Promoting Physical Activity and Healthy Eating among Oregon's Children

A Report to the Oregon Health Policy Commission

Physical Activity and Nutrition Program
Office of Disease Prevention and Epidemiology
Office of Family Health
Oregon Department of Human Services

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Introduction

The problem of obesity is a national public health priority. Obesity is associated with serious health problems, including Type 2 diabetes, asthma, high blood pressure, and high blood cholesterol. Like most of the UNITED STATES, Oregon is in the midst of an epidemic of obesity. Almost two thirds of adult Oregonians are either overweight or obese.

In this context preventing childhood obesity is particularly important. Rates of overweight have reached 28% among eighth graders and 21% among eleventh graders. Research shows that obesity tends to persist with age. Overweight children are more likely than children with healthy weights to become overweight and obese adults. Moreover, the health effects of that obesity only get more severe with age. If we do not act now to prevent obesity in Oregon's children this public health crisis will only worsen.

Numerous national organizations have identified childhood obesity prevention as a priority, including the American Medical Association, National Association for State Boards of Education, the National Association for Sport and Physical Education, the Institute of Medicine and the Centers for Disease Control and Prevention. Many statewide and local organizations in Oregon are also addressing the problem. The expertise and experience of these organizations can provide significant contributions to the development of a comprehensive strategy to address childhood obesity in Oregon.

In order to better understand how to address the problem of obesity for Oregon children, the Oregon Health Policy Commission asked the Physical Activity and Nutrition Program at the Public Health Division of the Department of Human Services to facilitate a review of the data on childhood obesity in Oregon and the effectiveness of various approaches to prevention. The goal of this review was to develop a set of recommendations that can translate into policy or legislative action for the Commission to consider. This document is the product of that review. While this review started with the problem of obesity, it quickly became clear that addressing childhood obesity requires promoting physical activity and healthy nutrition among youth.

Review of Relevant Data and Data Needs for the Future

Rates of obesity are increasing rapidly among adults, both in Oregon and nationally. In fact, the percentage of adult Oregonians who are obese more than doubled from 1990 to 2004. Obesity is not limited to adults, and, because obesity tends to persist as one gets older, the rise in overweight among Oregon's youth foreshadows a major increase in obesity-related chronic disease among adults if we don't do something. Nationally, the fraction of children aged 12-19 years who are overweight is 16%. That's more than 50% higher than it was ten years previously, and *three times* what it was two decades ago.

Overweight and obesity are defined based on the body mass index or "BMI", a measure of the ratio between weight and height. It is measured by taking a person's weight in kilograms and dividing it by the height in meters, squared (kg/m^2).

The terminology used for adults and children differs. Adults are considered "overweight" if they have a BMI between 25 and 30, and they are considered "obese" if the BMI is 30 or higher. For children less than 18 years old, however, there is concern about the stigmatizing effects of using the term "obese". For that reason, the highest BMI category for children is called "overweight" (corresponding to the adult category of "obese"). Children with a BMI in the top 5% for their age and sex based on a standard growth chart are considered "overweight". The next BMI category for children is referred to as "at risk for overweight" (corresponding to the adult category of "overweight"). Children whose BMI is within the top 15% but not yet in the top 5%, based on a standard growth chart, are considered "at risk for overweight".

A few key facts about childhood obesity in Oregon:

- Proportion of 8th graders who were overweight or at risk of it in 2005: **1 in 4.**
- Percentage of 11th graders who were overweight in 2005: **11%**
- Among 11th graders the relative increase since 2001 was (or "Relative increase since 2001 that this represents, among 11th graders": **63%.**

Simply speaking, becoming overweight or obese is the result of taking in more calories than one burns through physical activity. Small changes in this energy balance can result in major changes in weight. For example, if an average adult were to consume 120 calories a day more – just 10 potato chips – without any change in physical activity, they would put on one pound of weight in a month, or 12 pounds in a year. It is the cumulative effect of many small changes in our eating and physical activity patterns that has led us to the obesity epidemic we have today.

While there is some controversy about the relative importance of different mixes of nutrients for promoting health – for example, there is controversy about the long-term health effects of a high-carbohydrate, low-fat diet – most experts agree that eating at least five servings each day of fruits and vegetables is a healthful practice. From the standpoint of caloric intake these foods are relatively low in calories and fill you up, preventing you from taking in more calories. So how are Oregon youth doing at meeting this relatively modest standard?

- Proportion of 8th graders who **don't** eat five or more servings of fruits and vegetables a day: **3 in 4.**
- Proportion of 11th graders who **don't** eat five or more servings of fruits and vegetables a day: **4 in 5.**

Similarly, the Surgeon General in the past has recommended that people have at least 30 minutes of moderate physical activity at least five days each week. Recent guidelines have advised even more activity for children and adolescents. The new recommendation is 60 minutes. How are Oregon youth doing meeting the relatively modest Surgeon

General's recommendation of at least 30 minutes of moderate physical activity at least five days each week?

- Proportion of 8th graders who **don't** meet CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC) physical activity recommendations:
  1 in 5.
- Proportion of 11th graders who don't meet these recommendations: **1 in 4.**

What has led us to racking up calories on our energy balance sheet? The human body has not changed its basic physiology in the last 20 years. Nor have we suddenly become gluttonous and lazy; those tendencies have been with humanity since the dawn of the species. What has changed in recent times, however, is the environment we live in, which has made it easier for us to consume more calories, and harder for us to be physically active. For our children, high calorie snack foods have become widely and cheaply available, even in school. Aggressive marketing of these products also helps boost their consumption. For example, it is estimated that the average child in the United States sees a food advertisement every five minutes while watching TV, and the foods being advertised are not generally fruits or vegetables. And of course while they are watching TV they are not being physically active. In addition, many Oregon schools have business contracts with soft drink manufacturers that lead to the promotion of these high calorie beverages, cutting into the consumption of beverages with more nutritional value, such as milk. Walking and biking to school have become much rarer, in part because schools are often sited in places that are not easy for children to walk or bike, and our communities are not built with amenities to support those activities either. While children are in school opportunities for physical activity are also decreasing; physical education is far from universal, and the lack of physical activity during the school day not only leads to overweight, but also contributes to children being less ready to learn in the classroom.

While schools and media have important effects on children's physical activity and nutrition patterns, other factors such as the child's family and community norms also play important roles. Children model the behavior they see in the adults around them. Given the dismal data on children's physical activity and nutrition patterns, it is not surprising that adults in Oregon similarly fall far short of the 5-a-day nutrition guidelines and the Surgeon General's recommendations for physical activity.

While the information above gives us some idea of where to start in addressing this epidemic, there are a few important pieces of information missing. We currently have no population-based system in Oregon to assess body mass index in children below 8th grade. In addition, we have few systems to systematically track the conditions in communities that promote or discourage physical activity and healthy eating.
Creating such systems would enable us to better describe changes in the conditions that put our children at risk for obesity and to better target our efforts to help make the healthy choices the easy choices.

The Study

The charge to the Workgroups was to focus on the science rather than current political realities in forming its recommendations. This activity was accomplished through a two-stage process. First a group of scientists familiar with the field of obesity prevention (the Research/Science Workgroup) reviewed current research and emerging strategies. Because of the tight time frame for this process this Workgroup chose to draw on national reports based on the literature, such as the Institute of Medicine's report *Preventing Childhood Obesity*. Based on this review, a second workgroup (the Recommendations Workgroup) of practitioners and policymakers met to craft recommendations for the Commission to consider. The work of both groups began in March 2006 and concluded in July 2006.

Research/Science Workgroup Findings
This Workgroup organized its review of the research literature into a Table of best available practices by setting (see Appendix 2). The source for inclusion of these activities in the Table is also listed. In addition, based on its review this Workgroup agreed on several overarching principles to guide the Recommendations Workgroup in its work (see the beginning of Appendix 2). The most important of these overarching principles are:

- Interventions to prevent and reduce obesity need to address both calorie-in (healthy eating) and calorie-out (physical activity) strategies.

- Children's behaviors are substantially affected by the influential adults in their lives – parents, grandparents, and teachers. Efforts to address childhood obesity in Oregon will not be successful unless they also include interventions that influence the healthy eating and physical activity behaviors of adults as well as children.

- Choices about how active we are and what we eat are affected greatly by our social, cultural and physical environment. Changes in these environments are responsible for the current obesity epidemic. The Recommendations Workgroup should focus on activities that have the potential to change our environment so that it supports healthy activity and eating choices for children and adults.

- Experience with tobacco prevention has taught us that we need a comprehensive approach to promoting physical activity and healthy eating. A comprehensive approach means that this problem will be addressed in all significant environments for children (e.g., home, school, community, etc.), so that the behaviors are reinforced in multiple ways each day. Coordination of these multiple interventions, tracking and evaluating the effects of these programs are also critical to success.

Results from the Recommendations Workgroup

Based on the information compiled by the Research/Science Workgroup, the Recommendations Workgroup sought to reach consensus about the most promising approaches for Oregon to take in order to promote healthy eating and physical activity. The Workgroup considered many factors in making its recommendations including:

- Feasibility
- Cost
- Avoiding duplication of effort
- Maximum reach
- The need to reach the most vulnerable
- Identifiable people or organizations that will support an activity
- What has already been done that can be built upon

While the workgroup tried to identify a primary "actor" for each recommendation (e.g., the Legislature should…, the Governor's Office should…, etc.), the Group recognized that many of these activities could be undertaken by other "actors" as well. For example, while the Workgroup recommended that the Legislature develop incentives for local governments to increase supermarkets in underserved areas, the Group realized that local communities could develop similar incentives, albeit in a smaller area. In order to make it easy for different "actors" to consider the full menu of recommendations they might implement we have also reorganized this list of recommendations into a table by "actor" (see Table 1, below).

While the Workgroup reached consensus on the recommendations presented below, despite vigorous discussion the Workgroup could *not* reach consensus about whether or not to recommend BMI measurement of all children in school with reporting back to parents, as currently done in Arkansas. While the group clearly recognized the value of having comprehensive data on the BMI of Oregon schoolchildren over time, and the importance of helping parents recognize a problem in their child that needs attention, concerns were raised by several workgroup members about the possibly stigmatizing effects of such notification, especially when we cannot yet provide parents with many tools or supports with which they can address these issues. In addition, concerns were raised about the feasibility of undertaking these measurements in the school setting, particularly without substantial funding. Evaluation of the feasibility and utility of Arkansas' program is underway, and the Workgroup would recommend revisiting this issue when the results of those evaluations are available in the future.

The Recommendations are briefly listed below, by sector. **Additional detail on each recommendation, including the rationale and scientific support information for each recommendation, can be found in appendix I.**

List of Recommendations (Full recommendation statements are in appendix I)

Statewide Leadership:

1. Establish a statewide, multi-component comprehensive Obesity Prevention and Education Program (OPEP). Fund this with a dedicated revenue source, such as a tax on junk foods (foods of minimal nutrition value).

Schools:

2. Strengthen requirements for school wellness policies, implement and evaluate using CDCs Coordinated School Health approach.
3. Establish minimum standards for foods sold outside the National Breakfast and Lunch programs
4. Establish minimum standards for Physical Education, monitor implementation
5. Ban junk food marketing in schools
6. Create a school garden foundation and promote garden-based learning and develop a curriculum for garden-based learning

Land Use Planning and Transportation:

7. Create incentives for local governments to increase supermarkets/grocery stores and access to healthy foods in underserved areas
8. Require Health Impact Assessment in municipalities' comprehensive plans
9. Require the "Big Look" to recommend ways that planning could be used to promote physical activity and healthy eating
10. Allow inclusion of school costs in System Development Charges paid by developers
11. Ensure school siting decisions facilitate walking and biking to schools
12. Double the percentage of state highway funds dedicated to bicycle and pedestrian facilities

Food and Beverage Industry:

13. Subsidize marketing of fruits and vegetables, and remove subsidies for foods that keep the cost of producing junk food low
14. Require restaurants with 10 or more outlets to list calories on menu boards, other nutrition information on menus
15. Promote responsible food and beverage marketing to children through changes in federal agencies and by calling upon industry in Oregon to adhere to voluntary guidelines

Worksites:

16. Require all state agencies to develop policies to increase consumption of fruits and vegetables and promote physical activity by employees; monitor implementation, and publicly recognize exemplary agencies
17. Expand the Oregon Breastfeeding Mother Friendly Employer program to educate employers and increase employer participation.

Medical Care:

18. The Legislature should require and provide incentives for health plans in Oregon to:
    a. Provide coverage for effective obesity prevention and treatment strategies
    b. Provide incentives for health plan subscribers to maintain healthy body weight
    c. Include BMI screening and obesity prevention services in quality assessment efforts and encourage BMI screening by providers
19. The Legislature should:
    a. Establish a program to educate and encourage hospitals to adopt evidenced-based policies and practices supporting breastfeeding initiation and duration.
    b. Mandate the Department of Human Services to work with OMAP to cover lactation consultant visits.

Parks and Recreation:

20. Provide grants to community organizations to increase participation in outdoor physical activity.

Table 1
Primary "Actors" 1

Actor	Recommendation	Sector
Federal Legislation	6. Ban junk food marketing in schools	Schools
	14. Subsidize marketing of fruits and vegetables, and remove subsidies for foods that keep the cost of producing junk food low	Food and Beverage Industry
	16. Promote responsible food and beverage marketing to children through changes in federal agencies and by calling upon industry in Oregon to adhere to voluntary guidelines	Food and Beverage Industry
Actor	Recommendation	Sector
Oregon Legislature	1. Establish a statewide, multi-component comprehensive obesity prevention education program (OPEP). Fund this with a dedicated revenue source, such as a tax on junk foods.	Statewide Leadership
	2. Strengthen requirements for school wellness policies, implement and evaluate using CDCs Coordinated School Health approach	Schools
	3. Establish minimum standards for foods sold outside the National School Breakfast and Lunch programs	Schools
	4. Establish minimum standards for Physical Education, monitor implementation	Schools
	5. Ban junk food marketing in schools	Schools
	8. Require Health Impact Assessment in municipalities' comprehensive plans	Land Use Planning and Transportation

	10. Allow inclusion of school costs in System Development Charges paid by developers	Land Use Planning and Transportation
	11. Ensure school siting decisions facilitate walking and biking to schools	Land Use Planning and Transportation
	12. Double the percentage of state highway funds dedicated to bicycle and pedestrian facilities	Land Use Planning and Transportation
	13. Subsidize marketing of fruits and vegetables, and remove subsidies for foods that keep the cost of producing junk food low	Food and Beverage Industry
	14. Require restaurants with 10 or more outlets to list calories on menu boards, other nutrition information on menus	Food and Beverage Industry
	15. Promote responsible food and beverage marketing to children through changes in federal agencies and by calling upon industry in Oregon to adhere to voluntary guidelines	Food and Beverage Industry
	16. Require all state agencies to develop policies to increase consumption of fruits and vegetables and promote physical activity by employees; monitor implementation, and publicly recognize exemplary agencies	Worksites
	17. Expand the Oregon Breastfeeding Mother Friendly Employer program to educate employers and increase participation	Worksite
	18. The Legislature should require and provide incentives for health plans in Oregon to: a. Provide coverage for effective obesity prevention and treatment strategies.	Medical Care

	b. Provide incentives for health plan subscribers to maintain healthy body weight c. Include BMI screening and obesity prevention services in quality assessment efforts and encourage BMI screening by providers	
	19. The Legislature should: a. establish a program to educate and encourage hospitals to adopt evidenced-based policies and practices supporting breastfeeding initiation and duration, b. mandate DHS to work with OMAP to cover lactation consultant visits.	Medical Care
	20. Provide grants to community organizations to increase participation in outdoor physical activity	Parks and Recreation
Actor	Recommendation	Sector
Governor	19. Require the "Big Look" to recommend ways that planning could be used to promote physical activity and healthy eating	Land Use Planning and Transportation:
	13. Subsidize marketing of fruits and vegetables, and remove subsidies for foods that keep the cost of producing junk food low	Food and Beverage Industry
	16. Require all state agencies to develop policies to increase consumption of fruits and vegetables and promote physical activity by employees; monitor implementation, and publicly recognize exemplary agencies	Worksite
Actor	Recommendation	Sector
State Board of Education	2. Strengthen requirements for school wellness policies, implement and evaluate using CDCs Coordinated School Health approach	Schools

	3. Establish minimum standards for foods sold outside the National School Breakfast and Lunch programs	Schools
	4. Establish minimum standards for Physical Education, monitor implementation	Schools
	5. Ban junk food marketing in schools	Schools
Actor	Recommendation	Sector
Oregon Department of Education	6. Create a school garden foundation and promote garden-based learning and develop a curriculum for garden-based learning	Schools
Actor	Recommendation	Sector
City and County Government	7. Create incentives for local governments to increase supermarkets in underserved areas	Land Use Planning and Transportation
	11. Ensure school siting decisions facilitate walking and biking to schools	Land Use Planning and Transportation
	13. Subsidize marketing of fruits and vegetables, and remove subsidies for foods that keep the cost of producing junk food low	Food and Beverage Industry
	14. Require restaurants with 10 or more outlets to list calories on menu boards, other nutrition information on menus	Food and Beverage Industry
	15. Promote responsible food and beverage marketing to children through changes in federal agencies and by calling upon industry in Oregon to adhere to voluntary guidelines	Food and Beverage Industry

Actor	Recommendation	Sector
School Districts	2. Strengthen requirements for school wellness policies, implement and evaluate using CDCs Coordinated School Health approach	Schools
	3. Establish minimum standards for foods sold outside the National School Breakfast and Lunch programs	Schools
	5. Ban junk food marketing in schools	Schools
Actor	Recommendation	Sector
Food and Beverage Industry	3. Establish minimum standards for foods sold outside the National School Breakfast and Lunch programs	Schools
	5. Ban junk food marketing in schools	Schools
	13. Subsidize marketing of fruits and vegetables, and remove subsidies for foods that keep the cost of producing junk food low.	Food and Beverage Industry
	14. Require restaurants with 10 or more outlets to list calories on menu boards, other nutrition information on menus	Food and Beverage Industry
	15. Promote responsible food and beverage marketing to children through changes in federal agencies and by calling upon industry in Oregon to adhere to voluntary guidelines	Food and Beverage Industry
Actor	Recommendation	Sector
Health Plans/Hospitals	18. The Legislature should require and provide incentives for health plans in Oregon to: a. Provide coverage for effective obesity prevention and treatment strategies. b. Provide incentives for health plan subscribers	Medical Care

	to maintain healthy body weight c. Include BMI screening and obesity prevention services in quality assessment efforts and encourage BMI screening by providers	
	19. The Legislature should: a. establish a program to educate and encourage hospitals to adopt evidenced-based policies and practices supporting breastfeeding initiation and duration, b. mandate DHS to work with OMAP to cover lactation consultant visits	Medical Care
Actor	Recommendations	Sector
Oregon Employers	17. Expand the Oregon Breastfeeding Mother Friendly Employer program to educate employers and increase participation.	Worksites
Actor	Recommendation	Sector
Philanthropy/Foundations	6. Create a school garden foundation and promote garden-based learning and develop a curriculum for garden-based learning	Schools
	20. Provide grants to community organizations to increase participation in outdoor physical activity	Parks and Recreation
Actor	Recommendation	Sector
Oregon Farming and Agriculture	6. Create a school garden foundation and promote garden-based learning and develop a curriculum for garden-based learning	Schools
Actor	Recommendation	Sector
Universities	6. Create a school garden foundation and promote garden-based learning and develop a curriculum for garden-based learning	Schools

Conclusions

Childhood obesity is a looming public health crisis that has crept up on us through the cumulative effects of many small changes in our environment that affect our patterns of physical activity and nutrition. Just as we have changed our environment in ways that have brought us to this crisis, we can undo those changes if we have the will to do so. It is the sincere hope of those who contributed to this study that this document will help galvanize us to do so.

Physical Activity and Healthy Eating Recommendations

Physical Activity

1. Establish minimum standards for Physical Education and monitor implementation
2. Ensure school siting decisions facilitate walking and biking to schools
3. Double the percentage of state highway funds dedicated to bicycle and pedestrian facilities
4. Provide grants to community organizations to increase participation in outdoor physical activity.

Healthy Eating

1. Ban junk food marketing in schools
2. Promote responsible food and beverage marketing to children (15)
3. Create a school garden foundation and promote garden-based learning and develop a curriculum for garden-based learning
4. Subsidize marketing of fruits and vegetables and remove subsidies for foods keeping the cost of producing junk food low
5. Require restaurants with 10 or more outlets to list calories on menu boards, other nutrition information on menus
6. Incentives for local governments to increase supermarkets/grocery stores and access to healthy foods in underserved areas
7. Increase employer participation in the Oregon Breastfeeding Mother Friendly Employer program

Physical Activity and Healthy Eating

1. Strengthen requirements for school wellness policies, implement and evaluate using Coordinated School Health approach
2. Establish a statewide comprehensive obesity prevention and education program
3. Require state agencies to develop policies to increase consumption of fruits and vegetables and physical activity by employees
4. Require Health Impact Assessment in municipalities' comprehensive plans
5. Require the "Big Look" to recommend ways that planning could be used to promote physical activity and healthy eating
6. Allow inclusion of school costs in System Development Charges paid by developers
7. Health insurance coverage for routine screening and tracking of BMI and obesity prevention services (18)
8. Promote evidenced-based hospital policies and practices to support breastfeeding initiation and duration
9. OMAP coverage for lactation consultant visits

APPENDIX I

Childhood Obesity Study Recommendations

Statewide Leadership

Recommendation 1:
The Legislature should establish a statewide comprehensive Obesity Prevention and Education Program with a dedicated funding stream.

Rationale: Eating and physical activity are complex behaviors which are influenced by numerous forces. We know that education alone is not sufficient to change complex behaviors like these. Experience with tobacco prevention, in Oregon and in other states, has taught that successfully addressing these influences requires a multifaceted approach that includes behavioral and cultural approaches, changing social norms around these behaviors and a broad range of environmental interventions. In addition, since children model the behavior of adults around them, a comprehensive approach must target adults as well as children.

The components of this Program should be multiple, and include:

a. A media/public awareness and counter-advertising campaigns including TV, radio, print, and outdoor ads to promote and encourage physical activity and healthy eating, combat junk food marketing and support other program elements.
b. Grants to local county health departments for development and implementation of community-focused, evidenced-based programs.
c. Grants to tribes, coalitions and community organizations servicing populations at highest risk for overweight and obesity to implement evidence-based interventions focused on these populations.
d. Grants to School Districts to build capacity and infrastructure to develop and implement "Model School Wellness Policies", using a Coordinated School Health approach, implement evidence- based nutrition and physical education curriculum, and establish school-based wellness councils. .
e. Develop a media literacy curriculum related to marketing of food and beverages and promote its use by schools
f. Engagement of childcare providers and parents in activities that build healthy nutrition and physical activity patterns.
g. Engagement of the business community in promoting Breastfeeding friendly environments.
h. A comprehensive worksite wellness program utilizing best practices and evidenced-based interventions, including a Governor-convened advisory council of private and public CEO's and health plan administrators , and employer incentives offered through health plan design and discounts based on employee participation.

i. Ongoing collection of data on the prevalence of obesity, physical activity, nutrition practices and community conditions related to these behaviors.
j. Statewide leadership and coordination of these program elements, including grant and contract administration, ongoing program evaluation and quality improvement, and reporting on this program to policymakers

Creating such a program requires a long-term dedicated funding stream. In considering the amount of tax to be placed, two different strategies should be considered:

- A small tax is unlikely to affect consumer behavior, but could still garner considerable funds for prevention activities.
- A more substantial tax may have the added benefit of reducing consumption. .

Ideally the source of funds should be related to the causes of this epidemic. Although choosing which source is most appropriate is primarily a strategic rather than a scientific decision, the Workgroup discussed several possibilities including a tax on soda, high-calorie snacks or video games.

Scientific Support: In addition to extensive research literature on tobacco prevention, the 2004 Institute of Medicine's report "Preventing Childhood Obesity, Health in the Balance" and the 2006 Princeton – Brookings publication, "The Future of Children" recommended interventions in multiple areas for addressing childhood obesity. Both included approaches in school and community environments; media, advertising and marketing; targeting interventions in high risk and ethnic minority populations; and the parent's roles.

Schools

Recommendation 2:
The Legislature should direct the Department of Education to require school districts to meet stricter criteria for foods sold in schools and physical activity than currently required by the United States Department of Agriculture for School Wellness Policies, and to monitor and report on the implementation of these Policies.

Rationale: The Child Nutrition and WIC Reauthorization Act of 2004 includes a requirement that schools adopt a School Wellness Policy that covers the promotion of physical activity and healthy nutrition. Schools vary widely in how aggressively these policies address these issues, and many do little to change the *status quo*. The State should raise the bar. The Department of Education in partnership with the Department of Human Services, Division of Public Health has the capacity and expertise to accomplish this through the Healthy Kids Learn Better Partnership.

Developing and adopting a sound policy is only the beginning. The adoption of a policy does not automatically mean that it will be implemented. Implementation requires intentional planning and management, the necessary resources, consistent oversight, and widespread buy-in by school staff and the local community. Leadership, commitment,

communication and support are the keys to successful implementation. The Coordinated School Health Model describes a powerful approach to building that leadership and commitment.

Typically, many of the Coordinated School Health Model components already exist in schools. Often what is missing is the structure that supports the coordination of each component to function as an integrated system. Because the school-wide, inclusive planning process represents major changes in the way schools typically operate, quality guidelines and technical assistance are needed to promote comprehensive program planning to support the successful implementation and evaluation of local school wellness policies.

Scientific Support: The Coordinated School Health model has been developed and evaluated by the Center of Disease Control and Prevention's Division of Adolescent and School Health. A recent synthesis of research exploring the role of schools in obesity prevention concluded by recommending that schools address physical activity and nutrition through a Coordinated School Health Program approach. (The Future of Children, Princeton, Story, M. Kaphingst, K., and French, S. Volume 16, No. 1, Spring 2006). The 2004 Institute of Medicine's report "Preventing Childhood Obesity, Health in the Balance" recommends state level policy requiring the development and review of model school wellness policies.

Recommendation 3:

The Legislature should direct the Department of Education to develop and implement nutrition standards for school foods sold outside of the National School Breakfast and Lunch Programs to ensure that food sold conforms with current dietary guidelines and addresses pressing threats to child health and nutrition at school.

Rationale: Parents entrust schools with the care of their children during the school day. The sale of low-nutrition foods in schools makes it difficult for parents to ensure that their children are eating well. Without their parents' knowledge, some children spend their lunch money on the low-nutrition foods from vending machines rather than on balanced school meals.

In light of the alarming rates of childhood obesity and poor nutrition, statewide action is needed to improve the nutritional quality of foods and beverages sold in schools. Establishing statewide nutrition standards for foods and beverages sold in schools will provide a valuable tool for school districts working to feed children well. The vast majority of school districts do not have a certified nutrition professional on staff to develop science-based nutrition standards for school foods and beverages.

There is no scientific basis for differing nutrition standards for school foods and beverages for children in different school districts. All children in all Oregon schools should be offered food that meets the current Dietary Guidelines. It is sensible for the state to set a "floor" for nutrition standards for items sold in schools, and then for school

districts to select specific items for sale in their district that both meet the state standards and appeal to their students.

Promoting healthful eating in schools could help to reduce the state's obesity-related health-care costs. The sale of soda and junk food in schools undermines the public investment in healthful school meals. Setting statewide nutrition standards for items sold in schools will ensure that students in all school districts receive the benefit of healthy food choices

Scientific Support: While studies indicate that the school meal programs do contribute to better nutrition and healthier eating behaviors for children who participate, competitive foods undermine the nutrition integrity of the programs and discourage participation.

Competitive foods have diet-related health risks. With no regulated nutrition standards, competitive foods are relatively low in nutrient density and are relatively high in fat, added sugars and calories. When children replace school meals with these less nutritious foods and beverages, there is the risk that their daily dietary intake will be inadequate in key nutrients necessary for growth and learning. And when competitive foods are purchased in addition to school meals or in large quantities, there is the likelihood of over consumption and the risk of unhealthy weight gain. Source the Foods Sold in Competition with USDA School Meal Programs
A Report to Congress, January 12, 2001.

Recommendations 4:
Legislature should establish the following standards for minutes of Physical Education instruction: 150 minutes / week K-5th; 225 minutes / week 6-8th; have the Oregon Department of Education (ODE) collect data on number of minutes of Physical Education instruction K-8th currently being delivered by school districts and public charter schools; and have ODE develop a Physical Education assessment tool to measure students' progress in meeting statewide standards in Physical Education. Implementation of assessment should be conducted by local school districts with all results reported to ODE and made public by school district.

Rationale:
According to the National Association for Sport and Physical Education (NASPE), one in four children do not attend any school physical education classes and fewer than one in four children get 20 minutes of vigorous activity daily. In 2005, the Oregon Department of Human Services found that 17 percent of Oregon 8th grade and 24 percent of 11th grade students did not meet the recommended amount of physical activity. To help students meet the recommendations, both the 1996 U.S. Surgeon General's Report, *Physical Activity and Health,* and the Centers for Disease Control and Prevention's, *School and Community Programs to Promote Lifelong Physical Activity Among Young People,* recommended requiring daily physical education classes for all students in kindergarten through 12th grade. Currently, Oregon public elementary and middle schools are not

required to offer a specific amount of time for physical education and senior high school students are only required to earn one credit of physical education to graduate.

Scientific Support: According to the U.S. Department of Health and Human Services, *Dietary Guidelines for Americans 2005,* "children and adolescents should engage in at least 60 minutes of physical activity on most, preferably all, days of the week." The Institute of Medicine's *Preventing Childhood Obesity* recommended schools should provide physical education classes of 30 to 60 minutes' duration on a daily basis. The National Association for Sport and Physical Education notes that quality physical education plays a critical role in children's physical, mental, and emotional development, improves quality of life, and lays the foundation for a lifelong active lifestyle. In the CDC "Guide to Community Preventive Services" physical education is "strongly recommended", which the highest level recommendation to promote physical activity.

Recommendation 5:
The Legislature should pass a bill banning junk food marketing in schools.

Rationale: There has been a large increase in new food and beverage products targeted specifically to children and youth over the past decade. On average, today's kids see 40,000 ads on TV per year, compared to 20,000 in the late 1970s. It is estimated that more than $10 billion per year is spent for all types of food and beverage marketing to children and youth in America. The preponderance of the products marketed to children and youth are high in total calories, sugars, salt and fat, and low in nutrients. Food and beverage marketing targeted to children ages 12 and under leads them to request and consume these high-calorie, low-nutrient products. Because dietary preferences and eating patterns form early in life and set the stage for an individual's long-term health prospects. Current food and beverage marketing practices put kids' long-term health at risk.

Scientific Support: There is scientific evidence that advertising junk food to children has a negative impact on their behavior and health**.** The Institute of Medicine (IOM), in their 2006 report on food marketing to children, after evaluating all available evidence, concluded that, (1) There is strong evidence that television advertising influences the food and beverage preferences and purchase requests of children ages 2-11 years old; (2) There is strong evidence that exposure to television advertising is associated with overweight in children from ages 2 to 18 years old; and (3) Although this association cannot be precisely quantified, even a small effect across the entire population represents a significant impact. Of great concern is evidence suggesting how advertising affects children differently than it does adults. Studies have shown most children 4 years old and under cannot discriminate between ads and programming, and most kids 8 years old and under do not effectively comprehend the persuasive intent of marketing messages.

Recommendation 6:

a. The legislature should appropriate seed money to start a School Garden and Farm-to-School Foundation and Board and support creation of a State Program Coordinator for School Gardens and Farm to-School programs within the Department of Education Child Nutrition Programs.
b. The Oregon Department of Education will work with Portland State University to write an Oregon Nutrition Education Curriculum with Garden-based Learning as an obesity prevention education program.

Rationale: This initiative will: **(1)** Spearhead the creation of a private non-profit for the development of school garden education; (2) Create a position to coordinate the development of the nutrition curriculum and support the curriculum, (3) Assist school district food service in utilizing local farm and orchard food sources and produce from the garden, (4) Connect child nutrition programs to local school district wellness goals and, (5) Develop an Oregon garden based nutrition education curriculum.

Garden-enhanced education increases student consumption of fruits and vegetables and willingness to try vegetables. Students also improved their healthy snacking behaviors, and physical activity patterns. Some garden programs are also used to provide job training for adolescents. Lastly, school gardens and farm-to-school programs may improve the community through promoting public health and local economic development, while improving ecosystem health, and building social capital.

Scientific Support: The beneficial effects on students of garden-enhanced education are summarized in the Center for Ecoliteracy's "Findings from the Evaluation Study of The Edible Schoolyard", 2003. The economic, social and ecological effects of these programs are confirmed in the *Journal of Public Health Policy* "Public Health Implications of Urban Agriculture" 2000**.**

Land Use Planning and Transportation

Recommendation 7:
Local governments should encourage the establishment of retail food outlets in low-income neighborhoods by offering tax incentives and other assistance to responsible retail businesses.

Rationale: A public/private partnership agreement between local government and the supermarket business leaders to bring supermarkets into underserved areas will increase food access in areas that have been overlooked by the retail food industry. Public/private partnerships are agreements between government and private sector organizations that feature shared investment, risk, responsibility, and reward. Cities such as Pittsburgh, Boston, and New York have used public/private partnerships to bring supermarkets into underserved areas. In addition local governments can provide financial incentives to retail food outlets locating in low-income and rural neighborhoods.

Scientific Support: Research shows there are fewer supermarkets located in low-income neighborhoods than in middle class or affluent ones (Food Marketing Policy Center Issue Paper no. 8, The Urban Grocery Store Gap, 1995). A 1990 research article in Public Voice for Food and Health Policy, "Higher Prices, Fewer Choices: Shopping for Food in Rural America", shows that low-income area residents' local shopping options are often limited to smaller neighborhood stores where prices are higher than supermarkets. Fewer supermarkets in low-income and rural neighborhoods means less access to healthy foods making it harder for people to meet their dietary needs.

Recommendation 8:
The Oregon Land Conservation and Development Commission should require municipalities to include a Health Impact Assessment in the development of their comprehensive plans. The Health Impact Assessment will include analyses of factors such as how well proposed plans will promote regular physical activity, and the proximity of residential areas to nutritional resources (especially in low-income or mixed-income neighborhoods).

Rationale: Currently, no state policy exists to ensure that the Oregon Land Conservation and Development Commission (LCDC) considers the health impacts of community design before approving local development plans. The LCDC is comprised of seven volunteer citizens representing different regions of the state who are charged with developing and implementing Oregon's state land use strategies. Assisted by staff at the Department of Land Conservation and Development (DLCD), the LCDC adopts state land-use goals, implements rules designed to achieve those goals, assures local plan compliance with goals, coordinates state and local planning, and manages the costal zone program. One of the key responsibilities of the LCDC is to ensure that the comprehensive plans submitted by cities and counties to manage their future growth are consistent with state goals. Oregon has 19 statewide planning goals that the LCDC uses as a framework to evaluate local comprehensive plans; none of these goals explicitly addresses health.

Scientific Support: A significant and growing body of research demonstrates that the design of a neighborhood or city strongly influences patterns of physical activity. In addition, the placement of nutritious food options within neighborhoods (such as full-service grocery stores, farmers markets and community gardens) can promote healthy eating behaviors.

Recommendation 9:
The Governor should require that the Task Force on Land Use Planning adopts health as a 20th planning goal and includes input from public health in developing their land use strategies**.**

Rationale: Oregon has a unique opportunity right now to include the health impacts of land use decisions as part of our planning framework. The Oregon Legislature and the

Governor has directed the Department of Land Conservation and Development to fundamentally re-examine our land use policies in an effort known as the "Big Look." The Governor has appointed a 10-member Task Force on Oregon Land Use Planning, which is required to make an interim report to the 2007 legislature with legislative recommendations on (a) The effectiveness of Oregon's land use planning program in meeting current and future needs of Oregonians in all parts of the state; (b) The respective roles and responsibilities of state and local governments in land use planning; and (c) Land use issues specific to areas inside and outside urban growth boundaries and the interface between areas inside and outside urban growth boundaries. A final report is due on February 1, 2009. None of the 10 Task Force members has a background in public health, and thus far they have not asked anyone representing the public health field to provide testimony at one of their hearings.

Scientific Support: A significant and growing body of research demonstrates that the design of a neighborhood or city strongly influences patterns of physical activity. In addition, the placement of nutritious food options within neighborhoods (such as full-service grocery stores, farmers markets and community gardens) can promote healthy eating behaviors.

Recommendation 10:
The Oregon Legislature should pass legislation to allow cities and counties to include school-related costs in the system development charges (SDCs) paid by developers when new residential and commercial properties are built.

Rationale: Allowing local jurisdictions to collect SDCs for school construction will provide the resources necessary for school districts to site schools closer to the neighborhoods where their students live. In order to cover the public costs of new developments, municipalities assess SDCs, also known as impact fees. Currently, state law allows municipalities to charge developers SDCs to cover five categories of public services: water, sewage, storm drainage, transportation (including streets and sidewalks) and parks (ORS 223.297 – 223.314). Cities and counties are prevented from charging developers SDCs for other public services that the new development will require, such as schools.

Since school districts are not compensated for the increased costs of educating children moving into new developments, they must wait until they can collect a sufficient amount of new property tax revenue and look for the cheapest option to construct new schools. Often, this lack of funding for new facilities means that school districts site new schools outside of town where land is cheaper, rather than within the neighborhoods they serve. This, in turn, means that fewer children can walk or bike to school, significantly decreasing opportunities for regular physical activity and increasing obesity prevalence.

Scientific Support: In a 2002 national survey, just 17% of parents said that their children walked to school, and just 5% said that their children rode their bike to school, both significant drops from the 1970s; 53% of respondents said that they drove their

children to school. Two out of three parents who said that they drove their children to school said that their primary reason for doing so was that the school was located too far away from their neighborhood for walking to be a feasible option.

Recommendation 11:
The Oregon Legislature should require school districts to work closely with their city and county governments to ensure that school siting decisions are consistent with local comprehensive plans, and facilitate walking and biking to school**.** Specifically this policy recommendation should ensure the following:

a) The elimination of funding biases that skew district decisions toward the construction of new, large schools built on the edges of towns over the renovation of historic neighborhood schools.
b) The elimination of arbitrary acreage standards that undermine the ability of established communities to retain and upgrade existing schools.
c) The promotion of shared athletic and recreational facilities with parks and recreation departments and non-profit organizations.
d) The relaxation of local zoning ordinances on new or renovated schools.
e) Set a goal for school siting that ensures that a minimum of 50% of students can walk or bike safely to school.

Rationale: School districts in Oregon make their decisions regarding school construction and renovation outside of the comprehensive planning process developed by cities and counties. This dichotomy often leads to the construction of "mega schools" that are separated from the neighborhoods they serve. The goal of this recommendation is to promote neighborhood schools that will encourage walking and biking to school.

Oregon policy should promote close collaboration between those responsible for planning new and/or renovated school facilities and city and county planners responsible for ensuring that communities are designed to accommodate housing, retail, employment and transportation needs. This coordination should eliminate the phenomenon that has arisen in which school districts can develop their sites in isolation from the community planning process, and will encourage city and county officials to act more flexibly in applying local zoning regulations in order to promote neighborhood schools.

Arbitrary acreage standards should be explicitly eliminated because many Oregon school districts still use outdated guidelines from the Council of Educational Facility Planners International that call for exorbitant amounts of land – 10 acres plus one acre for every 100 students for an elementary school; 20 acres plus one acre for every 100 students for a middle school; and 30 acres plus one acre for every 100 students for a high school. The Council rescinded these guidelines in 2004, but many school districts still use variations of this formula, which typically places schools outside of neighborhoods, reducing walking and bicycling options.

Sharing established athletic and recreational facilities should be promoted in order to reduce acreage demands for school siting, making neighborhood-based schools more feasible.

The relaxation of local zoning ordinances for schools is necessary because often, local zoning regulations such as set-back requirements or height limitations push schools out of neighborhoods to open space where large, one-story schools can be built. If city planners work closely with school district officials toward the goal of building or renovating neighborhood schools, these requirements can be overcome.

Scientific Support: In a 2002 national survey, just 17% of parents said that their children walked to school, and just 5% said that their children rode their bike to school, both significant drops from the 1970s; 53% of respondents said that they drove their children to school. Two out of three parents who said that they drove their children to school said that their primary reason for doing so was that the school was located too far away from their neighborhood for walking to be a feasible option.

Recommendation 12:
The Oregon Legislature should double the percentage of state highway funds dedicated to bicycle and pedestrian facilities from 1% to 2% of the total project cost, and double the amount of grant funding available to cities for the design and construction of bicycle and pedestrian facilities from $5 million to $10 million every two years.

Rationale: Current law (ORS 366.514) requires that the proportion that cities and counties who receive funds from the State Highway Fund spend on pedestrian and bicycle transportation "shall never in any one fiscal year be less than one percent of the total amount of the funds received from the highway fund." This law provides exemptions based on population density, the size of the project, and other factors. In order to promote safe and available transportation options that involve physical activity, the Commission recommends doubling this percentage to 2%.

The Oregon Department of Transportation's Pedestrian and Bicycle Grant Program offers up to $5 million in grants per biennium to local municipalities to improve their biking and walking environments. The Commission recommends doubling this amount to $10 million per biennium. The Commission further recommends the Oregon Department of Transportation (ODOT) should work closely with the Oregon Parks & Recreation Department to determine when recreational trails can be incorporated into biking and walking promotion strategies as a complement to or replacement for building new facilities along commuting corridors.

Scientific Support: According to *Does It Work? State Department of Transportation Project Assessment*, "virtually all bicycling and most walking takes place in public space, along the streets and highways, and in park and recreation areas." *Preventing Childhood Obesity* notes there is a significant positive association between access to facilities such as bicycle paths and parks and physical activity levels. Rosenberger, Sneh, Phipps, and

Gurvitch (2005) demonstrated increased recreational opportunities have the potential to decrease health care expenditures and rates of obesity through increasing rates of physical activity. Data reported in *Quantifying the Benefits of Nonmotorized Transportation For Achieving Mobility Management Objectives* suggests approximately 5-10% of urban automobile trips can reasonably be shifted to nonmotorized transport (walking and biking) when alternatives to automobile use are provided.

Food and Beverage Industry

Recommendation 13:
The Governor and the Legislature, in collaboration with Oregon's Congressional delegation, should work to enact federal legislation that would:

a. Establish a subsidy for fruits and vegetables that would make these food items affordable to all persons in the United States.
b. Remove the subsidy on corn.
c. Remove the subsidy on sugar.
d. Place a tax on high fructose corn syrup and sugar.

Rationale: It makes little sense to provide subsidies for products that are linked with the increase in obesity, and at the same time enact public policies to combat obesity.

The consumption of fruits and vegetables will not increase as long as healthy foods are not economically competitive with other foods. Price reduction and availability encourage positive eating behaviors by removing financial barriers to a healthy diet. Removing the financial incentives currently provided to makers of high-fat and high-sugar foods will lead to natural price increases for those items. Subsidies for healthy foods such as fruits and vegetables will increase the availability of these and other healthy foods.

Removing the subsidy on corn would lead to an increase in the cost of corn and would decrease the amount of corn used to produce high fructose corn syrup. High fructose corn syrup is used in soft drinks, fruit and juice drinks, other beverages and many food products. In addition, corn is used to produce feedlot beef and pork (it is currently cheaper to feed cattle corn than allow them to graze on grass). Beef and pork contain considerable amounts of saturated fat and cholesterol that can contribute to high LDL cholesterol levels and coronary heart disease and stroke. Meat from grass-fed animals contains more of the essential omega-3 fatty acids.

Removing the subsidy on sugar would lead to an increase in the cost of food products containing large amounts of sugar used to produce cheap foods that contain largely calories and few other nutrients such as cookies, pastries, candy bars, etc.

Similarly, taxing high fructose corn syrup and sugar would increase the cost of producing soft drinks, other drinks, cookies, pastries, candy bars, etc.

Scientific Support: Support for this approach can be found in recent publications including, Environmental Health Perspectives, *The fat of the land: do agricultural subsidies foster poor health?* 2004; Future Child, *Markets and childhood obesity policy,* 2006; and the British Medical Journal, *Obesity, hunger, and agriculture: the damaging role of subsidies*, 2005.

Recommendation 14:
The Oregon Legislature should require that fast-food and other chain restaurants in Oregon with 10 or more locations list the calorie, saturated and trans fat, sodium and carbohydrate contents of standard menu items on their menus. Restaurants that use menu boards, where space is limited should be required to provide at least calorie information on their menu boards

Rationale: While some restaurants do have nutrition information available the accessibility of this information varies greatly. Having it available when food choices are made should increase the extent to which consumers consider nutritional information when choosing foods.

Currently at most restaurants people can only guess the nutritional content of the food. Even consumers who know a great deal about nutrition cannot make informed decisions. Experience to date has clearly demonstrated that without a statewide policy restaurants are not likely to display this information at the point of sale.

While ideally all restaurants should provide this information, small restaurants or those with menus that vary frequently may not have the resources to easily and reliably gather this nutritional information.

Scientific Support: Studies suggest that nutrition education offered at the "point of sale" is more likely to influence people's food purchasing behavior. A summary of studies are found in the Center for Science in the Public Interest "Policy Options to Support Nutrition and Activity"; Prevention Institute "Educating Consumers about Healthy Food Choices: Point-of-Sale Interventions."

Recommendation 15:
The Oregon legislature should: enact three resolutions to promote responsible food and beverage marketing to children:

a. Call upon Congress to provide the Federal Trade Commission authority to: restrict advertising to children; develop and implement nutrition standards for foods and beverages advertised to children; ensure equal time for promoting healthy lifestyles during television programming.
b. Call upon Congress to give the Secretary of Agriculture the authority to prohibit the marketing and advertising of food and beverages in schools.

c. Call upon food producers and marketers in Oregon to adhere to voluntary guidelines developed by experts for responsible food and beverage advertising to children.

Rationale: Concern has focused on food and beverage marketing practices because of the increase in new products targeted specifically to children and youth over the past decade. On average, today's kids see 40,000 ads on TV per year, compared to 20,000 in the late 1970s. It is estimated that more than $10 billion per year is spent for all types of food and beverage marketing to children and youth in America. The preponderance of the products marketed to children and youth are high in total calories, sugars, salt and fat, and low in nutrients. Food and beverage marketing targeted to children ages 12 and under leads them to request and consume these high-calorie, low-nutrient products. Because dietary preferences and eating patterns form early in life and set the stage for an individual's long-term health prospects. Current food and beverage marketing practices put kids' long-term health at risk.

Industries should shift their creativity and resources to develop a wider array of products that are nutritious, appealing, and affordable. Food, beverage, and restaurant companies, as well as the entertainment and marketing industries, should expand, strengthen, and enforce their standards for marketing practices. The industries should work with health officials and consumer groups to develop an industry wide rating system and labeling that convey the nutritional quality of foods and beverages in a consistent and effective fashion.

While the Workgroup feels that a voluntary, collaborative approach would be a good place to start, if voluntary efforts related to advertising during children's television programming are unsuccessful in shifting the emphasis away from high-calorie and low-nutrient foods and beverages to the advertising of healthful foods and beverages, stronger regulatory approaches should be considered.

Scientific Support: There is scientific evidence that advertising junk food to children has a negative impact on their behavior and health. The Institute of Medicine (IOM), in their 2006 report on food marketing to children, after evaluating all available evidence, concluded that, (1) There is strong evidence that television advertising influences the food and beverage preferences and purchase requests of children ages 2-11 years old; (2) There is strong evidence that exposure to television advertising is associated with overweight in children from ages 2 to 18 years old; and (3) Although this association cannot be precisely quantified, even a small effect across the entire population represents a significant impact. Of great concern is evidence suggesting how advertising affects children differently than it does adults. Studies have shown most children 4 years old and under cannot discriminate between ads and programming, and most kids 8 years old and under do not effectively comprehend the persuasive intent of marketing messages.

Worksites

Recommendation 16:
The Governor should, by executive order, require that all state agencies model increased consumption of fruits and vegetables from 2007-2012. This executive order should also require agencies to report on their activities in this regard, and require the Department of Human Services to showcase model agency activities.

Rationale: Children model the behavior they see in the adults around them. Because adults spend most of their day at work, the worksite is an important influence on adult behaviors. State government worksites are a logical place to test a healthy worksite policy and to model the healthy behaviors we would like to see in all worksites.

The proposal would be implemented by each state agency. While each agency would be free to creatively develop programs to meet the requirements of this executive order, some activities to be considered include: developing written guidance requiring fruit and vegetable options when food is provided at meetings; including in cafeteria and vending contracts requirements to offer healthy fruit and vegetable options; arranging for individual worksite Farmers' Market or Community Supported Agriculture; and offering educational materials and events that promote fruit and vegetable consumption.

Each state agency would submit an annual report to the Governor from 2007-2012 describing the activities undertaken by the agency to meet the requirements of this executive order. The Department of Human Services Public Health Division would review these reports and develop a plan to showcase state agencies successfully modeling increased consumption of fruits and vegetables.

Scientific Support: A logical place to promote health and manage obesity and chronic diseases is at the worksite. Based on Oregon's 2003 BRFSS, 57% of adults aged 20 to 64 reported working for an employer other than themselves. Since Oregon workers spend many hours on the job, creating workplace environments and policies supportive of healthy eating, daily physical activity, and weight and chronic disease management is a reasonable approach to reducing obesity and other chronic diseases. State government worksites are a logical place to test a healthy worksite policy and to model the healthy behaviors we would like to see in all worksites. The CDC's "Resource Guide for Nutrition and Physical Activity Interventions to Prevent Obesity and Other Chronic Diseases", and the California Department of Health Services, Public Health Institute's "Fruits and Vegetables and Physical Activity at the Worksite: Business Leaders and Working Women Speak out on Access and Environment". January 2004, documents the benefits of promoting healthy eating in the workplace

Recommendation 17:
The legislature should fund the expansion of the Breastfeeding Mother Friendly Employer Program to:

a) Maintain the Breast-feeding Employer Promotion and Recognition Program

b) Establish a database to track types of barriers faced by breastfeeding mothers and use this information for community education and interventions to support breastfeeding.
c) Provide grants to community organizations to increase outreach, community collaboration and education to employers and the community regarding the importance of breastfeeding.
d) Provide training and materials to the Temporary Assistance for Needy Families Program (TANF) and JOBS Program staff so they can assist low-income mothers to continue breastfeeding while successfully helping them return or enter the work force. Focus groups of staff and clients in Oregon indicated that this is needed.

Rationale:
Returning to work often signals the end of breastfeeding. In addition, rules for the Temporary Assistance for Needy Families Program (TANF) and the JOBS Program require mothers to return to full time training or employment by the time their infant is 3 months old. TANF program and employer support is needed in order for the children in these families to have equal access to the health protection that breastfeeding provides.

In Oregon mothers face significant barriers to breastfeeding. Currently Oregon does not have a way to systematically document the frequency or severity of these problems. The problem has been documented through focus groups of TANF/JOBS program staff and clients. Increased education and support is needed in this arena.

In 2000, the federally funded Women, Infants and Children (WIC) nutrition program began providing breast pumps to mothers returning to work or school; this is helpful if the workplace is supportive of breastfeeding. Some Oregon employers support breastfeeding mothers through workplace accommodations and DHS has been working to encourage others to do likewise through its breastfeeding friendly employer program. Increasing the number of mothers who breastfeed for six months supports the Healthy People 2010, Breastfeeding Goal of increasing to 50% the proportion of mothers who breastfeed their babies through five to six months of age. All employers should be encouraged to have a written policy about the promotion and protection of breastfeeding in the workplace.

Scientific Support:
According to the Centers for Disease Control and Prevention "CDC Guide to Breastfeeding Interventions" indicators of satisfaction and perceptions related to workplace programs have been evaluated, as have assessments of the use of resources for breastfeeding support, services provided, and perceived impact on success. Measures of participant satisfaction and perceptions show a positive impact of workplace support programs on the mother's work experience. Further, several studies indicate that support for lactation at work benefits individual families as well as employers via improved productivity and staff loyalty; enhanced public image of the employer; and decrease absenteeism, healthcare cost and employee turnover.

Medical Care

Recommendation 18:
The Legislature should require and provide incentives for health plans in Oregon to:

a. Provide coverage for effective obesity prevention and treatment strategies
b. Provide incentives for health plan subscribers to maintain healthy body weight
c. Include BMI screening and obesity prevention services in quality assessment efforts and encourage BMI screening by providers

Rationale: Health insurance coverage for the treatment of obesity has been both controversial and largely lacking. In 2005, Centers for Medicare & Medicaid Services (CMS)/Medicare officially classified obesity as a disease and began covering some treatment; perhaps opening the door for other health plans to follow suit. Lack of reimbursement for obesity screening and management services is an important barrier to their implementation.

Health plans often undertake quality assessment efforts to improve treatment for selected, "big ticket" health conditions. Given the epidemic problem of obesity the extent to which clinicians screen for and treat obesity should be a target for quality improvement activities. Typically measurement of how frequently clinicians follow treatment guidelines can be an important step towards promoting evidence-based treatment.

Scientific Support: Recent reviews of evidence regarding obesity management consistently recognize the value of body mass index as a screening measure. They also confirm the efficacy of multi-component programs (those that integrate low-calorie diet, structured physical activity and behavioral interventions) in producing and sustaining weight loss, and reducing resultant risk for co-morbidities, for periods of up to two years. The United States Preventive Services Task Force recommends routine screening for obesity using body mass index. The National Heart, Lung, and Blood Institute, and the British Medical Journal review, *What Works for Obesity* both note that multi-component interventions involving structured physical activity, calorie restriction, and a behavioral component have been demonstrated to produce modest (3-5kg) weight loss as well as to decrease health risk from co-morbidities. The American Medical Association, Guidelines for Adolescent Preventive Services recommends annual adolescent screening for eating disorders and obesity.

Recommendation 19
The Legislature should:

a) Provide funding to create a Breastfeeding Friendly Hospital program to educate and encourage hospitals to implement policies and procedures that support breastfeeding initiation and duration.
b) Mandate that DHS work with OMAP to cover lactation consultant visits.

Rationale: Breastfeeding is an important factor in preventing childhood obesity and diabetes, as well as, protecting infants from bacterial and viral infections. Increasing the

rate of exclusive breastfeeding for the first six months of life is important for obesity prevention and resulting reductions in health care costs.

Since 1997, the American Academy of Pediatrics (AAP) has recommended exclusive breastfeeding, without supplementation of food or formula for the first six months of life. While any breastfeeding is beneficial, research shows that exclusive breastfeeding reaps the greatest benefits both in childhood and for adult health. The United States Breastfeeding Committee recommends a set of best practices, "Practices for Successful Breastfeeding Services at Hospital and Maternity Centers. A similar recommendation, "Ten Steps to Successful Breastfeeding" are found in the "Baby Friendly Hospital Initiative" designation established by the World Health Organization. Both have been shown to support successful initiation and duration of breastfeeding

A survey conducted by the federal Centers for Disease Control and Prevention, found that while 88% of Oregon mothers start out breastfeeding, only 25 percent exclusively breastfed their child until six months of age. More than two-thirds of Oregon children do not get the health protection that exclusive breastfeeding provides.

Nursing mothers face a number of barriers to six months of exclusive breastfeeding including: hospital practices that do not support breastfeeding and lack of access to the care of a lactation consultant because it is not covered by insurance.

Scientific Support: Studies referenced in the "CDC Guide to Breastfeeding Interventions" found that institutional changes in maternity care practices effectively increase breastfeeding initiation and duration rates. These changes can be comprehensive or they can be individual interventions such as increasing the rooming-in of mothers and babies or discontinuing policies that are not evidenced based. Hospitals that adhere to the ten successful steps to breastfeeding included in the Breastfeeding Friendly Hospital Initiative designation typically experienced an increase in breastfeeding rates**.**

Parks and Recreation

Recommendation 20:
The Legislature should fund the Oregon Parks and Recreation Department Youth Investment Grant Program *Young Oregonians Use the Great Outdoors (You Go!)*

Rationale: Oregon's incredible outdoor resources could be used as a tool to promote physical activity among youth. The Oregon Parks and Recreation Department has developed a proposal for a Youth Investment Grant Program. Funding under this proposal would be available for programs such as outdoor skills courses, experiential education programs, environmental education, interpretation, intervention programs. $1,500,000 for this program is currently included in the agency's budget request. Eligible applicants for these funds would include local park and recreation providers and state and federal land management agencies and public schools

While exposing children to outdoor recreation activities can provide children a variety of benefits – including physical, social, emotional and spiritual benefits – promotion of physical activity would be a substantial benefit as well.

Scientific Support: Analysis of previous Oregon Statewide Comprehensive Outdoor Recreation Plan (SCORP) results indicates that participation in traditional outdoor recreation activities is decreasing, and this may be due to decreasing youth participation. Anecdotal information and available literature indicate that youth participation in outdoor activities is decreasing because of several factors, including: Increased urbanization, and thus distance from natural areas; Loss of free time; Increase in single-Parent households; Greater youth focus on electronic activities (TV, video games, internet), which complete for time and raise the level of stimulation needed to gain and maintain attention; and fear of allowing children to be unsupervised away from home.

Studies show that young people benefit significantly from compelling and consistent outdoor experiences, whether in urban or wilderness settings. The outdoors uniquely transforms individuals through personal, social, and academic growth. Outdoor experiences facilitate healthy childhood physical, emotional, and spiritual development, as well as engender support for conserving natural areas.

APPENDIX II

Childhood Obesity Study
Best Available Evidence Recommendations
March 30, 2006

Introduction/Background: The Research/Science Workgroup agreed on several overarching principles in developing their recommendations regarding decreasing childhood obesity in Oregon.

- Because there are a limited number of randomized, controlled research trials for obesity prevention and treatment among children and adolescents, the recommendations of this workgroup are, like the IOM report, based on the best currently available evidence.

- Because obesity ultimately results from more calories consumed than expended, interventions that have been demonstrated to reduce calorie intake and/or increase calorie expenditure should be considered for inclusion even if changes in weight/BMI have not yet been demonstrated.

- Interventions to prevent and reduce obesity need to address both calorie-in (healthy eating) and calorie-out (physical activity) strategies.

- Children's behaviors are affected either directly or indirectly by a variety of factors. Chief among these are the influential adults in their lives – parents, grandparents, teachers. The recommendations recognize the importance of these influential adults and support obesity interventions that influence the healthy eating and physical activity behaviors of adults as well as children.

- Children's behaviors are affected not only by individual factors but also through interactions with the larger social, cultural, and environmental contexts in which he or she lives (e.g., family, school, community, social and physical environments). The recommendations recognize that the social, cultural and policy environment must all support healthy choices for children and adults and that interventions must occur in all settings.

- The recommendations also recognize that certain populations are at greater risk, resulting in disparities in the prevalence of obesity. Thus interventions need to be tailored appropriately for various populations and incorporate cultural, linguistic, geographic and socioeconomic factors.

- It is appropriate to borrow from the effective tobacco control model. Like tobacco, the goal for obesity prevention and control is to build a comprehensive approach where interventions are conducted in all settings. Achieving this goal requires establishing an infrastructure at the state and local level, developing policies and programs that support healthy eating and physical activity, collecting

and analyzing data for surveillance and evaluation, and conducting research to determine effectiveness.

- Finally, research is needed, funded particularly at the federal level, to determine appropriate outcomes and effectiveness of interventions for specific populations and settings.

The following sources were used as the basis for the recommendations described below.

AAP 2003 - Prevention of Pediatric Overweight and Obesity, American Academy of Pediatrics, Policy Statement 2003
AAP 2006 – Dietary Recommendations for Children and Adolescents: A Guide for Practitioners, Endorsed Policy Statement American Academy of Pediatrics 2006
AHAO – Circulation, Journal of the American Heart Association, Overweight in Children and Adolescents: Pathophysiology, Consequences, Prevention and Treatment, 2005
AHAD – Circulation, Journal of the American Heart Association, Dietary guidelines for children and Adolescents: A Guide For Practitioners, 2005
AHAPA - Circulation, Journal of the American Heart Association, Promoting Physical Activity in Children and Youth, A leadership Role for Schools, 2006
CDC Guide to Breast Feeding Interventions, Centers for Disease Control 2005,
COSW – Childhood Obesity Study Workgroup
HHS/CDC – Department of Health and Human Services/Centers for Disease Control and Prevention, Resource Guide for Nutrition and Physical Activity Interventions to Prevent Obesity and Other Diseases
IOM – Preventing Childhood Obesity: Health in the Balance, Institute of Medicine, 2004
IOM Food Marketing – Food Marketing to Children and Youth: Threat or Opportunity? Committee on Food Marketing to Children and Youth, Institute of Medicine, 2006
NASPE – National Association for Sport and Physical Education – Moving Into the Future – National Standards for Physical Education, 2004
NHLBI – National Heart Lung and Blood Institute – The Practical Guide – Identification, Evaluation and Treatment of Overweight and Obesity, 1998, 2000
PUBI - Princeton University and the Brookings Institution, The Future of Children – Childhood Obesity, 2006
TFCPS – Increasing Physical Activity: A Report on the Recommendations of the Task Force on Community and Preventive Services
Worksite-TFCPS – Public Health Strategies for Preventing and Controlling Overweight and Obesity in School and Worksite Settings, Task Force on Community Preventive Services

State and Local Government	Best Available Evidence Recommendations	Implementation Recommendations
Physical Activity	• Local governments, private developers and community groups should expand opportunities for physical activity including recreational facilities, parks, playgrounds, sidewalks, bike paths, routes for walking or bicycling to school, and safe streets and neighborhoods, especially for population at high risk of childhood obesity. (IOM)	• Revise comprehensive plans, zoning and subdivision ordinances, and other planning practices to increase availability and accessibility of opportunities for physical activity in new developments. (IOM) • Prioritize capital improvement projects to increase opportunities for physical activity in existing areas. (IOM) • Improve the street, sidewalks, and street crossing safety of routes to school, developing programs to encourage walking and bicycling to school, and build schools within walking distance of neighborhoods they serve. (IOM)
Combined approaches to Obesity Prevention	• Government at all levels should provide coordinated leadership for the prevention of obesity in children and youth. An increased level and sustained commitment of federal and state funds and resources are needed. (IOM) • Local governments, public health agencies, schools, and community organizations should collaboratively develop and promote programs that encourage healthful eating and regular physical activity. Community coalitions should be formed to facilitate and promote cross-cutting programs and community-wide efforts. (IOM)	• Provide coordinated leadership and support for childhood obesity prevention efforts, particularly those focused on high-risk populations, by increasing resources and strengthening policies that promote opportunities for physical activity and healthful eating in communities, neighborhoods, and schools. (IOM) • Community evaluation tools should incorporate measures of the availability of opportunities for physical activity and healthful eating. (IOM) • Communities should improve access to supermarkets, farmers' markets and community gardens to expand healthful food options, particularly in low-income and underserved areas. (IOM)

State and Local Government	Best Available Evidence Recommendations	Implementation Recommendations
	• Provide coordinated leadership and support for childhood obesity prevention efforts, particularly those focused on high-risk populations, by increasing resources and strengthening policies that promote opportunities for physical activity and healthful eating in communities, neighborhoods and schools. (IOM) • Support public health agencies and community coalitions in their collaborative efforts to promote and evaluate obesity prevention interventions. (IOM) • Government at all levels should marshal the full range of public policy levers to foster the development and promotion of healthful diets fort children and youth. (IOM Food Marketing)	• Communication strategies should be consistent with the National 5 A Day Program (HHS/CDC) • Expand and promote opportunities for physical activity in the community through changes to ordinances, capital improvements programs, and other planning practices. (IOM) • Work with communities to support partnerships and networks that expand the availability of and access to healthful foods. (IOM) • Restrict certain types of foods and beverages on school grounds (AAP 2006) • Establish school wellness policies (AAP 2006) • State and local governments should make childhood obesity prevention a priority by devoting resources to this issue and providing leadership in launching and evaluating prevention efforts. (IOM) • Government should consider incentives (e.g., recognition, performance awards, tax incentives) that encourage and reward food, beverage, and restaurant companies that develop, provide, and promote healthier foods and beverages for children and youth in settings where they typically consume them (e.g., restaurants, schools, amusement parks, sports venues, movie theaters, malls, and airports). (IOM Food Marketing, AAP 2006) • Government should explore combining the full range of possible approaches (e.g., agricultural subsidies, taxes, legislation, regulation, federal nutrition programs) for making fresh fruit and vegetables readily available and accessible to all

State and Local Government	Best Available Evidence Recommendations	Implementation Recommendations
		children, youth and families. (IOM Food Marketing) • The U.S. department of Agriculture should develop and test new strategies for promoting healthier, appealing school meals provided though the School Breakfast Program and the National School Lunch program as well as other federal programs designed for after-school settings (Special Milk Program) and child-care settings (Child and Adult Care Food Program). (IOM Food Marketing) • If voluntary efforts related to advertising during children's television programming are unsuccessful in shifting the emphasis away from high-calorie and low-nutrient foods and beverages to the advertising of healthful foods and beverages, congress should enact legislation mandating the shift on both broadcast and cable television. (IOM Food Marketing, AAP 2006) • Relevant surveillance and monitoring efforts should be supported and strengthened by increased federal funding; this applies particularly to NHANES, as it is a valuable information resource for obesity prevention programs. Special efforts should be made to identify those populations most at risk of childhood obesity, and monitor the social, environmental and behavioral factors contributing to that elevated risk. (IOM).

Industry and Media	Best Available Evidence Recommendations	Implementation Recommendations
Nutrition	• Industry should make obesity prevention in children and youth a priority by developing and promoting products, opportunities, and information that will encourage healthy eating behaviors and regular physical activity. (IOM)	• Food and beverage industries should develop product and packaging innovations that consider energy density, nutrient density, and standard serving sizes to help consumers make healthful choices. (IOM) • Full-service and fast food restaurants should expand healthier food options and provide calorie content and general nutrition information at point of purchase. (IOM)
	• Nutrition labeling should be clear and useful so that parents and youth can make informed product comparisons and decisions to achieve and maintain energy balance at a healthy weight. (IOM)	•
	• Increasing the amount of positive images of breastfeeding to counteract advertising that markets infant formula helps to promote breastfeeding as a viable option for infant feeding. (CDC Guide to Breastfeeding Interventions, 2005)	• Media campaigns, particularly television commercials, improve attitudes toward breastfeeding and increase initiation rates. Media and social marketing increases initiation and duration of breastfeeding while improving perceptions of community support for breastfeeding. (CDC Guide to Breastfeeding Interventions, 2005)
	• Food and beverage companies should use their creativity, resources, and full range of marketing practices to promote and support more healthful diets for children and youth. (IOM Food Marketing)	• Shift their food and beverage portfolios in a direction that promotes new and reformulates child- and youth-oriented foods and beverages that are substantially lower in total calories, lower in fats, salt, and added sugars, and higher in nutrient content. (IOM Food Marketing) • Shift their food and beverage advertising and marketing emphasis to foods and beverages that are substantially lower in total calories, lower in fats, salt, and added sugars, and higher in

Industry and Media	Best Available Evidence Recommendations	Implementation Recommendations
		nutrient content. (IOM Food Marketing) • Engage the full range of their food and beverage marketing vehicles and venues to develop and promote healthier appealing and affordable foods and beverages for children and youth. (IOM Food Marketing)
	• Full service restaurant chains, family restaurants, and quick service restaurants should use their creativity, resources, and full range of marketing practices to promote healthful meals for children and youth. (IOM Food Marketing)	• Expand and actively promote healthier food, beverage, and meal options for children and youth. (IOM Food Marketing) • Provide calorie content and other key nutrition information, as possible, on menus and packaging that is prominently visible at the point of choice and use. (IOM Food Marketing, AAP 2006)
	• Food, beverage, restaurant, retail, and marketing industry trade associations should assume transforming leadership roles in harnessing industry creativity, resources, and marketing on behalf of healthful diets for children and youth. (IOM Food Marketing)	• Encourage member initiatives and compliance to develop, apply and enforce industry-wide food and beverage marketing practice standards that support healthful diets for children and youth. (IOM Food Marketing) • Provide technical assistance, encouragement, and support for members' efforts to emphasize the development and marketing of healthier foods, beverages, and meals for children and youth. (IOM Food Marketing) • Exercise leadership in working with their members to improve the availability and selection of healthful foods and beverage accessible at eye level and reach for children, youth and their parents in grocery stores and other food retail environments. (IOM Food Marketing) • Work to foster collaboration and support with public sector initiatives promoting healthful diets for children and youth. (IOM Food Marketing)

Industry and Media	Best Available Evidence Recommendations	Implementation Recommendations
	• The food, beverage, restaurant and marketing industries should work with government, scientific, public health and consumer groups to establish and enforce the highest standards for the marketing of foods, beverages and meals to children and youth. (IOM Food Marketing, AAP 2006)	• Work through children's Advertising Review Unit (CARU) to revise, expand, apply, enforce, and evaluate explicit industry self-regulatory guidelines beyond traditional advertising to include evolving vehicles and venues for marketing communication (e.g., the Internet, advergames, branded product placement across multiple media). (IOM Food Marketing) • Assure that licensed characters are used only for the promotion of foods and beverages that support healthful diets for children and youth. (IOM Food Marketing) • Foster cooperation between CARU and the Federal Trade Commission in evaluation and enforcing the effectiveness of the expanded self-regulatory guidelines. (IOM Food Marketing)
	• The media and entertainment industry should direct its extensive power to promote healthful foods and beverages for children and youth. (IOM Food Marketing)	• Incorporate into the multiple media platforms (e.g., print, broadcast, cable, internet, and wireless-based programming) foods, beverage, and storylines that promote healthful diets. (IOM Food Marketing) • Strengthen their capacity to serve as accurate interpreters and reporters to the public on findings, claims, and practices related to the diet of children and youth. (IOM Food Marketing)
	• Government, in partnership with the private sector, should create a long-term, multifaceted, and financially sustained social marketing program supporting parents, caregivers, and families in promoting healthful diets for children and youth. (IOM Food Marketing, AAP 2003)	• Elements should include the full range of evolving and integrated marketing tools and widespread educational and community-based efforts, including use of children and youth as change agents. (IOM Food Marketing) • Special emphasis should be directed to parents of children ages birth to 4 years and others caregivers. (e.g., child-care setting, schools, after-school programs) to build skills to wisely select and prepare healthful and affordable foods and beverages for children and youth. (IOM Food Marketing)

Industry and Media	Best Available Evidence Recommendations	Implementation Recommendations
		• The social marketing program should have a reliable and sustained support stream, through public-appropriated funds and counterpart cooperative support from businesses marketing foods, beverages, and meals to children and youth. (IOM Food Marketing)
Physical Activity	• Industry should make obesity prevention in children and youth a priority by developing and promoting products, opportunities, and information that will encourage healthy eating behaviors and regular physical activity. (IOM)	• Leisure, entertainment, and recreation industries should develop products and opportunities that promote regular physical activity and reduce sedentary behaviors. (HHS/CDC)
Combined Approaches	• Industry should develop and strictly adhere to marketing and advertising guidelines that minimize the risk of obesity in children and youth (IOM) • Industry should provide clear and consistent media messages. (IOM)	• Industry should implement the advertising and marketing guidelines. (IOM)

Community	Best Available Evidence Recommendations	Implementation Recommendations
Nutrition	• Local governments, public health agencies, schools and community organizations should collaboratively develop and promote programs that	• Community child- and youth-centered organizations should promote healthful eating behaviors and regular physical activity through new and existing programs that will be sustained over the long term. (IOM)

Community	Best Available Evidence Recommendations	Implementation Recommendations
	encourage healthful eating behaviors particularly in high-risk populations (IOM) • Enhance the community food environment to expand ability of community members to obtain healthful and affordable food on a regular basis (IOM)	• Communities should improve access to supermarkets, farmer's markets, and community gardens to expand healthful food options, particularly in low-income and underserved areas. (IOM) • Community evaluation tools should incorporate measures of the availability of opportunities for physical activity and healthful eating. (IOM) • Work with community groups, nonprofit organizations, local farmers and food processors, and local businesses to support multisectoral partnerships and networks that expand the availability of healthful foods within walking distance, especially in low-income and underserved neighborhoods (IOM) • Zoning and planning incentives that place full-service grocery stores in needed neighborhoods (COSW) • Increase access to fruits and vegetables by providing coupons for fruits and vegetables at farmers' markets (HHS/CDC) • Conduct social marketing campaigns such as promoting fruit and vegetable consumption via the 5 A Day for Better Health Program (HHS/CDC)
Physical Activity	• Local governments, public health agencies, schools and community organizations should collaboratively develop and promote programs that encourage physical activity particularly in high-risk populations. (IOM)	• Community evaluation tools should incorporate measures of the availability of opportunities for physical activity. (IOM) • Community child- and youth-centered organizations should promote healthful eating behaviors and regular physical activity through new and existing programs that will be sustained over the long term. (IOM) • Community-wide campaigns are effective in getting people to

Community	Best Available Evidence Recommendations	Implementation Recommendations
		be more physically active. Large scale intense, highly visible with messages directed to large audiences through different types of media. (TFCPS) • Point of decision prompts placed near elevators and escalator that encourage people to use the stairs for health benefits or weight loss. (TFCPS) • Social support interventions in community settings that focus on changing physical activity behavior through building, strengthening and maintaining social networks that provide supportive relationships for behavior change. (TFCPS) • Individually-adapted health behavior change programs that teach behavioral skills to help participants incorporate physical activity into their daily routines. Programs are tailored to each individual's specific interest, preference and readiness to change. (TFCPS)
	• Creating and improving access to places for physical activity combined with distribution of information increase physical activity. (TFCPS)	• Access to places for physical activity can be created or enhanced by building trails or facilities or by reducing barriers to such places (e.g. reducing fees or providing time for use) certain programs also provide training in using equipment and incentives (e.g., risk factor screening and counseling or other health education activities). (TFCPS)
	• Local governments, private developers, and community groups should expand opportunities for physical activity including recreational facilities, parks, playgrounds, sidewalks, bike paths, routes for walking or bicycling to	• Revise comprehensive plans, zoning and subdivision ordinances, and other planning practices to increase availability and accessibility of opportunities for physical activity in new developments (IOM) • Prioritize capital improvement projects to increase opportunities for physical activity in existing areas. (IOM)

Community	Best Available Evidence Recommendations	Implementation Recommendations
	school, and safe streets and neighborhoods, especially for populations at high risk of childhood obesity. (IOM)	
Combined Approaches to Obesity Prevention	• Local governments, public health agencies, schools and community organizations should collaboratively develop and promote programs that encourage physical activity particularly in high-risk populations. Community coalitions should be formed to facilitate and promote cross-cutting programs and community wide campaigns. (IOM)	• Private and public efforts to eliminate health disparities should include obesity prevention as one of their primary areas of focus and should support community-based collaborative programs to address social, economic, and environmental barriers that contribute to the increased obesity prevalence among certain populations. (IOM) • Develop and promote parental programs addressing parental monitoring of television time and setting of rules (HHS/CDC) • Provide more safe and engaging activities for children to do instead of watching television (HHS/CDC) • Develop or promote social marketing campaigns to reduce television viewing (HHS/CDC) • Develop and promote interventions with parents to reduce their own television watching (HHS/CDC) • Develop awareness campaigns and offer training in the community about obesity issues and solutions. (COSW)

Health Care	Best Available Evidence Recommendations	Implementation Recommendations
Combined Approaches	• Pediatricians, family physicians, nurses, and other clinicians should	• Health-care professional should routinely track BMI, offer relevant evidenced-based counseling and guidelines, serve as

Health Care	Best Available Evidence Recommendations	Implementation Recommendations
to Obesity Prevention	engage in the prevention of childhood obesity. (IOM) • Health-care professionals organizations, insurers, and accrediting groups should support individual and population-based obesity prevention efforts. (IOM)	role models, and provide leadership in their communities for obesity prevention efforts. (IOM, AAP 2003, AHAO, AHAD 2005) • Encourage organizations that are responsible for health care and health care financing to provide coverage for effective obesity prevention and treatment strategies. (AAP 2003, NHLBI) • Professional organizations should disseminate evidenced-base clinical guidance and establish programs on childhood obesity prevention. (IOM) • Training programs and certifying entities should require obesity prevention knowledge and skills in their curricula and examinations. (IOM) • Insurers and accrediting organizations should provide incentives for maintaining healthy body weight and include screening and obesity preventive services in routine clinical practice and quality assessment measures. (IOM)
	• Implement hospital and maternity care policies and practices outlined by the World Health Organization. (HHS/CDC)	• Implement best practices as identified through the Baby Friendly Hospital Initiative (WHO): no distribution of infant formula samples to new mothers during hospital stay; birthing practices such as continuous support during labor using trained labor assistants such as doulas; immediate skin-to-skin contact between mother and infant. (The CDC Guide to Breastfeeding Interventions, 2005)
	• Strengthen breastfeeding education and provision of peer support. (HHS/CDC, AAP 2003)	• Breastfeeding peer support programs increase breastfeeding initiation and duration; training is a necessary component as well as leadership and support, community partnerships and

Health Care	Best Available Evidence Recommendations	Implementation Recommendations
	• Take a leadership role in prevention of pediatric overweight and obesity. (AAP 2003)	integrating peer support within the overall health system. • Breastfeeding education increases breastfeeding initiation and short-term duration. Prenatal education and intrapartum education are both effective. • Ongoing professional support, in-person, impacts initiation and duration, especially when combined with maternal education. (The CDC Guide to Breastfeeding Interventions, 2005, AHAD, 2005) • Enlist policy makers from local, state, and national organizations and schools to support a healthful lifestyle for all children, including proper diet and adequate opportunity for regular physical activity. (AAP 2003, AHAO, 2005) • Support and advocate for social marketing intended to promote healthful food choice and increased physical activity. (AAP 2003) • Encourage public and private resources to direct funding toward research into effective strategies to prevent overweight and obesity and to maximize limited family and community resources to achieve healthful outcomes for youth. (AAP 2003)

Worksite	Best Available Evidence Recommendations	Implementation Recommendations

Worksite	Best Available Evidence Recommendations	Implementation Recommendations
Nutrition	• Worksite interventions in which nutrition and physical activity to control overweight or obesity are combined. (Worksite-TFCPS)	• Didactic nutrition education (Worksite-TFCPS) • Training in behavioral techniques (Worksite-TFCPS) • Providing self-directed materials (Worksite-TFCPS) • Specific dietary prescription (Worksite-TFCPS) • Add salad bars to worksite cafeterias, provide whole fruit or cut fruits and vegetables in work site cafeterias, and add fruit to refrigerated vending machines (HHS/CDC) • Have farmers promote their crops within worksites and bring purchased produce to worksites as employees leave for home (HHS/CDC) • Lower pricing of fruits and vegetables in worksite cafeterias to promote purchases (HHS/CDC) • Provide nutrition education about foods, including fruits and vegetables in worksites to promote purchase of lower calorie items (HHS/CDC)
Physical Activity	• Worksite interventions in which nutrition and physical activity to control overweight or obesity are combined. (Worksite-TFCPS)	• Group and supervised exercise (Worksite-TFCPS) • Place point of decision prompts near elevators and escalators to encourage people to use the stairs for health benefits or weight loss. (TFCPS) • Provide locked bike storage and places to shower/cleanup. (COSW) • Provide incentives for commute options. (COSW)
Combined Approaches to Obesity Prevention	• The literature supports an emphasis on interventions combining instruction in healthier eating with a structured approach to increasing physical activity in the worksite sitting. (TFCPS)	• Combine nutrition and physical activity programs in the workplace. (Worksite-TFCPS)

Worksite	Best Available Evidence Recommendations	Implementation Recommendations
	• Provide adequate break time and a private space for expressing milk in an environment that enables mothers to continue breastfeeding as long as the mother and baby desire. (HHS/CDC)	• Adopt the Oregon WIC Employer Breastfeeding Friendly Guidelines. • Elements of successful workplace programs are space, time, support, and gatekeepers. Ideally, have a room to express milk, employer supported strategies (flexible job schedules, break times, job sharing, etc.) to ensure time for breastfeeding or milk expression, and support from coworkers, supervisors and others in the workplace. • Promote legislation to support worksite lactation programs through mandates or incentives. (The CDC Guide to Breastfeeding Interventions, 2005)

Schools	Best Available Evidence Recommendations	Implementation Recommendations
Nutrition	• Schools should provide a consistent environment that is conducive to healthful eating behaviors (IOM) • Ensure that all school meals meet the Dietary Guidelines for Americans 2005 (IOM) • • Nutrition environment and policy interventions are encouraged to	• Federal, state and local authorities and schools should develop and implement nutritional standards for all competitive foods and beverages sold or served in schools. (IOM, AHAD, 2005) • Adopt model school district wellness policies (HHS/CDC) • Increase availability of fruits and vegetables by adding salad bars to school cafeterias, providing fruits and vegetables in

Schools	Best Available Evidence Recommendations	Implementation Recommendations
	improve and sustain healthy nutrition behaviors at a population level. (HHS/CDC) • State and local educational authorities, with support from parents, health authorities, and other stakeholders, should educate about and promote healthful diets for children and youth in all aspects of the school environmental (e.g., commercial sponsorships, meals and snacks, curriculum). (IOM Food Marketing)	school cafeterias, and adding to refrigerated vending machines. (CDC) • Lower price of fruits and vegetables in school cafeterias to promote purchases. (HHS/CDC) • Provide nutrition education information in schools to promote purchase of lower calories items. (HHS/CDC, AHAO, 2005) o Coordinate efforts to promote the 5 A Day for Better Health Program. A combination of strategies is more likely to provide supportive environments for healthy dietary choices. (HHS/CDC) • Develop and implement nutrition standards for competitive foods and beverages sold or served in the school environment. (IOM Food Marketing) • Adopt policies and bests practices that promote the availability and marketing of goods and beverages that support healthful diets. (IOM Food Marketing, AAP 2003) • Visible leadership in this effort should be provided by public and civic leaders at all levels such as the National Governors Association, the State and Local Boards of Education, and the Parent Teachers Organization, as well as trade associations representing private-sector businesses such as distributors, bottlers, and vending machine companies that directly interface with the school administration. (IOM Food Marketing)
Physical Activity	• Schools should provide a consistent environment that is conducive to regular physical activity. (IOM, TFCPS, HHS/CDC, AAP 2003)	• Ensure that all children participate in a minimum of 30 minutes of moderate to vigorous physical activity during the school day including expanded opportunities for physical activity through classes, sports programs, clubs, lessons, after school and community uses of school facilities, and walking and biking to

Schools	Best Available Evidence Recommendations	Implementation Recommendations
	• Expand opportunities for physical activity (IOM, TFCPS) • Improve permanent physical environment infrastructure (HHS/CDC) • All students in grades K-12, including students with disabilities, special health-care needs, and in alternative educational settings, will receive daily physical education (or its equivalent of 150 minutes/week for elementary school students and 225 minutes/week for middle and high school students) for the entire school year. (NASPE) • All physical education will be taught by a certified physical education teacher. (NASPE) • Student involvement in other activities involving physical activity (*e.g*., interscholastic or intramural sports) will not be substituted for meeting the physical education requirement. • Students will spend at least 50 percent of physical education class time participating in moderate to	school program. (IOM, AHAPA 2006) • Promote Walk to School strategies (IOM, TFCPS) • Facilitate the choice to walk or bicycle by promoting supervised walking and biking. (TFCPS) • Addition of sidewalks, lighting, crosswalks, provision of crossing guards, regulation of traffic speed. (TFCPS) • State level policy for physical education requirements. • Adopt model school district wellness policies

Schools	Best Available Evidence Recommendations	Implementation Recommendations
	vigorous physical activity. (NASPE)	
Combined Approaches to Obesity Prevention	• Schools should provide a consistent environment that is conducive to healthful eating behaviors and regular physical activity (IOM) • Conduct annual assessments of each student weight, height and body mass index and make that information available to parents. (IOM) • Assess school policies and practices related to nutrition, physical activity, and obesity prevention. (IOM)	• Enhance health curricula to devote adequate attention to nutrition, physical activity, reducing sedentary behaviors, and energy balance, and to include a behavioral skills focus (IOM, AHAPA, 2006) • Develop, implement, and enforce school policies to create schools that are advertising-free to the greatest possible extent (IOM) • School based interventions to decrease television time such as Planet Health or Eat Well, Keep Moving. (HHS/CDC) • Address physical activity and nutrition through a Coordinated School Health Program Approach (PUBI) • State level policy requiring measurement of student BMI (There are sensitivities and concerns that surround this issue, and it is important that the data on each student are collected and reported validly and appropriately, with the utmost attention to privacy concerns and with information and referrals available if further evaluation is needed.) (IOM) • Use BMI as a measure for surveillance of overweight and obesity in populations of children. (COSW) • State level policy requiring the development and review of model school wellness policies (IOM)

Home	**Best Available Evidence Recommendations**	**Implementation Recommendations**
Combined Approaches to Obesity Prevention	• Parents should promote healthful eating and regular physical activity for their children. (IOM, AAP 2003)	• Choose exclusive breastfeeding as the method for feeding infants for the first four to six months of life. (IOM, HHS/CDC, AHAD 2005) • Choose breastfeeding for first nutrition; try to maintain for 12 mo. (AAP 2006) • Provide healthful food and beverage choices for children by carefully considering nutrient quality and energy density. (IOM, HHS/CDC, AAP 2003, AHAD 2005) • Assist and educate children in making healthful decisions regarding types of foods and beverages to consume, how often, and in what portion size. (IOM, HHS/CDC, AAP 2006) • Encourage and support regular physical activity (IOM) HHS/CDC) (AAP 2003, AAP 2006) • Limit children's television viewing and other recreational screen time to less than two hours per day. For children under 2 years, no screen time is recommended. Parental monitoring and limit setting is needed. (IOM, HHS/CDC, AAP 2003) • Discuss weight status with their child's health-care provider and monitor age- and gender-specific BMI percentile (IOM, HHS/CDC, AHAO 2005) • Serve as positive role models for their children regarding eating and physical-activity behaviors. (IOM, HHS/CDC, AAP 2003, AAP 2006)

APPENDIX III

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APPENDIX IV

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