



Reading Food Labels Can Improve Chances of Weight Loss

WASHINGTON STATE UNIVERSITY EXTENSION FACT SHEET • FS065E

The National Longitudinal Survey of Youth

A recent study of middle-aged Americans finds that reading food labels could be an important tool in the quest for weight loss through dietary improvement. Today almost all packaged food carry labels that provide essential nutrient and ingredient information such as the percentages of fat and cholesterol, serving size, and percent daily value of key vitamins. Long-term dietary information is not commonly available for public use and analyses. However, the Bureau of Labor Statistics' National Longitudinal Survey of Youth (<http://www.bls.gov/nls/>) has been asking respondents about their food label usage since 2002. This allows examination of the actual use of food labels by middle-aged Americans who are trying to lose weight.

Data from 3,000 men and women who participated in the National Longitudinal Survey of Youth between 2002 and 2006 were used in the study. The National Longitudinal Survey of Youth began in 1979 when respondents were 12–17 years old. In the 2002–2006 biennial rounds of the survey, respondents were asked if they read food labels when they purchased an item for the first time, if they were trying to lose or control weight, and if they regularly participated in vigorous physical exercise. The study sample was restricted to individuals who were of healthy body weight, overweight, obese, and trying to lose or control their weight over the five year period between 2002 and 2006.

Study results

Among those trying to lose or control weight in the study, 74% were obese or overweight. Around 39% of those who were trying to lose or control weight were only reading food labels, about 11% were only participating in regular vigorous physical activity, around 17% were reading labels as well as exercising, and the rest were neither reading food labels nor exercising. In other words, in this particular age cohort, individuals were more likely to try to lose weight through dietary modifications than exercise. It is possible that individuals in the last group were pursuing some other weight management regimen, unknown to the researchers.

Controlling for these unobserved effects, analysis was conducted to note the success in weight loss between

consecutive surveys. Over the five years, only about 53% of the individuals were able to lose or maintain weight; the rest gained weight. Specifically, between 2002 and 2004, approximately 38% of individuals who were trying to lose or control weight did lose weight, while 33% lost weight between 2004 and 2006. The average weight loss between 2002 and 2006 was 12 pounds, while the average weight gain during the same duration was 8 pounds.

Women were more likely than men to read food labels when they purchased a product for the first time; they were also more likely to lose weight. Older individuals were less successful in losing weight than their younger counterparts. Overall, those who read labels but did not exercise were more likely to lose weight than those who exercised but did not read labels.

In any survey year there were four distinct behaviors: (1) read food labels but do not participate in vigorous physical activity, (2) do not read food labels but participate in vigorous physical activity, (3) do both, and (4) do neither. Consequently, going from one survey year to the next, 16 behavioral combinations are possible.

Predicted weight loss

Table 1 presents the expected probability of weight loss across various behavioral changes. Specifically, four behavioral changes are statistically significantly associated with the probability of weight loss. The regression model created as part of the survey outcome predicts a 42% chance of weight loss based on changing behavior from neither reading food labels nor exercising to doing both (Behavior 1 or B1). Even when an individual changes their behavior from neither reading food labels nor exercising to at least reading labels (B2), the predicted probability of weight loss is 37%. Similarly, changing behavior from reading labels but not exercising to doing both (B3) has a 40% success rate.

An interesting outcome, noted among only 4% of the sample, is that changing behavior from reading labels and not exercising to not reading labels but exercising (B4) is also associated with a statistically significant probability of weight loss. However, those who transitioned from neither reading labels nor exercising to only reading labels showed

a greater probability of weight loss than those who transitioned from neither reading labels nor exercising to only exercising. Additionally, those who were reading labels but not exercising were more likely to improve their chances of weight loss by adding exercise to their routines rather than by reversing their behavior (that is, not reading food labels but exercising). Furthermore, those who transitioned from reading labels and not exercising to doing both showed a greater probability of weight loss than those who transitioned from exercising and not reading to doing both. Finally, changing behavior from exercising but not reading labels to doing neither is associated with weight gain. On average, among those who were trying to lose weight and did lose weight, B1 individuals lost almost 14 pounds, B2 individuals lost 13.6 pounds, B3 individuals lost 13 pounds, and B4 individuals lost 11.7 pounds.

Bottom line: It is difficult to lose weight and many are often unsuccessful. However, reading food labels can increase one's dietary knowledge, which can be used to make healthier food choices, either through quantity or quality changes that can improve the chances of weight loss. Additionally, eating a healthful diet can help reduce the risk of some diseases, such as avoiding 1) too much

saturated fat and cholesterol that can contribute to heart disease and 2) too much sodium that may lead to high blood pressure. Read the Department of Health and Human Services' pamphlet on how to interpret the nutrition facts panels at <http://www.fda.gov/downloads/Food/Resources-ForYou/Consumers/UCM275412.pdf>.

Hear the author's interview with NPR on this topic at <http://www.publicbroadcasting.net/kplu/news.newsmain/article/0/0/1702236/news/Better.Weight.Loss.Through.Reading.Labels>.

Read a report of this study on the King 5 News website: <http://www.king5.com/news/Reading-food-labels-can-help-you-lose-weight-102973554.html>.

Acknowledgements

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Table 1. Expected probability of weight loss across different sets of behavior (from regression analysis using the National Longitudinal Survey of Youth, 2002–2006 data).

Change in behavior	Expected probability of weight loss	Statistical significance	Association with weight loss
Not read, not exercise → read, exercise	42%	yes	positive
Not read, not exercise → read, not exercise	37%	yes	positive
Not read, not exercise → not read, exercise	36%	no	positive
Read, exercise → not read, not exercise	31%	no	negative
Read, exercise → read, not exercise	36%	no	positive
Read, exercise → not read, exercise	27%	no	negative
Read, not exercise → not read, not exercise	36%	no	positive
Read, not exercise → read, exercise	40%	yes	positive
Read, not exercise → not read, exercise	42%	yes	positive
Not read, exercise → not read, not exercise	28%	yes	negative
Not read, exercise → read, exercise	28%	no	negative
Not read, exercise → read, not exercise	36%	no	positive

Note: The expected probability of weight loss was calculated after rigorous statistical analysis of the data. Comparison was made to the group of respondents who had no change in behavior over consecutive surveys. Complete methodology and results are available from the author upon request.



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FS065E