

# HEALTH HINTS



Cancer Prevention & Research Institute of Texas

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## Pedometers, Heart Rate Monitors...Motivational Tools

Outfitting yourself for health

With the holidays just around the corner, many of you may already be thinking about gift-giving ideas...as well as how to keep the costs to a minimum. Others of you may be thinking about how to avoid gaining unwanted weight during the holidays and the dreaded New Years resolutions—"exercise more, eat less," which seem impossible to keep.

A simple gadget (or two) may be the perfect solution to these dilemmas. Research is showing the simple pedometer—a small, inexpensive device which counts your steps—to be an excellent motivational tool for physical activity and the health benefits of physical activity are well established.

**"Modest, regular physical activity substantially reduces the risk of dying of coronary artery disease (the nation's leading cause of death) and decreases the risk of colon cancer, diabetes, and high blood pressure. Physical activity also helps to control weight; contributes to healthy bones, muscles, and joints; helps to relieve the pain of arthritis; and reduces symptoms of anxiety and depression."**

Pedometers are easy to use and can be used by almost anyone—children, young adults, older adults, even people with disabilities.<sup>2</sup> And, for the person who "has everything," there are even pedometers that use GPS (Global Positioning Service) satellite tracking to calculate steps taken, as well as distance, and other features. ... some pedometer models will even connect to your computer to upload data from your exercise workout.

In this issue of HealthHints, we'll look at the benefits of using a pedometer to motivate walking, as well as how to choose a pedometer. We'll also spend some time looking at another tool—a heart rate monitor and the benefits it offers for physical activity. A few other physical activity wares will also be discussed, including some to avoid purchasing.

While you're thinking of others, consider adding a pedometer or other physical activity motivating gadget to your own wish-list as well. The motivational and health benefits may surpass your expectations.

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# Why Walking?

Physically active for a lifetime

**W**alking is one of the easiest, safest, most cost-effective forms of exercise. Walking can be accomplished downtown on your lunch hour or on a trail in the woods. It can be done on vacation and business trips—outdoors or indoors. It can be done individually, with a partner, or in groups. Walking can be done by the beginner—just starting to exercise for the first time—and can be done for a lifetime with little risk of strain or injury. All you need is a good pair of shoes (see “Sole Facts” at [http://walkacrosstexas.tamu.edu/pdf/health\\_breaks/sole\\_facts\\_handout.pdf](http://walkacrosstexas.tamu.edu/pdf/health_breaks/sole_facts_handout.pdf)) and a bottle of water...and perhaps, a pedometer.

## Here's something to think about in regards to walking...

According to the Centers for Disease Control<sup>3</sup>, 29% of American adults are not physically active at all and 50% are not active enough to achieve health benefits.

## Here's what it costs...

- Direct and indirect costs of sedentary living are \$150 billion.<sup>3</sup>
- Estimated direct costs of obesity and inactivity together account for approximately 9.4% of U.S. health care expenditures.<sup>3</sup>
- The medical care costs for people with chronic diseases account for more than 70% of the nation's total medical care costs.<sup>4</sup>

## Now, think about this...

**“If 10% of adults began a regular walking program, \$5.6 billion in heart disease costs [alone] could be saved.”<sup>5</sup>**

In 1996, and continuing to be recommended today, the U.S. Surgeon General endorsed public health recommendations that individuals **minimally** strive to **accumulate** 30 minutes or more of moderate intensity activity (like **brisk walking**) on most, if not **all**, days of the week<sup>3</sup> (emphasis added).

Take just a minute to look at and think about the public health recommendations above with me. I added emphasis in a few places so that we could see some important points.

First, 30 minutes a day is the “minimum” we should be striving for...that word jumps out at me and finds me saying “Wow, *minimum*, that means I should probably be doing even more physical activity than that—and I can't even seem to get a sink full of dishes done today or a paragraph written in the current newsletter I'm responsible for at work.” In all seriousness though, how can we possibly accomplish the minimum, let alone be at peak performance?

Okay, now look at the next word highlighted—“accumulate.” Ah, there is a reprieve. Guess what, that 30 minutes doesn't have to happen all at once! You can take the stairs at work, instead of the elevator—and that counts; you can park in the furthest parking spot at the store and get some walking in—and that counts; you can walk 15–20 minutes of your lunch hour and still have time to eat—and that counts. The point is you don't have to “have” 30 or more minutes all at once. Oops, here's a glitch, “How can I keep track of all these little bouts of exercise when I still don't even have time to do that sink full of dishes?” We'll talk about that in a minute.

Look at the next set of words—“brisk walking.” Walking is a suggestion of the U.S. Surgeon General. Be aware, however, that the word “brisk” precedes the word “walking.” That means we have to get moving—taking my 2-year-old for a walk with him on foot probably won't help me achieve health benefits, but put that same child in a stroller and head out at a quickened pace and I'm on my way to better health. This is what is meant by “moderate intensity” in the recommendation...we have to pick up the pace a bit to get our heart rate going (we'll discuss heart rate a little later, too). “All steps count,

whether up a mountain or around town.<sup>6</sup> Try to make your steps brisk enough to boost your heart rate (we'll talk about this later) and to walk for 10 minutes or more at time when possible.<sup>6</sup>

Finally, I came to the word "all." "Okay, I think to myself, that's impossible! I barely go out for regular exercise 2–3 days a week, but *most*, or *all* days of the week? — that's out of the question — or, is it?" Let's talk about how pedometers can motivate you to achieve better health.

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## Pedometers

How they work, how they wear, how they can help

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**A**s we said earlier, a pedometer is a small, simple, inexpensive device that counts your steps. In fact, you can purchase a basic pedometer for less than \$10.<sup>7</sup> They are also very small devices, which can be worn throughout the day without being obtrusive. In fact, considering all the beepers and cell phones I've seen hanging from people's waistbands, a pedometer might go completely unnoticed, even if you're dressed for a business meeting. You might motivate others in your workplace to start walking with a pedometer.

Most pedometers today are electronic. A pedometer has an internal, horizontal spring-suspended lever arm (pendulum) that moves up and down with normal walking movements. With each movement, an electrical circuit closes and a "step" or electrical event is recorded.<sup>8,9</sup> Thus, when the foot hits the ground, it produces an impulse that transfers to the pedometer case.<sup>8</sup>

You can wear a pedometer in a variety of places (some sites, however, are more reliable than others) (see the section entitled "I Don't Want to Walk" in this issue of HealthHints). Recommendations for the most accurate readings are usually to wear the pedometer clipped to the waistband or belt, over the center of the leg (above the midline of the thigh); and, for standardized purposes, it is suggested that you always wear the pedometer over your dominant foot (i.e., typically the right foot for those who are right-handed and the left foot for those who are left handed).<sup>6,8</sup>

It is important that the pedometer remain snug to keep it from bouncing around and recording non-step movements, some experts even suggest adding an extra safety "leash" or string fastened to the pedometer's waist clip and pinned to or looped through a belt loop to keep it in place and prevent it from falling off or going down a toilet.<sup>10</sup> The pedometer needs to be worn as close to the hip bone as possible for the most accurate results.<sup>7</sup> It must also remain vertical for accurate readings. If the stomach protrudes and causes the pedometer to angle, it is best to wear the pedometer slightly below the waist.<sup>6</sup>

### Want to buy a pedometer?

See the handout in this issue of HealthHints entitled "A Consumer's Guide to Buying a Pedometer."



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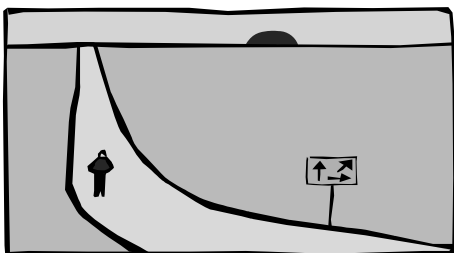
# The Mechanics of Motivation

How a pedometer works to motivate physical activity

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A pedometer has the potential to “increase awareness and amount of physical activity.”<sup>11</sup> How can such a simple, light-weight, unobtrusive device motivate? A pedometer can work as a motivator because it acts as a ~

- **Tracking device** – A pedometer continuously collects current activity (steps taken and other variables it is set to collect).<sup>3</sup>
- **Feedback tool** – A pedometer gives immediate feedback (information) about how many steps have been taken that day (and sometimes other variables are calculated depending on the pedometer model and settings).<sup>3</sup> “This feedback can increase self-efficacy (personal confidence) and may increase motivation to achieve a certain number of steps per day.”<sup>2</sup>
- **Coaching and self-monitoring tool** – A pedometer can also be used as a coaching and self-monitoring tool to help people set goals.<sup>2</sup> In addition to self-monitoring, a process of progressive goal-setting, reflection, and refinement can be a helpful strategy to put into place to help incrementally increase and sustain habitual physical activity.<sup>3</sup>
- **Behavioral modification tool** – A pedometer paired with a log book or other record-keeping diary<sup>3</sup> can also act as a behavioral modification tool by allowing a person to document change and recognize progress in their activity levels.<sup>2</sup>
- **Environmental cue** – A pedometer acts as an environmental cue or reminder to be active.<sup>3</sup>



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## How Many Steps to Health?

How do I know if I’m walking enough?

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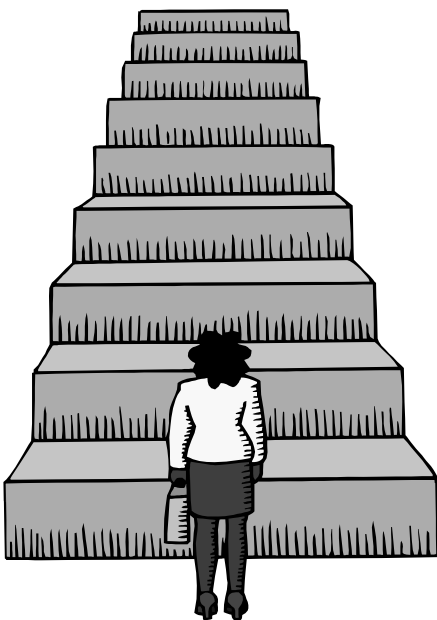
So, we know that “public health recommendations suggest that everyone should accumulate 30–60 minutes or more of moderate physical activity, such as brisk walking, on a daily basis.”<sup>12</sup> But how do we know if we are walking enough? Of course, one way is to plan structured 30–60 minute walks; the focus being on getting these walks in on most, if not all, days of the week. We also know, however, that there are health benefits to accumulated bouts of activity, so a more flexible approach is to accrue walking throughout the day. “The most effective way of ensuring adequate activity following this recommendation is to monitor your daily behavior using a pedometer.”<sup>12</sup>

But, how many steps should we be taking to gain health benefits? “We are now becoming acquainted with how many steps different groups of people typically take.”<sup>12</sup>

- Children typically take 10,500–16,000 steps per day (lower for girls than boys).
- Healthy younger adults take about 7,000–13,000 steps per day (lower for women than men).
- Healthy older adults typically take 6,000–8,500 steps per day.
- Persons living with chronic illnesses or with disabilities typically take 3,500–5,500 steps per day.<sup>3</sup>

Are these number of steps sufficient for positive health outcomes? The number of steps we expect any group to typically accumulate in a day should not be misinterpreted as recommendations for appropriate activity levels.<sup>3</sup> In fact, for the most part, experts believe accumulated steps per day should be higher for optimal health.

You may have seen media campaigns promoting a universal 10,000 steps per day goal. While 10,000 steps is an excellent goal for healthy adults, it is too low for children and too high for sedentary individuals or those with chronic disease or disability who take between 3,500-5,500 steps per day—setting up a high risk situation for failure and attrition among these groups.<sup>3</sup> The 10,000 steps/day challenge actually originated from a Japanese marketing phrase “manpo-kei,” which means 10,000 step meters, and was meant as a simple way to get people moving. Taking 10,000 steps per day equals about 5 miles (2,000 steps per mile). Many Americans today take only 3,200–5,000 steps/day.<sup>13</sup> Thus, rather than establishing one universal goal for everyone, try setting short term goals to increase your number of steps each day or week...with the idea to ultimately reach a long term goal, such as 10,000-15,000 steps/day.



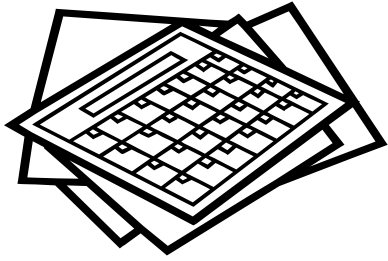
## Setting Goals

### Making your goals attainable and sustainable

A good way to make a step goal for your self is to establish your personal baseline, then try to set goals to progressively increase your number of steps. This process will give you a target that you can attain, sustain, and ultimately build upon.

To establish a baseline, you need to find out how many steps you currently take. Depending on your walking speed, most people take about 1,000 steps in 10 minutes. To personalize this, purchase a pedometer and walk for 10 minutes while wearing it. Look at the number of steps recorded and multiply that number by 3 to determine how many steps you take in 30 minutes, or multiply by 6 to determine how many steps you take in 60 minutes. Knowing these numbers of steps can help you determine how much you might want to increase your daily walking.<sup>12</sup>

Another way to establish your baseline is to wear your pedometer for a full week without altering your usual activity. This is important so that you can get a real baseline that you can later work on increasing. During this week, wear your pedometer from the moment you wake until you go to bed (except when immersed in water). At night, remove the pedometer and record the number of steps you've taken in a log book or notebook. Take special note of what you do differently on days when your steps per day are highest and lowest. For example, days when you go shopping, take your child to the park, or participate in a museum tour are higher than those when you stay at home, have long meetings, or travel long distances by car. This information will be useful when trying to work extra steps into your daily routine. Note, also, if you did any formal exercise, for example a 20-minute treadmill walk.<sup>12,14</sup>



Once you have your steps per day baseline for the week, set a goal to try to boost your average daily steps by 20%. To do this ~

- Add the total steps taken in one week
- Divide the total by seven
- Multiply that number by 1.2, which will give you your new target/goal for daily steps.<sup>14</sup>

Here's an example,

Jen averaged 21,000 steps/week.

Dividing by 7, she found she walks an average of 3,000 steps/day. Multiplying 3,000 times 1.2, Jen knows she needs to work toward walking 3,600 steps/day in week two to reach her goal. Once Jen is comfortable with her new goal, she can boost it by 20% again. If, 20% is too much, she can try a 10% boost (multiplying the average daily steps by 1.1 instead of 1.2).

For some people, they find that in just 3 weeks, 10,000 steps is actually attainable or even surpassed by boosting their daily steps by 20% per week. Others may find it takes several more weeks of boosting by 10–20% to reach their long-term goals and create a habit of taking more steps-per-day.<sup>14</sup>

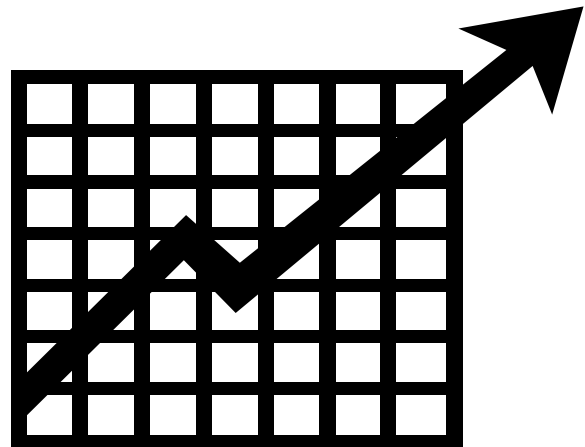
Your ultimate long-term step goals and the way you choose to reach them is up to you. Here are a few suggestions that may help work more steps into your day:

- take the stairs instead of the elevator
- pace back and forth while waiting on the bus or subway
- get off the train or bus a stop early and walk the rest of the way to your destination
- walk at lunch
- ask colleagues to meet and walk, rather than sit in the board room
- take your dog for a walk
- park in the furthest spot at the shopping center or grocery store and walk

- establish a family walk after dinner to discuss the day or while working on math drills with your kids
- get social support—invest in a pedometer for your spouse, kids, and/or friends or show them yours to get them interested; work toward your goals together; call a friend to go walking or to ask them how their walk is going
- get a new view, take the steps to the top of the bleachers at your next sporting event
- keep a record/log book to increase your motivation—it makes you more accountable, builds awareness, and helps track your progress over time.<sup>12,14,15</sup>

Though some of these ideas may seem to produce relatively few steps, the more you practice these behaviors the more steps will add up.<sup>12</sup> You will soon find that you won't need your pedometer to tell you how you're doing. For example, you will know that if you get off the train a stop early and walk at lunch you can meet your goal. At that point you may want to just use your pedometer when you need a step check or to keep you motivated to do more by being able to log your steps per day.<sup>14</sup>

For more goal-setting ideas, see the box entitled "SMART Goal-Setting" later in this issue of HealthHints.



## Long Term Goals: What the experts say

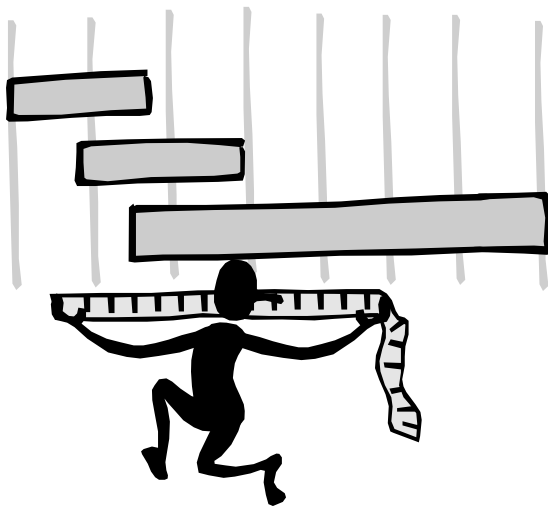
When trying to establish long-term goals, consider this...

- The 2001–2002 President’s Challenge Physical Activity and Fitness Award Program recommends children accumulate 11,000 steps/day at least 5 days a week for a standard healthy base.<sup>3</sup>
- One study reported individuals who take >9,000 steps/day are more frequently classified as normal weight; those who take <5,000 steps/day are more frequently classified as obese.<sup>3</sup>
- Some experts suggest that at least 15,000 steps/day are necessary to achieve weight loss goals.<sup>3</sup>

Others provide the following step/day guidelines:

- For long-term health and reduced chronic disease: 10,000 steps/day
- For successful, sustained weight loss: 12,000–15,000 steps/day
- To build aerobic fitness: make 3,000 or more of your steps/day fast.<sup>14</sup>

Though more research is needed to confirm these findings and guidelines, knowing this information may give you motivation and a place to start in setting your own long-term goals to achieve.



## I Don't Want to Walk

Pedometers and other forms of physical activity

Obviously, a pedometer won't work if your sport of choice is swimming, since you can't immerse a pedometer in water, but what about other forms of physical activity? Pedometers work for running. Keep in mind that a pedometer does not measure intensity, but steps are counted just the same.<sup>16</sup> Cycling is another possibility. Though some say it doesn't work for cycling because the pedometer can't register impact from the foot,<sup>7</sup> others recommend that if attaching the pedometer to the hip doesn't count your pedaling, attaching the pedometer to your shoe will.<sup>14</sup> Wearing the pedometer on the shoe is also an option for people who find that it doesn't record steps consistently when worn on the waistband, perhaps because of a high waist.<sup>14</sup>

Our recommendation would be to try the pedometer with other activities and see how accurate it is at counting your movements, then adjust the numbers as needed to represent your true amount of movement or number of steps. For example, if you want to play tennis, basketball, or soccer, put the pedometer on at the hip and play a short while counting your actual steps; then look at the pedometer to see if it recorded the steps or movements that you counted. Try this several times to see if it is accurate, underestimating, or overestimating. Then adjust the numbers accordingly—if the pedometer seems to underestimate by about 10%, add steps to your log book; if it overestimates, subtract steps. If it is within 2–5%, it is probably fairly accurate as many pedometers will be off by 2–5% even when counting steps when walking. If the pedometer does not register movements for your chosen activity, try placing it on the shoe to see if this makes a difference.

Though the pedometer may not be completely accurate with activities other than walking and running, you may still be able to record enough information to know whether or not you are increasing your activity level. Another option would be to use a heart rate monitor to record the intensity of your activities.

# Heart Rate Monitors

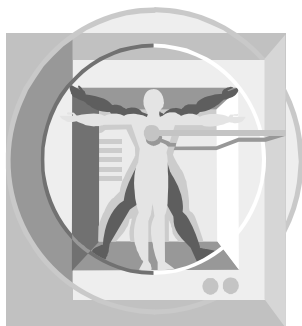
## Identifying your intensity

If you want to measure the intensity of your physical activity—that is, how hard you’re working (e.g., how briskly you’re walking)—you might want to purchase a heart rate monitor. In 1996, the Surgeon General’s recommendation (noted earlier) endorsed being physically active at “moderate intensity.” So, in addition to knowing the number of steps we’re taking, it would also be helpful, and motivating, to know how hard we’re working when we’re physically active.

We could just take our heart rate the old fashioned way, stopping activity momentarily to take the pulse and count for 10 seconds, multiply this by 6 to get our beats-per-minute. The problem with this method is that we must stop our activity to do it. Using a heart rate monitor allows you to see if you are within your target heart rate (training) zone **while** you are being physically active (see box entitled “Want to know your target heart rate?”).

A heart rate monitor is one gadget that can help walkers “improve their fitness and meet their weightloss goals.<sup>17</sup>” You can also use the same monitor in a variety of activities—indoors or out, such as, walking, running, cycling, skating, using a treadmill, stairstepper, exercycle, ski-exerciser, rower, etc. Many models are even waterproof for swimming, but not diving.<sup>17</sup>

For the price of a pair of shoes, a heart rate monitor can act as your personal trainer, telling you when to speed up or slow down and nagging you to get onto the trail or track, since a new gadget or toy usually acts as incentive telling you to get out and use it to get your money’s worth.<sup>17</sup>



## Monitoring & Measuring Your Steps: Pedometer Distance & Calorie Features

Many pedometers will have features that presumably measure your distance traveled as well as calories burned (energy expenditure), in addition to steps taken. Though these features may be appealing and even motivating, one caution is that distance features will require individuals to enter stride or step length, which depend partly on body shape, size, and walking speed. Thus, people with a smaller stride will not cover the same distance as those with a larger stride, even when an equal number of steps is taken. Estimating calories requires the entry of stride length as well as other variables (e.g., gender, age, weight, etc.) to give you an estimated value. Since both distance traveled and calories burned are estimated values, they are associated with greater error than the number of steps recorded by the pedometer;<sup>2</sup> steps recorded have been found to be accurate to within 5% for most pedometers studied.<sup>3</sup>

Still, setting your pedometer to monitor distance and calories burned can be motivating. To be more accurate, you might record your distance by following the route by car and calculating using your odometer. You could also walk other known distances, such as around a track (usually 1 quarter of a mile per lap). To estimate calories burned you could also use a calorie chart such as the one below adapted from Lippincott, Williams, and Wilkins *Essentials of Exercise Physiology*.<sup>18</sup>

Type of Exercise	Calories Burned* in 30 min/exercise
Walking at normal pace	181
Running 11 min. 30 sec/mile	305
Cycling at 5.5 mph	145
Elliptical Exercisers	305
Golfing	192
Cross-country skiing	269
Racquetball	402
Gardening (digging, hedging, mowing, raking)	208

\*Calories burned is based on a 166-pound adult, regardless of gender.

A heart rate monitor usually consists of two parts:

- 1 A monitor strap that is worn around the chest.<sup>19</sup> A heart rate monitor with a chest strap worn snugly around the chest just below the breast is considered the most accurate device for monitoring target heart rate. This wireless transmitter strap has the same accuracy as an electrocardiograph (ECG).<sup>17</sup> Although there are products, known as pulse monitors, that are made without the chest strap, heart rate monitors with the chest strap are considered more accurate.<sup>20</sup>
- 2 A heart-rate signal device that looks like a digital wristwatch. The wrist signal device displays your heart rate at the moment in beats per minute.<sup>19</sup>

Heart rate monitors may also offer additional, helpful features. Since heart rate monitors cost significantly more than pedometers (typically \$75+), you'll want to purchase a heart rate monitor with only the features you need.<sup>19</sup>

Here is a list of features you might want to consider (walking expert Mark Fenton highly recommends the first two features, while considering the others more optional):

- 1 Stopwatch feature – convenient for knowing your exercise time and heart rate on one device.
- 2 Target heart rate alarm – allows you to set your training zone (upper and lower limits of your target heart rate) and gives an audible signal when you go out of your zone/range.
- 3 Accumulated time in and out of range – tracks how much time you spend in your target range.
- 4 Memory – recalls your workout time and accumulated time in range, and/or plays back minute-by-minute measures such as heart rate climbed during speedy intervals and dropped as you eased up to recover.
- 5 Recovery rate – allows you to view your heart rate two minutes after ending a planned workout, to see how fast your heart rate recovers—an indication of fitness level, which you can use to track improvement.

### **Want to know your target heart rate? Here's how...**

Subtract your age from 220 to find your maximum heart rate. Take 60% of that by multiplying your maximum rate by 0.6. Also multiply your maximum heart rate by 0.8 (80%). Between these two numbers, 60% and 80% of your maximum heart rate, is your training zone (i.e., moderate intensity). Your heart rate while you are being physically active should fall between those two numbers most of the time.

For example, if you are 40 years old, the calculation for your target heart rate would be as follows:

$$220-40=180$$

$$180 \times 0.6 = 108$$

$$180 \times 0.8 = 144$$

Your target heart rate (i.e., your training zone—the level at which you want to keep your heart rate) should be primarily kept between 108 to 144 beats per minute. Your maximum heart rate is 180.

### **Remember that your maximum heart rate is the upper limit of what your cardiovascular system can handle....**

Low intensity activity may be achieved and sustained at 40–60% of your maximum rate, while more vigorous activity occurs when achieving and sustaining 80–85% of your maximum heart rate.<sup>21,22</sup>

You can also go to the Mayo Clinic's "Target Heart Rate Calculator" at <http://www.mayoclinic.com/invoke.cfm?objectid=A2A6A209-EAAF-4B18-AEF17503DC91698C> to have your target heart rate calculated.

- 6 Backlight – allows you to see your heart rate display better if you tend to exercise at dawn, dusk, or night.
- 7 Download to computer – interface cables and software allows you to download detailed playback of your workout measures to your computer for a digital training log.<sup>17,19</sup>

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## Fitness Fallacies & Cautions

Dispelling the myths

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**P**edometers calculate numbers of steps, while heart rate monitors let us know about our activity intensity level. Wouldn't a heart rate monitor be more important, since "vigorous aerobic exercise is all that matters?"...NOT TRUE.

A goal to increase the amount you are being physically active, even at a moderate intensity in 10–15 minute bouts, is going to provide health benefits. If you want to train for cardiovascular health/fitness with the use of a heart rate monitor—that's great. If you want to set a goal to increase your number of steps per day with the

use of a pedometer—that's an equally terrific goal! It is up to you. Take a few moments to think about your life and how physical activity can realistically best fit into it. Use the SMART goal-setting ideas below to guide you as you strive to gain or maintain health through increased physical activity, whether increased numbers of steps, cardiovascular training within your target heart rate, or both.

A word or two of caution...

Have you ever heard the phrase "no pain, no gain?" Again, this is NOT TRUE. A little muscle soreness when you do something new isn't unusual with physical activity, but "soreness doesn't equal pain.<sup>23</sup>" You don't need to make your muscles burn to know you're working them. "If it hurts, stop doing it."<sup>23</sup>

Also, if you are just beginning an exercise program and are 40 years or older, have been particularly sedentary in the past, have a chronic health condition (such as hypertension, diabetes, or a heart condition), have bone or joint pain, or are left breathless with activities of mild exertion, see your doctor first. You and your doctor can develop an exercise program that is safe and beneficial for you.<sup>24</sup>

## SMART Goal-Setting

(Adapted from the Alberta Centre for Active Living, Gesell, J., Stepping out: Tips for walkers. In WellSpring, 2003<sup>25</sup>)

***"Being motivated to make positive changes in your life is the first step toward a healthy lifestyle. People who set goals are much more likely to achieve them."<sup>25</sup>***

A SMART activity plan includes setting goals that are:

**Specific** – including enough detail to guide exactly where and when you will be active (e.g., "I will walk the dog for 30 minutes after work five times a week for two weeks.")

**Measurable** – measuring your activity gives you tangible evidence of your progress. Decide how you will measure your activity—number of steps or amount of time spent in activity?

**Attainable** – Maximize your chances for success by examining your strengths and weaknesses and using this information when setting goals.

**Realistic** – Start small and include only what you can do. Plan a few things, rather than many. As you attain smaller or short-term goals you are working toward attaining larger or long-term goals.

**Timely** – Note when you plan to work at your goal and how long it will take to achieve it.

Use a logbook or calendar (another great gift idea) to record your physical activity. "Logbooks are invaluable accountability tools."<sup>25</sup>

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## Dos & Don'ts

### Product recommendations and cautions

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**R**eady to head out for a good walk...or run or bicycle, or...

#### Dos

A few other important items you'll need are a good pair of shoes, socks, and a water bottle. These can also be great gift purchases.

For shoes, you will want to make sure the wearer tries them on first. Follow our guide for getting the right shoes in "Sole Facts" at [http://walkacrosstexas.tamu.edu/pdf/health\\_breaks/sole\\_facts\\_handout.pdf](http://walkacrosstexas.tamu.edu/pdf/health_breaks/sole_facts_handout.pdf), or see "Picking the Right Shoe" at <http://www.pbs.org/americaswalking/gear/gearpicking.html>, or "Athletic Shoes: Choosing the Right Footwear" at <http://www.cnn.com/HEALTH/library/HQ/00885.html>. A gift certificate to the shoe store might be a welcome gift.

The right socks are important, too. Sweat, pressure, and shear force can lead to blisters. The right socks can defend against blisters. Choose socks that wick/pull moisture away from the skin. A typical cotton or tube sock is not the best choice for physically active feet. Many "wicking" socks (made of CoolMax, polypropylene, or other wicking fabrics) are specifically designed for walking, jogging, or light hiking. Also, make sure socks fit right and don't bunch up inside the shoe where they can cause friction.<sup>26,27</sup>

And, of course, staying hydrated is always important. Invest in a water bottle or two (tie a bow around a colorfully designed water bottle for an inexpensive gift for someone else as well). Remember, as we go into the winter months that although you may not feel the need to drink as much water as during the summer, it is still essential. Try to drink a pint of water about 15 minutes before you start exercising, and at least a pint after you cool down. Take water with you for physical activity that will last 20–30 minutes or longer.<sup>28</sup>

#### Don'ts

Some items you can do without are hand weights, weighted shoes, and fat-burning supplements.

We have all seen individuals walking with hand weights, trying to tone and burn more calories. Experts agree, however, that walking with hand weights puts you at increased risk for strain, stress, and injury to the muscles and bones. If you want to burn more calories just walk a little longer, a little further, take a few more steps. If you want to tone, it is fine to use hand weights (as well as other weights or tension bands for strength and flexibility training), just don't use them while you're walking.<sup>29</sup>

For the same reason, weighted shoes or ankle weights are not recommended. These put you at increased risk for stress, strain, and injury.

You will also want to avoid buying into touted "fat-burning" supplements. Multitudes of dietary supplements are claiming fat-burning properties. Remember, if the advertisements sound too good to be true, they probably are. If these products truly worked, they would be heavily researched and sold by a major drug company.<sup>30</sup> Stick with a healthy diet and increased, regular physical activity for a successful plan for burning fat and shaping up.

#### Still can't get motivated to start being more physically active?

Read "Why should I exercise?" in the American Medical Association's "Fitness Basics" publication at [http://www.medem.com/MedLB/article\\_detaillb.cfm?article\\_ID=ZZZML5ED9CC&sub\\_cat=376](http://www.medem.com/MedLB/article_detaillb.cfm?article_ID=ZZZML5ED9CC&sub_cat=376).



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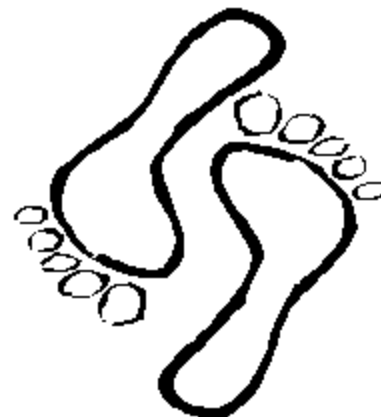


*Improving Lives. Improving Texas.*

## A Consumer's Guide to Buying a Pedometer

### Where Can I Buy a Pedometer?

Pedometers can be found in many sporting goods stores. You can also buy them directly from the manufacturer.<sup>1</sup> As pedometers become more popular in your area, you may find them in other local multi-purpose stores as well—check the sporting goods departments. Additionally, many health and physical activity promotion programs give pedometers as prizes, rewards, or motivators.



### What Should I Look for in the Features of a Pedometer?

#### Accuracy

The most important consideration when buying a pedometer is accuracy. You want a pedometer that counts your steps as accurately as possible. The simplest pedometer that accurately counts steps is the only truly essential feature in a pedometer.<sup>2</sup>

#### Comfort

Second to accuracy, you will want to consider comfort. If you only plan to wear the pedometer during scheduled physical activity, comfort will not be as important; but, if you plan to wear the pedometer all day, comfort will be an essential component.<sup>3</sup>

#### Other Features

Choosing other features is dependent on your personal preferences. You might want to choose other features if they help to motivate you or keep your interest in continued physical activities. Just remember that features such as calories burned and distances covered are estimates (based on individual factors input into the device), and therefore have a larger margin of error than steps counted.

### Which Pedometers are Recommended?

When looking at consumer ratings of pedometers, you will often read about a make and model that is accurate and has the features you want, only to find when you go to purchase that pedometer it is no longer available and has been replaced by a newer model. First, note that researchers have reported that no pedometer (of those studied) exceeded 5% error (i.e., 5 steps out of 100).<sup>4</sup> You can probably expect similar error when validating the accuracy of your own pedometer.<sup>4</sup> So, try it out and if you find it more than 5% inaccurate, return it and try another make or model. (Note that most pedometers studied have been shown to be more accurate if you walk about 3.5 mph rather than more slowly at 2.5 mph.<sup>5</sup>)



## Where Do I Begin?

To give you a starting place as a consumer, current ratings seem to consider the following brands (particular models in parentheses) to produce consistently accurate pedometers:

- Omron (Omron HJ-112),
- New-Lifestyles (NL-2000),
- Sportline (Sportline 330, 343, & 345), and
- Yamax Digi-Walker (SW-200 and SW-701).<sup>4,5,6,7</sup>



Also, making the *Consumer Reports* “quick picks” list for a good combination of accuracy, ease of use, and value were the

- Omron HJ-112,
- Freestyle Tracer, and
- LifeWise 63-619.<sup>5</sup>

Other pedometers worth noting for accuracy in the ratings are the

- Kenz Lifecorder, and
- Walk4Life LS 2525.<sup>6,8</sup>

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