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Nordic Walking: A Simple Lifetime Physical Activity for Every Student

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Nordic Walking

A Simple Lifetime Physical Activity *for Every Student*

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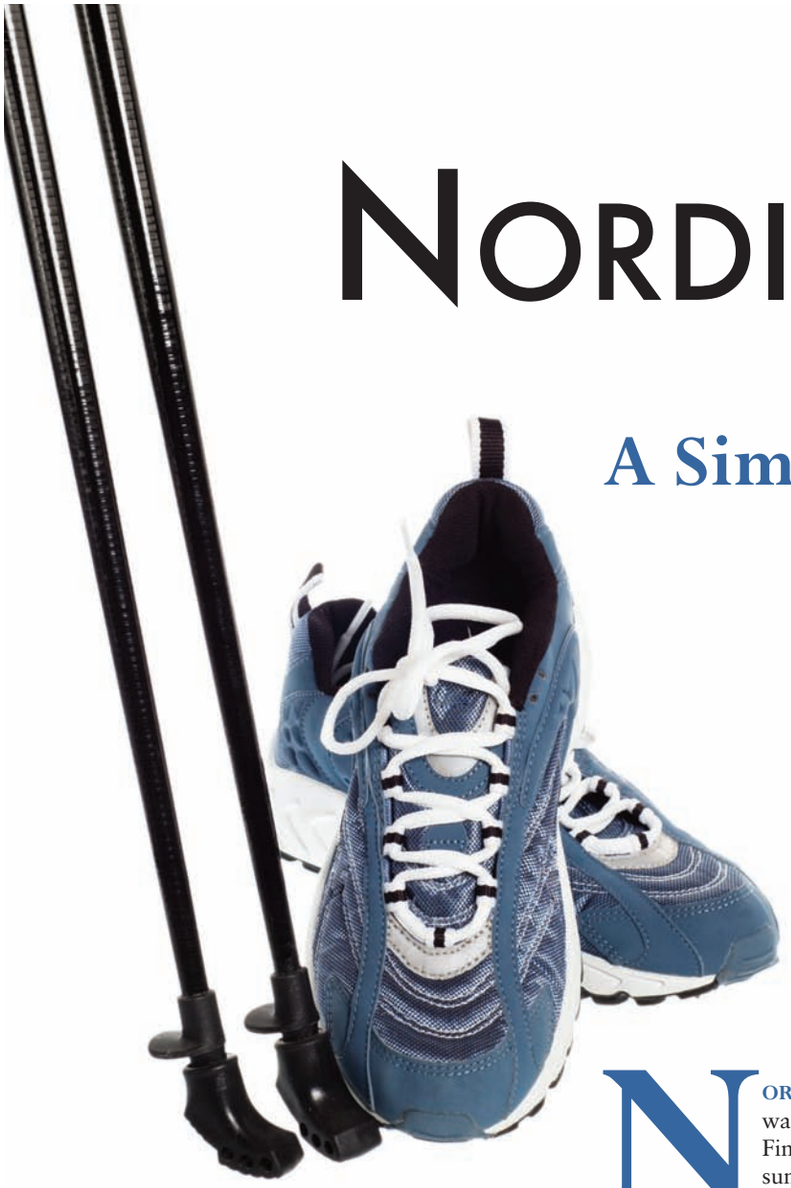

Anyone, anytime, anywhere can do this activity.

Nordic walking is an activity that combines natural walking with the active use of cross-country ski poles. It was invented in Finland in the 1930s by cross-country skiers who used poles during their summer training in order to keep working on their motor skills for their sport (International Nordic Walking Federation [INWA], 2010a).

In 1966, the first "walking with ski poles" lessons and tasks, to be used for outside training and as a competitive sport, were published. They were developed by Leena Jääskeläinen, a physical education teacher at Viherlaakso School in Helsinki, Finland (INWA, 2010b). In 1968, Jääskeläinen, as a member of the Faculty of Physical Education and Sport Sciences at the University of Jyväskylä (Finland), introduced the use of poles as a learning tool in physical education. The idea was to use them as an aid to walk cross-country ski style.

In the 1980s and 90s, the first research works on Nordic walking were published. Researchers found that the activity could provide good health benefits (Porcari, Hendrickson, Walter, Terry, & Walsko, 1997; Walter, Porcari, Brice, & Terry, 1996). In 1997, the name "Nordic walking" was proposed to denominate this type of physical activity. Finally, in 2000, the International Nordic Walking Association (INWA) was founded. Nowadays, INWA and other associations all over the world (e.g., American Nordic Walking Association, Nordic Walking UK, Österreichischer Nordic Walking Verband) conduct all kinds of activities, including certification seminars, workshops, and courses, to promote the activity for all ages.

Nordic walking can be enjoyed in a variety of environments. Many people in cities all over the world just practice it on the streets, which has been called "urban Nordic walking." However, its natural environment is the outdoors (Nordic trail walking), and it has become

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so popular that hundreds of people travel to different countries to spend their summer holidays practicing this fitness activity. "Beach Nordic walking" is another variation of the original activity that attracts many people all over the world, probably because the sand gives some extra cushion to the joints. Finally, another possibility is to wear modified roller skates while exercising, called "roller skiing" or "skiking," which combines cross-country skiing, inline skating, and Nordic walking skills.

One thing is clear: all these variations of Nordic walking are more physically demanding than regular walking (Church, Earnest, & Morss, 2002) and, except for the last one, all of them are recommended for people of all ages and physical conditions (Figard-Fabre, Fabre, Leonardi, & Schena, 2010; Morgulec-Adamowicz, Marszalek, & Jagustyn, 2011). Therefore, Nordic walking can be considered a safe, healthy activity that should be promoted in school physical education.

NORDIC WALKING CAN BE CONSIDERED A SAFE, HEALTHY ACTIVITY THAT SHOULD BE PROMOTED IN SCHOOL PHYSICAL EDUCATION.

Nordic walking has also become a competitive sport, in which participants race over a set distance while walking with poles. At present, however, there is no standard distance used for Nordic walking competitions. Therefore, each event is organized by a committee that establishes the race distance based on the age of the participants. The distance is usually set at 2 kilometers for children, and 10, 15, 21, 26, or 42 (marathon) kilometers for adults.

Nordic Walking Basics

Nordic walking motion can be summarized as a simple enhancement of the normal arm swing that occurs when walking, by adding the use of a pair of poles to actively propel oneself forward. It has many similarities with cross-country skiing and elliptical-training machines. The critical elements needed to perform the basic Nordic-walking motion are as follows:

- Shoulders should be relaxed (down).
- Arms and legs must move alternately.
- Poles should be held close to the body, but not gripped tightly.
- Longer strides than in normal walking should be taken.
- Feet should roll from the heel to the ball on each step.
- Poles swing forward, pointing diagonally backwards, and should always be planted between the front and the back foot.
- The body is pushed forward past the pole that is forward, until it makes a continuous line with the outstretched arm behind the body.

The body should move comfortably and rhythmically, with loose and relaxed arm motion that is naturally linked to the movement of the legs. There are also several technique variations depending on elements such as the tilt of the terrain, the active use of the poles, or the speed of the walker.

Nordic Walking Uphill. This is very similar to the basic technique, but it needs two simple adjustments: (1) lean the body slightly forward, and (2) take slightly longer strides.

Nordic Walking Downhill. This also resembles the basic technique, with a couple of easy modifications: (1) take shorter strides, and (2) bend the knees slightly to lower the center of gravity for better balance.

Steep Downhill. A safety technique when going down steeply is to take shorter strides, bend the knees slightly, and plant both poles at the same time.

Double Poling. This technique consists of planting both poles on the ground at the same time (parallel to each other) every two steps. It can also be done every three steps, adding some extra arm swing. This technique helps to develop muscular endurance in the arms and legs.

Nordic Jogging. In this technique, the participant jogs while performing the basic motion.

Nordic Striding. This is similar to Nordic jogging, except that the walker must use longer strides and wider arm movements.

Nordic Skating—Diagonal Pole Plant. This is also similar to Nordic jogging, but the walker takes diagonal strides. It is a very helpful technique when going up steep hills.

Nordic Skating—Simultaneous Pole Plant. This is similar to the previous technique, except that both poles are planted on the ground at the same time every two steps. This technique helps to develop muscular endurance in the arms and legs.

For examples of all of these Nordic walking techniques, readers can look at demonstrations on YouTube (http://www.youtube.com/watch?v=gZ_K6p_zUdA&feature=fvst).

Nordic Walking Equipment

The only equipment that is absolutely necessary to practice any variation of Nordic walking is a pair of poles. According to the Australian Nordic Walking Association's web site (Nordic Walking, 2010), it is not advisable to use alpine ski poles. It is better to use specific walking poles, because they are lighter (between 120 and 200 grams) and possess a higher center of gravity. They ought to be made from carbon composites, which make them lighter and stiffer and offer good shock absorption to protect the walkers' joints (figure 1).

There are two types of poles: fixed length and telescopic. Fixed length poles are the best option, as they are lighter and more efficient. They also provide a greater sense of support to the walker because they do not easily collapse, and they offer a better swing weight. In addition, poles ought to possess the following features: an ergonomic handgrip, an adjustable and supportive wrist strap (which allows correct force transmission and hand grip), a removable rubber control

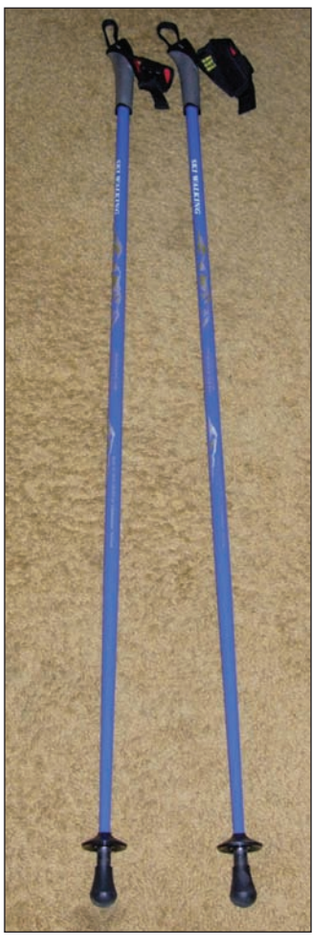

Figure 1.
Nordic Walking Poles

Figure 2.
Homemade Poles

Figure 3.
Students Using Homemade Poles

asphalt tip (which reduces floor impact and noise), correct length (i.e., it must cover the distance between the stomach and the floor, and the elbow joint must be at a 90-degree angle when the person holds the pole). Proper dress is similar to what would be used for most other physical activities (e.g., athletic shoes, shirt, pants) or for hiking.

Teaching Nordic Walking in School

The national standards for physical education established by the National Association for Sport and Physical Education (NASPE, 2004) state that a physically educated person "participates regularly in physical activity" (p. 11). All the ideas described in the previous section make Nordic walking an easy, healthy activity to be introduced in physical education at all levels as a way of achieving the standards. However, the authors have found that it is extremely important to introduce it as something fun and appealing to students. Teachers ought to promote children's active participation in class using several basic ideas:

- Practice on different surfaces (e.g., asphalt, grass, sand) and scenarios (e.g., streets, parks, trails).
- Combine all types of terrains (e.g., level, uphill, downhill) and distances (short and middle).
- Teach all Nordic walking techniques (i.e., double poling, striding, jogging).
- Conduct individual and team-relay competitions.
- Encourage students to make their own Nordic walking poles.

Regarding this last issue, the poles described in the previous section are ideal for Nordic walking. However, most primary and secondary students or schools cannot afford to buy enough of them. One solution is to help students design and create their own poles. A simple, easy idea is to make them using old broom sticks. Another possibility is to use plastic or cardboard tubes that students could find in any hardware store. Finally, old cross-country or downhill ski poles also could fit the needs of students (figure 2). The only rule is for the length of the poles to be adjusted according to students' height (see previous section for standards). Self-made and/or recycled poles often turn out good enough for the students to discover, learn, and enjoy Nordic walking (figure 3). However, if students express a wish to continue practicing in their recreational time, it is better to suggest that they purchase a set of Nordic walking poles.

Based on all the information described above, the authors designed an approach to Nordic walking in physical education that includes three stages. The first stage focuses on how to walk correctly by coordinating the movement of the arms and legs: right arm and left leg swing together and vice versa. The second stage consists of teaching students how to walk in

Figure 4.
Students Practice Nordic Walking

"Nordic walking style" using the poles: planting them into the ground to propel oneself forward (figure 4). Finally, the third stage introduces all the different Nordic walking techniques described earlier in this article. A unit plan for Nordic walking appears in table 1.

A Nordic walking lesson could begin with a warm-up, such as active walking (students walk taking long strides and actively swinging the arms). After the warm-up, students can be led in a variety of activities performed on a flat surface, such as the following:

- Walking with poles: students grab the poles by the middle part of the shaft (they never touch the ground), and practice the basic Nordic-walking motion.
- Dragging the poles: students hold the poles by the handgrip, keep their arms stretched, and practice the basic motion while dragging the poles.
- Basic Nordic walking: students perform the basic technique following the critical elements introduced by the teacher.
- Speed walking: students change speed while Nordic walking.
- Group walking: students walk in pairs or groups of three.

Assessment should be based on the essential elements of Nordic walking that students have practiced. Their progress can be measured using checklists based on the specific criteria introduced to the students during instruction. An example of this type of assessment instrument is shown in figure 5. Teachers could also have students to use this instrument during peer assessment as part of a formative assessment process.

Nordic walking in physical education not only enhances motor skills and physical fitness, it also develops coordination, balance, agility, cardiovascular endurance, and speed (Church et al., 2002). In addition, it involves the student's cognitive, affective, and social dimensions, since it is usually practiced in groups. Therefore, it can be enjoyed with friends and family, which contributes to positive social relationships.

Nordic walking can be enjoyed at any time of the year and on any type of terrain. Since it is usually practiced in natural surroundings, it also provides opportunities to teach students how to be environmentally conscious. Therefore, it contributes to a holistic education of the child.

Table 1.
Nordic Walking Unit Plan

Day	Daily Outline
1	• Walking with active use of the arms • Nordic walking basics
2	• Nordic walking uphill • Nordic walking downhill
3	• Steep downhill • Double poling (every two and every three steps)
4	• Nordic jogging • Nordic striding
5	• Nordic skating—diagonal pole plant • Nordic skating—simultaneous pole plant
6	Assessment

Figure 5. Nordic Walking Assessment Checklist

Skill to Assess	Always	Sometimes	Rarely
Arms and legs move alternatively			
Poles are held close to the body			
Longer strides are taken			
Foot rolls from the heel to the ball on each step			
Poles are planted between the front and the back foot			
Body is pushed forward past the pole that is forward			

Conclusion

One of the main goals of physical education should be to promote lifelong physical activity among students. In order to achieve this goal, school programs must include activity units that encourage children to increase their skill level and stay active all year round. Nordic walking is an activity that can help physical education teachers achieve these goals.

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