

Part A. Executive Summary

The 2015 Dietary Guidelines Advisory Committee (DGAC) was established jointly by the Secretaries of the U.S. Department of Health and Human Services (HHS) and the U.S. Department of Agriculture (USDA). The Committee was charged with examining the *Dietary Guidelines for Americans, 2010* to determine topics for which new scientific evidence was likely to be available with the potential to inform the next edition of the Guidelines and to place its primary emphasis on the development of food-based recommendations that are of public health importance for Americans ages 2 years and older published since the last DGAC deliberations.

The 2015 DGAC's work was guided by two fundamental realities. First, about half of all American adults—117 million individuals—have one or more preventable, chronic diseases, and about two-third of U.S. adults—nearly 155 million individuals—are overweight or obese. These conditions have been highly prevalent for more than two decades. Poor dietary patterns, overconsumption of calories, and physical inactivity directly contribute to these disorders. Second, individual nutrition and physical activity behaviors and other health-related lifestyle behaviors are strongly influenced by personal, social, organizational, and environmental contexts and systems. Positive changes in individual diet and physical activity behaviors, and in the environmental contexts and systems that affect them, could substantially improve health outcomes.

Recognizing these realities, the Committee developed a conceptual model based on socio-ecological frameworks to guide its work (see **Part B. Chapter 1: Introduction**) and organized its evidence review to examine current status and trends in food and nutrient intakes, dietary patterns and health outcomes, individual lifestyle behavior change, food and physical activity environments and settings, and food sustainability and safety.

The remainder of this Executive Summary provides brief synopses of the DGAC's topic-specific evidence review chapters. Each of these chapters ends with a list of research recommendations (see **Appendix E-1: Needs for Future Research** for a compilation of these recommendations). The Committee integrated its findings and conclusions into several key themes and articulated specific recommendations for how the report's findings can be put into action at the individual, community, and population levels. The Executive Summary ends with a brief summary of this chapter.

36 **TOPIC-SPECIFIC FINDINGS AND CONCLUSIONS**

37 **Food and Nutrient Intakes, and Health: Current Status and Trends**

38 The DGAC conducted data analyses to address a series of questions related to the current status
39 and trends in the Nation's dietary intake. The questions focused on: intake of specific nutrients
40 and food groups; food categories (i.e., foods as consumed) that contribute to intake; eating
41 behaviors; and the composition of various dietary patterns shown to have health benefits. These
42 topics were addressed using data from the What We Eat in America dietary survey, which is the
43 dietary intake component of the ongoing National Health and Nutrition Examination Survey.
44 Food pattern modeling using the USDA Food Pattern food groups also was used to address some
45 questions. In addition, the DGAC examined the prevalence and trends of health conditions that
46 may have a nutritional origin, or where the course of disease may be influenced by diet.

47
48 The DGAC found that several nutrients are underconsumed relative to the Estimated Average
49 Requirement or Adequate Intake levels set by the Institute of Medicine (IOM) and the
50 Committee characterized these as shortfall nutrients: vitamin A, vitamin D, vitamin E, vitamin C,
51 folate, calcium, magnesium, fiber, and potassium. For adolescent and premenopausal females,
52 iron also is a shortfall nutrient. Of the shortfall nutrients, calcium, vitamin D, fiber, and
53 potassium also are classified as nutrients of public health concern because their
54 underconsumption has been linked in the scientific literature to adverse health outcomes. Iron is
55 included as a shortfall nutrient of public health concern for adolescent females and adult females
56 who are premenopausal due to the increased risk of iron-deficiency in these groups. The DGAC
57 also found that two nutrients—sodium and saturated fat—are overconsumed by the U.S.
58 population relative to the Tolerable Upper Intake Level set by the IOM or other maximal
59 standard and that the overconsumption poses health risks.

60
61 In comparison to recommended amounts in the USDA Food Patterns, the majority of the U.S.
62 population has low intakes of key food groups that are important sources of the shortfall
63 nutrients, including vegetables, fruits, whole grains, and dairy. Furthermore, population intake is
64 too high for refined grains and added sugars. The data suggest cautious optimism about dietary
65 intake of the youngest members of the U.S. population because many young children ages 2 to 5
66 years consume recommended amounts of fruit and dairy. However, a better understanding is
67 needed on how to maintain and encourage good habits that are started early in life. Analysis of
68 data on food categories, such as burgers, sandwiches, mixed dishes, desserts, and beverages,
69 shows that the composition of many of these items could be improved so as to increase
70 population intake of vegetables, whole grains, and other underconsumed food groups and to
71 lower population intake of the nutrients sodium and saturated fat, and the food component
72 refined grains. Improved beverage selections that limit or remove sugar-sweetened beverages
73 and place limits on sweets and desserts would help lower intakes of the food component, added
74 sugars.

75

76 The U.S. population purchases its food in a variety of locations, including supermarkets,
77 convenience stores, schools, and the workplace. The DGAC found that although diet quality
78 varies somewhat by the setting where food is obtained, overall, no matter where the food is
79 obtained, the diet quality of the U.S. population does not meet recommendations for vegetables,
80 fruit, dairy, or whole grains, and exceeds recommendations, leading to overconsumption, for the
81 nutrients sodium and saturated fat and the food components refined grains, solid fats, and added
82 sugars.

83

84 Obesity and many other health conditions with a nutritional origin are highly prevalent. The
85 Nation must accelerate progress toward reducing the incidence and prevalence of overweight and
86 obesity and chronic disease risk across the U.S. population throughout the lifespan and reduce
87 the disparities in obesity and chronic disease rates that exist in the United States for certain
88 ethnic and racial groups and for those with lower incomes.

89

90 The DGAC had enough descriptive information from existing research and data to model three
91 dietary patterns and to examine their nutritional adequacy. These patterns are the Healthy U.S.-
92 style Pattern, the Healthy Mediterranean-style Pattern, and the Healthy Vegetarian Pattern. These
93 patterns include the components of a dietary pattern associated with health benefits.

94

95

96 **Dietary Patterns, Foods and Nutrients, and Health Outcomes**

97 A major goal of the DGAC was to describe the common characteristics of healthy diets, and the
98 Committee focused on research examining dietary patterns because the totality of diet—the
99 combinations and quantities in which foods and nutrients are consumed—may have synergistic
100 and cumulative effects on health and disease. The Committee focused on providing a qualitative
101 description of healthy dietary patterns based on scientific evidence for several health outcomes.

102

103 The DGAC found remarkable consistency in the findings and implications across its conclusion
104 statements for the questions examining dietary patterns and various health outcomes. When
105 reviewing the evidence, the Committee attempted to adhere to the language used by the study
106 authors in describing food groupings. There was variability across the food groupings, and this
107 was particularly apparent in the meat group. For example, “total meat” may have been defined as
108 “meat, sausage, fish, and eggs,” “red meat, processed meat, and poultry,” or various other
109 combinations of meat. Similarly, “vegetables” seemed to most often exclude potatoes, but some
110 studies included potatoes, yet those that mentioned potatoes rarely provided information on how
111 the potatoes were consumed (e.g., fried versus baked). When reported in the studies, the
112 Committee considered these definitions in their review. However, the Committee provided a
113 general label for the food groupings in its conclusion statements.

114

115 The overall body of evidence examined by the 2015 DGAC identifies that a healthy dietary
116 pattern is higher in vegetables, fruits, whole grains, low- or non-fat dairy, seafood, legumes, and
117 nuts; moderate in alcohol (among adults); lower in red and processed meat;¹ and low in sugar-
118 sweetened foods and drinks and refined grains. Vegetables and fruit are the only characteristics
119 of the diet that were consistently identified in every conclusion statement across the health
120 outcomes. Whole grains were identified slightly less consistently compared to vegetables and
121 fruits, but were identified in every conclusion with moderate to strong evidence. For studies with
122 limited evidence, grains were not as consistently defined and/or they were not identified as a key
123 characteristic. Low- or non-fat dairy, seafood, legumes, nuts, and alcohol were identified as
124 beneficial characteristics of the diet for some, but not all, outcomes. For conclusions with
125 moderate to strong evidence, higher intake of red and processed meats was identified as
126 detrimental compared to lower intake. Higher consumption of sugar-sweetened foods and
127 beverages as well as refined grains was identified as detrimental in almost all conclusion
128 statements with moderate to strong evidence.

129
130 Regarding alcohol, the Committee confirmed several conclusions of the 2010 DGAC, including
131 that moderate alcohol intake can be a component of a healthy dietary pattern, and that if alcohol
132 is consumed, it should be consumed in moderation and only by adults. However, it is not
133 recommended that anyone begin drinking or drink more frequently on the basis of potential
134 health benefits, because moderate alcohol intake also is associated with increased risk of
135 violence, drowning, and injuries from falls and motor vehicle crashes. Women should be aware
136 of a moderately increased risk of breast cancer even with moderate alcohol intake. In addition,
137 there are many circumstances in which people should not drink alcohol, including during
138 pregnancy. Because of the substantial evidence clearly demonstrating the health benefits of
139 breastfeeding, occasionally consuming an alcoholic drink does not warrant stopping
140 breastfeeding. However, women who are breastfeeding should be very cautious about drinking
141 alcohol, if they choose to drink at all.

142
143 Following a dietary pattern associated with reduced risk of CVD, overweight, and obesity also
144 will have positive health benefits beyond these categories of health outcomes. Thus, the U.S.
145 population should be encouraged and guided to consume dietary patterns that are rich in
146 vegetables, fruit, whole grains, seafood, legumes, and nuts; moderate in low- and non-fat dairy
147 products and alcohol (among adults); lower in red and processed meat; and low in sugar-
148 sweetened foods and beverages and refined grains. These dietary patterns can be achieved in
149 many ways and should be tailored to the individual's biological and medical needs as well as
150 socio-cultural preferences.

151

¹ As lean meats were not consistently defined or handled similarly between studies, they were not identified as a common characteristic across the reviews. However, as demonstrated in the food pattern modeling of the Healthy U.S.-style and Healthy Mediterranean-style patterns, lean meats can be a part of a healthy dietary pattern.

152 The dietary pattern characteristics being recommended by the 2015 DGAC reaffirm the dietary
153 pattern characteristics recommended by the 2010 DGAC. Additionally, these characteristics
154 align with recommendations from other groups, including the American Institute for Cancer
155 Research (AICR) and the American Heart Association (AHA). The majority of evidence
156 considered by the Committee focused on dietary patterns consumed in adulthood. Very little
157 evidence examined dietary patterns during childhood. However, the healthy dietary pattern
158 components described above also apply to children and are reaffirmed with the USDA Food
159 Patterns, which are designed to meet nutrient needs across the lifespan.

160

161 **Individual Diet and Physical Activity Behavior Change**

162 The individual is at the innermost core of the social-ecological model. In order for policy
163 recommendations such as the *Dietary Guidelines for Americans* to be fully implemented,
164 motivating and facilitating behavioral change at the individual level is required. This chapter
165 suggests a number of promising behavior change strategies that can be used to favorably affect a
166 range of health-related outcomes and to enhance the effectiveness of interventions. These include
167 reducing screen time, reducing the frequency of eating out at fast food restaurants, increasing
168 frequency of family shared meals, and self-monitoring of diet and body weight as well as
169 effective food labeling to target healthy food choices. These strategies complement
170 comprehensive lifestyle interventions and nutrition counseling by qualified nutrition
171 professionals.

172

173 For this approach to work, it will be essential that the food environments in communities
174 available to the U.S. population, particularly to low-income individuals, facilitate access to
175 healthy and affordable food choices that respect their cultural preferences. Similarly, food and
176 calorie label education should be designed to be understood by audiences with low health
177 literacy, some of which may have additional English language fluency limitations. Although
178 viable approaches are available now, additional research is necessary to improve the scientific
179 foundation for more effective guidelines on individual-level behavior change for all individuals
180 living in the United States, taking into account the social, economic, and cultural environments
181 in which they live.

182

183 The evidence reviewed in this chapter also indicates that the social, economic, and cultural
184 context in which individuals live may facilitate or hinder their ability to choose and consume
185 dietary patterns that are consistent with the Dietary Guidelines. Specifically, household food
186 insecurity hinders the access to healthy diets for millions of Americans. In addition, immigrants
187 are at high risk of losing the healthier dietary patterns characteristic of their cultural background
188 as they acculturate into mainstream America. Furthermore, preventive nutrition services that take
189 into account the social determinants of health are largely unavailable in the U.S. health system to
190 systematically address nutrition-related health problems, including overweight and obesity,
191 cardiovascular disease, type 2 diabetes, and other health outcomes.

192
193 This chapter calls for: a) stronger Federal policies to help prevent household food insecurity and
194 to help families to cope with food insecurity if it develops, b) food and nutrition assistance
195 programs to take into account the risk that immigrants have of giving up their healthier dietary
196 habits soon after arriving in the United States, and c) efforts to provide all individuals living in
197 the United States with the environments, knowledge, and tools needed to implement effective
198 individual- or family-level behavioral change strategies to improve the quality of their diets and
199 reduce sedentary behaviors. These goals will require changes at all levels of the social-ecological
200 model through coordinated efforts among health care and social and food systems from the
201 national to the local level.

202

203

204 **Food Environment and Settings**

205 Environmental and policy approaches are needed to complement individual-based efforts to
206 improve diet and reduce obesity and other diet-related chronic diseases. These approaches have
207 the potential for broad and sustained impact at the population level because they can become
208 incorporated into organizational structures and systems and lead to alterations in sociocultural
209 and societal norms. Both policy and environmental changes also can help reduce disparities by
210 improving access to and availability of healthy food in underserved neighborhoods and
211 communities. Federal nutrition assistance programs, in particular, play a vital role in achieving
212 this objective through access to affordable foods that help millions of Americans meet Dietary
213 Guidelines recommendations.

214

215 The DGAC focused on physical environments (settings) in which food is available. Its aim was
216 to better understand the impact of the food environment to promote or hinder healthy eating in
217 these settings and to identify the most effective evidence-based diet-related approaches and
218 policies to improve diet and weight status. The DGAC focused on four settings—community
219 food access, child care, schools and worksites—and their relationships to dietary intake and
220 quality and weight status.

221

222 The DGAC found moderate and promising evidence that multi-component obesity prevention
223 approaches implemented in child care settings, schools, and worksites improve weight-related
224 outcomes; strong to moderate evidence that school and worksite policies are associated with
225 improved dietary intake; and moderate evidence that multi-component school-based and
226 worksite approaches increase vegetable and fruit consumption. For the questions on community
227 food access addressing the relationship between food retail settings and dietary intake and
228 quality and weight status, the evidence was too limited or insufficient to assign grades. To reduce
229 the disparity gaps that currently exist in low resource and underserved communities, more
230 solution-oriented strategies need to be implemented and evaluated on ways to increase access to
231 and procurement of healthy affordable foods and beverages, and also to reduce access to energy-

232 dense, nutrient-poor foods and beverages. Although several innovative approaches are taking
233 place now throughout the country, they generally lack adequate evaluation efforts.

234
235 The Committee’s findings revealed the power of multi-component approaches over single
236 component interventions. For obesity prevention, effective multi-component interventions
237 incorporated both nutrition and physical activity using a variety of strategies, such as
238 environmental policies to improve the availability and provision of healthy foods and beverages;
239 increasing opportunities for physical activity; increased parent engagement (in child care and
240 school settings); and educational approaches, such as a school nutrition curriculum. For multi-
241 component dietary interventions (e.g., to increase consumption of vegetables and fruit) the most
242 effective strategies included nutrition education, parent engagement (in school and child care
243 settings) and environmental modifications (e.g., policies for nutrition standards, food service
244 changes, point of purchase information).

245
246 Collaborative partnerships and strategic efforts are needed to translate this evidence into action.
247 Further work on restructuring the environment to facilitate healthy eating and physical activity,
248 especially in high risk populations, is needed to advance evidence-based solutions that can be
249 scaled up.

250
251

252 **Food Sustainability and Safety**

253 Access to sufficient, nutritious, and safe food is an essential element of food security for the U.S.
254 population. A sustainable diet ensures this access for both the current population and future
255 generations.

256
257 The major findings regarding sustainable diets were that a diet higher in plant-based foods, such
258 as vegetables, fruits, whole grains, legumes, nuts, and seeds, and lower in calories and animal-
259 based foods is more health promoting and is associated with less environmental impact than is
260 the current U.S. diet. This pattern of eating can be achieved through a variety of dietary patterns,
261 including the Healthy U.S.-style Pattern, the Healthy Mediterranean-style Pattern, and the
262 Healthy Vegetarian Pattern. All of these dietary patterns are aligned with lower environmental
263 impacts and provide options that can be adopted by the U.S. population. Current evidence shows
264 that the average U.S. diet has a larger environmental impact in terms of increased greenhouse gas
265 emissions, land use, water use, and energy use, compared to the above dietary patterns. This is
266 because the current U.S. population intake of animal-based foods is higher and plant-based foods
267 are lower, than proposed in these three dietary patterns. Of note is that no food groups need to be
268 eliminated completely to improve sustainability outcomes over the current status.

269
270 A moderate amount of seafood is an important component of two of three of these dietary
271 patterns, and has demonstrated health benefits. The seafood industry is in the midst of rapid

272 expansion to meet worldwide demand. The collapse of some fisheries due to overfishing in the
273 past decades has raised concern about the ability to produce a safe and affordable supply. In
274 addition, concern has been raised about the safety and nutrient content of farm-raised versus
275 wild-caught seafood. To supply enough seafood to support meeting dietary recommendations,
276 both farm-raised and wild caught seafood will be needed. The review of the evidence
277 demonstrated, in the species evaluated, that farm-raised seafood has as much or more EPA and
278 DHA per serving as wild caught. It should be noted that low-trophic seafood, such as catfish and
279 crawfish, regardless of whether wild caught or farm-raised seafood, have less EPA and DHA per
280 serving than high-trophic seafood, such as salmon and trout.

281
282 Regarding contaminants, for the majority of wild caught and farmed species, neither the risks of
283 mercury nor organic pollutants outweigh the health benefits of seafood consumption. Consistent
284 evidence demonstrated that wild caught fisheries that have been managed sustainably have
285 remained stable over the past several decades; however, wild caught fisheries are fully exploited
286 and their continuing productivity will require careful management nationally and internationally
287 to avoid long-term collapse. Expanded supply of seafood nationally and internationally will
288 depend upon the increase of farm-raised seafood worldwide.

289
290 The impact of food production, processing, and consumption on environmental sustainability is
291 an area of research that is rapidly evolving. As further research is conducted and best practices
292 are evaluated, additional evidence will inform both supply-side participants and consumers on
293 how best to shift behaviors locally, nationally, and globally to support sustainable diets. Linking
294 health, dietary guidance, and the environment will promote human health and the sustainability
295 of natural resources and ensure current and long-term food security.

296
297 In regard to food safety, updated and previously unexamined areas of food safety were studied.
298 Currently, strong evidence shows that consumption of coffee within the moderate range (3 to 5
299 cups per day or up to 400 mg/d caffeine) is not associated with increased long-term health risks
300 among healthy individuals. In fact, consistent evidence indicates that coffee consumption is
301 associated with reduced risk of type 2 diabetes and cardiovascular disease in adults. Moreover,
302 moderate evidence shows a protective association between caffeine intake and risk of
303 Parkinson's disease. Therefore, moderate coffee consumption can be incorporated into a healthy
304 dietary pattern, along with other healthful behaviors. However, it should be noted that coffee as
305 it is normally consumed can contain added calories from cream, milk, and added sugars. Care
306 should be taken to minimize the amount of calories from added sugars and high-fat dairy or dairy
307 substitutes added to coffee.

308
309 The marketing and availability of high-caffeine beverages and products is on the rise.
310 Unfortunately, only limited evidence is currently available to ascertain the safety of high caffeine
311 intake (greater than 400 mg/day for adults and undetermined for children and adolescents) that

312 may occur with rapid consumption of large-sized energy drinks. Limited data suggest adverse
313 health outcomes, such as caffeine toxicity and cardiovascular events. Concern is heightened
314 when caffeine is combined with alcoholic beverages. Limited or no consumption of high caffeine
315 drinks, or other products with high amounts of caffeine, is advised for children and adolescents.
316 Energy drinks with high levels of caffeine and alcoholic beverages should not be consumed
317 together, either mixed together or consumed at the same sitting.

318
319 The DGAC also examined the food additive aspartame. At the level that the U.S. population
320 consumes aspartame, it appears to be safe. However, some uncertainty continues about increased
321 risk of hematopoietic cancer in men, indicating a need for more research.

322
323 Individual behaviors along with sound government policies and responsible private sector
324 practices are all needed to reduce foodborne illnesses. To that end, the DGAC updated the
325 established recommendations for handling foods at home.

326
327

328 **Cross-cutting Topics of Public Health Importance**

329 The *2010 Dietary Guidelines* included guidance on sodium, saturated fat, and added sugars, and
330 the 2015 DGAC determined that a reexamination of the evidence on these topics was necessary
331 to determine whether revisions to the guidance were warranted. These topics were considered to
332 be of public health importance because each has been associated with negative health outcomes
333 when overconsumed. Additionally, the Committee acknowledged that a potential unintended
334 consequence of a recommendation on added sugars might be that consumers and manufacturers
335 replace added sugars with low-calorie sweeteners. As a result, the Committee also examined
336 evidence on low-calorie sweeteners to inform statements on this topic.

337
338 The DGAC encourages the consumption of healthy dietary patterns that are low in saturated fat,
339 added sugars, and sodium. The goals for the general population are: less than 2,300 mg dietary
340 sodium per day (or age-appropriate Dietary Reference Intake amount), less than 10 percent of
341 total calories from saturated fat per day, and a maximum of 10 percent of total calories from
342 added sugars per day.

343
344 Sodium, saturated fat, and added sugars are not intended to be reduced in isolation, but as a part
345 of a healthy dietary pattern that is balanced, as appropriate, in calories. Rather than focusing
346 purely on reduction, emphasis should also be placed on replacement and shifts in food intake and
347 eating patterns. Sources of saturated fat should be replaced with unsaturated fat, particularly
348 polyunsaturated fatty acids. Similarly, added sugars should be reduced in the diet and not
349 replaced with low-calorie sweeteners, but rather with healthy options, such as water in place of
350 sugar-sweetened beverages. For sodium, emphasis should be placed on expanding industry

351 efforts to reduce the sodium content of foods and helping consumers understand how to flavor
352 unsalted foods with spices and herbs.

353
354 Reducing sodium, saturated fat, and added sugars can be accomplished and is more attainable by
355 eating a healthy dietary pattern. For all three of these components of the diet, policies and
356 programs at local, state, and national levels in both the private and public sector are necessary to
357 support reduction efforts. Similarly, the Committee supports efforts in labeling and other
358 campaigns to increase consumer awareness and understanding of sodium, saturated fats, and
359 added sugars in foods and beverages. The Committee encourages the food industry to continue
360 reformulating and making changes to certain foods to improve their nutrition profile. Examples
361 of such actions include lowering sodium and added sugars content, achieving better saturated fat
362 to polyunsaturated fat ratio, and reducing portion sizes in retail settings (restaurants, food outlets,
363 and public venues, such as professional sports stadiums and arenas). The Committee also
364 encourages the food industry to market these improved products to consumers.

365

366

367 **Physical Activity**

368 This chapter provides strong evidence supporting the importance of regular physical activity for
369 health promotion and disease prevention in the U.S. population. Physical activity is important for
370 all people—children, adolescents, adults, older adults, women during pregnancy and the
371 postpartum period, and individuals with disabilities. The findings further provide guidance on the
372 dose of physical activity needed across the lifecycle to realize these significant health benefits.

373

374 Future Physical Activity Guidelines Advisory Committees will be asked to carefully review the
375 most recent evidence so that the Federal government can fully update the *2008 Physical Activity*
376 *Guidelines for Americans*. Given the exceedingly low physical activity participation rates in this
377 country, it will be critically important for the next Committee to identify proven strategies and
378 approaches to increase population-level physical activity across the lifespan.

379

380 **INTEGRATING THE EVIDENCE**

381 The research base reviewed by the 2015 DGAC provides clear evidence that persistent,
382 prevalent, preventable health problems, notably overweight and obesity, cardiovascular disease,
383 type 2 diabetes and certain cancers, have adversely affected the health of the U.S. public for
384 decades and raise the urgency for immediate attention and bold action. Evidence points to
385 specific areas of current food and nutrient concerns and it pinpoints the characteristics of healthy
386 dietary and physical activity patterns that can reduce chronic disease risk, promote healthy
387 weight status, and foster good health across the lifespan. In addition, research evidence is
388 converging to show that healthy dietary patterns also are more sustainable and associated with
389 more favorable health as well as environmental outcomes.

390
391 Effective models of “what works” to promote lifestyle behavior change exist. While they can be
392 improved, especially in terms of our capacity for scaling-up in community and health care
393 settings, the evidence to date can be used to guide programs and services for individuals and
394 families. They also can be used to assist the public and private sectors and communities in
395 facilitating innovative environmental change to promote the population’s health.

396
397 It will take concerted, bold actions on the part of individuals, families, communities, industry,
398 and government to achieve and maintain the healthy diet patterns and the levels of physical
399 activity needed to promote the health of the U.S. population. These actions will require a
400 paradigm shift to an environment in which population health is a national priority and where
401 individuals and organizations, private business, and communities work together to achieve a
402 population-wide “culture of health” in which healthy lifestyle choices are easy, accessible,
403 affordable and normative—both at home and away from home. In such a culture, health care and
404 public health professionals also would embrace a new leadership role in prevention, convey the
405 importance of lifestyle behavior change to their patients/clients, set standards for prevention in
406 their own facilities, and help patients/clients in accessing evidence-based and effective nutrition
407 and comprehensive lifestyle services and programs.

408
409