

# IMPACT



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## Diabetes Pedometer Results in Cassia County

### *The Situation*

Adult diabetes in Idaho has followed the national trends of increasing prevalence and now stands at 6.3%. In the last decade, the percentage of Idaho adults with diabetes has increased from 4.2% in 1994 to the current prevalence of 6.3% (2003, BRFSS).

Individuals who do not follow a prescribed treatment for diabetes are more likely to suffer from heart disease, stroke, high blood pressure, blindness, kidney disease, nervous system damage, amputations, and dental disease. The total annual cost of diabetes in Idaho, including direct medical expenses and indirect costs, such as disability, work loss and premature mortality is estimated at \$873 million. Research indicates that effective diabetes education can not only reduce the number of complications from diabetes but also decrease the overall cost of the disease.

The 2003 Behavioral Risk Factor Surveillance System (BRFSS) conducted by the Idaho Department of Health and Welfare, in conjunction with the Centers for Disease Control and Prevention (CDC), found that Idaho adults were significantly more likely to be diagnosed with diabetes if they were: over the age of 65, if they had less than a college education, and if they were obese (BMI > 30).

Physical activity also plays a role in developing diabetes. In Idaho, those who reported no leisure time physical activity were 2.2 times more likely to have been diagnosed with diabetes when compared with those who participated in some kind of leisure time physical activity. A landmark study by the National

Institutes of Health (NIH) found that those at risk for type 2 diabetes could reduce the likelihood of developing the disease by 58% through 30 minutes of moderate daily exercise and by weight reduction, and eating a low-fat, low-carbohydrate diet. This study demonstrated that lifestyle interventions could actually prevent the disease.

### *Our Response*

The University of Idaho Extension has partnered with the Idaho Diabetes Prevention and Control Program (DPCP) and Health Departments to develop a ten-week walking/pedometer program that can be used in conjunction with The Healthy Diabetes Plate curriculum.

**Weeks 1-5:** The University of Idaho Extension provided education to participants during weeks 1-5 on diabetes and physical activity. Diabetes education focused on signs and symptoms of diabetes, meal planning, and grocery tour, incorporating recipes and eating out. Physical activity information included: benefits of physical activity, how to use a pedometer, setting goals, increasing level of physical activity, overcoming barriers to physical activity, and stretch band activities. In addition, the DPCP provided pedometers and stretch bands and the Health Department provided information on physical activity resources in the community, e.g. walking trails.

**Weeks 6-9:** Participants kept daily step logs and turned them into the Extension office.

**Week 10:** Reunion. Participants met to discuss the pedometer program.

## ***Program Outcomes***

Three evaluation tools were used to determine changes in level of physical activity: (1) Daily Step logs (weeks 1-10), (2) Pre and Post Physical Activity Surveys (weeks 1 and 10), and (3) Follow-up phone call (week 18). Data was collected on 10 participants.

**Step Logs:** During the 10 week study, participants recorded their daily steps on a Step Log sheet. At week 1, the average number of daily steps was 6398, and the number of steps peaked at week 6 to 7778 steps/day and decreased from week 7-10 to 5582 steps/day. (See table below).

| Week | Average daily steps |
|------|---------------------|
| 1    | 6398                |
| 2    | 6597                |
| 3    | 6027                |
| 4    | 6659                |
| 5    | 6732                |
| 6    | 7778                |
| 7    | 7683                |
| 8    | 7076                |
| 9    | 6286                |
| 10   | 5582                |

**Diabetes and Physical Activity Survey:** Participants completed the survey at week 1 (pre) and week 10 (post). The results are shown below.

1. There was an increase in the number of participants who:
  - Exercised 6-7 times a week (56% pre and 80% post).
  - Lifted weights (22% pre, 40% post).
  - Stretched (44% pre, 60% post).
2. There was a decrease in the number of participants who:
  - Cited lack of time as a barrier to being physically active (67% pre, 20% post).
3. All participants reported a weight loss (ranging from 5 to 34 pounds).

4. Diabetes blood sugar measures. There was an increase in individuals who reported their:
  - Blood sugar was under good control (86% pre, 100% post).
  - Hemoglobin A1c was at a good level (50% pre, 67% post).

Follow-up phone calls at week 18.

1. All respondents stated they were still using the pedometer.
2. 40% stated their level of physical activity had increased; 60% stated their level of physical activity had stayed the same.
3. 100% stated their blood sugar and hemoglobin levels were good and had improved.

## ***For More Information***

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