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Final Report of the COMMISSION TO STUDY PUBLIC HEALTH

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Executive Summary

The Commission to Study Public Health (the "Commission") was created by Resolve 2003, chapter 95, and was by law given the task of studying obesity and recommending ways to combat obesity, decrease the cost of health care and increase the public health. The Commission's 31 members represented a broad range of stakeholders concerned with public health, including health care and nutrition providers and professionals, educators, advocacy groups, food and beverage industry representatives, insurers, legislators and executive agency representatives. The Commission first convened on December 5, 2003.

Pursuant to its enabling legislation, the Commission was responsible for considering a number of areas, each of which potentially was an appropriate target for public health initiatives aimed at curbing obesity and attendant health problems and costs. In order to address the wide range of areas to be considered, the Commission assigned members to each of three subcommittees: the Subcommittee on Schools, Children and Nutrition; the Subcommittee on Government Involvement in Nutritional Choice; and the Subcommittee on State Employment and Nutrition. Each subcommittee met a number of times throughout the Winter and Spring of 2004 to consider the several tasks of the Commission that fell within that subcommittee's jurisdiction.

When the full Commission convened again in May 2004, the subcommittees presented proposed recommendations and supporting material for the full Commission's consideration. After discussing the proposed recommendations and soliciting public comment through a public hearing in September 2004, the Commission formally adopted 27 recommendations for presentation to the 122nd Legislature. These recommendations, which were built upon the foundation laid by the subcommittees but in many cases amended substantially, are presented in their full form in Section III of this report. While the majority of the recommendations were unanimously endorsed by Commission members, some were not; support for each recommendation is reflected in the full text of the recommendations. The recommendations are presented in summary form below.

Summary of Recommendations

For the purposes of implementing the recommendations through proposed legislation, the Commission's recommendations are further organized into categories that more specifically describe the target areas for reform. These areas, and a brief description of the Commission's recommendations addressing each, follow.

Advertising to Children:

1. Initiate a review of whether advertising of unhealthy foods directed at children under 12 can and should be restricted on Maine television.

2. Draft a letter to Maine's Congressional delegation and federal authorities calling for limits on this type of advertising.

3. Prohibit this type of advertising in schools.

School Nutrition:

4. Limit schools to serving only "healthy foods and beverages," and limit portion sizes.

5. Implement a pilot program to install dairy vending machines in schools.

6. Prohibit the use of food or beverages as rewards in schools.

7. Provide no fewer than 20 minutes for teachers and students to eat lunch.

8. Direct schools to post nutritional information for food items sold.

9. Encourage local fruit and vegetable consumption in schools through the Farm to School Program.

10. Direct schools to provide nutrition education in accordance with Learning Results guidelines.

Statewide Body Mass Index ("BMI") Assessment:

11. Direct schools to confidentially assess and record students' body mass index ("BMI").

Physical Activity:

12. Direct the Department of Transportation to spend at least 1% of its highway budget on shared-use paths to schools.

13. Require elementary and middle school students to participate in 150 minutes of physical activity per week outside of recess, and high school students to participate in 220 minutes per week.

14. Include health and physical education as a component of statewide student assessment.

15. Endorse the "Maine in Motion" Program of the Governor's Council on Physical Fitness, Sports, Health and Wellness.

General Recommendations:

16. Provide funding for a number of specific health and wellness-related activities.

17. Continue the Commission to Study Public Health.

Healthy Food Purchasing:

18. Require chain restaurants to provide caloric information on menus or menu boards.

19. Direct Dirigo Health and the Food Stamp Program to collaboratively assist participants in making healthy food purchases and securing the "Healthy Me Rewards" credit; also, draft a letter to Maine's Congressional delegation requesting the Food Stamp Program to encourage healthy food purchases.

State Employment:

20. Implement a comprehensive, population-based health and wellness program to assist State employees in improving and monitoring their health.

21. Create an expedited bid process for pilot projects related to State employee health.

22. Direct State-run food services to implement healthy food choices in cafeterias, snack bars and vending machines in accordance with recommendations of food choice committees.

23. Track food purchases at State-run cafeterias, snack bars and vending machines.

24. Provide caloric information for foods sold at State-run cafeterias, snack bars and vending machines.

25. Require inclusion of wellness coordinators from executive departments within food choice committees.

Health Insurance Coverage:

26. Direct insurance carriers for State employees to investigate the cost savings of certain services such as BMI assessment and nutrition counseling, and encourage implementation of those services found to reduce costs.

27. Encourage insurance carriers to provide incentives for insured to make use of certain wellness services, such as BMI assessment and nutrition counseling.

A discussion of the Commission's key findings supporting these recommendations follows in Section II of this report.

I. INTRODUCTION

The 121st Legislature grappled with a series of bills that sought to address rising rates of obesity in the State, and attendant health risks, in a number of ways: through curricular change and education reform in Maine's public schools; through adaptation of Maine's transportation infrastructure; and through regulation of menus at Maine's chain restaurants, to name a few. These bills were handled by several different legislative committees, and met various fates in the legislative process.

One measure that emerged from the legislative process and ultimately became law was Resolve 2003, Chapter 95, entitled "Resolve, To Study Obesity and Methods to Decrease the Cost of Health Care and Increase the Public Health."[1] That resolve created the 31-member Commission to Study Public Health (the "Commission"), which is submitting this report in accordance the resolve's charge to the Commission.

The resolve detailed the Commission's duties, which included examination and analysis of information in a number of areas, including nutrition, physical activity and health assessment in schools; food and beverage advertising to children; consumer food purchases; nutrition and health in places of State employment; and health insurance coverage. The resolve directed that the Commission submit a report to the Legislature, and authorized introduction of a bill, which were to have as goals "improving public health, including cardiovascular health, decreasing rates of obesity, decreasing the cost of health care, increasing the physical activity of youth and increasing awareness of healthy eating choices. . . ."[2]

The 31 members of the Commission[3] were to include a wide range of public health stakeholders, including representatives of school administrators, educators, health professionals and parent-teacher organizations; cancer, heart and diabetes associations; physicians and other health care providers, as well as representatives of dieticians and nutritionists; health care and consumer advocacy groups; food, beverage and dairy industries; and health insurers. Additionally, the Commission was to include two members of the Senate and two members of the House of Representatives, as well as a designee of the Attorney General, Commissioner of Education and Commissioner of Human Services.

Because appointments to the Commission were completed within weeks of the Commission's original reporting date, the Commission requested from the Legislative Council and was granted an extension of the deadline for submitting its report and legislation.[4] The Commission convened for its first meeting on December 5, 2003, at which Dr. Dora Ann Mills, Director of the Bureau of Health within the Maine Department of Human Services, presented introductory information concerning Maine's burgeoning obesity-related public health issues, possible causes and potential avenues for pursuing solutions.

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[1] Resolve 2003, Chapter 95 is included as part of Appendix B.
[2] Ibid.
[3] A list of the members of the Commission is included on the title page of this report and as Appendix A.
[4] The letter documenting the Legislative Council's approval of the Commission's extension request is included as part of Appendix G.

The Commission convened for a second time on January 23, 2004. With the understanding that many of the Commission's members would be engaged in the Second Regular Session of the 121st Legislature, and therefore unavailable for Commission meetings, the Commission appointed a smaller group of members to three subcommittees: the Subcommittee on Schools, Children and Nutrition, the Subcommittee on Government Involvement in Nutritional Choice and the Subcommittee on State Employment and Nutrition. The full Commission delegated to each of these subcommittees the responsibility for crafting proposed recommendations in its subject area, which would be presented to the full Commission after the legislative session for discussion, amendment -- if necessary -- and possibly adoption by the Commission as part of its report.

After meeting several times during the months of February, March, April and May 2004, the three subcommittees presented their proposed findings and recommendations to the full Commission on May 21, 2004.[5] The Commission discussed each of the 28 recommendations proposed by the subcommittees at that time, suggested a number of potential amendments to the proposed recommendations and requested additional information from the subcommittees. The subcommittees presented their final proposed recommendations to the full Commission on August 2, 2004. At that meeting, the full Commission adopted a set of preliminary recommendations based on the subcommittees' proposals, which were disseminated to the public and interested parties and subject to public comment at a public hearing scheduled for September 24, 2004.

After the public hearing, the Commission met one final time for a work session on November 13, 2004. At the work session, the Commission formally voted to adopt many of the draft recommendations in final form, and to craft legislation to implement these recommendations. [6] A more detailed description of the Commission's recommendations is included in Section III of this report. Note is made under the description of each recommendation of any Commission member dissenting from that recommendation. Additionally, minority comments representing dissent from some of the text and findings of this report are presented as Appendix H, Minority Comments of Commission Member Oakley Jones, at the end of the report.

[5] The Commission also heard a presentation at that time by Donald Nicholson of Farmington concerning the "obesity pandemic."

[6] The members of the Commission who were present and voting at the November 13, 2004 meeting were: Senator John Martin, Rep. Margaret Craven, Senator Karl Turner, Kip DeSerres, Robert Holmberg, Sandy Hunter, Oakley Jones, Lori Kaley, Barbara Leonard, Ann London, Tom Nelson, Joan Orr (substituting for Karen O'Rourke), Barbara Raymond, Colleen Rioux, Stephen Sears, Hilary Schneider, Jonathan Shenkin, Deb Silberstein and David Stockford.

II. KEY FINDINGS CONCERNING THE CAUSES OF OBESITY AND METHODS TO DECREASE THE COST OF HEALTH CARE AND INCREASE THE PUBLIC HEALTH

The following sections summarize the information collected by the Commission in its efforts to satisfy its charge to study causes of obesity and resulting health care costs and to propose recommendations to address these costs and increase the public health. The Commission's findings are presented in three broad subject areas, representing the subcommittees into which the Commission was organized for the purpose of initial inquiry and deliberation: (1) Schools, Children and Nutrition; (2) Government Involvement in Nutritional Choice; and (3) State Employment and Nutrition. Within these broad subject areas, information is further organized into more specific categories focusing on particular duties charged to the Commission in the authorizing legislation.

1. Schools, Children and Nutrition

Advertising and Media

The Commission was charged with conducting an analysis of whether advertising targeted at children is contributing to the rising rates of obesity in Maine and the nation and, if so, to perform an analysis of possible strategies to address this issue. The Commission presents the following findings:

- Food marketing that targets children has grown rapidly in the United States.[7] The overwhelming majority of foods marketed to children are those considered foods of poor nutritional value, high in sugar and/or fat.[8]

- Increased viewing of television programs results in decreases in fruit and vegetable consumption and increases in consumption of non-nutritive foods.[9] Children see 40,000 commercials a year on television alone.[10] They are also inundated with advertising on the Internet, in movies, on the radio, in video games, in print media, and during school.

- Many of these food products are glamorized by marketers, a tool that can often overwhelm children, and undermine parental authority.[11] Television viewing often results in more snacking

[7] Story M, French S. Food advertising and marketing directed at children and adolescents in the US. *Int J Behav Nutr Phys Act*. 2004;1(1):3.
[8] French S, Story M, Neumark-Sztainer D, Fulkerson JA, Hannan P. Fast food restaurant use among adolescents: associations with nutrient intake, food choices and behavioral and psychosocial variables. *Int J Obes Relat Metab Disord*. 2001;25(12):1823-1833.
[9] Boynton-Jarrett R, Thomas TN, Peterson KE, Wiecha J, Sobol AM, Gortmaker SL. Impact of television viewing patterns on fruit and vegetable consumption among adolescents. *Pediatrics*. 2003;112(6 Pt 1):1321-1326.
[10] Kunkel D. Children and television advertising. In: Singer DG, Singer JL, eds. *The Handbook of Children and Media*. Thousand Oaks, CA: Sage; 2001:375-393.
[11] Lewis MK, Hill AJ. Food advertising on British children's television: a content analysis and experimental study with nine-year olds. *Int J Obes Relat Metab Disord*. 1998;22(3):206-214.

and less meal consumption that results in more calories consumed overall.[12]

- It has been shown that children who watch television significantly increase their food consumption after watching food advertisements.[13] Children's perceived need for sweets also increases after watching advertisements on television.[14] These results coincide with study results that show, over time, children who watch more television had more body fat over time than their peers who did not watch as much television.[15] [16] [17]

- Children as young as 2 years of age are greatly influenced by very brief television food advertisements.[18] Subsequent reductions in television viewing by young children decreases poor nutritional food requests.[19]

- Motivating children to consume harmful and excessive amounts of low-nutrition food is considered as unhealthy as promoting other behaviors that are currently banned from children's television.[20]

The Commission did consider possible strategies for restricting or counteracting the advertisement of non-nutritious foods and beverages to children. These strategies included restrictions of such advertisements directed at children 12 years or younger on Maine television stations and the levying of a tax on such advertisements originating in Maine in order to use these funds to develop a media campaign promoting healthy eating and physical activity.

School Nutrition

The Commission was charged with conducting an analysis of whether schools are meeting modern nutrition standards for school meals and food and drink offered on school property and, if not, to perform an analysis of what strategies are available to encourage more nutritious offerings in schools. The Commission presents the following findings:

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[12] Gore SA, Foster JA, DiLillo VG, Kirk K, Smith West D. Television viewing and snacking. *Eat Behav*. 2003;4(4):399-405.

[13] Halford JC, Gillespie J, Brown V, Pontin EE, Dovey TM. Effect of television advertisements for foods on food consumption in children. *Appetite*. 2004;42(2):221-225.

[14] Gore SA et al., op. cit.

[15] Gortmaker SL, Must A, Sobol AM, Peterson K, Colditz GA, Dietz WH. Television viewing as a cause of increasing obesity among children in the United States, 1986-1990. *Arch Pediatr Adolesc Med*. 1996;150(4):356-362.

[16] Gortmaker SL, Peterson K, Wiecha J et al. Reducing obesity via a school-based interdisciplinary intervention among youth: Planet Health. *Arch Pediatr Adolesc Med*. 1999;153(4):409-418.

[17] Proctor MH, Moore LL, Gao D et al. Television viewing and change in body fat from preschool to early adolescence: The Framingham Children's Study. *Int J Obes Relat Metab Disord*. 2003;27(7):827-833.

[18] Borzekowski DL, Robinson TN. The 30-second effect: an experiment revealing the impact of television commercials on food preferences of preschoolers. *J Am Diet Assoc*. 2001;101(1):42-46.

[19] Hindin TJ, Contento IR, Gussow JD. A media literacy nutrition education curriculum for head start parents about the effects of television advertising on their children's food requests. *J Am Diet Assoc*. 2004;104(2):192-198.

[20] Mercer SL, Green LW, Rosenthal AC, Husten CG, Khan LK, Dietz WH. Possible lessons from the tobacco experience for obesity control. *Am J Clin Nutr*. 2003;77(4 Suppl):1073S-1082S.

- Childhood obesity is a major public health concern in the United States, where the percentage of overweight children doubled between 1965 and 1999.[21] Over 10% of Maine adolescents are overweight or obese.[22]

- Overweight children are more likely to have or develop high blood pressure, heart disease, high cholesterol, diabetes, stroke, sleep apnea, orthopedic problems, serious behavioral problems, and certain cancers.[23]

- Roughly 60% of overweight children already have at least one cardiovascular risk factor of high blood pressure, abnormal lipids, or elevated blood sugar.[24] [25]

- Type II diabetes, which is usually associated with overweight and unhealthy eating habits, is on the rise in children and adolescents.[26] [27] In fact, in Cincinnati, the incidence of Type II diabetes in adolescents increased ten-fold between 1982 and 1994.[28]

- Overweight and obesity is caused by consumption of too many calories and expenditure of too few calories. Most children consume too much fat, saturated fat, and sodium, and not enough fruits, vegetables, or calcium.[29]

- More than two-thirds of U.S. children consume more than 30% of their calories from fat, and added sugar accounts for approximately 20% of their calories.[30] [31] [32]

- High fat, high sugar foods are available for sale in most schools in vending machines, concessions, and as a la carte items.[33] Studies report that approximately 75% of high schools

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[21] Ogden CL, Flegal KM, Carroll MD, Johnson CL. Prevalence and trends in overweight among US children and adolescents, 1999-2000. *Journal of the American Medical Association.* 2002;288:1728-1732.
[22] Mills DA. *Healthy Maine 2010: Longer and Healthier Lives.* Bureau of Health Maine Department of Human Services. December 2002.
[23] Dietz W. Health consequences of obesity in youth: childhood predictors of adult disease. *Pediatrics.* 1998; 101(supplement):518-525.
[24] Freedman DS, Dietz WH, Srinivasan SR, Berenson GS. The relation of overweight to cardiovascular risk factors among children and adolescents: the Bogalusa Heart Study. *Pediatrics*. 1999;103(6 Pt 1):1175-1182.
[25] Williams CL, Strobino B, Bollella M, Brotanek J. Body size and cardiovascular risk factors in a preschool population. *Prev Cardiol*. 2004;7(3):116-121.
[26] Hotu S, Carter B, Watson PD, Cutfield WS, Cundy T. Increasing prevalence of type 2 diabetes in adolescents. *Journal of Pediatrics and Child Health*. 2004;40:201-204.
[27] Pinhas-Hamiel O, Dolan L, Daniels S, Standidford D, Khoury P, Zeitler P. Increased incidence of non-insulin-dependent diabetes among adolescents. *Journal of Pediatrics.* 1996;128:608-615.
[28] Ibid.
[29] US Department of Agriculture, Food and Nutrition Service. (2001a) *Children's diets in the mid-1990's: Dietary intake and its relationship with school meal participation.* (CN-01-CDC), Alexandria, VA: Phil Gleason and Carol Suitor. Project Officer, Ed Herzog.
[30] Ibid.
[31] US Department of Agriculture, Food and Nutrition Service. (2001b) *Foods sold in competition with USDA school meal programs: a report to Congress*, January 12, 2001. Washington, DC: 2001.
[32] Guthrie JF, Morton JF. Food sources of added sweeteners in the diets of Americans. *Journal of the American Dietetic Association*. 2000;100:43-51.
[33] Kubik MY, Lytle LA, Hannan PJ, Perry CL, Story M. The association of the school food environment with dietary behaviors of young adolescents. *American Journal of Public Health*. 2003;93:1168-1173.

offer an a la carte program at lunchtime with few low fat items, fruit or fruit juice offered.[34]

➢ Studies have shown that the availability of less nutritious foods for sale in school is associated with decreased consumption of more nutritious foods.[35] [36] Fruit consumption decreases by 11% for every vending machine present in the school.[37]

➢ Students in schools that don't offer "a la carte" foods consume more fruit and vegetable servings daily and are less likely to exceed fat intake guidelines than students in schools offering a la carte items.[38]

➢ Packages of snack foods sold outside of the school lunch programs often provide more than one serving per package. Like adults, children are likely to overeat when served large portions of food.[39]

➢ In addition, students claim that after waiting in line to buy a meal there isn't enough time to eat, so they buy snack foods because they are faster to eat, but also provide excessive amounts of fat and sugar. Control of the nutritional quality of food items for sale in school is needed.

The Commission did consider possible strategies to encourage more nutritious offerings in foods sold or offered in schools. These strategies included the development of guidelines for nutritional food and the potential costs and benefits of adopting a specific definition of "healthy foods and beverages" that would apply to food and beverages provided to school children in Maine schools.[40]

Vending Machines

Vending machines represent a significant source of food and beverage products for school children in Maine schools. The Commission presents the following findings regarding the nutritional value of foods and beverages available from vending machines in public schools:

➢ Vending machines displace student consumption of more nutritious foods.[41]

➢ Soft drink consumption has increased nationally by almost 500 percent in the past 50 years, displaces milk from children's' diets and is negatively associated with calcium consumption.[42] [43]

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[34] Kubik MY et al., op.cit.
[35] Ibid.
[36] Cullen KW, Eagan J, Baranowski T, Owens E, de Moor C. Effect of a la carte and snack bar foods at school on children's lunchtime intake of fruits and vegetables. *Journal of the American Dietetic Association.* 2000;100:1482-1486.
[37] Kubik MY et al., op. cit.
[38] Ibid.
[39] Rolls BJ, Engell D, Birch LL. Serving portion size influences 5-year-old but not 3-year-old children's food intake. *Journal of the American Dietetic Association.* 2000;100:232-234.
[40] See proposed definition of "healthy foods and beverages" and standards for serving sizes in Appendix C.
[41] Mrdjenovic G, Levinsky D. Nutritional and energetic consequences of sweetened drink consumption in 6-13 year old children. *Journal of Pediatrics*. 2003;142:604-610.

[44] Children who don't drink milk are more likely to experience a bone fracture, and are at higher risk for developing osteoporosis.[45]

➢ Sugar-sweetened beverages provide excess calories and sugar but no nutrients.[46 47 48 49] Children who drink soft drinks consume approximately 10% more calories and are more likely to be overweight than children who rarely consume soft drinks.[50 51 52 53]

➢ Children in the United States consume added sugars equivalent to from 19 teaspoons per day for 6-8 year old girls to 36 teaspoons per day for 14-18 year old boys.[54]

➢ Soft drinks are most likely to be chosen from a vending machine, followed by candy and chips. In addition to soft drinks, vending machines offer a variety of energy-dense candy and chips that are loaded with fat, particularly the heart-unhealthy saturated and trans fats.[55]

➢ Portion sizes also contribute to the problem of obesity.[56] Beyond the age of 3 years, children are likely to overeat when served excessive portions of food.[57]

➢ Vending machine packages sometimes provide more than one serving per package, which can be considered excessive. For example, according to the FDA, 8 ounces of carbonated beverage is considered a serving; therefore, a 20-ounce soda bottle contains 2 ½ servings.

Consistent with the findings on school nutrition programs, the Commission also contemplated the strategy of requiring that food and beverages sold on school grounds from vending machines

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[42] Ludwig DS, Peterson KE, Gortmaker SL. Relation between consumption of sugar-sweetened drinks and childhood obesity: a prospective, observational analysis. *Lancet*. 2001;357:505-508.
[43] Mrdjenovic G, Levinsky D, op. cit.
[44] Ballew C, Kuester S, Gillespie C. Beverage choices affect adequacy of children's nutrient intakes. *Archives of Pediatrics and Adolescent Medicine.* 2000;154:1148-1152.
[45] Goulding A, Rockell JE, Black RE, Grant AM, Jones IE, Williams SM. Children who avoid drinking cow's milk are at increased risk for prepubertal bone fractures. *Journal of the American Dietetic Association.* 2004;104:250-253.
[46] Guthrie JF, Morton JF. Food sources of added sweeteners in the diets of Americans. *Journal of the American Dietetic Association*. 2000;100:43-51.
[47] Harnack L, Stang J, Story M. Soft drink consumption among US children and adolescents: Nutritional consequences. *Journal of the American Dietetic Association*. 1999;99:436-441.
[48] Ludwig DS et al., op. cit.
[49] Swinburn BA, Caterson I, Seidell JC, James WP. Diet, nutrition and the prevention of excess weight gain and obesity. *Public Health Nutrition*. 2004;7:123-146.
[50] Harnack L et al., op. cit.
[51] Ludwig DS et al., op. cit.
[52] Mrdjenovic G, Levinsky D, op. cit.
[53] Gillis LJ, Bar-Or O. Food away from home, sugar-sweetened drink consumption and juvenile obesity. *Journal of the American College of Nutrition*. 2003;22:539-545.
[54] US Department of Agriculture, Food and Nutrition Service. (2001a), op. cit.
[55] Kubik MY et al., op. cit.
[56] Young L, Nestle M. The contribution of expanding portion sizes to the US obesity epidemic. *American Journal of Public Health*. 2002;92:246-249.
[57] Rolls BJ et al., op. cit.

must also adhere to "healthy food and beverage" standards and "single serving standards."[58] Commission members also considered the potential benefits of installing dairy vending machines, (selling flavored and/or unflavored low-fat, non-fat or 1% fat milk), in schools.

Physical Activity Improvement

The Commission was charged with conducting an analysis of physical education standards in Maine schools, including a review of the Maine system of learning results; and also to review the general trends in Maine toward a less active and more sedentary lifestyle, including the contribution of these trends to the rising rates of obesity in the State and the nation and strategies for addressing physical activity issues. The Commission presents the following findings from this analysis:

- The number of overweight children in this country has increased by 200% in the past 20 years, and currently represents the most prevalent nutritional disease among children in the United States.[59] [60] [61] Clinically obese children are also at increased risk of developing diabetes, hypertension, and cardiovascular diseases associated with sedentary lifestyles, as well as increased adult morbidity and mortality.[62] [63]

- Declining physical activity at home and school has been implicated as a primary factor leading to the dramatic rise in overweight and obesity in American children. Nationwide cuts in school physical education programs as well as increased time dedicated to sedentary activities is thought to play an important role in the reduction in general physical activity that has been correlated with increased incidence of childhood obesity.[64] [65]

- U.S. children spend an average of 25-27 hours per week watching television but only 1.6 hours per week engaging in physical activity.[66] The probability of a child being overweight were 4.6 times greater for individuals watching five hours of television per day as compared to those watching fewer than two hours.[67]

[58] See proposed definition of "healthy foods and beverages" and standards for serving sizes in Appendix C.
[59] Troiano RP, Flegal KM. Overweight children and adolescents: description, epidemiology, and demographics. *Pediatrics*. 1998;101: 497-504.
[60] Barlow SE et al., op. cit.
[61] Ogden CL et al., op. cit.
[62] Steinbeck KS, op. cit.
[63] Stephens M, op. cit.
[64] Luepeker RV. How physically active are American children and what can we do about it? *Int J Obes Relat Metab Disord*. 1999;23 (Suppl 2): S12-S17.
[65] Yackel, EE. An activity calendar program for children who are overweight. *Pediatric Nursing*. 2003;29(1):17-22.
[66] Fry, PL. From fat to fit. *World and I* [serial online]. 1999;14: 330-335.
[67] Gortmaker SL, Must A, Sobol AM, Peterson K, Colditz GA, and Dietz WH. Television viewing as a cause of increasing obesity among children in the United States, 1986-1990. *Archives of Pediatrics and Adolescent Medicine*. 1996;150: 356-362.

- Research has found that increasing physical activity alone could prevent childhood obesity.[68] Furthermore, a recent study has reported that increasing school physical education programs provided some evidence that the increased physical activity had several significant favorable effects on academic achievement.[69]

- Excessive television viewing may promote obesity by displacing general physical activity and increasing dietary intake, either while directly viewing or some time later in response to food advertising.[70] [71] Time spent watching television represents the single greatest source of physical inactivity among American children aside from sleeping.[72]

- Current data suggests that the amount of hours spent watching television inversely correlates with measures of physical fitness, participation in general physical activities, and active involvement in athletics.[73] [74] [75] [76] [77] Findings from a recent study proposed that suppression of metabolic rate during television viewing may be a primary factor leading to onset of childhood overweight and obesity.[78]

- A recent national study has reported that obesity incidence is lowest among children that watch less than one hour of television per day and highest for those who watch greater than four hours per day.[79] Furthermore, a separate investigation noted a 1-2% increase in the prevalence of pediatric obesity in urban areas of China for each hourly increase in television viewing per week.[80]

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[68] Wilmore JH. Weight gain, weight loss, and weight control: what is the role of physical activity? *Nutrition*. 1997;13(9): 820-821.
[69] Sallis JF, McKenzie TL, Kolody B, Lewis M, Marshall S, Rosengard P. Effects of health-related physical education on academic achievement: project SPARK. *Research Quarterly for Exercise and Sport*. 1999;70(2):127-134.
[70] Dietz WH, Gortmaker SL. Do we fatten our children at the television set? Obesity and television viewing in children and adolescents. *Pediatrics*. 1985;75:807-812.
[71] Dietz WH, Strasburger VC. Children, adolescents, and television. *Curr Probl Pediatr*. 1991;21:8-31.
[72] Ibid.
[73] Tucker LA. The relationship of television viewing to physical fitness and obesity. *Adolescence*. 1985;21:797-806.
[74] Pate RR, Ross JG. The national children and youth fitness study II: factors associated with health-related fitness. *Journal of Physical Education, Recreation and Dance*. 1987;58:93-95.
[75] Robinson TN, Hammer LD, Killen JD, et al. Does television viewing increase obesity and reduce physical activity? Cross-sectional and longitudinal analyses among adolescents girls. *Pediatrics*. 1993;91:273-280.
[76] DuRant RH, Baranowski T, Johnson M, Thompson WO. The relationship among television watching, physical activity, and body composition of young children. *Pediatrics*. 1994;94:449-455.
[77] Williams TM, Hanford AG. Television and other leisure activities. In: Williams TM, ed. *The Impact of Television: A Natural Experiment in Three Communities*. Orlando, Fl: Academic Press Inc.; 1986:143-213.
[78] Sallis JF, Simons-Morton BG, Stone EJ, et al. Determinants of physical activity and interventions in youth. *Official Journal of the American College of Sports Medicine*. 1992;24(6):S248-S257.
[79] Crespo CJ, Smit E, Troiano RP, Bartlett SJ, Macera CA, Andersen RE. Television watching, energy intake, and obesity in US children: results from the Third National Health and Nutrition Examination Survey, 1988-1994. *Arch Pediatr Adolesc. Med*. 2001;155:360-365.
[80] Ma GS, Li YP, Hu XQ, Ma WJ, WU J. Effect of television viewing on pediatric obesity. *Biomed Environ Sci*. 2002;15:291-297.

➢ Several intervention studies have provided evidence that reduction in television viewing hours and increased physical activity can reduce or prevent childhood obesity.[81] [82] [83]

➢ Research has also shown that the degree to which children consume snack foods while watching television and between meals is related to the number of hours spent watching television.[84] [85]

➢ Food advertisements may misinform children with regard to nutritional beliefs.[86] Such programming tends to place emphasis on consumption of high-calorie, prepared foods of poor nutritional quality.[87]

➢ Increased television viewing time among American children and adolescents has been associated with reduced physical activity and potentially unhealthy dietary practices, notably an increased consumption of high-fat foods and decreased consumption of fruits, vegetables and complex carbohydrates.[88] [89] [90]

➢ Television viewing appears to have a causal relationship with overweight and obesity, and is increasingly the target of interventions designed to reduce the incidence of childhood obesity in the United States. One means of reversing this disturbing trend is to provide children with regular opportunities for physical activity and decreased television-viewing time, thereby promoting and sustaining healthy behaviors and lifestyles.[91]

Commission members analyzed several strategies related to the reversing the trends toward inactive and sedentary lifestyles, including reinvigorating the physical education standards and mandating the assessment of health education and physical education in the Maine system of learning results, providing for more time in schools for physical activity and physical education,

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[81] Epstein LH, Valoski AM, Vara LS et al. Effects of decreasing sedentary behavior and increasing activity on weight change in obese children. *Health Psychol.* 1995;14:109-115.
[82] Gortmaker SL, Peterson K, Wiecha J et al. Reducing obesity via a school-based interdisciplinary intervention among youth: Planet Health. *Archives of Pediatrics and Adolescent Medicine.* 1999;153:409-418.
[83] Robinson TN. Reducing children's television viewing to prevent obesity: a randomized controlled trial. *J Am Med Assoc.* 1999;282:1561-1567.
[84] Clancy-Hepburn K, Hickey AA, Nevill G. Children's behavior responses to TV food advertisements. *J Nutr Educ*. 1974;6:93-96.
[85] Taras HF, Sallis JF, Patterson TL, Nader PR, Nelson JA. Television's influence on children's diet and physical activity. *Dev Behav Pediatr*. 1989;10:176-80.
[86] Ross RP, Campbell T, Huston-Stein A, Wright JC. Nutritional misinformation of children: a developmental and experimental analysis of the effects of televised food commercials. *J Appl Der Psychol*. 1981;1:329-347.
[87] Story M, Faulkner P. The prime time diet: a content analysis of eating behavior and food messages in television program content and commercials. *Am J Public Health*. 1990;80: 38-740.
[88] Wong ND, Hei TK, Qaqundah PY, Davidson DM, Bassin SL, Gold KV. Television viewing and pediatric hypercholesterolemia. *Pediatrics*. 1992;90:75-79.
[89] Subar AF, Ziegler RG, Patterson BH, Ursin G, Graubard B. US dietary patterns associated with fat intake: the 1987 national health interview survey. *Am J Public Health*. 1994;84:359-366.
[90] Robinson TN, Killen JD. Ethnic and gender differences in the relationships between television viewing and obesity, physical activity, and dietary fat intake. *J Health Educ*. 1995;26 (suppl):1-8.
[91] Stephens M, op. cit.

the constructing of local bicycle/walking paths to our schools and the expansion of in-town community walking trails.

Funded Assessment of Body Mass Index (or "BMI") of Maine Children

The Commission also spent considerable time in its review of the general trends in Maine and the nation related to a less active and sedentary lifestyle and the implications of these trends for the rising rates of obesity. The research and recommended strategies found in the literature related to the use of available predictive measures such as Body Mass Index ("BMI") turned out to be important findings in this area. The Commission presents the following findings related to this review:

- The proportion of children that are overweight has tripled among adolescents in the past 20 years, and currently represents the most prevalent nutritional disease among American children.[92] [93] [94]

- Childhood body weight and composition are important determinants of overweight and obesity in adulthood.[95] [96] Roughly 50% of primary school and 80% of obese high school students become obese adults.[97]

- Prevention and treatment requires the identification of children likely to become obese during adulthood via predictive measures such as Body Mass Index (BMI; kg/m^2). BMI is the most commonly used index of overweight and helps to identify children with a high probability of impending adult obesity.[98]

- BMI is a measure of body weight adjusted for stature that correlates with measures of body fatness, as well as secondary complications of obesity.[99] [100] [101] Greater than 60% of clinically obese children are also at increased risk of developing diabetes, hypertension and cardiovascular disease, as well as increased adult morbidity and mortality.[102] [103]

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[92] Troiano RP, Flegal KM. Overweight children and adolescents: description, epidemiology, and demographics. *Pediatrics*. 1998;101:497-504.
[93] Barlow SE, Dietz WH. Obesity evaluation and treatment: expert committee recommendations. *Pediatrics* [serial online]. 1998;102(3). Available at: http://www.pediatrics.org/cgi/content/full/102/3/e29.
[94] Ogden CL et al., op. cit.
[95] Abraham S and Nordsieck M. Relationship of excess weight in children and adults. *Public Health Rep*. 1960;75:263–273.
[96] Guo SS, Chumlea WC, Roche AF, Siervogel RM. Age- and maturity-related changes in body composition during adolescence into adulthood: the Fels Longitudinal Study. *Int J Obes Relat Metab Disord*. 1997;21:1167–1175.
[97] Ibid.
[98] Guo SS, Roche AF, Chumlea WC, Gardner JD, Siervogel RM. The predictive value of childhood body mass index values for overweight at age 35 y. *Am J Clin Nutr*. 1994;59:810-819.
[99] Dietz W, op. cit.
[100] Dietz WH, Robinson TN. Use of the body mass index as a measure of overweight in children and adolescents. *J Pediatr*. 1998;132:191-193.
[101] Freedman DS et al., op. cit.
[102] Steinbeck KS. The importance of physical activity in the prevention of overweight and obesity in childhood: a review and an opinion. *Obes Rev*. 2001;2(2):117-130.

➢ Furthermore, childhood and adolescent obesity may carry over into adulthood.[104] [105] [106] [107] [108] Measures of BMI typically emphasize correlations between childhood and adulthood values.

➢ Although adult BMI values are largely independent of those measured during infancy, they are related to childhood BMI patterns beginning at approximately age six.[109] [110] [111] For instance, rapid change in BMI at age six is associated with high, predicted BMI values at age sixteen.[112]

➢ Furthermore, additional analyses have shown that patterns of change in BMI during later childhood and adolescence are closely related to those during early childhood.[113] The American Academy of Pediatrics has recommended that annual childhood BMI measurement be made to help foster prevention and early identification of at risk for or already overweight children.[114]

The Commission deliberated on the costs and benefits of implementing an assessment program that deployed BMI as a screening tool that could inform education, prevention and intervention strategies for nutritional educational and health promotion in Maine schools.

Carbonated Beverage Tax

In response to the directive that the Commission consider strategies available to encourage more nutritious offerings, the Commission examined the nutritional value and impact of soft drinks consumed by children and adolescents. The Commission presents the following findings from its review:

➢ Over the last two decades, consumption of soft drinks by children and adolescents has escalated dramatically. This increase in soft drink consumption has been simultaneous with a decrease in dairy consumption.

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[103] Stephens M. Children, physical activity, and public health: another call to action. *Am Fam Phys*. 2002;65(6):1033-1034.
[104] Must A, Jacques PF, Dallal GE, Bajema DJ, Dietz WH. Long-term morbidity and mortality of overweight adolescents: a follow-up of the Harvard Growth Study of 1922 to 1935. *N Engl J Med.* 1992;327:1350-1355.
[105] Serdula MK, Ivery D, Coates RJ, Freedman DS, Williamson DF, Byers T. Do obese children become obese adults? A review of the literature. *Prev Med.* 1993;22:167-177.
[106] Guo SS, 1994, op. cit.
[107] Klesges RC, Klesges LM, Eck LH, Shelton ML. A longitudinal analysis of accelerated weight gain in preschool children. *Pediatrics*. 1995;95:126-132.
[108] Whitaker RC, Wright JA, Pepe MS, Seidel KD, Dietz WH. Predicting obesity in young adulthood from childhood and parental obesity. *N Engl J Med.* 1997;337:869-873.
[109] Must A. et al., op. cit.
[110] Abraham S, Nordsiek M, op. cit.
[111] Guo SS, 1997, op. cit.

[112] Rolland-Cachera MF, Deheeger M, Bellisle F, Sempé M, Guilloud-Bataille M, Patois E. Adiposity rebound in children: a simple indicator for predicting obesity. *Am J Clin Nutr*. 1984;39:129–135.
[113] Ibid.
[114] American Academy of Pediatrics. A policy statement: prevention of pediatric overweight and obesity. *Pediatrics*. 2003;112(2):424-430.

- According to the US Department of Health and Human Services *Healthy People 2010* objectives, only 14% adolescent females are currently receiving the USDA recommended amount of calcium.[115] This goal is becoming ever more challenging since milk intakes decreased by 36% while that of sodas and fruit drinks almost doubled from the late 1970s to the mid 1990s.[116]

- This is of no surprise when you evaluate the consumption patterns of pre-school children. Among pre-school children, 40% consume up to 8.9 ounces of soft drinks a day, and 11.7% of pre-school children consume 9.0 ounces or more of soft drinks a day.[117]

- While few resources are available for proper nutrition education, billions of dollars are spent every year by soft drink companies to promote beverages of minimal nutritional value, with specific emphasis on marketing to children and adolescents.[118] [119] [120] [121] [122] In order to properly counter these messages, revenue to develop school based education programs are necessary.

- One source of income to counter aggressive marketing towards children is to apply a small tax on the syrup used to produce carbonated beverages.[123] These small taxes are so minuscule that consumers feel little or no effect of this added cost, while income for health education programs from this tax can be quite large.

The Commission discussed the costs and benefits of levying of a tax on carbonated beverage products as a strategy for altering the consumption patterns of these products and as a means to fund campaigns that promote health education programs.

2. Government Involvement in Nutritional Choice

Several elements of the Commission's charge included study of potential influences of State government on matters relating to eating habits and health awareness. The Commission's key findings concerning the role of government in consumers' nutritional choice are described below.

Healthy Foods and Public Benefit Programs

[115] U.S. Department of Health and Human Services. *Healthy People 2010: Understanding and Improving Health*. 2nd ed. Washington, DC: U.S. Government Printing Office, November 2000.
[116] Bowman SA. Beverage choices of young females changes and impact on nutrient intakes. *J Am Diet Assoc*. 2002;102(9):1234-1239.
[117] Harnack L, Stang J, Story M. Soft drink consumption among US children and adolescents: nutritional consequences. *J Am Diet Assoc*. 2001;101:798-802.
[118] Britney's twist. *Beverage Industry News*. 2002;May:43.
[119] Hitchings EJ, Moynohan PJ. The relationship between television food advertising recalled and actual foods consumed by children. *J Human Nutr Diet*. 1998;11:511-517.
[120] Prince GW. Young tastes: Kids are people too. *Beverage World*. 2002: May:58.
[121] Rant LM. Baby bottles: How young can you market? *Beverage World*. 2001: September:18.
[122] Sen KC. Advertising intensity within the carbonated soft drink industry. *J Advertising Res*. 1997;37:37-47.
[123] Jacobson MF, Brownell KD. Small taxes on soft drinks and snack foods to promote health. *Am J Public Health*. 2000;90:854-857.

The Commission was charged with investigating methods of encouraging healthy food purchasing by families that receive public benefits. The Commission presents the following findings from this analysis:

- The federal government sets Food Stamp Program eligibility requirements. In March 2004, the number of Maine households receiving food stamps was 74,254 representing 144,856 individuals (11.4% of Maine's population). The monthly cost of the program in March 2004 was $11.9 million, all in federal dollars. In Maine, individuals participating in the Food Stamp Program are using an electronic benefit transfer (EBT) card to access their benefits.[124]

- The Dirigo Health plan "Healthy ME Rewards" incentive program will pay $100.00 to an enrollee who completes a clinical health risk assessment with his or her primary care physician and then meets the identified goals (e.g., lose a predetermined amount of weight, participate in a smoking cessation program, lower blood pressure) within one year.[125] It is anticipated that enrollees of the Dirigo Health plan will include individuals participating in the Food Stamp Program.

- Laws concerning food stamps are developed at the federal level. A recent attempt by Minnesota to obtain a waiver so that state could ban using food stamps for the purchase of junk food,[126] was denied by Eric M. Bost, Under Secretary for Food, Nutrition, and Consumer Services, U.S. Department of Agriculture, on April 28, 2004.

- 71% of Maine adults do not eat the recommended five servings of fruit and vegetables each day.[127]

- 77% of Maine high school students do not eat the recommended five servings of fruit and vegetables each day.[128]

- Evidence exists that the highest rates of obesity occur among populations experiencing the highest rates of poverty. Poverty is associated with lower food spending, low fruit and vegetable consumption, and lower-quality diets.[129]

- A review of intervention studies suggests that fruits and vegetables may play an important role in weight management. Increased consumption of fruits and vegetables and reduced fat

[124] Maine Department of Health and Human Services, Bureau of Family Independence, Food Stamp Program data, 2004.
[125] Email communication from Michelle Small, Esq., Director of Programs and Policy, Consumers for Affordable Health Care. Email to members of Subcommittee on Government Involvement in Nutritional Choice, Commission to Study Public Health. Dated Friday, June 18, 2004 at 8:12 AM.
[126] Howe P. Minnesota Seeks Food Stamp Ban on Junk Food. *The Associated Press*. March 11, 2004.
[127] Maine Behavioral Risk Factor Surveillance System, 2002.
[128] Maine Youth Risk Behavior Survey, 2003.
[129] Drewnowski A, Specter SE. Poverty and obesity: the role of energy density and energy costs. *American Journal of Clinical Nutrition*. 2004; 79:6-16.

intake was associated with weight loss and maintenance of weight loss. Some fruits and vegetables can improve satiety and reduce hunger.[130]

- Several current public benefit programs encourage healthy eating, including:

  - Maine's Women Infants and Children ("WIC") Nutrition Program, which provides healthy foods, nutrition education, breastfeeding support and referrals for pregnant, breastfeeding and non-breastfeeding postpartum women, infants and children under five that live in Maine and meet income guidelines or have a medical or nutritional need.

  - The US Department of Agriculture ("USDA") Food Stamp Nutrition Education provides grant support to Maine programs including the Maine Nutrition Network (MNN) and the University of Maine Cooperative Extension ("UMCE"). The federal share of this funding is $3.8 million in 2004. The UMCE provides two programs, the Maine Family Nutrition Program that supports nutrition education for any low income Maine person and the Expanded Food and Nutrition Education Program ("EFNEP") which provides nutrition education to families with children that are experiencing low income. The MNN provides school and community based nutrition education resources, including a social marketing campaign, developed to reach low income Maine people eligible to participate in the Food Stamp Program.

  - The USDA National School Lunch Program ("NSLP") and National School Breakfast Program ("NSBP") provides students whose families meet income criteria with free or reduced price meals. Nutrition standards for these school meals have been established for calories, total fat, saturated fat, protein, calcium, Vitamins A and C and iron. There are also summer meal programs and ongoing training of foodservice staff following USDA guidance.

Analysis of Michigan Law Concerning Discrimination Based on Personal Size and Applicability to Maine

Additionally, the Commission was directed to analyze Michigan law concerning discrimination based on personal size. The Commission presents the following findings from this analysis:

- Michigan law labels weight as a protected classification under its anti-discrimination statute, which requires equal opportunity for employment, housing, public service and educational facilities without discrimination based on religion, race, color, national origin, age, sex, height, weight or marital status.[131] Michigan has awarded damages to individuals who proved that they lost employment or housing opportunities or were denied access to educational facilities solely because they were overweight.

[130] Rolls BJ, Ello-Martin JA, Carlton Tohill, B. What can intervention studies tell us about the relationship between fruit and vegetable consumption and weight management? *Nutrition Reviews*. 2004; 63(1): 1-17.
[131] Mich. Comp. L. Ann., § 37.2101.

➢ The Maine Human Rights Act requires the State to continually review "all practices infringing on the basic human right to a life with dignity so that corrective measures may, where possible, be promptly recommended and implemented, and to prevent discrimination in employment, housing or access to public accommodations on account of race, color, sex, physical or mental disability, religion, ancestry or national origin. . . ."[132] This mandate is very broad and the implementing regulations track federal law which has found morbid obesity to be a disability in some cases. Under existing law, Maine citizens have the same protections against discrimination as Michigan citizens and there is no need for a statutory change.

Nutrition Information on Menus and Menu Boards at Chain Restaurants

Based on a communication from the Joint Standing Committee on Business, Research and Economic Development, the Commission understood its charge to include examination of the concept of dissemination of caloric information at chain restaurants. The Commission presents the following findings from this analysis:

➢ In April of 2004 Ruby Tuesday became the first national restaurant chain to provide comprehensive nutritional information throughout its more than 700 restaurants on all food items on their main menu. Sandy Beall, CEO and founder stated in an April 2004 press release, "We are committed to offering our guests plenty of choices. This means not only providing them with healthier menu options, along with their old favorites, but also offering information they need to make informed decisions."[133] Since that time, however, Ruby Tuesday has removed nutritional information from its menus and published the information in a separate booklet placed on customers' tables in its restaurants.

➢ Under the current system of voluntary labeling, approximately two-thirds of the largest chain restaurants do not provide any nutrition information.[134] The approximately one-third of restaurants that do provide nutrition information usually do so on websites or hard-to-find and difficult-to-read posters or brochures in their stores.[135]

➢ In 1999, the USDA studied the impact of away-from-home foods on the quality of Americans' diet.[136] These researchers, along with others, have found that eating out has been increasingly popular for Americans. Americans spend more than 45% of their food budget and consume approximately 34% of their total calories on food and beverages outside the home. In 1970, only 26% of food dollars were spent on food consumed outside the home. In 1978, 18%

[132] 5 M.R.S.A. §§ 4551-4631.
[133] Available at: http://www.rubytuesday.com.
[134] Center for Science in the Public Interest. *Anyone's Guess: The Need for Nutrition Labeling at Fast-Food and Other Chain Restaurants*. Washington DC, November 2003.
[135] Ibid.
[136] Lin B, Guthrie J, Frazao E. *Away-From-Home Foods Increasingly Important to Quality of American Diet.* Washington, DC: U.S. Dept. of Agriculture, Economic Research Service, 1999. Agriculture Information Bulletin No. 749.

of calories were from food consumed outside the home.[137] In 1977-78, only 2% of meals were consumed at fast food restaurants. In 1995, that number jumped to 9%.[138]

- Food eaten outside the home, on average, is higher in fat and calories than food eaten at home.[139] Children eat almost twice as many calories when they eat a meal at a restaurant (770 calories) compared to at home (420 calories).[140] Studies have found a positive association between eating out and higher caloric intake and higher body weights. Whites who eat fast food twice a week or more have 50% greater risk of obesity than do those who eat this way once or less.[141]

- The current sizes of food offered at fast food chains are often 2 to 5 times larger than when the food item was first introduced. In 1955, McDonald's offered one size of French fries at 210 calories. Until this year when McDonald's eliminated "super sizing," a super size order of French fries provided 610 calories.[142]

- Larger portions encourage people to eat more,[143] but most consumers are unaware of the calories they are consuming. People have a difficult time estimating calories and portion sizes. A study by New York University and the Center for Science in the Public Interest found that even well trained professionals could not accurately estimate the calorie content of typical restaurant meals. In the study, dietitians consistently underestimated caloric values.[144]

- The Nutrition Labeling and Education Act ("NLEA") of 1990 requires comprehensive, consistent food labeling on almost all packaged foods sold at supermarkets, convenience stores and other retail stores. NLEA explicitly exempts restaurants; the only requirement concerning restaurants is that when a restaurant makes a health or nutrient-content claim for a food or meal, nutrition information relevant to that claim must be available.[145] Three-quarters of adults report using food labels[146] and using food labels is associated with eating more-healthful diets.[147] An

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[137] Lin B et al., op. cit.
[138] Ibid.
[139] Ibid.
[140] Zoumas-Morse C, Rock CL, Sobo EJ, Neuhouser ML. Children's Patterns of Macronutrient Intake and Associations with Restaurant and Home Eating. *Journal of the American Dietetic Association*. 2001;101:923-925.
[141] Pereira M, et al. Fast Food Meal Frequency and the Incidence of Obesity and Abnormal Glucose Homeostasis in Young Black and White Adults: The CARDIA Study. *Circulation*. 2003;107:e7001.
[142] Young LR, Nestle M. Expanding portion sizes in the US marketplace: Implications for nutrition counseling. *Journal of the American Dietetic Association*. 2003; 103: 231-234.
[143] Rolls BJ, Morris EL, Roe LS. Portion size of food affects energy intake in normal-weight and overweight men and women. *Am J Clin Nutr*. 2002;76:1207-1213.
[144] Backstrand J, Wootan MG, Young LR, Hurley J. *Fat Chance*. Washington DC: Center for Science in the Public Interest, 1997.
[145] Food and Drug Administration (FDA), U.S. Dept. of Health and Human Services. *Nutrition Labeling of Restaurant Foods*. 21 C.F.R., sec. 101.10, 2001, p.47.
[146] US Dept. of Health and Human Services, Healthy People 2000 Final Review. Hyattsville, MD: US DHHS, CDC, NCHS, 2001b. DHHS Publication No. 01-0256.
[147] Neuhouser M, Kristal AR, Patterson RE. Use of Food Nutrition Labels is Associated with Lower Fat Intake. *Journal of the American Dietetic Association*. 1999;99(1):45-53.

unpublished project by the Heart Institute of Spokane found that calorie labeling on restaurant menus in four participating establishments led to lower calorie selections.[148]

➢ The 2001 U.S. Surgeon General's "Call to Action" to reduce obesity included a recommendation to "increase availability of nutrition information for foods eaten and prepared away from home."[149] A 2003 poll conducted for Harvard University found that 62% of Americans either strongly support or somewhat support requiring restaurants to list nutrition information, such as calories, on menus.[150]

➢ Note: Representatives of the restaurant industry registered some objections to the concept of requiring nutrition information on menus and menu boards, during the Commission's deliberations on potential recommendations. The Commission believes that legislation crafted in accordance with the recommendations presented later in this report would adequately address these concerns.[151]

3. State Employment and Nutrition

A cluster of the Commission's duties addressed the specific population of State employees, and the potential for generating health care cost savings based on implementing initiatives that encouraged and supported health and wellness in that population and in the institutions that support that population. The Commission's key findings concerning the potential for health care cost savings resulting from healthy lifestyle initiatives focused on State employment are presented below.

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[148] Heart Institute of Spokane. Menu2 Pilot Results. Available at: http://this.org/comm_edu/menu2.html. Accessed on July 16, 2004.

[149] U.S. Dept. Of Health and Human Services. *The Surgeon General's Call to Action to Prevent and Increase Overweight and Obesity*. Rockville, MD: U.S. Dept of Health and Human Services, Public Health Service, Office of the Surgeon General, 2001.

[150] Lake, Snell, Perry and Associates. *Obesity as a Public Health Issue: A Look at Solutions.* Results from a National Poll for The Harvard Forums on Health conducted May 28 through June 1, 2003.

[151] These concerns have been incorporated into the Commission's recommendations as follows: (1) *Variation due to customized orders or unavoidable variation in preparation/fear of lawsuits*: Most chain restaurant meals are standardized in all aspects of preparation, portion size and ingredients. However, included in the proposed legislation based on the Commission's recommendations is a statement that a restaurant is not out of compliance with labeling requirements if the calories posted on the menu or menu board vary somewhat due to hand assembly or customer substitutions. (2) *Cost of printing menus*: Menus across chains differ from restaurant to restaurant so are already customized for each location. For example, calls to restaurants during the last legislative session found that a McDonald's Big Mac in Farmington was $2.35 while it was $2.69 in Biddeford. A Ruby Tuesday Turkey BLT was $7.49 in Bangor but $7.48 in Presque Isle. The cost of adding the term "cal" and a number will be minimal. (3) *Cost to analyze food*: The vast majority of the largest chain restaurants with more than 20 locations have this information available. If a chain does not have this information, the one-time cost per menu item is approximately $50-$100.

State Employee Nutrition Counseling, Physical Activity, Health Risk Identification And Management

The Commission's charge included an analysis of the costs and benefits of creating fitness centers for State employees The Commission presents the following findings from this analysis:

- As reported by Frank Johnson, Executive Director of the Office of Employee Health & Benefits, when current State employees are compared with other Maine Health Management Coalition employers, State employees have a greater prevalence of diabetes, cardiovascular disease, depression, and back injuries. It has been documented that obesity can be a contributor to all of these conditions.[152] The Commission believes that a comprehensive worksite model can significantly decrease the impact of these health problems.

- Within state government a small number of health improvement strategies already exist. These strategies include: formation of wellness teams, expansion of the role of departmental health and safety committees, implementation of worksite coordinator training programs, implementation of disease specific programs, introduction of pilot weight management programs and the development of a collaborative model to assess and manage health risks on a pilot basis. A more structured, multifaceted program with dedicated resources is necessary to achieve the desired results. Mr. Johnson described that a major goal of the Office of Employee Health and Benefits is to develop a statewide comprehensive health improvement infrastructure for all insured members.

- As a general matter, however, insufficient State funds are provided to support employee health and wellness activities.

- Currently, only one department (Department of Transportation) has a full-time employee (FTE) devoted to health improvement and employee wellness. One department (Department of Behavioral and Developmental Services) has one FTE split between employee wellness and employee safety. All other departments rely on volunteer health improvement coordinators.

- It has been demonstrated that preventive measures such as increased physical activity, improved nutrition, tobacco cessation, and early detection and intervention may prevent heart disease, stroke and other chronic diseases. Healthy eating behaviors lower the risk for many chronic diseases, including obesity, heart disease, stroke, some types of cancer, diabetes and osteoporosis.[153]

- The value of flextime policies in terms of employee health and wellness at places of State employment is demonstrated in the following example provided by a State of Maine supervisor. An employee who strongly prefers water aerobics for her physical activity faced a scheduling problem. The class is offered at 9:00 a.m. on two days of the week. The employee worked it out

[152] See *Inventory of Research Relating to Worksite Health Promotion*, attached as part of Appendix D.
[153] Ibid.

with her manager that she can go to aerobics those two mornings a week and then works later in the day on those days by utilizing flex time.

➢ An employee wellness center currently is being implemented on site at the former Augusta Mental Health Institute campus in Augusta. Since this is only easily accessible to those on that side of the Kennebec River there is concern about accessibility for those on the other side of the river, and, importantly, for insured members statewide.

➢ The State has added safety to its performance management policies. These policies have been used by Maine employers to create workplaces that support good health, much like safety objectives have been used in manufacturing settings for the past 25 years. Maine School Administrative District ("MSAD") 11, Acheron Engineering, and Cianbro are Maine employers who have created such policies.

Healthy Food Options at State Buildings

The Commission's charge also included an analysis of the impact of food offerings in State facilities on obesity rates. The Commission presents the following findings from this analysis:

➢ Based on information obtained from senior staff at the Centers for Disease Control and Prevention's National Center for Disease Prevention and Health Promotion, Division of Nutrition and Physical Activity, performing an analysis of whether food offered for sale in places of state employment contributes to the rising rate of obesity in Maine is neither feasible nor possible. However, information provided in peer-reviewed articles about promotion of employee health suggests a variety of strategies that can be undertaken in order to improve the variety of healthy food options available to employees. When these strategies are included in a comprehensive approach to improving worksite wellness, changes in employee consumption patterns do occur. The Commission believes that its recommendations concerning healthy food choices are feasible, and that many are currently in place in private business settings.

➢ The Division for the Blind and Visually Impaired, within the Department of Labor, oversees all contracts for cafeterias, snack bars, and vending machines. Healthy choices, such as 100% fruit juice, non-fat milk, fruits, vegetables, and healthy snacks are available at other worksites in Maine, including L.L. Bean, numerous hospitals, Anthem Blue Cross/Blue Shield, and others. The current contract at the Cross State Office Building cafeteria requires that 5% of choices be healthy. Contract requirements can be modified to require or promote sale of healthy food options. Cold vending machines that can provide vegetables and fruits are available for higher volume worksites.

➢ The Division for the Blind and Visually Impaired has been given responsibility to contract with business managers for approximately 16 state-run cafeterias and snack bars in the state, of which three are seasonal locations. Those contractors also manage vending machines located near the cafeterias and snack bars. Each cafeteria and snack bar is run as a stand-alone business. There is currently no means of measuring consumption of specific food items. The logical

means to monitor consumption is to develop a system by which inventories are monitored, through some combination of tracking purchases and tracking physical inventory in storage.

➢ Without great cost, the Division of the Blind could perform nutrient analysis of items that are major sellers in the cafeterias and snack bars under their purview, and post nutritional content and calories of those foods. Providing caloric information about food offerings will allow purchasers to make informed decisions about the foods they choose.

➢ At present, not all departments have assigned wellness coordinators, and those that are identified do not systematically interact with those on food choice committees who would help to ensure a consistent approach to promoting health in state employee worksites.

Health Insurance Coverage for Obesity Prevention and Nutrition Counseling

The Commission's duties included an examination of the costs and benefits of providing obesity-related health coverage for State employees. The Commission presents the following findings from this analysis:

➢ The U.S. Preventive Services Task Force[154] recommends that clinicians screen all adult patients for obesity and offer intensive counseling and behavioral interventions to promote sustained weight loss for obese adults. Its recommendation is based upon evidence that high-intensity counseling—about diet, exercise, or both—together with behavioral interventions aimed at skill development, motivation, and support strategies produces weight loss in adults who are obese (BMI $\geq$ to 30 kg/m2). Additionally, the Diabetes Prevention Program clinical trial has demonstrated that modest weight loss and changes in lifestyle can significantly reduce the development of diabetes in adults who are overweight (BMI $\geq$ to 25 kg/m2), 45 years or older and have prediabetes (impaired glucose tolerance or impaired fasting glucose).

➢ The Commission's brief review of the availability of health insurance benefit coverage for intensive nutrition counseling and behavioral interventions has proven that coverage for these services is inconsistent across plans, many plans providing no coverage for recommended services. There is currently no existing methodology to estimate costs, benefits and savings of health coverage for these issues. Maine State government can work with the Centers for Disease Control and Prevention and other states to help to develop and pilot such tools.

➢ On July 15, 2004, the federal Department of Health and Human Services announced a new Medicare coverage policy that would remove barriers to covering anti-obesity interventions if scientific and medical evidence demonstrate their effectiveness in improving Medicare beneficiaries' health outcomes.

➢ Maine's Bureau of Medical Services states that the only time MaineCare pays for nutritional services of any kind is if there is a diagnosis of disease for which nutritional therapy is required.

[154] Information concerning the U.S. Preventive Services Task Force can be obtained at: http://www.ahrq.gov/clinic/3rduspstf/obesity/obesrr.htm.

Thus coverage is usually associated with need for enteral and/or parenteral therapy in an in-patient setting. No nutrition counseling is available for obesity prevention.

Permanent Commission to Prevent Overweight and Obesity in the State of Maine

Given the magnitude and complexities of the public policy issues addressed by this legislative study, the Commission members concluded that a permanent public health commission on the prevention of overweight and obesity and the promotion of healthy lifestyles is warranted. The following finding summarizes the scope and focus of such an ongoing commission on public health:

1) The State of Maine will appoint commissioners to a permanent public health commission on prevention of overweight and obesity and promotion of healthy lifestyles.

2) The commission will: continue to collect and evaluate evidenced based science on overweight prevention;

3) Coordinate and market various state wellness initiatives;

4) Continue to seek state, federal and foundation grant support for community-based wellness and obesity prevention programs, and;

5) Facilitate the evaluation of existent public health and Department of Education obesity prevention programs.

The preceding findings were accompanied with preliminary recommendations submitted by the three Commission subcommittees to the full Commission. These preliminary recommendations were then presented to the public and interested parties and were used to seek public comment. The next section of this report will detail the specific recommendations that were reviewed and adopted by the full Commission at its final meeting.

III. RECOMMENDATIONS

The Commission recommends that the State of Maine, including the Legislature and appropriate Executive branch agencies and departments, take action as described in this section. The recommendations described below were unanimously endorsed by the members of the Commission, unless otherwise indicated.

Advertising to Children:

1. Direct the Bureau of Health within the Department of Human Services to define "healthy foods and beverages" through major substantive rules[155]; direct the Attorney General to determine whether advertising of foods and beverages other than "healthy foods and beverages" directed at children 12 years or younger legally can be restricted on Maine television stations; and direct the Bureau of Health to evaluate and recommend to the Legislature whether these advertisements should be restricted on Maine television stations.

Commission member opposed: Senator Karl Turner

2. Direct a letter to Maine's Congressional delegation and federal regulatory authorities calling for limits on national television advertising of foods and beverages other than "healthy foods and beverages" directed at children.

3. By the end of September 2007, prohibit advertising of foods and beverages other than "healthy foods and beverages" on school grounds.

School Nutrition:

4. As of September 2006, food and beverages sold or distributed on school grounds but outside of school meal programs (e.g., a la carte items, fund raisers, vending machines, etc.) must:

a. Adhere to "healthy foods and beverages" standards and "single serving standards"[156];

[155] The definition of "healthy foods and beverages" is to be determined by the Bureau of Health through the major substantive rulemaking process. The Commission recommends that the Bureau of Health use the following definition: "healthy foods and beverages" means fruits, vegetables, whole grains, low-fat animal protein foods, low-fat dairy products, legumes, soy products, nuts and seeds. "Healthy foods and beverages" do not include any item that includes more than 30% of its calories from total fat or more than 10% of its calories from saturated fat, excluding seeds and nuts; any item for which 35% of its weight comes from refined sugars, excluding fruits, vegetables and low-fat dairy products; any item which contains more than 360 mg of sodium per serving; and any meal which includes more than 480 mg of sodium per serving.

[156] "Single serving standards" include the following maximum portion sizes: for beverages other than water, 12 oz.; for frozen desserts and ice creams, 3 fluid oz.; for cookies and cereal bars, 2 oz.; for baked items other than cookies and cereal bars, 3 oz.; and for pre-packaged snacks, 1.25 oz.

b. For other than low-fat dairy, fruits, vegetables, seeds and nuts, contain no more than 10% of calories from saturated plus trans fat, 30% of calories from total fat and 35% of weight from refined sugars;

c. Not include soda (non-diet or diet) or candy;

d. For milk, be either 1% fat or less; and

e. For juice, be 100% fruit juice.

Changes to this list of permissible foods and beverages on school grounds may be made as necessary by the Department of Education through the routine technical rulemaking process.

Commission member opposed: Oakley Jones

5. By January 2006, the Department of Education, in collaboration with the Maine Dairy and Nutrition Council, shall implement a pilot program to install dairy vending machines (selling flavored and/or unflavored 1% or less-fat milk) in schools.

6. Food or beverages may not be used as a reward or incentive for learning or behavior in a school setting.

7. At the termination of an existing contractual agreement for teachers in a school administrative district, all new teachers' contractual agreements must provide at least 20-minute school lunch periods for students and teachers to eat.

8. By the end of August, 2007, schools must post nutritional information for menu items, including age-appropriate daily values, total calories, saturated and total fat percentages, sodium content, sugar content and total carbohydrate content (calories only for menu boards).

9. Encourage the Departments of Education and Agriculture to collaborate through the Farm to School Program to provide local fruits and vegetables in schools.

10. Schools must provide nutrition education for students, teachers and staff through a coordinated school health program and in accordance with Maine Learning Results guidelines.

Statewide Body Mass Index ("BMI") Assessment:

11. School nurses must annually assess the height and weight of all Maine school children in grades K, 1, 3, 5, 7 and 9. These measurements must be obtained privately and confidentially by trained school nurses or physical education teachers. The height and weight data -- disaggregated by age, gender, and school -- shall be submitted electronically to a Department of Education or Bureau of Health statistician or epidemiologist. The assessment data shall be analyzed for Body Mass Index (BMI) percentile and shall be aggregated by grade level, school administrative unit and the State. The assessment data shall be reported, by grade level aggregates, to school administrative unit s annually and to Legislature every 3 years. A legislative appropriation must be provided to schools for this assessment, including financial support to schools for measurement training for school nurses and physical education teachers, measurement equipment, (e.g., scales and stadiometers); and to the Department of Education or Bureau of Health for central data analysis and reporting by a statistician or epidemiologist. Each school shall provide the parents of school children who participate in this assessment with a confidential report on their child's weight, height and BMI. The report shall also include: a) an explanation of the limitation of BMI as only a screening -- rather than evaluation -- tool for diagnosing overweight; b) the suggestion they seek their Primary Care Provider's evaluation; and c) the implications for nutrition and physical activity, together with references to local community health programs for nutrition and physical activity resources.

Physical Activity:

12. The Department of Transportation must spend at least 1% of its total annual highway budget allocation, excluding non-road related budget items such as bridges and rails, on construction of shared-use paths to schools (with some community choice), and must study the economic development rewards of this construction.

13. Schools must require elementary and middle school students to participate in 150 minutes of physical activity per week outside of recess, and high school students to participate in 220 minutes of physical activity per week. The Department of Education and Bureau of Health must collaboratively publish a list of free and accessible physical activity options. Schools also are encouraged to require daily recess for all elementary and middle school students before lunch. Funding must be provided for a physical education consultant within the Department of Education.

14. Health education and physical education must be included within some form of statewide assessment (e.g. Maine Learning Results), and must include a parent outreach component.

15. The Commission endorses the "Maine in Motion" Program that encourages physical activity for all Maine citizens, is led by the Governor and is administered by the Maine Governor's Council on Physical Fitness, Sports, Health and Wellness.

General recommendations:

16. The Legislature must provide funding for the following activities: coordinated school health programs; yearly school BMI assessment; increased availability of fresh fruits and vegetables in schools; and media campaigns encouraging healthy diets and physical fitness. It is recommended that funding for these initiatives be derived from sources that are determined by the Legislature to be causes of obesity, and that no funds be allocated from the Fund for a Healthy Maine.

17. Continue the Commission to Study Public Health through the 122nd Legislative Session, to collect and evaluate evidence, coordinate wellness initiatives, seek grant funding and evaluate existing programs.

Healthy Food Purchasing:

18. Require chain restaurants with 20 or more nationwide locations to provide caloric information for food items on menus or menu boards. A restaurant shall not be considered out of compliance with this directive if an item's actual caloric value varies insubstantially from the provided information due to assembly by hand or variation requested by a customer.

Commission members opposed: Oakley Jones, Senator Karl Turner

19. Direct Dirigo Health and the Food Stamp Program to study the feasibility of providing information to participants of both programs as to how making healthy food purchases may help them secure a $100 credit through the "Healthy Me Rewards Program" as part of the Dirigo Health plan. The Commission also endorses composing a letter to Maine's congressional delegation requesting that changes to the Food Stamp Program encourage purchases of more healthy foods by participants.

State Employment:

20. The Office of Employee Health and Benefits must implement a comprehensive, population-based approach to obesity-related risk factors and disease management, including nutrition counseling, physical activity, health risk identification and management. Implementation should include: (1) creation of one or more full-time positions within State government to support the development of a health improvement

infrastructure; (2) requirement of flex-time policies covering all State employees to encourage and support employee health; (3) performance of an inventory of the availability of fitness centers in locations of heavy concentrations of State employees; (4) creation of performance management objectives through which supervisors and managers support and encourage healthy lifestyles among employees they supervise; and (5) dedication of at least 0.5% of annual health insurance premiums for all State insured members to support employee health and wellness.

21. Create an expedited bid process for pilot projects related to employee health, allowing quicker approval.

22. Direct the Department of Labor to implement recommendations of food choice committees to include "healthy food and beverage" options at cafeterias, snack bars and vending machines under the purview of the Division of the Blind and Visually Impaired. These food choice committees must consider providing price incentives for purchase of healthy foods and beverages.

23. Direct the Department of Labor to develop a system for tracking food purchases at cafeterias and snack bars and in vending machines under the purview of the Division of the Blind and Visually Impaired.

24. Require that nutritional analysis be performed on all major selling food items, and that caloric and nutritional information be posted, at cafeterias and snack bars under the purview of the Division of the Blind and Visually Impaired.

25. Require that food choice committees for cafeterias and snack bars under the purview of the Division of the Blind and Visually Impaired include wellness coordinators from executive departments that use those cafeterias and snack bars.

Health Insurance Coverage:

26. Insurance carriers shall investigate the cost savings of including the following services as part of health insurance coverage for State employees, retirees and MaineCare participants, and if cost savings are shown, are strongly recommended to implement these services: BMI assessment; intensive counseling and behavioral interventions for all employees with BMI of at least 30kg/m2; and evidence-based interventions for all overweight employees (BMI of at least 25kg/m2) who are 45 years of age or older with prediabetes.

27. The Commission encourages insurance carriers licensed by the State to provide incentives for their insured to engage in the following services: BMI assessment; intensive counseling and behavioral interventions for all employees with BMI of at least 30kg/m2; and evidence-based interventions for all overweight employees (BMI of at least 25kg/m2) who are 45 years of age or older with prediabetes.

APPENDIX A

Membership List, Commission to Study Public Health

COMMISSION TO STUDY PUBLIC HEALTH
Resolve 2003, Ch 95

As Of Tuesday, November 04, 2003

Appointment(s) by the President

Sen. John L. Martin **Chair**
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APPENDIX B

Resolve 2003, Chapter 95

APPENDIX C

Annotated Bibliography for
Subcommittee on Schools, Children and Nutrition

Annotated Bibliography for
Subcommittee on Schools, Children and Nutrition

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APPENDIX D

Inventory of Research Relating to Worksite Health Promotion From the Subcommittee on State Employment & Nutrition

Inventory of Research Relating to Worksite Health Promotion

I. The link between health risks and healthcare utilization.

Section I Summary:

- A close relationship exists between individual health risks and the number and total cost of healthcare claims.
- Moving individuals from high-risk to low-risk is associated with significant reduction in claims cost.
- Maintaining low-risk status prevents high cost associated with moving toward high-risk
- Being at high-risk status for certain risk factors (stress, tobacco-use, overweight/obesity, physical activity) is associated with higher costs

Study	Purpose	Sample Size	Results
Yen LT, Edington D, Witting P. Amer J Health Promo, Sept/Oct 1991;6(1):46-54.	To investigate associations between health risk appraisal scores and employee medical claims costs in a manufacturing company.	12,984	As the number of risk factors increases, the number of claims increases # of risks — Increase in claims 0 — 1.0 1 — 1.9 2-3 — 2.9 4-5 — 3.8 6+ — 8.2
Edington D, Yen LT, Witting P. J Occup Env Medicine. 1997;39(11):1037-1046.	Using same population as above study, looked at the financial impact of changes in personal health practices.	12,984	• When high-risk individuals (3 or more risk factors) migrated to low-risk category (<3 risk factors), their medical claims dropped an average of $416. • When low-risk individuals migrated to high-risk, a claims cost increase of more than $600 was observed.
Anderson, D.R., Whitmer, R.W., Goetzel, R.Z., et. al. Amer J Health Promo, 15:1, 45-52, September/October, 2000.	To better understand the relationship between modifiable health risks and group-level health care expenditures.	46,025	• Using HERO (Health Enhancement Research Organization) database of health risk appraisals, authors compared the per capita cost of high-risk vs. low-risk employees, for multiple risk factors. See Attachment 1 for results.

II. The effectiveness of worksite health promotion and disease prevention interventions.

Section II Summary

- An overwhelming amount of evidence exists regarding the effectiveness of health promotion and disease prevention interventions on positive behavior change.
- There is adequate evidence indicating that health promotion and disease prevention interventions are effective at reducing healthcare costs.
- Health promotion and disease prevention can improve productivity. The link between health promotion interventions and productivity outcomes is receiving significant attention as these benefits can be significant and may be accrued over a shorter timeframe.

Study	Purpose	Sample Size	Type of Intervention	Outcomes	Results
Goetzel RZ, Dunn RL, Ozminkowski RJ, et al. J Occup Environ Med. 1998;40:538-545.	To evaluate the impact of Chevron's Health Quest fitness program on medical expenditures.	950	Fitness Program	Medical costs	Expenditures for participants were significantly lower for those who used the fitness center at least twice weekly
Baun W, et al. J Occup Med 28(1):18-22, 1986	To determine the effect of a corporate fitness program on absenteesim and health care cost.	517	Fitness Program	Absenteeism Medical Costs	Male and female exercisers had 20% and 46.8% lower rates of absenteeism than non-exercising controls; medical costs were lower for participants
Bowne D et al. J Occup Med 26(11):809-816, 1984	To investigate effects of an industrial fitness program on disability and health care costs.	205	Fitness Program	Medical Costs Disability	Medical costs reduced by 50%; disability cut by 20%
Lynch W et al., J Occup Med 32(1):9-12, 1990	Assess impact of a facility based corporate fitness program on the number of absentees from work due to illness.	2,232	Fitness Program	Absenteeism	After controlling for age and gender participants had 13.8% less absenteeism; decrease was related to level of participation
Tsai S, Bernacki E, Baun W. Preventive Medicine 17:475-482, 1988.	To evaluate injury prevalence and associated costs among participants of an employee fitness program.	6,104	Fitness Program	Safety/injuries Medical Costs Fitness	Exercisers and non-exercisers had equal number of injuries, exercisers over 50 had fewer medical costs and increased fitness levels
Goetzel, R.Z., Jacobson, B.H.,	Analysis of the total medical costs of	8,334	Multicomponent	Medical Costs	After 3rd year of program, non-participant costs were

Aldana, S.G., Vardell, K., and Yee, L. J of Occ and Env Medicine, 40:4, April, 1998.	participants and non-participants in P&G wellness program.				29% higher than participant costs. See Attachment 2.

Section II Continued…

Study	**Purpose**	**Sample Size**	**Type of Intervention**	**Outcomes**	**Results**
Chapman L. "Proof Positive:" Summex Corporation: Seattle, WA 2002:(page 8)	An Analysis of the Cost-Effectiveness of Worksite Wellness."	42	Multicomponent	Multiple outcomes	Assessed 42 of the most valid evaluations of multi-component worksite health promotion and disease prevention programs. Attachment 3 provides a summary of the strength of evidence for worksite health promotion and disease prevention.
Lechner, L. J Occ Env Medicine. 1997;39(5): 827-831.	This study examined the effects of fitness program participation on sick leave experience. Subjects were divided into high participation, low participation, and no participation over 1 year.	469	Fitness program	Sick leave experience	The high participation group experienced a 54.7% reduction (4.8 days) in the average number of sick leave days used over the course of one-year. No changes in other groups.
Wood E Am J Health Promot. 1989;4(2):128-133.	Study examined the prevalence of major risk factors and absenteeism at one and two years after introduction of a broad-based health promotion program at the worksite.	1,075	Multicomponent	Absenteeism Sick leave exper.	• 36.3% fewer absence days for participants vs. non-participants. • 36.7% lower sick leave costs for participants vs. non-participants
Serxner S, et al. J Occ Env Medicine. 2001; 43(1): 25-29.	Study evaluated a comprehensive worksite wellness program and its impact on short-term disability.	1,628	Multicomponent	Short Term Disability	• Net days lost for participants averaged 6 days less per person than non-participants. This is a 20% difference. • The cost savings in net days lost for participants was $396,900.

III. Return on Investment of Worksite Health Promotion Programs

Section III Summary:

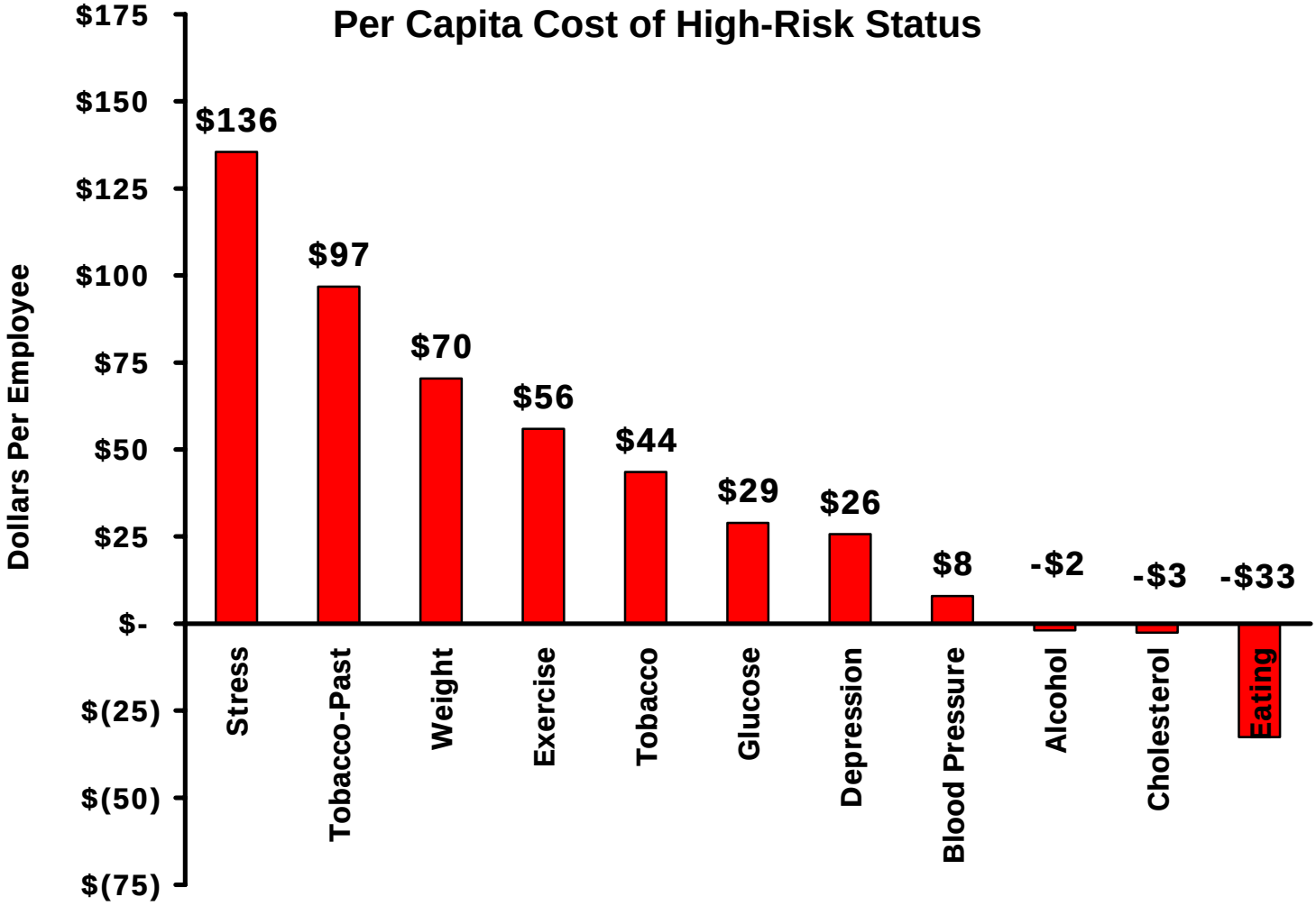
- Comprehensive programs produce a positive ROI, from $3.35 to $4.70 saved for every $1.00 invested.
- According to Pelletier, "these reviews (above) and those of this author (also above) clearly indicate that multi-component or comprehensive interventions rank higher in both clinical effectiveness and cost-effectiveness as compared with single-factor disease management programs such as smoking cessation."
- The best programs are those with interventions that cross all levels of prevention.

Since the mid-1990's, a number of reviews of comprehensive worksite health promotion and disease management programs have been conducted:

Study	Purpose	Results
Heaney CA, Goetzel RZ. A review of health-related outcomes of multicomponent worksite heath promotion programs. Am J Health Promot. 1997;11:290-307.	Heaney and Goetzel reviewed 47 studies that were based on 35 programs.	Authors concluded that the evidence for positive outcomes was "indicative/acceptable." *
O'Donnell M. Health impact of workplace health promotion programs and methodological quality of the research literature. Art Health Promot. 1997;1(3):1-7.	Review of 36 comprehensive worksite health promotion programs.	O'Donnell reviewed 36 studies and found the area of multi-component programs to be "indicative/acceptable." *
Aldana, S.G. Financial impact of health promotion programs: A comprehensive review of the literature. Amer J Health Promot 2001, 15:5, 296-320.	Aldana reviewed eight studies which measured health care costs and calculated cost benefit ratios.	The average cost benefit ratio was 1:3.35 (For every dollar spent, $3.35 was saved). Aldana also included five absenteeism studies in his review and found an average cost benefit ratio of 1:4.87.
Ozminkowski RJ, et al. Amer J Health Promot 1999; 14(1): 31–43.	Ozminkowski et al. evaluated the effect of Citibank's Health Management program.	Found a cost benefit ratio of 1:4.7, a program savings of $7.0 million.
Pelletier KR. Am J Health Promot. 2001;16(2):107-116.	A review and analysis of the clinical and cost-effectiveness studies of comprehensivehealth promotion and disease management programs at the worksite: 1998-2000 update.	Suggests that the vast majority of research to date indicates a positive clinical and cost savings.

*** Authors have developed a system to rate the quality of evidence regarding the effectiveness of worksite wellness on producing behavior changes and cost savings. An "Indicative/Acceptable" rating suggests that the research indicates a positive relationship between worksite wellness programs, behavior change, and cost savings. It also suggests that the study methodology was rigorous enough to accept the findings.**

Attachment 1:
Per Capita Cost of High-Risk Status



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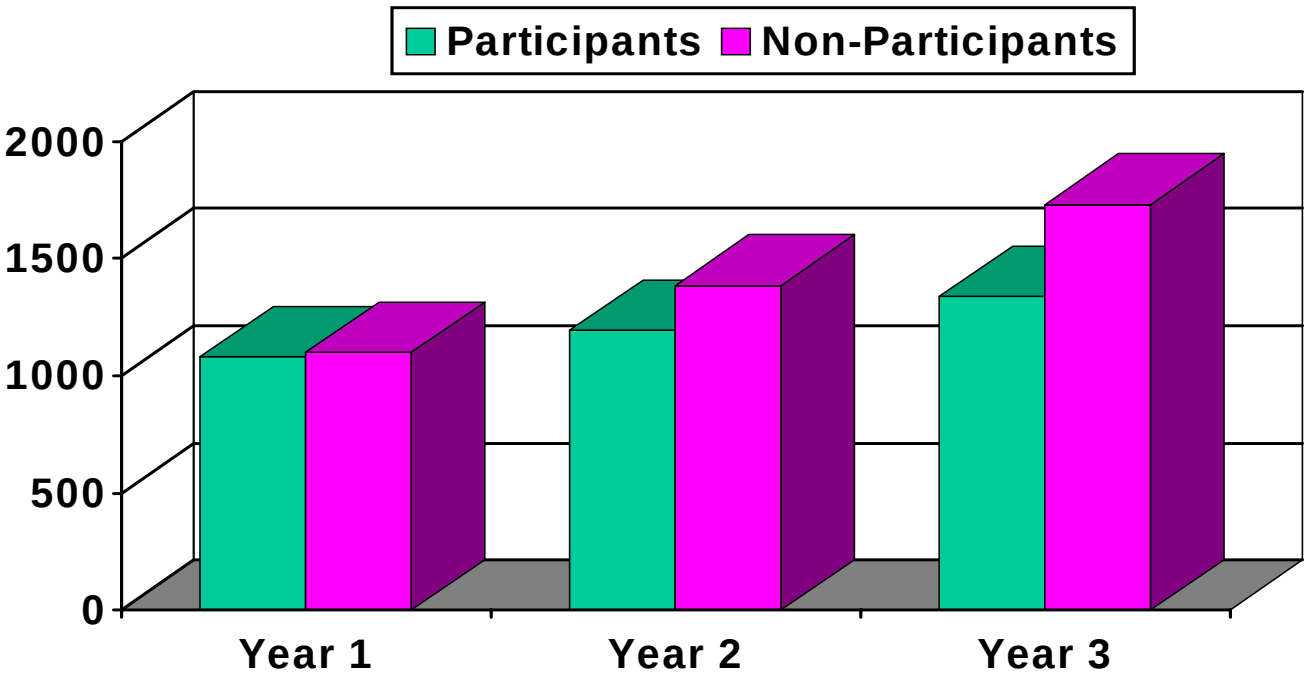
Attachment 2

Procter & Gamble:
Total Annual Medical Costs For Participants and Non-Participants In Health Check (1990 - 1992) (N=8,334)



Adjusted for age and gender; Significant at $p < .05$
*Participant costs were 29% lower

Ref: Goetzel, R.Z., Jacobson, B.H., Aldana, S.G., Vardell, K., and Yee, L. *Journal of Occupational and Environmental Medicine,* 40:4, April, 1998.

Attachment 3

Proof Positive: An Analysis of the Cost-Effectiveness of Worksite Wellness.

Type of Program or Target Behavior	Major Cause of Disease or Cost	Programs Alter Behavior	Programs Reduce Cost
Multi-Component	Very Strong	Strong	Very Strong
Hypertension Control	Very Strong	Very Strong	Strong
Tobacco Use	Very Strong	Strong	Strong
Medical Self-Care	Very Strong	Very Strong	Very Strong
Nutrition Education	Very Strong	Strong	Weak
Weight Management	Strong	Moderate	Weak
Physical Activity	Very Strong	Strong	Moderate
Stress Management	Very Strong	Moderate	Strong
Back Injury Prev.	Very Strong	Moderate	Strong
Cholesterol Reduction	Very Strong	Weak	Weak
High Risk Intervention	Very Strong	Very Strong	Strong

Chapman L. "Proof Positive: An Analysis of the Cost-Effectiveness of Worksite Wellness." Summex Corporation: Seattle, WA 2002:(page 8)

Healthy Maine Partnerships

The people dedicated to helping us live longer and healthier.
Bureau of Health, Department of Human Services

Performance Objective for School Principals

the people

Maine School Administrative District 11 (MSAD 11) is made up of the Central Maine communities of South Gardiner, Gardiner, West Gardiner, Randolph and Pittston. MSAD 11 employs approximately 300 teachers, staff and administrators. District wide there are a total of 2400 students. As part of the Coordinated School Health Program, a Wellness Team was formed with a mission to promote staff and student health.

the need

School principals and leadership agree that they should lead by example for the district toward improving the health of staff and students.

the idea

The MSAD 11 Administrative team voted unanimously to create a performance objective that would require administrators to find creative ways to support and encourage healthy lifestyles among staff and students. This performance objective would become part of every administrator's yearly evaluation. Each year when the superintendent conducts evaluations of building principals, the principal must demonstrate how they promoted or encouraged healthy behaviors. Specifically written into the evaluation is the promotion of physical activity, nutrition, and tobacco prevention and cessation.

the idea at work

The idea for an administrator performance objective was generated from a meeting between the School Health Coordinator (SHC), the Superintendent, and the Assistant Superintendent, regarding the need for administrators to take a more active role in health promotion. The SHC recommended that a performance objective related to health promotion be included on the yearly administrative evaluation. The Superintendent liked the idea and pitched it to Administrators at the next meeting. In March of 2003, the Administrative team voted unanimously to approve the addition. Furthermore, to encourage Administrators to take action, a list of strategies to use in promoting health improvement was generated and distributed. These strategies are listed on the second page of this document.

the cost

There were no continuous costs related to the addition on the evaluation, which makes it a perfect example of a creative, low or no cost idea employers can implement to support the well being of their employees. In most cases, it has been easy to promote the importance of health in a manner that doesn't cost money. For example, one principal often ends the daily announcements by making a health-related quote. Another principal now holds a healthy breakfast for staff that he cooks himself. Though this required a bit of funding, the costs were seen as worthwhile.

the results

Principals now consider health promotion as part of their daily job. The MSAD 11 staff is reaping the benefits of including health and well-being of staff and students as a priority among administration. Matt Houghton, Principal at Laura E. Richards School says, *"By modeling health, it has more value. I have seen a 100% increase in staff awareness about the importance of physical activity and nutrition because of the goals we established."* Other school leaders have taken the initiative to consider employee health an important part of the learning process. Barbara Evan, Principal at Pray St. School says, *"Physical health supports mental health, mental heath supports the ability to learn. Administrators need to be an advocate for health."*

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attachments & resources

See below for the MSAD 11 Performance Objective - Administrator Scoring Rubric

VISION/LEADERSHIP

Exploring	Transitioning	Transforming
Administrator occasionally discusses physical activity and nutrition with the staff and students.	Administrator encourages staff and students to find ways to become physically active and make healthy food choices.	Administrator actively supports and models healthy behaviors related to physical activity and nutrition.

Resource List for Administrators to support Teachers	Resource List for Administrators to support Students
1. Sit for 60 move for 3 2. Walking routes around halls, number of steps 3. Encourage use of stairs rather than elevators 4. Make contact with local gyms 5. Seasonal Incentives "Walking through Winter" 6. Smoking Cessation programs	1. 5 minutes of walking during class 2. Weekly Health messages 3. Health Month/Week 4. Healthy snacks in vending machines 5. Veggies available for snacks 6. Hiking classes 7. Visiting Physical Education/ Health classes 8. Walking to school 9. Promotion of extracurricular activities

7. 5 minute walks with students 8. Walking meetings with staff 9. Staff activities before or after school 10. Veggie snack cart in teachers room 11. Health Month 12. Health thought of the week 13. Build teamwork around incentive programs 14. Monday is walk with the Principal day! 15. Health tip or thought on every agenda 16. Walking routes around town including steps and mileage 17. Become an active member of the wellness team 18. Volunteer to serve on the Community Health Advisory Board 19. Promote ways in which you model a healthy lifestyle	10. Walking routes around halls 11. Celebrate Healthy Triumphs 12. What does my Principal do for Physical Activity? 13. What will your Principal have healthy today for lunch? 14. Celebrating students achievements around Physical Activity and Nutrition 15. Become a member of the wellness team 16. Volunteer to serve on the community health advisory board 17. Discuss with students ways in which you promote healthy lifestyles

***Note. This list is only a resource guide. There are many other ways you may promote health in your school. Please see the School Health Coordinator if you would like to discuss any of the above.**

Definitions of Key Terms

Body mass index (BMI) is a measure of body fat based on height and weight that applies to both adult men and women. BMI Categories:

- Underweight = <18.5
- Normal weight = 18.5-24.9
- Overweight = 25-29.9
- Obesity = BMI of 30 or greater

(Note: There is a different body mass index used for children that considers age and gender.)

Calorie – The Food and Nutrition Board of the National Academy of Sciences has developed Recommended Daily Allowances (RDA) for food intake. The recommended amount of energy (kilocalories, or "calories") to be consumed daily to maintain a healthy weight varies by age and gender. According to the RDA a woman in her 40's can consume approximately 2,200 kcal per day, and man of the same age can consume 2,900 kcal.

Cardiovascular disease are diseases of the heart (cardio) and blood vessels (vascular) often caused by a narrowing of the blood vessels, which is often due to accumulation of plaque in the lining of the blood vessels. CVD is the leading cause of disability and death in the United States, resulting in more premature deaths than any other illness.

Diabetes is a disease in which the body does not produce or properly use insulin. Insulin is a hormone that is needed to convert sugar, starches and other food into energy needed for daily

life. Type II diabetes (formerly known as adult-onset or non-insulin dependent diabetes) is caused by overweight and inactivity.

Disease management is a coordinated system of preventive, diagnostic and therapeutic measures intended to provide cost-effective, quality healthcare for a patient population who have or are at risk for a specific chronic illness or medical condition.

Flex time is a work schedule in which the worker is required only to work a minimum number of hours and is given latitude in deciding when to report for and leave work.

Health risk appraisals (HRA) - Screenings provide an assessment of an individual's health status and risk for adult-onset diseases.

Maine Health Management Coalition (MHMC) – The Mine Health Management Coalition is a coalition of employers, hospitals, health plans, and doctors working together since 1994 to improve the quality of healthcare in Maine.

Mandated benefit – A mandated benefit is one required by state law to be included in a health insurance policy.

Nutrient analysis – A nutrient analysis is a study of the components of food (like vitamins, minerals, protein, fat and carbohydrates) that help the body function and grow

Obesity – For adults, obesity is defined as a BMI (body mass index) over 30. For a person 5'7" tall, this translates to a body weight of approximately 190 pounds.

Overweight - For adults, a body mass index of 25 or more is considered overweight. A 5'7" person is overweight if he or she weighs more than approximately 160 pounds.

Primary prevention is prevention of disease in susceptible individuals or populations through promotion of health and specific protection, as in immunization, as distinguished from the prevention of complications or after-effects of existing disease.

Public Purchasers Steering Group - Steering group members include representatives of the Maine Education Association Benefits Trust, the Maine Municipal Association Health Trust, the Maine School Management Association and the University of Maine System, as well as state officials. The group was established by Executive Order and is expected to make an inventory of health-care and related expenditures by public purchasers and develop an overall purchasing strategy.

Return on investment (ROI) - A figure used to help make capital investment decisions. ROI is calculated by considering the annual benefit divided by the investment amount.

Risk factors - At least ten risk factors can help predict the likelihood of cardiovascular disease: heredity, being male, advancing age, cigarette smoking, high blood pressure, diabetes, obesity (especially excess abdominal fat), lack of physical activity, and abnormal blood cholesterol and homocysteine levels. The more risk factors a person has, the greater the likelihood of

developing heart disease. Heredity, gender, and age cannot be modified, but the others can be influenced by the individual's behavior.

Secondary prevention consists of prevention activities designed to intervene when risk factors or early indicators of disease are present.

Tertiary prevention consists of actions to slow or stop the progress of a disease during its advanced stages.

Worksite health promotion includes health education programs, employee health services and benefits, physical fitness and nutrition programs, health promotion policies and procedures, counseling and employee assistance programs, a safe and healthy work environment, and the integration of company and community resources.

APPENDIX E

Annotated Bibliography for
Subcommittee on Government Involvement in Nutritional Choice

Annotated Bibliography

Healthy Foods & Public Benefit Programs

Maine Department of Health and Human Services, Bureau of Family Independence, Food Stamp Program data, 2004.

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Email to members of Subcommittee on Government Involvement in Nutritional Choice, Commission to Study Public Health. Dated Friday, June 18, 2004 at 8:12 AM.

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APPENDIX F

Definitions: Nutrition & Dietary Guidelines

Definitions: Nutrition & Dietary Guidelines

Dietary Guidelines for Americans-Is published jointly every 5 years by the US Department of Health and Human Services and the US Department of Agriculture.

FDA Serving Size- An FDA serving size is required on the side of packaged foods. Serving sizes are provided in familiar units, such as cups or pieces, followed by the metric amount, e.g., the number of grams. Serving sizes are based on the amount of food people typically eat, which makes them realistic and easy to compare to similar foods.

See http://vm.cfsan.fda.gov/~dms/foodlab.html

Physical Activity-Dietary Guidelines for Americans recommends that children get at least 60 minutes of physical activity daily and limit inactive forms of play such as television watching and computer games. Physical activity does not necessarily include physical education.

See http://www.health.gov/dietaryguidelines/dga2000/document/frontcover.htm

Physical Education-- According to National Association of Sport and Physical Education guidelines, a high-quality physical education program includes the following components: opportunity to learn, meaningful content, and appropriate instruction.

- Opportunity to learn:
  - 1) Appropriate Instructional periods
  - 2) Qualified physical education specialist providing a developmentally appropriate program
  - 3) Adequate equipment and facilities
- Meaningful content:
  - 1) Instruction in a variety of motor skills that are designed to enhance the physical, mental, and social/emotional development of every child
  - 2) Fitness education and assessment to help children understand, improve and/or maintain their physical well-being
  - 3) Development of cognitive concepts about motor skill and fitness
  - 4) Opportunities to improve their emerging social and cooperative skills and gain a multi-cultural perspective
  - 5) Promotion of regular amounts of appropriate physical activity now and throughout life

Appropriate Instruction:

- 1) Full inclusion of all students
- 2) Maximum practice opportunities for class activities
- 3) Well-designed lessons that facilitate student learning
- 4) Out of school assignments that support learning and practice
- 5) No physical activity for punishment
- 6) Uses regular assessment to monitor and reinforce student learning

See http://www.aahperd.org/naspe/template.cfm?template=publications-nationalstandards_3.html

USDA Serving Size- Serving Sizes from the USDA refer to those in the food guide pyramid. Serving size is based on four criteria:
1. Amount of foods from a food group typically reported in surveys as consumed on one eating occasion;
2. Amount of foods that provide a comparable amount of key nutrients from that food group, for example, the amount of cheese that provides the same amount of calcium as one cup of fluid milk;
3. Amount of foods recognized by most consumers (e.g., household measures) or that can be easily multiplied or divided to describe a quantity of food actually consumed (portion);
4. Amount traditionally used in previous food guides to describe servings.

See http://www.usda.gov/cnpp/Insights/insight11.PDF

APPENDIX G

Letter from Legislative Council Extending Commission to Study Public Health

APPENDIX H

Minority Comments of Commission Member Oakley Jones

MINORITY COMMENTS OF COMMISSION MEMBER OAKLEY JONES

This appendix represents dissenting comments submitted by Commission member Oakley Jones in response to specific sections of text and findings in the body of the Commission's report. Comments are organized according to the section of the report, as well as the location of the text to which they pertain.

Introduction (page 1, first paragraph):

The "series of bills that sought to address rising rates of obesity in the State" were largely defeated in the 121st Legislature. For instance, L.D. 104 (2003), which proposed several measures that are being recommended is this report, was voted "Ought Not to Pass" unanimously by the Joint Standing Committee on Education and Cultural Affairs.

Schools, Children and Nutrition: School Nutrition (pages 4-6):

Schools are an environment that should foster and support life-long eating habits and appropriate food choices. Children should develop skills to make wise food selections at breakfast, lunch, and snacks that will contribute to a healthful lifestyle throughout their life. Other views on nutrition standards in the school environment included using the USDA standard of applying the Dietary Guidelines for Americans to a la carte, vending, and other foods in the school environment. This would allow schools to provide a wide variety of foods and beverages throughout the school environment that over time fit the dietary patterns recommended in the Dietary Guidelines. Dietary standards over time cannot be successfully applied to individual foods.

The National School Lunch Program introduction on menu planning is as follows: "The National School Lunch Act mandates that school meals 'safeguard the health and well-being of the Nation's children'. Participating schools must serve lunches that are consistent with the applicable recommendations of the most recent Dietary Guidelines for Americans including: eat a variety of foods; choose a diet with plenty of grain products, vegetables and fruits; choose a diet moderate in sugars and salt; and choose a diet with 30% or less of calories from fat and less than 10% of calories from saturated fat. In addition, lunches must provide, on average over each school week, at least 1/3 of the daily Recommended Dietary Allowances for protein, iron, calcium, and vitamins A and C. To provide local food service professionals with flexibility, there are four menu planning approaches to plan healthful and appealing meals. Schools choose one of the approaches below. The choice of what specific foods are served and how they are prepared and presented are made by local schools."
(Source: http://www.fns.usda.gov/cnd/menu/menu.planning.approaches.for.lunches.doc).

Schools, Children and Nutrition: Vending Machines in Schools (pages 6-8):

Vending machines do not displace student consumption of more nutritious foods in Maine. In Maine foods of "minimal nutritional value" cannot be made available to students during the "normal school day" which is from before the first bell until after the last bell. In most

other states, these foods can be sold all day except during the lunch period. In those states there may be an argument that vending machine products are competing with school lunch offering because kids can buy from vending right up to, and right after, the lunch period. This is simply not the case in Maine. This fact cannot be ignored, and in fact, ought to be applauded.

The Nielson Company has researched soft drink consumption over a five-year period. The Nielson Report shows a decline in soft drink sales every year in relation to total U.S. liquid consumption. Data provided to the Commission subcommittee showed sales volume of the Coca Cola Company in schools in Maine. Dasani outsells Coca Cola Classic nearly 5 to 1; Pepsi's sales are similar with Aquafina outselling Pepsi nearly 5 to 1.

The practice in Maine for soft drink vending in schools is that carbonated soft drinks are unavailable for purchase by elementary and middle school children at all times, and are unavailable for purchase by high school children during the normal school day; i.e., until after the last bell. This fact was put before the Commission and can be confirmed by Commission Member David Stockford of the Department of Education as well as by many other Commission members. It is important to note that Representative Sean Faircloth commended the state soft drink industry on its position.

Schools, Children and Nutrition: Carbonated Beverage Tax (pages 12-13):

In response to the directive that the Commission consider strategies available to encourage more nutritious offerings, the Commission examined the nutritional value of soft drinks consumed by children and adolescents. **The Commission considered, discussed, and voted against a Carbonated Beverage Tax.**

The Commission's finding stating that "consumption of soft drinks by children and adolescents has escalated dramatically" is ill-defined and potentially misleading. It is unclear whether the data discussed pertains to Maine, and "soft drink" is not defined. The only dramatic increases in consumption have been with bottled water, juice drinks, sports drinks, diet drinks and teas. Since 1999, sugar carbonated soft drinks has declined by nearly 10% as a percentage of the mix of sales in Maine. Soft Drink consumption in Maine is 45th among the states in the nation on a per capita basis.

Focusing on Maine, it is disingenuous to compare "billions of dollars spent every year by soft drink companies" – referring, presumably to national expenditures – with State funds available for health promotion. In fact, there is relative parity between expenditures of soft drink companies in Maine and health promotion funds from sources such as the Fund for a Healthy Maine. Further, it is and has been the policy of the Coca Cola Company not to advertise on television programs that target children age 12 and under. We simply have not done it.

If, as the Commission states, the revenue generated by a tax on soft drinks would be "quite large," then the impact on consumers would necessarily be quite large also. It ought to be

specified what is being considered a “small tax,” what this tax adds up to in Maine, and what impact it has on the cost to consumers. For example, the “small tax” that the Commission believed would raise a large amount of money was a tax of 37 cents per 2 liter bottle prior to retail mark up.

In summary, the Commission voted against recommending a soft drink tax because of conclusions that soft drinks were already subject to sales tax (unlike other snacks), that the tax being proposed was not “small,” and because it would be fundamentally unfair to tax one potential contributor to weight gain while not taxing all other potential contributors in a proportionate amount. There was a vote and a strong snack tax discussion led by all the legislators in the room.

Government Involvement in Nutritional Choice: Nutrition Information on Menus and Menu Boards at Chain Restaurants (pages 16-18)

It is inaccurate to state that the restaurant industry’s concerns about menu and menu board labeling are satisfactorily addressed by the Commission’s recommended legislation. Hopefully the industry could make recommendations in this area. Menus are very expensive, as discussed, and we need some creative help from industry. This part of the report will only entrench a lot of good Maine businesses against the report.

APPENDIX I

Suggested Draft Legislation

Title: An Act to Implement Recommendations of the Commission to Study Public Health

Be it enacted by the People of Maine as follows:

Sec. 1. 22 MRSA c.260-B is enacted to read:

Chapter 260-B: Prevention of Obesity

§ 1515. Maine Obesity Prevention Fund

1. Fund established. The Maine Obesity Prevention Fund, referred to in this chapter as the "fund," is established as an Other Special Revenue fund for the purposes specified in this chapter.

2. Sources of fund. The State Controller shall credit to the fund:

A. All money allocated to the fund by the Legislature derived from sources determined by the Legislature to be contributing causes of obesity;

B. Money from any other source, whether public or private, designated for deposit into or credited to the fund, other than from the Fund for a Healthy Maine; and

C. Interest earned or other investment income on balances in the fund.

3. Unencumbered balances. Any unencumbered balance remaining at the end of any fiscal year lapses back to the fund, the account within the Department of Administrative and Financial Services established pursuant to this section, and may not be made available for expenditure without specific legislative approval.

4. Departmental indirect cost allocation plans. Any revenue transfer from a Maine Obesity Prevention Fund account to another account pursuant to an approved departmental indirect cost allocation plan is an authorized use of revenue credited to the Maine Obesity Prevention Fund. The State Budget Officer shall reduce allotment for the amount of any transfer made from a Maine Obesity Prevention Fund account for the purpose authorized in this subsection.

5. Restrictions. This section does not require the provision of services for the purposes specified in subsection 7. Allocations from the fund must be used to supplement, not supplant, appropriations from the General Fund or from the Fund for a Healthy Maine.

6. General Fund limitation. Notwithstanding any provision to the contrary in this section, funding for any program, expansion of a program, expenditure or transfer authorized by the Legislature using the Maine Obesity Prevention Fund may not be transferred to the General Fund without specific legislative approval.

7. Obesity prevention purposes. Allocations are limited to the following obesity prevention-related purposes:

A. Coordinated school health programs;

B. Annual assessments of body-mass index of students in schools;

C. Increased availability of fresh fruits and vegetables in schools; and

D. Media campaigns encouraging healthy diets and physical fitness.

8. Report by Treasurer of State. The Treasurer of State shall report at least annually on or before the 2nd Friday in December to the joint standing committee of the Legislature having jurisdiction over appropriations and financial affairs and the joint standing committee of the Legislature having jurisdiction over health and human services matters. The report must summarize the activity in any funds or accounts directly related to this section.

9. Annual appropriation. Beginning July 1, 2006, the State Controller is authorized to provide an annual appropriation from the General Fund to the fund to provide money for the purposes described in subsection 7, in an amount determined by the Legislature to adequately support those purposes.

10. Restricted accounts. The State Controller is authorized to establish separate accounts within the fund in order to segregate money received by the fund from any source, whether public or private, that requires as a condition of the contribution to the fund that the use of the money contributed be restricted to one or more of the purposes specified in subsection 7. Money credited to a restricted account established under this subsection may be applied only to the purposes to which the account is restricted.

Sec. 2. Commission extended. The Commission to Study Public Health, created pursuant to Resolve 2003, chapter 95, is extended through the 122nd Legislative Session for the following purposes: to collect and evaluate evidence; to coordinate wellness initiatives; to seek grant funding; and to evaluate existing health and wellness programs. The Commission shall submit a report concerning its activities relating to these purposes and any accompanying legislation to the First Regular Session of the 123rd Legislature by November 3, 2006. The Commission is authorized to submit legislation related to its report to the First Regular Session of the 123rd Legislature.

Sec. 3. Dirigo Health study and report; Department of Health and Human Services study and report. The Board of Directors of Dirigo Health, established pursuant to Maine Revised Statutes Title 24-A, chapter 87, shall consider the recommendations of the Commission to Study Public Health related to providing incentives to individuals using certain public benefit programs when it reviews the "Healthy ME Rewards" incentive program of the Dirigo Health plan. In response to the recommendations included in the final report of the Commission to Study Public Health, the Board of Directors of Dirigo Health shall conduct a study that addresses the following:

A. An analysis of the extent to which the "Healthy ME Rewards" incentive program, or any quality assurance, disease prevention, disease management or cost-containment programs included as part of the Dirigo Health plan in accordance with Maine Revised Statutes Title 24-A, section 6910, contains incentives that encourage the purchase of healthy and nutritious food by individuals enrolled in the health plan and their dependents.

B. An analysis of how food purchasing behavior information obtained via the electronic benefit transfer (EBT) card system by individuals receiving public benefits through the Food Stamp Program can be directly used by the Dirigo Health plan "Healthy ME Rewards" incentive program to provide incentives to individuals enrolled in the health plan that participate in the Food Stamp Program.

C. An analysis of the extent to which the consumer education campaign developed and conducted by the Maine Quality Forum in accordance with Maine Revised Statutes Title 24-A, section 6951, subsection 5 to help health care consumers make informed decisions and engage in healthy lifestyles includes information regarding the consumption of healthy and nutritious food by individuals enrolled in the Dirigo Health plan, as well as individuals who are eligible for and receiving public benefits through the Food Stamp Program.

The Board of Directors of Dirigo Health shall submit a report, including findings and recommendations from the analyses of issues identified in this section, as part of the annual report required by September 1, 2005 in accordance with Maine Revised Statutes Title 24-A, section 6908, subsection 6.

In addition, as part of the effort recommended by the Commission to Study Public Health to encourage the purchase of healthy and nutritious food by families using certain public benefit programs, the Department of Health and Human Services shall determine if the electronic benefit transfer (EBT) card system can obtain information regarding the fruit and vegetable purchasing behavior of individuals who are receiving public benefits through the Food Stamp Program, including the purchase of Maine grown fruits and vegetables, and if this information can be directly used by the Dirigo Health plan "Healthy ME Rewards" incentive program to provide incentives to individuals enrolled in the health plan that participate in the Food Stamp Program. The Commissioner of Health and Human Services shall submit a report that includes the information determined pursuant to this section by November 2, 2005 to the joint standing committee of the Legislature having jurisdiction over insurance and financial services matters and the joint standing committee of the Legislature having jurisdiction over health and human services matters.

Sec. 4. Comprehensive employee health program addressing obesity. The Department of Administrative and Financial Services, Bureau of Human Resources, Division of Employee Health and Benefits shall implement a comprehensive, population-based approach to addressing obesity-related risk factors and disease management, including nutrition counseling, physical activity, health risk identification and management. Implementation should include:

A. Creation of one or more full-time positions within State government to support the development of a health improvement infrastructure;

B. Requiring flex-time policies covering all State employees to encourage and support employee health;

C. Performance of an inventory of the availability of fitness centers in locations of heavy concentrations of State employees;

D. Creation of performance management objectives through which supervisors and managers support and encourage healthy lifestyles among employees they supervise; and

E. Dedication of at least 0.5% of annual health insurance premiums for all State insured members to support employee health and wellness.

Sec. 5. Expedited bid process. The Department of Administrative and Financial Services shall create an expedited process for consideration and approval of bids for pilot projects related to employee health.

Sec. 6. Healthy food and beverage options at State cafeterias, snack bars and vending machines. The Department of Labor, Division of the Blind and Visually Impaired shall:

A. Implement recommendations of food choice committees to include healthy food and beverage options at cafeterias, snack bars and vending machines under the purview of the Division of the Blind and Visually Impaired. These food choice committees must consider providing price incentives for purchase of healthy foods and beverages;

B. Develop a system for tracking food purchases at cafeterias and snack bars and in vending machines under the purview of the Division of the Blind and Visually Impaired;

C. Perform nutritional analysis on all major selling food items and post caloric and nutritional information at cafeterias and snack bars under the purview of the Division of the Blind and Visually Impaired; and

D. Include wellness coordinators from each executive department that uses a cafeteria or snack bar within the food choice committee for that cafeteria or and snack bar, if the cafeteria or snack bar is under the purview of the Division of the Blind and Visually Impaired.

Sec. 7. Investigation of insurance cost savings. The State Employee Health Commission, established pursuant to 5 MRSA § 285-A, shall direct any insurance carrier providing health insurance coverage to State employees, retirees or MaineCare participants to investigate the cost savings of including the following services as part of that coverage, and if cost savings are shown, shall strongly recommend implementation of these services: body-mass index assessment; intensive counseling and behavioral interventions for any employee with a body-mass index of at least 30kg/m2; and evidence-based interventions for any overweight

employee (body-mass index of at least 25kg/m2) who is 45 years of age or older and has been diagnosed with prediabetes.

Sec. 8. Encouragement of insurance incentives. The Department of Professional and Financial Regulation, Bureau of Insurance shall compose and distribute a letter to all carriers, as that term is defined in 24-A MRSA § 4301-A, sub-§ 3, encouraging those carriers to provide incentives for their insured to engage in the following services: body-mass index assessment; intensive counseling and behavioral interventions for any covered person with a body-mass index of at least 30kg/m2; and evidence-based interventions for any overweight covered person (body-mass index of at least 25kg/m2) who is 45 years of age or older and has been diagnosed with prediabetes.

SUMMARY

This bill implements recommendations of the Commission to Study Public Health, which was created pursuant to Resolve 2003, chapter 95. The bill does the following:

1. Creates the Maine Obesity Prevention Fund, which is to be funded from sources determined by the Legislature to be contributing causes of obesity, which may not be funded by allocations from the Fund for a Healthy Maine and from which allocations may not be made to the General Fund;

2. Extends the Commission to Study Public Health through the 122nd Legislative Session;

3. Directs the Dirigo Health Board and Department of Health and Human Services to study and report on incentives provided to encourage purchases of healthy food and beverages;

4. Directs the Division of Employee Health and Benefits to implement a comprehensive employee health program addressing obesity;

5. Directs the Department of Administrative and Financial Services to create an expedited bid process for pilot projects related to employee health;

6. Directs the Division of the Blind and Visually Impaired to pursue reforms that will increase the availability of healthy foods and beverages in cafeterias, snack bars and vending machines under the Division's purview;

7. Directs the State Employee Health Commission to direct health insurance carriers who provide health coverage for State employees, retirees and MaineCare recipients to investigate, and possibly implement, potentially cost-saving services for obesity prevention among their insureds; and

8. Directs the Bureau of Insurance to encourage all health insurance carriers to provide incentives for their insureds to make use of potentially cost-saving services for obesity prevention.

TITLE: An Act To Implement the Recommendations of the Commission to Study Public Health Concerning Schools, Children and Nutrition

Be it enacted by the People of the State of Maine as follows:

Sec. 1. 20-A MRSA §6209, first paragraph is amended to read:

The department in consultation with the state board shall establish and implement a comprehensive, statewide system of learning results, referred to in this section as the "system," no later than the 2002-03 school year. The system, based broadly upon guiding principles set forth in this section, must establish high academic standards at all grade levels in the areas of math; English; science and technology; social studies, including history, economics and civics; career preparation; visual and performing arts; health, nutrition and physical education; and foreign languages. Only students in a public school or a private school approved for tuition that enrolls at least 60% publicly funded students, as determined by the previous school year's October and April average enrollment, are required to participate in the system of learning results. The commissioner shall develop accommodation provisions for instances where course content conflicts with sincerely held religious beliefs and practices of a student's parent or guardian. The system must be adopted to accommodate exceptional students as defined in section 7001, subsection 2.

Sec. 2. 20-A MRSA §6209, sub-§2, paragraph D is amended to read:

D. Health, nutrition and physical education;

Sec. 3. 20-A MRSA § 6602, sub-§§ 13-16 are enacted to read:

13. Advertising on school grounds. After September 30, 2007, a school board subject to this section shall prohibit advertising on school grounds of foods and beverages other than "healthy foods and beverages," as that term is defined by the Department of Health and Human Services, Bureau of Health by rule.

14. Food and beverages outside school lunch programs. After September 30, 2006, food and beverages sold or distributed on school grounds but outside of school meal programs must:

A. Adhere to "healthy foods and beverages" standards as that term is defined by the Department of Health and Human Services, Bureau of Health by rule;

B. Adhere to single serving standards, including the following maximum portion sizes:

(1) For beverages other than water, 12 ounces;

(2) For frozen desserts and ice creams, 3 fluid ounces;

(3) For cookies and cereal bars, 2 ounces;

(4) For baked items other than cookies and cereal bars, 3 ounces; and

(50 For pre-packaged snacks, 1.25 ounces;

C. For other than low-fat dairy, fruits, vegetables, seeds and nuts, contain no more than 10% of calories from saturated plus trans fat, 30% of calories from total fat and 35% of weight from refined sugars;

D. Not include soda (non-diet or diet) or candy;

E. For milk, be either 1% fat or less; and

F. For juice, be 100% fruit juice.

The Department of Education may amend the requirements of paragraphs B and C of this subsection as necessary by rule. Rules adopted pursuant to paragraphs B and C of this subsection are routine technical rules as defined in Title 5, chapter 375, subchapter 2-A.

15. Food and beverages not to be used as rewards. A school board subject to this section shall prohibit the use of food or beverages as rewards or incentives in the school setting.

16. Nutritional information. After August 31, 2007, food service programs must post nutritional information for menu items, including age-appropriate daily values, total calories, saturated and total fat percentages, sodium content, sugar content and total carbohydrate content. Food service programs may limit nutritional information posted on menu boards to calories only.

Sec. 4. 20-A MRSA chapter 223, sub-chapters 9 and 10 are enacted to read:

SUBCHAPTER 9

NUTRITION EDUCATION AND HEALTHFUL PHYSICAL ACTIVITY

§ 6660. Nutrition education

Public schools shall provide nutrition education for students, teachers and staff as part of coordinated school health programs, and in accordance with chapter 222. This nutrition education must include an outreach component for students' parents. The department may adopt rules to implement the purposes of this section. Rules adopted pursuant to this section are routine technical rules as defined in Title 5, chapter 375, subchapter 2-A.

§ 6661. Body-mass index assessment

1. Assessment program; rules. An assessment program for body-mass index must be instituted according to the following provisions.

A. The school board of school administrative units shall require that the height and weight of students in grades Kindergarten, 1, 3, 5, 7 and 9 in the public schools be assessed. These measurements must be obtained privately and confidentially by trained school nurses or physical education teachers. The height and weight data, disaggregated by age, gender, and school, must be submitted electronically to a Department of Education or Department of Health and Human Services, Bureau of Health statistician or epidemiologist. The Department of Education shall analyze the assessment data for body-mass index (BMI) percentile and aggregate the data by grade level, school administrative unit and the State as a whole. The Department of Education shall report the assessment data, by grade level aggregates, to school administrative units annually and to the Legislature every 3 years.

B. The Department of Education shall adopt rules to implement this section. Rules adopted pursuant to this section are routine technical rules as defined in Title 5, chapter 375, subchapter 2-A.

2. Report to parents. Each school shall provide the parents of students who participate in this assessment with a confidential report on their child's weight, height and body-mass index. The report shall also include: an explanation of the limitation of BMI as only a screening, rather than evaluation, tool for diagnosing overweight; the suggestion that they seek their Primary Care Provider's evaluation; and the implications for nutrition and physical activity, together with references to local community health programs for nutrition and physical activity resources.

3. Funding. The State shall provide funding for this program to the extent that federal funds do not cover the costs of the program. This funding must include support to schools for measurement training for school nurses and physical education teachers, for measurement equipment such as scales and stadiometers, and to the Department of Education or Department of Health and Human Services, Bureau of Health for central data analysis and reporting by a statistician or epidemiologist.

§ 6662. Healthful physical activity

1. Healthful physical activity required. The school board of school administrative units shall require that students within the administrative unit participate in healthful physical activity as follows: elementary and middle school students must be required to participate in 150 minutes of physical activity per week outside of recess, and high school students must be required to participate in 220 minutes of physical activity per week. The department and Department of Health and Human Services, Bureau of Health shall collaboratively publish a list of free and accessible physical activity options.

2. Rules. The department shall adopt rules to implement this section, including rules to encourage schools to require daily recess for all elementary and middle school students before lunch. Rules adopted pursuant to this section are routine technical rules as defined in Title 5, chapter 375, subchapter 2-A.

SUBCHAPTER 10
PHYSICAL EDUCATION CONSULTANT

§ 6671. Physical education consultant position

1. Establishment. The position of physical education consultant is established jointly within the department and the Department of Education. The Director of the Bureau of Health within the department and the Director of Special Projects and External Affairs within the Department of Education shall jointly supervise the physical education consultant.

2. Qualifications. The physical education consultant must be licensed as a registered professional nurse in the State and have a master's degree in nursing or a related field and experience in school health care or community nursing.

§ 6672. Duties

The physical education consultant shall provide statewide nursing leadership, consultation and direction for physical education, physical fitness and healthful physical activity programs. The physical education consultant shall:

1. Liaison. Serve as a liaison and resource expert in physical education, physical fitness and healthful physical activity program areas for local, regional, state and national school physical education and related policy making groups;

2. Information. Monitor, interpret, synthesize and disseminate relevant information related to physical education, physical fitness and healthful physical activity trends, practice, related policy changes, legal issues in program implementation and professional development;

3. Staff development. Foster and promote staff development for physical education teachers and other school personnel by planning and providing orientation, educational offerings and networking with universities and other providers of continuing education to meet identified needs; and

4. Standards. Gather and analyze data relevant to the physical education, physical fitness and healthful physical activity programs and monitor standards to promote physical education excellence and optimal physical fitness of school children.

5. Funding. The State shall provide funding for a physical education consultant within the department and the Department of Education to the extent that federal funds do not cover the costs of the consultant.

Sec. 5. 20-A MRSA §13803 is enacted to read:

§13803. Lunch periods

Upon expiration of a collective bargaining agreement for a school administrative unit that includes teachers that expires after December 31, 2005, any new collective bargaining agreement for that unit shall include a provision allowing teachers and students no less than 20 minutes to eat lunch each school day.

Sec. 6. Considering nutrition education during review of system of learning results. The Department of Education shall consider the recommendations of the Commission to Study Public Health, established in Resolve 2003, chapter 95, related to implications for the system of learning results when the department reviews the guiding principles, the performance standards and the content indicators of the system of learning results during the 2005-2006 school year in accordance with the Maine Revised Statutes, Title 20-A, section 6209, subsection 4. The Department of Education's review shall specifically include the addition of "nutrition education" within the learning results system content standards.

Sec. 7. Dairy vending machines. By January 31 2006, the Department of Education, in collaboration with the Maine Dairy and Nutrition Council, shall implement a pilot program to install dairy vending machines, selling flavored or unflavored 1% or less-fat milk, in schools.

Sec. 8. Implementation of Farm to School program. The Department of Education, in collaboration with the Department of Agriculture, Food and Rural Resources, shall implement the Farm to School program as fully as is practical to provide locally grown fruits and vegetables in public schools.

Sec. 9. Healthy foods and beverages; advertising to children. The Department of Health and Human Services, Bureau of Health shall define the term "healthy foods and beverages" by rule. In developing this rule, the Bureau of Health shall consider the following definition:

> "Healthy foods and beverages" means fruits, vegetables, whole grains, low-fat animal protein foods, low-fat dairy products, legumes, soy products, nuts and seeds. "Healthy foods and beverages" do not include any item that includes more than 30% of its calories from total fat or more than 10% of its calories from saturated fat, excluding seeds and nuts; any item for which 35% of its weight comes from refined sugars, excluding fruits, vegetables and low-fat dairy products; any item which contains more than 360 mg of sodium per serving; and any meal which includes more than 480 mg of sodium per serving.

Rules adopted pursuant to this section are major substantive rules as defined in Title 5, chapter 375, subchapter 2-A.

Sec. 10. Attorney General review. The Attorney General shall determine whether the State may legally restrict, on Maine television stations, advertising of foods and beverages that

do not fit within the definition of "healthy foods and beverages" adopted by the Bureau of Health when those advertisements are directed at children 12 years of age or younger. If the Attorney General determines that these advertisements may be restricted, the Bureau of Health shall evaluate whether these advertisements should be restricted on Maine television stations, and shall make a recommendation to the Legislature based on this evaluation.

SUMMARY

This bill implements the recommendations of the Commission to Study Public Health concerning schools, children and nutrition. The bill does the following:

1. Includes nutrition within the. Maine Learning Results assessment and a parent outreach component.

2. Requires schools to provide nutrition education for students, teachers and staff through coordinated school health programs and in accordance with Maine Learning Results guidelines.

3. Direct school boards to require, by the end of September 2006, to ensure that food and beverages sold or distributed on school grounds but outside of school meal programs (such as a la carte items, fund raisers and vending machines) adhere to "healthy foods and beverages" standards, "single serving standards" and other healthy parameters.

4. Requires schools, by the end of August 2007, to post nutritional information for menu items, including age-appropriate daily values, total calories, saturated and total fat percentages, sodium content, sugar content and total carbohydrate content (for menu boards, calories only).

5. Direct school boards, by the end of September 2007, to prohibit advertising of foods and beverages other than "healthy foods and beverages" on school grounds.

6. Directs the Department of Education, by January 2006, in collaboration with the Maine Dairy and Nutrition Council, to implement a pilot program to install dairy vending machines selling flavored and unflavored 1% or less-fat milk in schools.

7. Prohibits schools from using food or beverages as a reward or incentive for learning or behavior in a school setting.

8. Requires that, at the termination of an existing contractual agreement for teachers in a school administrative district, all new teachers' contractual agreements must provide at least 20-minute school lunch periods for students and teachers to eat.

9. Directs the Department of Education and the Department of Agriculture to collaborate through the Farm to School Program to provide local fruits and vegetables in

schools as much as is practical.

10. Requires confidential assessments of the height and weight of all Maine school children in grades K, 1, 3, 5, 7 and 9, and compilation and reporting of this data. Each school also is required to provide the parents of school children who participate in this assessment with a confidential report on their child's weight, height and body-mass index, as well as accompanying information

11. Directs schools to require elementary and middle school students to participate in 150 minutes of physical activity per week outside of recess, and high school students to participate in 220 minutes of physical activity per week, and provides funding for a physical education consultant within the Department of Education.

12. Directs the Bureau of Health within the Department of Human Services and the Attorney General to determine whether advertising of foods and beverages other than "healthy foods and beverages," as defined by rule, directed at children 12 years or younger legally can be and should be restricted on Maine television stations. Additionally, the Bureau of Health is directed to make a report of its findings to the Legislature.

Title: An Act to Implement the Recommendations of the Commission to Study Public Health Concerning Chain Restaurants

Be it enacted by the People of Maine as follows:

Sec. 1. **22 MRSA § 2502** is enacted to read:

§2502. Caloric information

Beginning January 1, 2006, a restaurant, which for the purposes of this section means a restaurant licensed as an eating establishment under chapter 562, that is identified with a restaurant chain having 20 or more locations under the same name nationally, regardless of the type of ownership of the restaurant locations, shall provide caloric information for all food and drink items sold in the eating establishment as follows. As used in this section, "caloric information" for a food or drink item means the number of calories contained in the item as prepared in accordance with the standard recipe and standard formulation of that item.

1. Menu boards. Caloric information must be provided on menu boards in restaurants in which menu boards are displayed. The typeface of the caloric information must no less than two-thirds as large as other menu board information or clearly legible, whichever is larger, and the caloric information must be displayed adjacent to the listing of the food item.

2. Menus. Caloric information must be provided on menus in restaurants in which menus are used. The typeface of the caloric information must be no less than two-thirds as large as other menu information or clearly legible, whichever is larger, and the caloric information must be displayed adjacent to the listing of the food item.

3. Restaurants without menus. Restaurants without menus must display caloric information on menu boards on the walls, with at least one menu board that can be read at a distance of 12 feet from each entrance. The menu board must meet the requirements of subsection 1.

4. Telephone orders exempt. This section does not apply to orders received orally by telephone.

5. Reasonable variation. A restaurant is not out of compliance with this section for the sole reason that the actual number of calories contained in a food or drink item as served at that restaurant varies from the caloric information provided due to assembly of the item by hand or changes or substitutions made at the request of the customer.

Sec. 2. Rules regarding nutrition information. By December 31, 2005, the Department of Human Services, Bureau of Health shall adopt rules regarding the provision of caloric information in restaurants required by the State. Rules adopted pursuant to this

section are routine technical rules as defined in the Maine Revised Statutes, Title 5, chapter 375, subchapter 2-A.

SUMMARY

This bill requires restaurants that are part of chains with 20 or more locations to provide caloric information for food and drink items on menus or menu boards. The amendment specifies the size and placement of this information. The amendment also exempts telephone orders from the requirements, and allows for reasonable variation from the provided caloric information based on assembly of items by hand or changes or substitutions made at the request of the customer.

Title: An Act to Implement the Recommendations of the Commission to Study Public Health Concerning Shared-Use Paths to Schools

Be it enacted by the People of Maine as follows:

Sec. 1. § 613 is enacted to read:

§ 613 Alternative roadways.

1. Definition. For the purposes of this section, "alternative roadways" means a vehicle way, paved or unpaved, upon which pedestrians and human powered vehicles may be operated.

2. Requirements. The commissioner of transportation shall ensure that in each fiscal year, an amount equal to at least 1% of state highway funds received for the improvement, construction and maintenance of a state or state aid highway pursuant to section 1653 shall be provided for the construction, repair or maintenance of alternative roadways.

A. In lieu of expending the funds each year the department may credit the funds to a financial reserve or special fund to be held for not more than 10 years, and to be expended for the purposes required by this section.

B. For purposes of computing amounts expended during a fiscal year under this subsection, the department may record the money as expended on the date actual construction of the alternative roadway is commenced if the alternative roadway is constructed by the department or on the date a contract for the construction of the alternative roadway is entered with a private contractor or with any other governmental body.

3. Exceptions. Alternative roadways are not required to be established:

A. Where the establishment of such roadways would be contrary to public safety;

B. If the cost of establishing such roadways would be excessively disproportionate to the need of probable use; or

C. Where lack of population, the existence of other available ways or other factors indicate an absence of any need for alternative roadways.

SUMMARY

This bill requires the Department of Transportation to expend at least 1% of its annual Highway Fund allocation for highway improvement, construction and maintenance on the construction and maintenance of alternative roadways.