data shows that the ban is likely to save lives.[88] For example, the Harvard School of Public Health estimates that a reduction of *trans* fats prevents between 72,000 and 228,000 heart attacks each year in the United States—of these, approximately 50,000 are fatal.[89] Assuming the homogeneity of these fatalities, these numbers amount to over 6,000 deaths in California.[90] Of course, the elimination of *trans* fats in restaurants will not eliminate deaths: restaurants may simply replace the banned fats with unhealthy saturated fats. Additionally, opponents of Chapter 207 note that these projected benefits are unrealistic, as only twenty-five percent of meals are consumed in restaurants.[91] Therefore realizing the estimated benefits of the ban will require more than the elimination of artificial *trans* fats in restaurants.[92]

While the ban on artificial *trans* fats may not be the silver bullet ensuring good health for all Californians, it will eliminate from restaurants a product that is universally acknowledged as unhealthy.[93] Although actual health benefits may be unknown, one thing is certain: the ban will not negatively affect Californians' health.[94]

C. *Future Trans Fat Bans*

After California passed the ban on artificial *trans* fats, other states and cities introduced similar legislation.[95] For example, a bill in Connecticut passed the Senate but was never raised for a vote in the House.[96] One of Connecticut's largest cities elected not to wait, and implemented its own ban this past year.[97] Similarly, legislation was introduced in Massachusetts but stalled; meanwhile, the city of Boston decided to implement its own ban.[98] While California remains

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88. *See, e.g.*, Letter from Harold Goldstein, Executive Dir., Cal. Ctr. for Pub. Advocacy, to Tony Mendoza, Assembly Member, Cal. State Assembly (Mar. 21, 2008) (on file with the *McGeorge Law Review*) (describing the research conducted by the Harvard School of Public Health).

89. *Id.*

90. U. S. Census Bureau, State and County Quick Facts, http://quickfacts.census.gov/qfd/states/06000.html (last visited Nov. 7, 2008) (on file with the *McGeorge Law Review*). This information is based on estimates of California and United States populations of 36,457,549 and 299,398,484, respectively. *Id.*

91. CRA Letter, *supra* note 65.

92. *Id.*

93. Jennifer Steinhauer, *California Bars Restaurant Use of Trans Fats*, N.Y. TIMES, July 26, 2008, http://www.nytimes.com/2008/07/26/us/26fats.html (on file with the *McGeorge Law Review*) (noting that opponents of California's *trans* fat bill concede that the fatty acids are unhealthy).

94. *See id.* (noting the health hazards associated with trans fats).

95. *See infra* notes 96-98 and accompanying text.

96. Jeff Holtz, *Stamford Restaurants Face Ban on Trans Fats*, N.Y. TIMES, Apr. 27, 2008, http://www.nytimes.com/2008/04/27/nyregion/nyregionspecial2/27transfatct.html# (on file with the *McGeorge Law Review*).

97. *See id.* (describing how Stamford, Connecticut imposed artificial *trans* fat ban at restaurants).

98. Stephen Smith & Andrew Ryan, *Trans Fats Now Banned in Boston Restaurants*, BOSTON GLOBE, Sept. 13, 2008, *available at* http://www.boston.com/news/local/articles/2008/09/13/trans_fats_now_banned_in_boston_restaurants/ (on file with the *McGeorge Law Review*).

the only state with a restaurant *trans* fat ban, California's new law may encourage more cities and states to consider similar measures.[99]

V. CONCLUSION

Prior to Chapter 207, California only regulated *trans* fat content in public schools.[100] Now, all food service facilities will be prohibited from using artificial *trans* fats in their food or food preparation by 2010, and deep fried yeast dough and cake batter must not contain these fats by 2011.[101] Although the negative health effects of *trans* fats are well documented, the effect of bans similar to that imposed by Chapter 207 remains to be quantified.[102] However, data does suggest that implementation of the ban will be possible, and many establishments have eliminated *trans* fats from their menus already.[103]

99. Press Release, Office of the Governor, *supra* note 60.

100. CAL. HEALTH & SAFETY CODE § 114377(e) (enacted by Chapter 207); CAL. EDUC. CODE § 49431.7 (West Supp. 2008).

101. *See supra* notes 52-58 and accompanying text.

102. *See supra* notes 4-5, 29, 42-44, 88-92 and accompanying text.

103. *See supra* notes 49, 51, 76, 87 and accompanying text.