Snowshoeing benefits revealed

The Energy Expenditure of Snowshoeing in Packed Vs.
Unpacked Snow at Low-Level Walking Speeds
Summary of original research from Declan A.J. Connolly, ?The Energy Expenditure of Snowshoeing in Packed Vs. Unpacked Snow at Low-Level Walking Speeds?, The Journal of Strength and Conditioning Research, 16(4): 606-610, 2002.

Snowshoeing, ranked as one of the top 20 participatory sports in the United States, offers an enjoyable non-impact winter training option for participants of all ages. Despite its popularity, there had been no scientific studies quantifying any physiologic response to the activity, and estimated caloric expenditure in the literature varied widely from 250-1,000 calories per hour without any clarification about intensity, body mass, snow conditions, or equipment used.

The Study: The researchers in this study attempted to:

assess the energy cost of snowshoeing at two low-level speeds.
determine differences in speed that occurred when performing at the same heart rate intensity on flat terrain (a tread mill) at 4 and 6 mph.
assess the differences in energy costs for travel over packed vs. unpacked snow.
differentiate between the energy cost to talk and snowshoe at a given speed across varying terrain.

determine whether caloric expenditure during snowshoeing would support its acceptance as an aerobic conditioning activity.
The Results: Snowshoeing on packed snow at 2.95 mph elicited a similar heart rate and energy expenditure response as snowshoeing in unpacked snow at 2.04 mph or walking on a flat treadmill at 4 mph. Snowshoeing on packed snow at 3.97 mph elicited the same heart rate and energy expenditure response as snowshoeing on unpacked snow at 2.87 mph or walking on a treadmill at 6 mph.

The Take-Home Message: Snowshoeing requires 50% higher energy expenditure than previously described. Such expenditure occurs at a much slower speed of motion and while carrying only one?s body weight (adding a pack increases the expenditure at the same walking speeds).
Snowshoeing may be especially attractive to those people who may experience discomfort or injury when moving at higher running speeds, or who refrain from running in winter due to more dangerous (icy, slick) road conditions.
Increasing walking speed on snow by just 1 mph nearly doubles the energy expenditure. Increasing the range of motion in the legs (walking through unpacked snow rather than packed) also increases the energy expenditure. It is a viable winter alternative for the maintenance and/or development of cardiovascular fitness.

For Winter Trails Day info, check here: http://www.wintertrails.org/index.php