

## Self-reported Weight, Weight Goals, and Weight Control Strategies of a Midwestern Population

THOMAS E. KOTTKE, MD, MSPH; MATTHEW M. CLARK, PhD; LEE A. AASE, BS;  
CATHERINE L. BRANDEL, BSN; MARK J. BREKKE, MA; LEE N. BREKKE, PhD; STEPHEN W. DEBOER, MPH;  
SHARONNE N. HAYES, MD; REBECCA S. HOFFMAN, BA; PEGGY A. MENZEL, BS; AND RANDAL J. THOMAS, MD

- **Objective:** To elicit from individuals in a population their current weight and height, weight goals, and weight control strategies to aid in design of effective interventions to prevent and treat obesity.

- **Subjects and Methods:** By random digit dial telephone survey, 1224 adult residents of Olmsted County, Minnesota, were contacted between February 28 and May 5, 2000. They self-reported weights and weight goals and described physical characteristics associated with their desire to lose weight.

- **Results:** Among the 1224 respondents, 65.6% of men and 47.9% of women reported that they were overweight (body mass index [BMI], 25.0-29.9 kg/m<sup>2</sup>) or obese (BMI, ≥30.0 kg/m<sup>2</sup>). Only 0.4% of men and 3.7% of women reported that they were underweight (BMI, <18.5 kg/m<sup>2</sup>). Of the respondents 72.6% of men and 85.1% of women reported that they were either trying to lose or not gain weight. The average weight loss goal for individuals trying to lose weight was 23.4 pounds for men and 28.0 pounds

for women. Only one third of individuals trying to lose weight and one fifth of individuals trying not to gain weight reported using the recommended approach of combining energy restriction with at least 150 minutes of exercise per week.

- **Conclusions:** The prevalence of overweight and obesity in the population and the underutilization of combining both restricting energy intake and exercising at least 150 minutes per week for weight control is high. Like the majority of people in the United States, the majority of people in Olmsted County desire to control their weight. The community has responded with plans to help residents meet their goals, although efficacy and outcomes remain to be determined.

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BMI = body mass index; BRFSS = Behavior Risk Factor Surveillance System

In the United States, the prevalence of obesity increased from 12% in 1991 to nearly 18% in 1998.<sup>1</sup> Overall, 6% of expenditures for health care in the United States (\$99.2 billion) have been attributed to obesity.<sup>2</sup> The health and economic burden that the increasing prevalence of obesity places on Americans demands that effective population-wide weight control strategies are designed and implemented.<sup>3</sup> CardioVision 2020 is a comprehensive program designed to reduce the burden of cardiovascular disease for the population of Olmsted County, Minnesota,<sup>4</sup> and therefore considers obesity as a risk factor for cardiovascular disease.<sup>5</sup>

From the Division of Cardiovascular Diseases and Internal Medicine (T.E.K., C.L.B., S.N.H., R.S.H., P.A.M., R.J.T.), Department of Health Sciences Research (T.E.K.), Department of Psychiatry and Psychology (M.M.C.), Division of Communications (L.A.A.), and Division of Endocrinology, Metabolism, Nutrition and Internal Medicine (S.W.D.), Mayo Clinic, Rochester, Minn; and Brekke Associates, Inc, Minneapolis, Minn (M.J.B., L.N.B.).

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Address reprint requests and correspondence to Thomas E. Kottke, MD, MSPH, Department of Health Sciences Research, Mayo Clinic, 200 First St SW, Rochester, MN 55905 (e-mail: tkottke@mayo.edu).

The evaluation of CardioVision 2020 program outcomes will be based in part on comparisons with data for Minnesota and the nation collected by the Behavior Risk Factor Surveillance System (BRFSS). However, the BRFSS sampling rates (approximately 6 interviews per 10,000 adult population) do not permit accurate characterization of populations at the county level. The low sampling fraction makes it necessary for the CardioVision 2020 program to collect comparable data for Olmsted County.

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In addition to their value for reporting outcomes, county-specific data will contribute to the design and planning of CardioVision 2020 interventions. Are members of the population aware that there is a population-wide problem with increasing obesity? Are they concerned about the problem? Are they effectively addressing the problem? Collecting accurate and unbiased data from the intervention community rather than relying on clinical data is critical since obese adults who seek treatment differ psychosocially from obese adults who do not seek weight control treatment.<sup>6</sup> Local data are also necessary because members



of a particular community may not accept that national data are representative of them.

To address these issues, we conducted a community survey to determine the current self-reported distributions of weight and weight goals, body mass index (BMI) derived from self-reported weight and height, and the proportion of individuals who report attempting to lose or not gain weight. We also used logistic regression to explore the association between desire to lose weight and physical characteristics of individuals. Finally, we describe the proportion of individuals in the population who restrict energy intake, exercise, or both to control their weight.

## SUBJECTS AND METHODS

### Survey Procedures

The population of Olmsted County, Minnesota, was surveyed in 1999 and 2000 using identical survey methods. The survey methods have been reported in detail previously.<sup>4,7</sup> In brief, the data presented in this report were collected between February 28 and May 5, 2000, through random digit dial telephone interviews of Olmsted County residents. Data collection tasks were subcontracted to SNG Research, a survey research organization based in Rochester, Minn. The sampling frame consisted of 6000 telephone numbers purchased from Survey Sampling, Inc (Fairfield, Conn). The following procedure was used to identify interview respondents: If only 1 eligible respondent was identified in a household, that individual was interviewed if the age-sex cell to which they belonged contained fewer than 100 completed interviews. If there were multiple adults living in the household and one of them was a male aged 70 years or older, a request was made to speak to and interview that individual since that age-sex group was the smallest in the population. If there was more than 1 adult in the household and none was a male aged 70 years or older, the person who celebrated his or her birthday most recently was selected to be the respondent. Two thousand fourteen eligible adults were identified, and 1224 (61%) consented to participate.<sup>7</sup> Complete data regarding height, weight, and related goals were available for 1162 respondents, 588 men and 574 women. Statistics were computed using all respondents for whom data were available for each particular statistic. In addition, respondents with current BMI of less than 18.5 kg/m<sup>2</sup> (ie, BMI in the underweight category) were excluded from multivariate analyses, as explained below. Consequently, the numbers used in computation varied.

Survey items from the BRFSS survey that were related to cardiovascular disease risk factors were used to allow comparisons between Olmsted County and state and national data. Among other questions, respondents were asked how tall they are without shoes and how much they weigh without shoes. They were also asked, "Are you now

Table 1. Sample Sizes and Size of the Reconstructed Population

Age group (y)	Sample		Reconstructed population	
	Women	Men	Women	Men
20-29	102	100	7780	7143
30-39	104	103	10,139	10,047
40-49	106	100	9423	9101
50-59	100	102	6024	6095
60-69	101	101	3579	3255
≥70	105	100	5882	3332
Total	618	606	42,827	38,973

trying to lose weight?," "Are you now trying to maintain your current weight, that is, keep from gaining weight?," and "How much would you like to weigh?" Respondents who reported trying either to lose weight or not gain weight were asked, "Are you eating fewer calories or less fat to lose weight/keep from gaining weight?" with possible responses of "Yes, fewer calories," "Yes, less fat," "Yes, fewer calories and less fat," "No," or "Don't know." They were also asked, "Are you using physical activity or exercise to lose weight/keep from gaining weight?" with possible responses of, "Yes," "No," "Don't know/not sure." As with the BRFSS survey, participants were asked about the type, duration, and frequency of the 2 leisure-time physical activities they had participated in most frequently during the preceding month. The physical activity cutpoint (<150/≥150 min/wk) reflects the national guideline that recommends 30 minutes or more of physical activity on most or all days of the week. The cutpoint was also selected to allow comparison of Olmsted County data with published national data. No attempt was made to validate or verify the self-report responses of the survey participants.

### Data Analysis

**Statistical Weighting.**—The response data from each interview were weighted to reconstruct the relative proportions of age-sex groups from the estimated 1998 Olmsted County population based on US Census estimates (Table 1). With the exception of frequency counts, all analyses are based on weighted data.

**Univariate Analysis.**—Data on self-reported weight in pounds and height in inches were transformed to calculate BMI as weight in kilograms divided by the square of height in meters (kg/m<sup>2</sup>). Population distributions of BMI were reported by standard categories and nomenclature: underweight (BMI, <18.5 kg/m<sup>2</sup>), normal (BMI, 18.5-24.9 kg/m<sup>2</sup>), overweight (BMI, 25.0-29.9 kg/m<sup>2</sup>), obese (BMI, ≥30.0 kg/m<sup>2</sup>).<sup>8,9</sup> The small number of respondents who reported that they were underweight on this survey made

Table 2. Percentage of Population Categorized by Sex and BMI\*

Sex	Underweight: BMI, <18.5 kg/m <sup>2</sup> (95% CI)	Normal: BMI, 18.5-24.9 kg/m <sup>2</sup> (95% CI)	Overweight: BMI, 25.0-29.9 kg/m <sup>2</sup> (95% CI)	Obese: BMI, ≥30.0 kg/m <sup>2</sup> (95% CI)
Men (n=602)	0.4 (0.1-1.4)	34.0 (30.2-38.0)	47.9 (43.9-52.0)	17.7 (14.8-20.5)
Women (n=590)	3.7 (2.4-5.6)	48.4 (44.3-52.5)	30.7 (27.0-34.6)	17.2 (14.3-20.5)
Total (n=1192)	2.1 (1.4-3.1)	41.4 (38.6-44.3)	39.0 (36.2-41.8)	17.5 (15.4-19.8)

\*Data were weighted to reconstruct the population. BMI = body mass index; CI = confidence interval.

accurate inference about this important population group impossible; therefore, this category was removed from all other analyses.

**Prediction of Attempt to Lose Weight.**—The probability of attempting to lose weight was modeled with use of logistic regression (PROC LOGIT, SAS Institute, Cary, NC). Sex, age in years, the square of age, current BMI, the square of BMI, BMI-age interaction, ethnicity, history of high cholesterol level, history of high blood pressure, history of cardiovascular disease, history of diabetes, smoking, daily physical activity, number of fruits and vegetables eaten per day, whether cholesterol was measured in the past 5 years, and whether blood pressure was measured in the past 2 years were tested in a stepwise procedure as predictors of an affirmative response to the question, "Are you now trying to lose weight?" For the regression, age was centered by subtracting 45.3 years; BMI was centered on 26.2 kg/m<sup>2</sup>.

**Prediction of Desired Weight Loss.**—The magnitude of desired weight loss was modeled with use of multivariate regression (PROC GLM, SAS Institute, Cary, NC). The same variables as in prediction of attempt to lose weight were tested as predictors of the difference between desired and current weight. The analysis included only subjects who reported currently attempting to lose weight.

**Statistical Confidence of the Estimates.**—The approximate 95% confidence intervals for the various proportions are given in parentheses in the tables. Calculation of the confidence intervals was based on the binomial distribution for large sample sizes.<sup>10</sup> For proportions involving small sample sizes, although more precise estimates of the confidence intervals may be obtained by using the exact probability distributions, the listed values remain reasonable estimates.

## RESULTS

### Current BMI Distribution

Only 0.4% of the men and 3.7% of the women reported a combination of height and weight that placed them in

the underweight BMI category (Table 2). The BMI was normal for 34.0% of the men and 48.4% of the women. Among men, 47.9% were overweight and 17.7% were obese. The respective proportions for women were 30.7% and 17.2%.

### Desired BMI

Among respondents of normal weight and above, the average  $\pm$  SD desired BMI for men was 25.4 $\pm$ 2.8 kg/m<sup>2</sup>. The lowest desired BMI among the men, 18.7 kg/m<sup>2</sup>, was the same as the lowest current BMI among men. The maximum desired BMI for men was 40.4 kg/m<sup>2</sup> (to be compared with the maximum current BMI of 51.7 kg/m<sup>2</sup>). Mean desired BMI among men increased linearly by current BMI category (Figure 1).

The average  $\pm$  SD desired BMI for women of normal weight and above was 22.4 $\pm$ 2.3 kg/m<sup>2</sup>. While the lowest current BMI among women was 18.5 kg/m<sup>2</sup>, the lowest desired BMI among women was 18.0 kg/m<sup>2</sup>. The maximum desired BMI among women was 32.9 kg/m<sup>2</sup> (to be compared with the maximum current BMI of 62.9 kg/m<sup>2</sup>). As with men, desired BMI increased with current BMI (Figure 1).

### Desire to Lose or Not Gain Weight

Of men, 41.9% were trying to lose weight and 36.5% were trying not to gain weight; the respective figures for women were 57.4% and 30.8% (Table 3). For men, the proportion trying to lose weight increased from 18.6% of normal men to 75.0% of obese men. For women, the proportion trying to lose weight increased from 41.2% of normal-weight women to 80.7% of obese women.

Not all overweight individuals seek to lose weight; some seek simply to maintain their current weight. More than one third (38.0%) of overweight men and about one quarter (23.8%) of overweight women reported trying not to gain weight. The respective figures for obese men and women were 16.6% and 11.8%.

The proportion of men either trying to lose weight or not gain weight increased monotonically from about half of normal-weight men to nearly 90% of the obese men. The proportion of women trying either to lose weight or not to gain weight increased from four fifths of normal-weight women to nearly 90% of obese women.

### Prediction of Attempting to Lose Weight

In a stepwise logistic regression, current BMI was the strongest predictor of attempting to lose weight ( $P<.001$ ;  $\beta=0.267\pm0.021$ ). The BMI was followed by female sex ( $P<.001$ ;  $\beta=1.118\pm0.143$ ); the square of BMI ( $P<.001$ ;  $\beta=-0.0078\pm0.0013$ ); daily physical activity ( $P<.001$ ;  $\beta=0.676\pm0.1355$ ); age for women only ( $P<.001$ ;  $\beta=-0.024\pm0.0057$ ); and cholesterol checked in the past 5 years ( $P=.002$ ;  $\beta=0.458\pm0.149$ ). No other factors, including ethnicity, comorbid conditions, and smoking, were significant predictors of self-reported attempts to lose weight.

### Prediction of Desired BMI Loss

In a stepwise multiple regression analysis of subjects currently trying to lose weight, current BMI was the strongest predictor of the log of the magnitude of their desired BMI loss ( $P<.001$ ;  $\beta=0.161\pm0.006$ ). The BMI was followed by female sex ( $P<.001$ ;  $\beta=0.629\pm0.039$ ); the square of BMI ( $P<.001$ ;  $\beta=-0.003\pm0.0003$ ); age ( $P=.03$ ;  $\beta=-0.003\pm0.001$ ); the square of age ( $P<.002$ ;  $\beta=-0.0002\pm0.00007$ ); and current smoking ( $P<.002$ ;  $\beta=0.156\pm0.050$ ). No other variables were statistically significant at  $P$  value of less than .05.

### Magnitude of Desired Weight Loss Among Individuals Wanting to Lose Weight

Women who wanted to lose weight wanted to lose an average of 28.0 pounds, and men who wanted to lose weight wanted to lose an average of 23.4 pounds to achieve BMI values of 22.7 and 26.0 kg/m<sup>2</sup>, respectively. These represent average  $\pm$  SD losses of  $15.3\%\pm10.4\%$  of current weight for women and  $10.4\%\pm6.5\%$  of current weight for men. The average magnitude of the desired loss of BMI increased from 1.2 for men of normal weight to about 5.8 for obese men (Figure 2). For women, the average magnitude of desired loss of BMI increased from 2.0 for women of normal weight to about 10.1 for obese women.

### Strategies Used to Control Weight

Among men who reported that they were trying to lose weight, more than 80% reported dieting by eating fewer calories or less fat (Table 4). This proportion increased somewhat with increased BMI. Except for a somewhat smaller proportion of obese men (70.1%), about three quar-

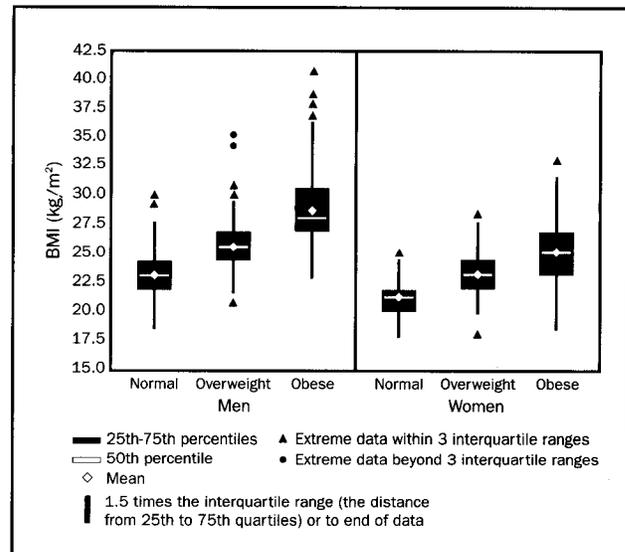


Figure 1. Desired body mass index (BMI) categorized by current BMI and sex in 1138 respondents for whom all necessary data were available. Responses were weighted to reconstruct the population.

ters reported using physical activity for weight loss. However, only about one third of men in any BMI category reported exercising or being physically active 150 minutes per week or more *and* reducing energy intake to lose weight. The activities reported by women who were trying to lose weight were similar to those reported by men.

Among men who reported that they were trying not to gain weight, slightly more than half reported use of dietary restriction of calories and/or fat, and slightly more than half reported use of physical activity. Only one fifth reported use of both 150 minutes per week or more of physical activity or exercise *and* fewer calories to control their weight. Among women who reported trying not to gain weight, nearly two thirds reported use of dietary restriction of calories and/or fat, and a similar proportion reported use of physical activity. As with men, only about 20% of women reported use of both 150 minutes per week or more of physical activity or exercise *and* fewer calories to prevent weight gain.

### DISCUSSION

Two thirds of men and nearly half of women responding to the CardioVision 2020 survey conducted in 2000 reported that they were either overweight or obese. In multivariate analysis, current self-reported BMI was the strongest predictor of both wanting to lose weight and the amount of weight that an individual wanted to lose. Except for female sex, other factors were far weaker and less prevalent predictors of obesity and desire to lose weight. Like the major-

Table 3. Percentage of Population Trying to Lose or Not to Gain Weight Categorized by Sex and BMI\*

Sex and BMI category	No. in group, unweighted	% Trying to lose weight (95% CI)	% Trying not to gain weight (95% CI)	% Trying to lose or not to gain weight (95% CI)
<b>Men</b>				
All	600	41.9 (37.9-46.0)	36.5 (32.7-40.5)	72.6 (68.8-76.1)
Normal	192	18.6 (13.5-25.0)	44.7 (37.6-52.0)	53.8 (46.5-61.0)
Overweight	295	46.2 (40.4-52.1)	38.0 (32.5-43.8)	80.0 (74.9-84.3)
Obese	113	75.0 (65.8-82.5)	16.6 (10.5-25.0)	88.9 (81.3-93.8)
<b>Women</b>				
All	567	57.4 (53.2-61.5)	30.8 (27.1-34.8)	85.1 (81.8-87.9)
Normal	271	41.2 (35.3-47.3)	42.0 (36.1-48.1)	80.4 (75.1-84.9)
Overweight	188	70.0 (62.8-76.3)	23.8 (18.0-30.7)	91.2 (86.0-94.7)
Obese	108	80.7 (71.7-87.4)	11.8 (6.6-19.8)	87.5 (79.4-92.8)

\*Data include all respondents for whom all data were available, weighted to reconstruct the population. BMI = body mass index; CI = confidence interval.

ity of people in the United States,<sup>11-13</sup> the majority of the Olmsted County population would like to control their weight. Even so, few individuals are both limiting energy intake and performing at least moderate levels of physical

activity nearly every day—2 behaviors that appear crucial for weight control.<sup>14</sup>

National and international data are consistent with the hypothesis that the changing social and physical environments of Olmsted County are the major contributors to obesity in Olmsted County.<sup>3,9,15,16</sup> While the ability of individuals to walk and bicycle as they go about their daily business strongly influences their fitness levels and overall health,<sup>17,18</sup> the absolute distances in the rural areas of the county and the currently popular suburban neighborhood design of large lots and cul-de-sac streets discourages or limits walking and bicycling.<sup>19</sup> Several trends contribute to eating too much food and consuming too many calories. Nationally, the cost of food has declined from 38% of total household income in 1924 to 11% in 1998.<sup>3</sup> The proportion of meals eaten outside the home has increased from 18% in 1977-1978 to 34% in 1995, and meals eaten away from home tend to be higher in fat and total energy than at-home meals.<sup>3</sup>

The nationwide and global trend of increasing obesity also suggests that the changing social environment is responsible for the obesity epidemic. In the United States in 1990, for example, there was not a single state in which more than 15% of the population was more than 30 pounds overweight.<sup>16</sup> By 1999, more than 15% of the population in all but 6 states was 30 pounds overweight. Between 1980 and 1994, the proportion of children and adolescents considered overweight increased by 100% in the United

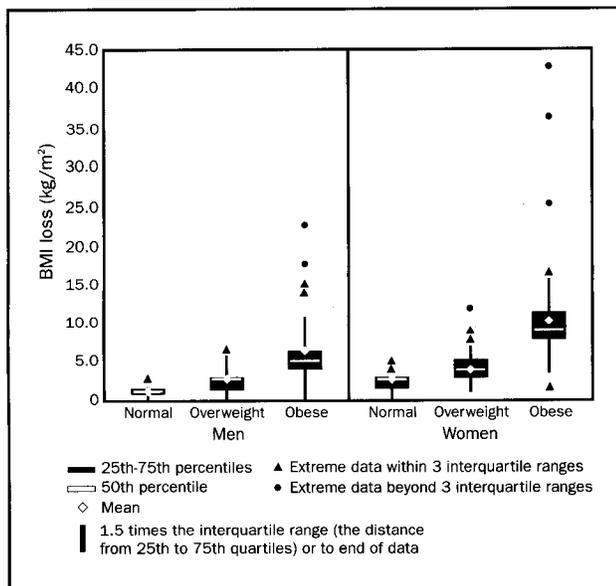


Figure 2. Desired body mass index (BMI) loss categorized by current BMI and sex in 546 respondents who reported trying to lose weight and for whom all necessary data were available. Responses were weighted to reconstruct the population.

Table 4. Prevalence of Specific Weight Control Practices Categorized by Sex and BMI\*

Sex and BMI category	Unweighted No. in category	% Eating fewer calories and/or less fat (95% CI)	% Using physical activity (95% CI)	% Exercising $\geq 150$ min/wk and eating fewer calories (95% CI)
Persons trying to lose weight				
Men				
All	255	83.6 (78.3-87.8)	73.3 (67.3-78.5)	32.2 (26.6-38.4)
Normal	36	76.1 (58.6-88.1)	76.0 (58.5-88.0)	32.2 (18.2-49.9)
Overweight	136	81.6 (73.8-87.5)	74.4 (66.1-81.3)	31.8 (24.2-40.4)
Obese	83	90.6 (81.7-95.6)	70.1 (58.9-79.4)	33.0 (23.3-44.3)
Women				
All	320	88.1 (83.9-91.3)	80.7 (75.9-84.8)	33.4 (28.3-38.9)
Normal	107	87.3 (79.1-92.7)	85.7 (77.3-91.5)	33.7 (25.0-43.6)
Overweight	127	88.0 (80.7-92.9)	77.9 (69.5-84.6)	34.0 (26.0-43.0)
Obese	86	89.5 (80.6-94.8)	78.0 (67.5-85.9)	32.0 (22.6-43.0)
Persons trying not to gain weight				
Men				
All	219	54.2 (47.4-60.9)	56.2 (49.4-62.8)	19.3 (14.4-25.3)
Normal	88	44.9 (34.4-55.8)	56.4 (45.4-66.8)	10.1 (5.0-18.8)
Overweight	112	61.4 (51.7-70.3)	58.4 (48.7-67.5)	25.7 (18.1-35.0)
Obese	19	57.8 (33.9-78.8)	41.4 (20.6-65.4)	27.3 (10.7-52.4)
Women				
All	180	61.1 (53.5-68.2)	60.4 (52.8-67.5)	20.2 (14.7-27.0)
Normal	118	54.4 (45.0-63.5)	66.8 (57.5-75.0)	19.8 (13.3-28.4)
Overweight	49	77.0 (62.4-87.3)	50.2 (35.8-64.6)	23.3 (12.9-37.9)
Obese	13	71.9 (41.3-91.2)	33.3 (11.9-63.3)	13.4 (2.0-44.2)

\*Data include all respondents for whom all data were available, weighted to reconstruct the population. BMI = body mass index; CI = confidence interval.

States.<sup>20</sup> World Health Organization data indicate that obesity is increasing "at an alarming rate" in all its regions.<sup>9</sup>

Although obesity is highly prevalent in Olmsted County, the environment has positive aspects. The Rochester Department of Parks and Recreation has developed a plan to increase park acreage and facilities by about 25% in the next decade.<sup>21</sup> The 50-year plan of the Rochester-Olmsted County Planning Department includes a program to assure that any neighborhood will be accessible by foot or bicycle from any other neighborhood in the city,<sup>22</sup> and the Roches-

ter-Olmsted County Planning Department also has proposed zoning for "smart growth"—that is, creating neighborhoods in which the housing density permits travel to work, school, religious services, and shopping on foot or by bicycle.<sup>23</sup>

Likewise, CardioVision 2020 has responded to the obesity epidemic with 3 programs. The first, "Walk & Win," is designed to encourage county residents to begin programs of daily physical activity. After registering on the CardioVision 2020 Web site ([www.cardiovision2020.org](http://www.cardiovision2020.org))

or at one of numerous participating businesses in the county, the participant submits a physical activity scorecard for each week during which they have walked or performed appropriate physical activity with a partner for at least 30 minutes on at least 5 days. Jogging, bicycling, and swimming are examples of activities that are considered appropriate substitutes for walking. Each submitted scorecard constitutes 1 chance to win \$500 by lottery at the end of the campaign. Other smaller prizes are also awarded. A total of 1111 residents of the county participated in the first "Walk & Win" campaign. CardioVision 2020 initiated a second "Walk & Win" campaign in June 2001.

The second CardioVision 2020 program designed to help people control their weight is "Weigh & Win." The first "Weigh & Win" campaign was conducted over the 2000 holiday season to help community residents avoid the weight gain that frequently occurs at this time.<sup>24</sup> A lottery ticket was attached to 1 of 6 different weight control tip sheets, and after registering at a site around the community or on the CardioVision 2020 Web site, the participant was required only to weigh him- or herself once a week and submit the lottery ticket at a drop box located at participating community businesses. As with "Walk & Win," a \$500 winner was selected by lottery at the end of the campaign. Participants were not required to lose weight, they were required only to weigh themselves as a stimulus to control their holiday eating. A total of 1085 individuals participated in "Weigh & Win."

The third CardioVision 2020 program designed to help community residents deal with obesity is the CardioVision 2020 menu-labeling program. Entrées at participating restaurants have been analyzed for sodium, calorie, and saturated fat content, and those entrées that met CardioVision 2020 criteria are marked on the menu. Text placed at the bottom of each menu page reads, "The CardioVision 2020 runner indicates the entrée contains less than 1000 mg of sodium and 500 or fewer calories, of which less than 7% come from saturated fat."

Even with these facilities, activities, and plans, many questions remain. How much will we have to change our environment to reverse the epidemic of obesity? When the current goal of many families is to own a single-family home built on a multiacre lot, will they accept the higher-density housing that will permit them to walk or bicycle to daily activities? In 1997, the entire amount spent by the US Department of Agriculture on nutrition education, evaluation, and demonstration was just 3% of the amount the food industry spent promoting their products.<sup>3</sup> Can we expect individuals to make appropriate food choices when confronted by this disparity in food-marketing resources? Can we expect children to adopt wise nutrition and physical

activity habits if the aggressive marketing practices of fast-food companies continue to be permitted in schools,<sup>25</sup> and the curricular time for physical education continues to decline?<sup>26</sup> Although the efficacy of weight loss campaigns has been demonstrated for work sites,<sup>27</sup> will the physical activity, weight control, and nutrition campaigns conducted by CardioVision 2020 be enough to offset the pressures to sit and to consume excess fat and calories? Progress toward weight control is one of the measures that CardioVision 2020 will monitor with its annual surveys.<sup>4</sup>

The current study has several limitations. The data on which the interpretations are based are limited in several ways. First, both the heights and weights of the respondents are self-reported and may therefore be biased. The very small numbers of underweight respondents limit the reliability of inferences that can be made about this important group of individuals; therefore, they have been removed from this analysis. Finally, the data are from a single community at a single point in time. Even so, population-based data from a single community are necessary for program planning and evaluation, particularly for members of that community.

In 2000, a clear majority of men and women we surveyed from Olmsted County, Minnesota, reported a desire to control their weight. However, the current weight distribution in the county suggests that they are unsuccessful. This indicates to us that, in addition to clinical programs that provide skills training and reinforcement, affordable, tasty foods of low energy density need to be both available and promoted to the population. Additionally, a physical environment that permits and promotes physical activity for everyone needs to be developed, maintained, and enlarged over time to match population growth. Social norms that reinforce the nutrition and physical activity goals that result in maintaining ideal weight need to be developed and fostered. The data presented here should alert the residents of Olmsted County to the fact that they, like the rest of the country and much of the world, are experiencing an obesity epidemic that will require attention at both personal and community levels if the negative effects that obesity exerts on health, quality of life, and economic prosperity are to be avoided.

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