

# Maximizing Safety, Social Support, and Participation in Walking/Jogging/Running Classes

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*Exercise walking may seem as natural as breathing, but a formal course can promote lifelong participation and safety.*

Effective teaching of walking/jogging/running classes, whether at the high school or college level, presents a particular challenge to the physical education instructor in that these classes often enroll 20 to 35 individuals of varying health, fitness ability, and motivational levels. Those who teach at the college level may also encounter nontraditional-age students, who now make up nearly 39 percent of the undergraduate student population in the United States and often range from 25 to 40 years of age—though they can also be much older (U.S. Census Bureau, 2006). How can the physical education instructor meet each student's individual needs and encourage maximum participation while still providing a safe environment for diverse fitness levels? Why is it important that the physical educator do so?

Numerous surveys have documented that few Americans, young and old, engage in appropriate levels of aerobic activity. Only 65 percent of adolescents exercise vigorously, with females exercising less vigorously and less often than males. By age 19, the percentage drops to 44.1 percent for males and 32.6 percent for females (U.S. Department of Health and Human Services [USDHHS], 1996). A survey of college students shows that less than four in ten college students participate in aerobic activities that make them sweat and breathe hard for 20 minutes on three or more days of the week (Centers for Disease Control and Prevention [CDC], 1997). Only 19 percent of adults in the United States meet the American College of Sports Medicine recommendations for the improvement and maintenance of aerobic fitness (Barnes & Schoenborn, 2003). The lack of participation in aerobic exercise has been proven to have serious health consequences. For instance, 63 percent of adolescents in the United States already have two or more of five major risk factors for chronic disease (CDC, 2000).

Students who participate in walking, jogging, or running are an exception to these statistics. If the instructor can meet their students' individual needs and provide them with a safe, supportive environment (USDHHS, 1999), then the class can be an important vehicle not only for promoting cardiovascular fitness, but in fostering exercise adherence or a continued commitment to walk or run after the class ends (Patton, Corry, Gettman, & Graf, 1986). Students who are at most risk for quitting exercise are those who have low motivation and high body fat (Dishman, Ickes, & Morgan, 1980). One of the factors that enhance adherence, which the instructor can exert some influence over, is social support. An energetic, caring instructor can be a positive influence on the social environment of the class. A class in walking or running can give participants the opportunity to meet new friends and belong to a group while engaging in health-promoting behaviors. According to the diffu-

sion-of-innovation theory (Rogers, 1983), social networks are important in influencing behavior change. Characteristics of socially supportive relationships include genuine expression of caring and the provision of timely and appropriate information, feedback, and constructive criticism (Heaney & Israel, 1997). The instructor can provide these and encourage class participants to do the same for one another. Use of partner groups and partners of a similar fitness level can add social support, thereby fostering a positive environment and adherence to exercise.

### Preparing for the First Class Meeting

**High School Level.** For those who teach at the high school level, most public schools require that each student provide medical information at the beginning of the year. There are certain medical conditions such as asthma, diabetes, and congenital cardiovascular disorders that could affect physical participation in walking or jogging, especially if the asthmatic student has forgotten to take a necessary medication or the diabetic does not understand how to make adjustments in insulin or diet for exercise. Therefore it is advisable that the physical education instructor read through this medical information before the first class to note whether any students in the class have such conditions, in order to watch these students more closely for signs of a medical emergency, such as shortness of breath, dizziness, or loss of balance. The instructor should know and follow school policy if a medical emergency arises in class.

**Health Screening at the College Level.** For those who teach in a college setting, particularly at regional campuses or at a community college where students commute and often do not enroll in classes until the day they begin, use of medical health forms is helpful because such information is usually not on file or known to the instructor. These students often vary in age as well as fitness and motivation levels, and some may have serious medical conditions that warrant a physician's approval before starting a walking or jogging program. If the instructor's class composition appears to include such individuals, the use of a questionnaire developed by the American College of Sports Medicine (ACSM) and the American Heart Association (AHA) is recommended (ACSM & AHA, 1998). The ACSM-AHA form asks about history, symptoms, and risk factors to determine whether the participant is ready to exercise or should first contact a physician and get a letter of approval. If the instructor intends to demand a letter from a physician before participation, this requirement should be written in the syllabus. While this may limit participation for some, it is intended to help individuals who might need a medical intervention and to avoid a serious health situation. Often students can return to class after having taken care of their medical needs. The instructor will need to weigh the benefits and risks with the awareness that lawsuits claiming negligence or malpractice these days often look at whether the physical education instructor properly evaluated physical impairments and whether they referred participants to a physician when appropriate (ACSM 2000;

Eickhoff-Shemek & Deja, 2000).

If the instructor wants to use a shorter, less complicated questionnaire, the "Physical activity readiness questionnaire" (PAR-Q) is recommended (Canadian Society for Exercise Physiology, 1996). This questionnaire was designed in the 1970s by Canadian researchers. After being revised in 1994 and used extensively, it is recognized as a safe, pre-exercise screening for those age 15 to 69 who will engage in low-to-moderate exercise training (Nieman, 2003).

**College-Level Consent Forms.** Most colleges that offer physical activity classes also use an informed consent form to minimize the possibility of a lawsuit (ACSM, 2000). These colleges typically develop their own form for students to sign before participating. Check first with your institution to see what form they prefer. Figure 1 is a sample form that instructors can use as a model. These forms should be kept in a secure place in the event of an illness or injury. High schools normally do not use consent forms, though in our increasing litigious society, it may be a worthwhile consideration.

**Proper Shoe Selection.** Purchasing properly fitting walking or running shoes is key to preventing injuries during these activities (Hoeger & Hoeger, 2003) as well as for providing comfort. To ensure proper shoe selection, the instructor should send instructions to parents of high school students at least a week before the first class (figure 2). For college students, make this information available before they enroll



Students take turns checking one another's shoe fit at the first class meeting.

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Figure 1. Sample Hold-Harmless Form for College Physical Education Classes

ASSUMPTION OF RISK AND AGREEMENT TO HOLD HARMLESS \_\_\_\_\_ COLLEGE, IT'S EMPLOYEES, AGENTS, AND REPRESENTATIVES

I understand that the College is committed to providing a safe and secure environment and that every effort will be made to keep all facilities and equipment in good, safe, and workable condition. I also understand that I share in this responsibility. For the safe participation of myself and of my fellow students, I will call to the attention of the instructor any situation that I perceive to be a potential danger.

In consideration for my participation in this class, I agree to follow the rules and regulations established by the instructor for my safety. This includes proper dress, such as running/walking shoes. If I choose not to use such equipment, I realize that I am doing so at my own risk and that injury may occur.

I acknowledge that participation in this physical education class entails a certain amount of risk.

I hereby, on behalf of myself, my heirs, executor, administrator, and assignees, assume all risks associated with participation in this class and agree to hold \_\_\_\_\_ College/University, its employees, agents, and representatives harmless for any and all liability, actions, causes of action, debts, claims, and demands of any kind and nature which may result from or in connection with my participation in walking or running.

Print Student Name: \_\_\_\_\_

Sign Student Name: \_\_\_\_\_

Date: \_\_\_\_\_



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Walking or running with others of comparable experience or fitness creates social support that enhances motivation.

in the class. Those who teach at colleges where enrollments occur the first day of class also need to have this information available then.

## The First Class Meeting

**Creating Partner Groups.** To foster social interaction, have students introduce themselves to two different people in class and get their names, ask about the experience they have had with walking or running (no experience, some walk or run experience, walk or run regularly), and then introduce one of these individuals to the class. Try to have everyone introduced by someone else, not themselves. Assign students to groups based on their reported experience.

**Shoe-Fit Check.** Review the guidelines for checking for shoe fit in regard to length, heel, and sole fit. Each group should take turns checking each individual's shoe fit. Have them raise

their hand if they perceive a problem, so the instructor can advise. For the college class, students can also be filling out any health and consent forms during this check.

**Building Social Support and Safety.** Once the shoe check is done, have students find two people in their group who they feel have walking and running experience similar to their own. Explain that for a few class meetings, they will be partners and that they must support and encourage one another. A socially supportive environment is helpful in fostering exercise participation and adherence (Patton et al., 1986). They should also know the following warning signs to look for in themselves as well as in their partners:

- Shortness of breath or difficulty talking
- Dizziness or loss of balance
- Pain that does not disappear after a warm-up
- Nausea and other signs of illness or injury

Inform students that they are to stop exercise if any such signs appear, and one partner should stay with the afflicted student while the other notifies the instructor. Note that students do not have to stay right next to each other all the time but should be within sight and hearing (without shouting), allowing for each person to work out at their individual pace.

**Walking or Running Pace.** A common question walkers and runners ask is what pace they should start at. Help students understand that the rule is "train, do not strain." Encourage students to listen to their body and to exercise at a pace that feels comfortable. Keeping walking and running at a moderate intensity not only minimizes health risks from overworking (Payne, Hahn, & Lucas, 2007) but encourages exercise adherence better than high intensity exercise (Dishman & Buckworth, 1997). Epidemiological research has also shown that the greatest difference in the death rates of heart disease and cancer has been observed between the

Figure 2. Instructions to Parents on Proper Shoe Selection

Dear Parents/Students:

In order to prevent injuries in our class, all participants need to have proper running or walking shoes. Here are guidelines to help you purchase the correct shoe:

1. Before you leave home, be sure to wear the athletic socks you plan to run or walk in (Galloway, 1984; Payne, Hahn, & Lucas, 2007).
2. Shop mid-day or later, since feet swell up to one-half size after you have walked or run on them. This will prevent you from purchasing a shoe that is too small. Expect the walking or running shoe to be a half size larger than the dress-shoe size (Galloway, 1984; Payne et al., 2007).
3. Know your foot type (Road Runner Sports, 2006).
  - A low-arched or flat foot needs a motion-control shoe with cushioning and maximum stability.
  - A medium-arched foot needs only moderate stability and cushioning.
  - A high-arched foot needs cushioning.
4. When trying on the shoe, walk and jog in them for a good five to 10 minutes. The shoe should feel comfortable right away and not need breaking in like a dress shoe (Payne et al., 2007).
5. For length, stand balanced with both feet and have the sales person or parent determine how much room is between the longest toe and the end of the shoe. There should be half an inch (Galloway, 1984).
6. For heel fit, note whether there is any place where the heel does not fit snugly. Also note if the heel of the shoe is rubbing any bones (Payne et al., 2007).
7. For sole fit, make sure the entire foot rests on the shoe without spilling over the soles.
8. If one can afford it, buy two pairs and alternate. Also take out the inserts after exercise and let them dry before reuse.
9. Be sure to save the box and receipts in case a return is needed.
10. Street shoes and flip flops will not be permitted in class.
11. Shoes that you already have should be checked for wear. If there is compression and cracks in the mid-sole (the material between the sole and upper) or if there is more than an eighth of an inch worn, buy new shoes (Hoeger & Hoeger, 2005).

least physically active or most unfit and the next higher category, which shows that the greatest health benefits are experienced when the most sedentary individuals become moderately active (Blair et al., 1996). In response to these findings, the ACSM recommends that adults perform 30 or more minutes of activity on most days and preferably all days of the week at a moderate intensity level (ACSM, 2005). As for high school students, the 1993 International Consensus Conference on Physical Activity Guidelines for Adolescents emphasized similar guidelines, stating that youths should be physically active every day and engage in three or more 20-minute sessions of moderate-to-vigorous exercise each week (Sallis & Patrick, 1994). Thus the goal for physical education classes should be to build students up to 20 to 30 minutes of aerobic exercise at a moderate, comfortable intensity.

### The “Talk Test”

An easy way to teach students to pay attention to their intensity and how it is affecting their body is to teach the talk test. Since partners and groups of a similar fitness level have been created, explain to students that when they walk or run, they should stay at a pace at which they can comfortably talk. This “talk test,” which has recently been validated by Persinger et al. (2004), ensures that they are exercising in the lower range of exercise intensity; if they are unable to maintain a conversation, then they are exercising too hard. Create a course in

which participants can travel out and back. Have students start their watches simultaneously and walk or run at a talk pace for seven or 10 minutes, then turn back so that when they return they will have been out for 14 to 20 minutes. This is usually enough time to get the body sweating. Tell them this is a warm-up period, which literally means their body should feel warmer and be sweating when they come back. The advantage of using out-and-back courses and time is that those who are running can be free to go farther and those who are walking, though covering less distance, will still finish in close to the same time as the runners. This way, no students will get lost or feel they are finishing far behind the pack. Having students return the same way can help the instructor to observe whether there are any students who are struggling or need help. Remind students who are ahead to encourage the other students when they turn around and start meeting those who are slower. Also remind students that their partners and group assignments are flexible. If they feel faster and good on a certain day, they may want to walk faster or even run with another group in the class or even alone, though they will still be on the same course and likely in visual range of the rest of the class. If a fit student does not feel well one day and decides to walk instead of run, that student can be encouraged to join a slower group, provided the excuse is a legitimate one. If the instructor has been successful in creating a socially supportive class, then

students will support each other regardless of fitness ability or pace, which helps maintain motivation and encourages each person to improve. Using the out-and-back arrangement also allows students of many levels to interact and encourage one another until they become better at keeping an even pace.

### Monitoring Exercise Intensity

Another easy method of teaching students to learn more about their exercise intensity and how they feel is to give them the Borg Scale of Perceived Exertion (Borg, 1982). Participants are asked, “How hard do you feel the exercise to be?” They then select a descriptive rating on a 10-point scale (table 1), which uses very simple words, to describe their effort. Researchers have found that a rating of “somewhat hard or strong”— 4 on the 10-point scale—correlates to the lactate threshold level, which is the level recommended for ideal exercise intensity as perceived by both trained and untrained men and women (Robertson & Noble, 1997). This scale can be useful to the student who has difficulty taking heart rates, and it teaches participants to listen to their body. However, the scale may not be accurate for some populations, such as

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**Table 1. The Borg Scale of Perceived Exertion**

#### Light Intensity

- 0—nothing at all
- 0.5—very, very weak, just noticeable
- 1—very weak
- 2—weak (light)
- 3—moderate

#### Moderate Intensity

- 4—somewhat strong
- 5—strong (heavy)
- 6

#### Vigorous Intensity

- 7 very strong
- 8
- 9
- 10—very, very strong (almost max)

*Source: Borg (1982)*

**Table 2. Cooper’s 12-minute Walking/Running Test**

Purpose: To determine cardiorespiratory endurance during a 12-minute running or walking activity.

Equipment:

1. Measured running course, preferably a track
2. Stopwatch

Procedure: During a 12-minute period, the subject attempts to cover as much distance as possible by either running or walking.

Distance in Miles by Age in Years

Fitness Category	Gender	13-19	20-29	30-39	40-49	50-59	60+
Superior	Male	>1.87	>1.77	>1.70	>1.66	>1.59	>1.56
	Female	>1.52	>1.46	>1.40	>1.35	>1.31	>1.19
Excellent	Male	1.73–1.86	1.65–1.76	1.57–1.69	1.54–1.65	1.45–1.58	1.33–1.55
	Female	1.44–1.51	1.35–1.45	1.30–1.39	1.25–1.35	1.19–1.30	1.10–1.18
Good	Male	1.57–1.72	1.50–1.64	1.46–1.56	1.40–1.53	1.31–1.44	1.21–1.32
	Female	1.30–1.43	1.23–1.34	1.19–1.29	1.12–1.24	.06–1.18	.99–1.09
Fair	Male	1.38–1.56	1.32–1.49	1.31–1.45	1.25–1.39	1.17–1.30	1.03–1.20
	Female	1.19–1.29	1.12–1.22	1.06–1.18	.99–1.11	.94–1.05	.87–.98
Poor	Male	1.30–1.37	1.22–1.31	1.18–1.30	1.14–1.24	1.03–1.16	.87–1.02
	Female	1.00–1.18	.96–1.11	.95–1.05	.88–.98	.84–.93	.78–.86
Very Poor	Male	<1.30	<1.22	<1.18	<1.14	<1.03	<.87
	Female	<1.0	<.96	<.94	<.88	<.84	<.78

*Source: Cooper (1968)*

## Taking Charge of Vocal Health

Vocal health is a serious issue that is too often ignored. If a teacher believes that his or her voice is being compromised due to overuse, then preventive steps must be taken immediately. Voice amplification devices allow the teacher to speak at a normal volume and the pedagogical tips noted earlier can reduce or even eliminate the need for voice projection. Teachers who believe that they have already sustained damage to their vocal folds should consult a physician and consider seeing a speech language pathologist to minimize further trauma. If at all possible, however, teachers should not let a vocal condition deteriorate to that point. The phrase “an ounce of prevention is worth a pound of cure” resonates especially true in the world of voice projection and vocal health.

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the elderly, obese, or those exercising at very low workloads (Mahon, Stolen, & Gay, 2001).

Other methods of monitoring exercise intensity, such as calculating target heart-rate zones, are not recommended for physical education classes, but for those who are training and conditioning for competition (Gilbert, 2005). The drawback to calculating target heart-rate zones is the difficulty in finding an accurate formula to predict maximum heart rate. There are many new proposed formulas, but finding one to fit the entire class is also problematic and confusing if different formulas are needed for different class members. Thus, heart rate is best used along with the talk test or Borg scale to familiarize students with what their rates are during comfortable, moderate exercise.

## Assessing Fitness Level

Various field tests exist to assess fitness levels, but many, such as the mile walk or 1.5-mile run, depend on how fast one can go for a certain distance, leaving unfit students to finish last or feel left behind. This can be discouraging to these students. Thus the test recommended to help the instructor get a better assessment of each student's cardiovascular fitness is Cooper's (1968) 12-minute walking/running test (table 2). Doing this test on a track makes it easier to measure how far (in miles) one has traveled in 12 minutes. It is best done after four to six weeks of training, so that some fitness has been achieved (Nieman, 2003). Teachers should know their students well enough to determine whether they will be motivated to work harder if they score in a low-fitness category or discouraged and cease to enjoy the class if they find they are still unfit. In the latter case, including a fitness assessment may be counterproductive.

If the instructor determines that assessment can be a motivational tool, the following guidelines will help to maximize support and ensure safety.

Divide the class into two groups. One group will perform the test first while the other group cheers and encourages this first group and helps the instructor watch for any signs of physical distress. Then the groups will switch places. This test categorizes fitness levels according to age and gender, so it is ideal for classes that have diverse age groups as well as a mixture of males and females. Try to assign walkers and unfit students in one group and runners and highly fit students in the other group.

## The Log Book

The exercise log book is a very important tool for both the student and the instructor. Students can make their own or purchase one, or the instructor can make a simple handout that includes the following: (1) a line for the date, (2) a line for the time spent doing exercise, (3) a line to describe the weather and course conditions, and (4) a line indicating whether the person felt any pain or discomfort, or suffered

any illness. Keeping an exercise log helps the student and the instructor to design workouts that meet the individual needs of each student and teaches students to monitor themselves for early signs of over-training so that adjustments can be made before problems occur.

## Summary

Despite large class numbers and differences in fitness levels, health status, and even age, physical educators can effectively meet the individual needs of all students. They can also provide a safe environment by knowing each student's health status and by educating them on proper shoe selection, on how to identify exercise warning signs, how to exercise at a comfortable pace, and on proper warm-up and cool-down techniques. The use of partners and partner groups builds social support and fosters positive relationships. Out-and-back workouts by time allow the individuals to pace themselves and also build social support because students start and finish close together. Fitness assessments using Cooper's 12-minute walking/running test allow the instructor to view all students and for students to encourage one another. Since students start and finish together, no student is left behind or alone. Log checks and the use of partners further maximize safety and help the instructor to encourage maximum participation while building social support, which may lead to future adherence.

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