

# IMPACT

University of Idaho  
Extension

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## Bonneville County StrongWomen™ Program Increases Arm and Leg Strength

### *The Situation*

Beginning in their forties, women lose 1/4 to 1/3 pound of muscle per year and gain that much or more in fat. Approximately 10 million Americans have osteoporosis and 80% of them are women. One out of every two women will experience an osteoporosis related fracture.

As women age, their bone density begins to decrease, especially after menopause. Weight bearing exercise such as walking and strength training have been shown to maintain and increase bone density.

### *Our Response*

To address this health concern, the University of Idaho Extension Educator began offering strength training classes patterned after the StrongWomen™ curriculum developed by Tufts University. Barbara Petty, a certified instructor of the StrongWomen™ program teaches the 12 session program.

The classes are offered twice week and each class lasts approximately 1 hour. Classes are offered in the morning from 10:00 – 11:00 and a second session is offered from 5:15 – 6:15. This schedule accommodates both the stay at home and working women in our community. In addition to the strength training, nutritional topics focusing on MyPyramid and diseases that are common to the older female population are discussed.



### *Program Outcomes*

The first time this program was offered, both morning and evening sessions drew full classes. A variety of reasons motivated the women to attend.

- “Needed to take care of health and avoid osteoporosis.”
- “I was feeling old.”
- “Seemed like training for a routine I could do later at home.”
- “Had read the book but had never done anything about it.”

Within two weeks the participants were able to identify changes as a result of the strength training.

- “I found I was more capable of heavier weights than I thought. I enjoyed the ladies and saw physical results.”
- “I feel better. It was fun being in a group.”
- “I enjoyed the companionship, ability to try exercise without much expense and it gave me time for myself.”

- “Following knee surgery I was finally able to walk down the stairs without thinking about taking one step at a time.”

Table 1. Pre/post arm and leg exercises

First Session			
Exercise	Pre (Mean Wt)	Post (Mean Wt)	% Increase
Standing Leg Curl	3.17 lb	8.50	168%
Knee Extension	3.19 lb	7.88 lb	147%
Side Hip Raise	3.31 lb	8.38 lb	153%
Biceps Curl	3.52 lb	5.64 lb	60%
Overhead Press	3.52 lb	5.31 lb	51%
Upward Row	4.67 lb	5.60 lb	20%
Bent Forward Fly	3.10 lb	4.40 lb	42%

The data in the previous table is based upon 21 first time students. There was an average increase of 156% in leg strength and 43% increase in arm strength.

Table 2. Pre/post arm and leg exercises

Second Session			
Exercise	Pre (Mean Wt)	Post (Mean Wt)	% Increase
Standing Leg Curl	7.08 lb	10.50 lb	48%
Knee Extension	7.08 lb	10.36 lb	46%
Side Hip Raise	7.08 lb	10.29 lb	45%
Biceps Curl	5.38 lb	8.00 lb	49%
Overhead Press	5.23 lb	6.21 lb	19%
Upward Row	5.92 lb	6.88 lb	16%
Bent Forward Fly	4.23 lb	4.79 lb	13%

This table is based upon the results from fourteen repeat students. During the second session there was continued increase with an average increase of 46% in leg strength and 24% increase in arm strength.



### *For More Information*

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