Casey Connor (Physical Education Major at Western Oregon University) Nordic Walking with his grandmother, Ruth Connor

Bill Connor, Nordic Walking – So Easy, So Effective, Presentation Handout - American Association for Physical Activity and Recreation, AAHPERD National Convention, Boston 2012

What is Nordic Walking? Nordic walking is an easy to do activity that has a multitude of health related fitness benefits. It is simply walking with poles. It is closely related to Nordic skiing, which we know is an excellent aerobic activity. Its historical roots, which go back to early twentieth century Scandinavia,

lie in off season training for competitive Nordic skiers. More recently, it has become a popular fitness activity for all ages, particularly in Europe. It is truly a lifetime activity.

Benefits of Nordic Walking

Based on solid research as summarized by Downer (Downer, 2006), "Nordic walking has been shown to provide many health and fitness benefits. This unique and increasingly popular form of exercise has many advantages, both for healthy and fit individuals who want to increase their workouts and gain additional cardiovascular benefits as well as for those with medical conditions that restrict them from jogging or running." Briefly, walking with poles adds physiological stress to regular walking in both fit and less fit individuals. Walking with poles improves mainly aerobic fitness and muscular endurance. Specifically Nordic walking is effective in increasing cardiovascular functionality, managing weight, and providing upper body resistances which developmentally stresses muscles and bones which can aid in preventing osteoporosis. Nordic walking also decreases neck-shoulder area disabilities and pain, promotes mechanically sound walking mechanics, and can even have positive effects on mood state (how do you walk when you are happy?) Interesting stuff!

The Cooper Institute in Texas compared Nordic walking with regular walking (Church, 2002). The caloric expenditure and the oxygen consumption increase on an average was 20%, and the heart rate increase with about 10 beats per minute when using the Nordic walking poles. Some individuals increased as much as 46% in oxygen consumption and just about the same in caloric expenditure. The interesting thing is that even through the body works harder using the poles, the RPE (rated perceived exertion) was the same walking with or without poles. Increased caloric expenditure with no corresponding increase in perceived exertion may have important public health applications. Individuals who poled more intensely had higher oxygen consumption. There is potential for considerably more or less benefit

depending on the selection of poling intensity. This may have particular significance for individuals who need to increase caloric expenditure but have walking speed limitations.

I was recently approached while Nordic walking in a mall by a physical therapist about the potential of Nordic walking for elderly population physical activity and the devastating long term postural orthopedic effects of "walkers". I believe the use of Nordic walking poles is particularly promising for elderly populations, as the poles provide the stability that can promote physical activity among older individuals with gait, orthopedic and balance concerns.

Equipment:

Nordic walking poles are manufactured by a variety of distributors. The retail cost can range from approximately twenty dollars to as high as two hundred dollars. For starters, a set of used ski poles can be modified and utilized. Basically, you get what you pay for in quality, durability and ease of use. Poles can be of fixed length or can be adjustable. There are obvious durability advantages to each type; however, in a setting where the poles are used by multiple populations, adjustable poles eliminate the sizing issue. Pole length should be just short of elbow height when the pole is gripped and planted vertically.

Straps vary in quality and functionality from basic ski straps to far more effective, specialized arrangements which cradle the hand. Straps are important as the grip on the pole is released during a good part of the poling movement allowing circulation to occur. A variety of replaceable "feet" are available to aid in traction on varied surfaces, as like automobile tires, they do wear out.

Getting Started:

Let's get started. Here is a teaching progression for introducing Nordic Walking that has proved to be effective.

1. Adjust or select a pole so that when it is held upright the forearm angles just slightly downward from parallel with the ground. With the Nordic walking poles strapped on, the fingers loose (don't squeeze the pole grips), the arms relaxed and down at your side and the poles angled back – start walking without moving your arms - let them hang straight down at your side. Let the pole tips drag along the ground.

2. Now, start to gradually swing your arms just like you would while casually walking. Emphasize basic walking technique using cues such as: arm swing, opposition, erect posture, heel- toe technique and knee lock. Continue to let the pole tips drag. Keep the fingers loose.

3. Next, with poles angled back, start to push back on the poles – gripping then gradually releasing your grip after the plant. Let your hands push down through the straps to help you push off the ground and propel yourself along. Work for full extension of the elbow and adjust gait accordingly. Continue to drag the pole tips on recovery to the plant position just ahead of the lead heel. You should feel the developmental stress being applied to the shoulder girdle and arms.

4. Finally, continue to keep your fingers relaxed by not squeezing the poles after planting and stop dragging the rubber tips on the ground. The lead pole tip never goes further ahead than the opposing lead foot's heel and the poles are angled slightly back. This is a crucial teaching point! The motion isn't out in front, except for balance when negotiating challenging terrain or a steep downhill. Intensity can be added by punching the pole into the ground and pushing harder through the movement as the elbow extends and/or by walking up hills.

Some final thoughts:

A traditional walking program requires supplemental upper body work in a well rounded fitness program. Nordic walking adds an upper body dimension. Physiological response is compounded.

As mentioned, Nordic walking is extremely popular in Europe but needs to be promoted in North America. It meets the criteria for lifetime physical activity, which include (Pangrazi, 2010): 1) potential for participating at varied intensities 2) can be done alone or with others 3) does not require extensive amounts of equipment 4) does not require a membership 5) does not require a specific playing field or surface.

In my experience, the activity is well received by high school, college students and adults. They are pleasantly surprised by the physiological response that this activity provides, as I was the first time I tried it. The activity is developmentally appropriate for elementary children after mature walking form is developed and mastered, and it gives an added dimension to school walking programs including those using pedometers. It can be an activity of choice for overweight students starting at the upper elementary and secondary level (Pangrazi, 2010).

Part of the attraction of walking and Nordic walking is in the variety of interesting locations it can be practiced in, and the potential for collaboration with other academic areas in the school setting exists. Well grounded walking programs are readily available for populations ranging from elementary to mature populations (Pangrazi, 2010, www.walk4life.com, www.thewalkingsite.com), and the results can certainly be enhanced through the use of Nordic walking poles. As the perceived exertion of the activity is no greater than regular walking, durations of activity are similar. The benefits, however, are greatly enhanced. There are numerous outstanding free online materials which you can use to gain further information on this interesting topic (*www.leki.com* , *www.nordicwalking.co.uk*, *www.skiwalking.com*).

If you give Nordic Walking a try, you will probably be approached by passersby's with some smiles and interesting queries like "Did you forget your skis?", or "Where's the snow?" Perhaps you can use this opportunity to initiate a conversation about the benefits of this remarkable, easy to do, inexpensive, readily accessible activity. Try it – you will like it! Pass it on!

References:

Church, T., Earnest, C., Morss, G. at The Cooper Institute, RQES, vol 73, No.3, pp. 296-300, September 2002

Downer, David. The thought behind the walk – Research proves it! The benefits of Nordic walking, 2011. (Retrieved from *www.nordicwalking.co.uk*. November 15, 2011)

Pangrazi, Robert and Beighle, Aaron. Dynamic Physical Education for Elementary School Children, 16th Edition, Benjamin Cummings, 2010.

Dr. Bill Connor
Adjunct Professor
U of Montana -Western