

Weight Control Practices in Adults: Results of a Multistate Telephone Survey

ABSTRACT

In this study, data collected in 1989 in a random-digit dialing telephone survey of 60 590 adults in 38 states and the District of Columbia were analyzed. Approximately 38% of women and 24% of men reported that they were currently trying to lose weight. Methods reported were counting calories (24% of women, 14% of men), participating in organized weight loss programs (10%, 3%), taking special supplements (10%, 7%), taking diet pills (4%, 2%), and fasting for 24 hours or longer (5%, 5%). Among both sexes, only half of those trying to lose weight reported using the recommended method of caloric restriction combined with physical activity. (*Am J Public Health*. 1994;84:1821-1824)

Mary K. Serdula, MD, David F. Williamson, PhD, Robert F. Anda, MD, Alan Levy, PhD, Alan Heaton, PhD, and Tim Byers, MD

Introduction

Attempts to lose or maintain weight are common in the US population.¹⁻³ However, little is known about the prevalence of specific weight control practices in the general population.² To provide such estimates, we examined data from a large population-based telephone survey.

Subjects and Methods

Data for the Behavioral Risk Factor Surveillance System (BRFSS) are collected by state health departments in collaboration with the Centers for Disease Control and Prevention.⁴ During each year, an independent probability sample of each state's adult residents with telephones is selected by multistage cluster sampling.⁵ Up to 20 calls are made to a single phone number before replacement; 80% of calls are made on weeknights and weekends. Thirty-eight states and the District of Columbia collected data on specific weight control practices during 1989. The median response rate (the number of completed interviews divided by all phone contacts) was 82%.

All respondents were asked "Are you now trying to lose weight?" Respondents who answered no were asked "Are you now trying to maintain your weight, that is, keep from gaining weight?" Only those respondents who answered yes to either of the above questions were then asked the following questions:

1. "Are you now eating fewer calories to lose weight or keep from gaining weight?" (If yes) "Some people count calories. If you are counting calories, about how many calories are you eating each day?"
2. "Are you now using physical activity or exercise to lose weight or keep from gaining weight?"
3. "Are you now doing any of the following to lose weight or keep from gaining weight? Taking diet pills to decrease your appetite? Taking special products such as canned or powdered supplements? Fasting for 24 hours or

longer as part of your diet? Participating in an organized weight control program (such as Weight Watchers, TOPS [Take Off Pounds Sensibly], or Nutri-System)? Causing yourself to vomit after you eat?"

Of the 65 176 people who completed the interview, we excluded from all analyses those who did not report sociodemographic or smoking information (0.7%), whether they were trying to lose or maintain weight (0.8%), or their weight and height (4.2%). We also excluded those who were pregnant (1.3%). In analyses of specific weight loss practices, we excluded individuals who did not report such practices (1.4%).

We categorized respondents into the following categories of body mass index (weight in kilograms divided by height in square meters) based on the sex-specific National Center for Health Statistics reference population⁶: below average weight (under the 50th percentile), average weight (50th to 85th percentile), overweight (85th to 95th percentile), and severe overweight (95th percentile or above). We age adjusted the prevalence estimates by direct standardization to the age distribution of the total sample.⁷ We used the Cochran-Mantel-Haenszel statistic to test for homogeneity of prevalence estimates across sociodemographic and body mass index categories.⁸

Results

Attempts to lose weight were reported by 38.4% of women and 24.3% of men. Attempts to maintain weight were

Mary K. Serdula, David F. Williamson, Robert F. Anda, and Tim Byers are with the National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Atlanta, Ga. Alan Levy and Alan Heaton are with the Division of Consumer Studies, Food and Drug Administration, Washington, DC.

Requests for reprints should be sent to Mary K. Serdula, MD, Division of Nutrition (K26), Centers for Disease Control and Prevention, 4770 Buford Hwy, NE, Atlanta, GA 30341-3724.

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TABLE 1—Prevalence of Current Weight Control Attempts, by Selected Characteristics of Respondents: Behavioral Risk Factor Surveillance System (BRFSS), 1989

Characteristic	Women				Men			
	No.	Lose Weight, %	Maintain Weight, %	Neither, %	No.	Lose Weight, %	Maintain Weight, %	Neither, %
Age, y								
18-29	7 173	40.3	29.3	30.3	6 321	18.7	26.9	54.4
30-39	7 928	42.9	28.6	28.5	6 779	25.4	29.4	45.1
40-49	5 375	44.6	28.2	27.2	4 601	29.9	28.8	41.3
50-59	4 033	41.7	28.3	29.9	3 127	28.9	27.5	43.6
≥ 60	9 733	27.3	27.6	45.1	5 520	21.7	26.9	51.4
Race								
White	28 550	38.4	28.8	32.8	22 185	24.2	27.9	47.9
Black	3 223	38.8	24.0	37.2	2 013	21.8	25.0	53.2
Hispanic	1 437	37.5	29.9	32.6	1 217	29.7	27.4	42.9
Other	1 032	38.9	29.1	32.0	933	24.8	33.8	41.4
Education								
Less than high school	6 139	37.3	23.5	39.3	4 073	20.0	22.9	57.1
High school	12 172	39.0	27.0	34.0	8 431	22.8	26.6	50.5
Some college ^a	8 949	40.8	29.3	29.8	6 650	25.5	28.2	46.3
College graduate	6 982	36.5	33.3	30.2	7 194	27.7	32.4	39.9
Smoking status								
Yes	8 246	34.5	26.7	38.8	7 049	17.9	24.7	57.5
No	25 996	39.5	29.0	31.4	19 299	26.6	29.1	44.3
Body mass index, kg/m²^b								
Below average	13 018	14.1	36.0	49.9	8 382	4.9	28.0	67.1
Average	13 894	48.0	26.2	25.8	12 126	24.3	31.5	44.3
Overweight	5 096	65.1	17.0	17.9	3 816	47.1	24.1	28.8
Severe overweight	2 234	69.6	13.6	16.7	2 024	60.1	15.9	24.1
Total (width of 95% confidence interval)	34 242	38.4 (±0.7)	28.4 (±0.6)	33.2 (±0.6)	26 348	24.3 (±0.6)	27.9 (±0.6)	47.8 (±0.8)

Note. Except for age-specific estimates, all estimates were adjusted by direct standardization to the age distribution of the total BRFSS population.

^aIncludes technical school.

^bBased on National Health and Nutrition Examination Survey II percentiles (see text).

TABLE 2—Prevalence of Specific Weight Loss Practices, by Weight Control Status: Behavioral Risk Factor Surveillance System (BRFSS), 1989

Practice	Women, %		Men, %	
	Lose Weight (n = 12 732)	Maintain Weight (n = 9480)	Lose Weight (n = 6221)	Maintain Weight (n = 7164)
Consuming fewer calories	83.6	47.5	78.1	41.0
Increasing physical activity	61.2	44.3	60.3	45.1
Both consuming fewer calories and increasing physical activity	52.1	22.9	47.9	20.3
Counting calories	24.1	7.9	14.0	4.2
Belonging to an organized program	10.3	2.3	3.5	0.7
Taking special supplements	9.9	2.2	6.6	1.9
Fasting	4.8	1.7	4.9	1.7
Using diet pills	3.9	0.8	1.9	0.3
Vomiting	0.3	0.2	0.3	0.1

Note. All estimates were adjusted by direct standardization to the age distribution of the total BRFSS population.

reported by 28.4% of women and 27.9% of men (Table 1). The practice of losing or maintaining weight varied by sociodemographic characteristics and body mass

index. Attempts to lose weight were most strongly associated with body mass index.

Among individuals currently trying to lose weight, consumption of fewer

calories and increases in physical activity were reported by only 52.1% of women and 47.9% of men (Table 2). Women were more likely than men to report counting calories, belonging to an organized weight loss program, taking special supplements, or taking diet pills. The use of these specific weight control practices was lower for those who were trying to maintain weight (Table 2).

Among those who were trying to lose weight, consumption of fewer calories was reported by 70% or more of all sociodemographic and body mass index groups (Tables 3 and 4). The use of physical activity to lose weight increased with education and decreased with age and body mass index, and it was reported less often by smokers than by nonsmokers. Fasting and diet pill use decreased with age. Among both sexes, fasting was more often reported by Blacks and Hispanics than by Whites, while supplement and diet pill use were reported more often by Black and Hispanic men. Among women, participation in organized weight control programs increased with education.

TABLE 3—Prevalence of Specific Weight Loss Practices among Women (n = 12 732) Currently Trying to Lose Weight, by Selected Characteristics

Characteristic	% of Women	Consuming Fewer Calories, %	Increasing Physical Activity, %	Consuming Fewer Calories and Increasing Physical Activity, %	Counting Calories, %	Using Organized Program, %	Using Supplements, %	Fasting, %	Using Diet Pills, %
Age, y									
18–29	22.3	82.9	73.8	61.6	25.7	7.8	10.7	6.9	5.8
30–39	26.3	83.9	67.6	57.3	26.1	11.8	11.0	5.5	4.9
40–49	18.3	84.8	61.8	53.5	25.7	14.0	11.3	4.3	3.6
50–59	12.9	85.1	55.7	48.9	25.0	12.9	9.5	4.1	2.8
≥ 60	20.1	82.0 ^a	45.0	38.4	18.6	6.7	6.9	2.9	1.8
Race									
White	83.1	84.4	62.8	53.8	24.6	10.8	9.6	3.9	3.9
Black	9.5	79.5	52.0	42.8	21.9	7.7	11.5	10.6	3.8
Hispanic	4.3	85.0	55.7	48.3	22.6	8.5	11.0	8.8	4.4
Other	3.1	71.8	53.8	42.2	17.2	4.9	8.7 ^a	5.7	4.2 ^a
Education									
Less than high school	15.3	77.7	49.3	40.5	20.0	5.5	9.8	7.2	4.4
High school	36.1	85.0	60.3	52.4	24.0	9.5	9.9	5.1	4.4
Some college ^b	28.5	84.1	65.0	55.2	25.2	11.8	11.1	4.5	4.4
College graduate	20.1	85.0	68.8	58.4	26.2	13.3	8.8	3.4	2.1
Current smoking									
Yes	22.4	81.8	53.7	44.8	23.6	7.7	10.9	6.4	5.3
No	77.6	84.0	63.3	54.2	24.2 ^a	11.0	9.6	4.2	3.4
Body mass index, kg/m² ^c									
Below average	15.4	78.6	63.1	50.3	17.3	4.9	8.7	4.8	3.6
Average	49.0	83.4	64.2	54.6	23.7	10.2	9.0	4.2	3.6
Overweight	23.9	86.1	58.2	51.2	27.1	12.2	11.2	5.0	4.2
Severe overweight	11.7	86.0	52.3	46.3	29.1	13.9	13.3	7.2	5.2
Total (width of 95% confidence interval)	100.0	83.6 (±1.3)	61.2 (±1.4)	52.1 (±1.2)	24.1 (±0.9)	10.3 (±0.6)	9.9 (±0.5)	4.8 (±0.4)	3.9 (±0.3)

Note. Except for age-specific estimates, all estimates of specific weight loss practices were adjusted by direct standardization to the age distribution of the total Behavioral Risk Factor Surveillance System population.

^aChi-square not statistically significant ($P > .05$).

^bIncludes technical school.

^cBased on National Health and Nutrition Examination Survey II percentiles (see text).

Discussion

In this population-based study of US adults from 38 states and the District of Columbia, 38% of women and 24% of men reported that they were currently trying to lose weight. However, only about half of those trying to lose weight reported using the recommended regimen of decreasing caloric intake while increasing physical activity.^{9,10} The 1990 National Health Interview Survey found similar estimates: 40% of women and 23% of men 25 years of age and older reported that they were trying to lose weight.¹¹

The limitations of this study include those inherent in any study using self-reported data. Although errors in the reporting of weight and height are, on average, small, there are differences in

accuracy of reporting by a person's overweight status. Underreporting of weight is most common among those most overweight.¹² The 18% overall survey nonresponse and 4% item nonresponse for the question on current weight and height are of concern. Secretive behaviors such as self-induced vomiting are likely to be. In addition, the survey did not determine the duration of fasting or the types of diet pills or supplements used.

Fasting and diet pill use are short-term methods that may be ineffective and unsafe if used excessively. Although the prevalences were small (and probably underestimated), our estimates suggest that about 2.2 million adults in the United States used diet pills and 3.8 million fasted for weight control at the time of the survey.¹³

In 1989, consumers were estimated to have spent \$32 billion for weight loss products and services.¹⁴ Nonetheless, obesity remains a major health problem in the United States.^{6,9} In this survey, the groups at greatest risk for obesity-related problems—the severely overweight, the less educated, smokers, and older adults—were also those least often reporting increasing physical activity to lose weight. Thus, health care professionals, particularly physicians, need to develop expertise in person-appropriate exercise counseling.¹⁵ □

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TABLE 4—Prevalence of Specific Weight Loss Practices among Men (n = 6221) Currently Trying to Lose Weight, by Selected Characteristics

Characteristic	% of Men	Consuming Fewer Calories, %	Increasing Physical Activity, %	Consuming Fewer Calories and Increasing Physical Activity, %	Counting Calories, %	Using Organized Program, %	Using Supplements, %	Fasting, %	Using Diet Pills, %
Age, y									
18–29	18.6	73.7	72.5	54.5	13.4	3.2	6.4	6.3	3.0
30–39	27.1	79.6	66.5	52.9	14.7	4.0	6.5	5.5	1.9
40–49	21.5	81.8	58.4	47.5	14.0	4.3	6.7	5.3	2.3
50–59	14.3	79.9	50.5	42.5	14.4	3.0	6.9	3.8	1.2
≥ 60	18.6	76.7	49.3	39.7	13.4 ^a	2.9 ^a	6.8 ^a	3.5	0.9
Race									
White	84.2	79.1	60.5	48.7	14.3	3.4	6.0	4.2	1.5
Black	6.7	74.8	54.9	43.0	14.1	4.9	10.1	9.5	3.1
Hispanic	5.4	72.1	62.4	46.3	11.0	5.4	12.0	9.8	5.8
Other	3.6	70.2	61.4 ^a	43.3	10.1 ^a	0.7	7.1	5.1	2.5
Education									
Less than high school	12.6	70.1	49.2	36.3	11.3	1.8	6.1	7.5	2.8
High school	29.6	77.6	55.4	43.5	13.1	2.8	6.8	5.7	1.9
Some college ^b	26.2	79.7	63.5	50.8	15.7	4.0	7.6	4.7	2.3
College graduate	31.6	80.9	66.5	54.7	15.0	4.0	5.8 ^a	3.9	1.5 ^a
Current smoking									
Yes	20.3	75.6	53.9	41.6	13.5	3.6	6.0	6.7	2.3
No	79.7	78.7	61.9	49.5	14.0 ^a	3.5 ^a	6.9 ^a	4.5	1.8 ^a
Body mass index, kg/m² ^c									
Below average	6.3	77.7	61.4	46.8	11.0	1.8	5.9	5.3	2.6
Average	46.7	76.9	63.1	49.8	12.0	2.6	5.8	4.0	1.6
Overweight	27.8	78.9	60.2	47.8	15.0	3.5	6.7	5.2	2.2
Severe overweight	19.2	81.4	53.8	45.0	19.1	6.3	8.8	7.0	2.3 ^a
Total (width of 95% confidence interval)	100.0	78.1 (±2.2)	60.3 (±1.9)	47.9 (±1.7)	14.0 (±0.9)	3.5 (±0.5)	6.6 (±0.7)	4.9 (±0.6)	1.9 (±0.3)

Note. Except for age-specific estimates, all estimates of specific weight loss practices were adjusted by direct standardization to the age distribution of the total Behavioral Risk Factor Surveillance System population.

^aChi-square not statistically significant ($P > .05$).

^bIncludes technical school.

^cBased on National Health and Nutrition Examination Survey II percentiles (see text).

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