

quotes—or completely spare. It should be comfortable and, if possible, free of distractions.

Meditation has many rewards, but it doesn't come effortlessly for everyone. Pascal wouldn't have contended, "All of humanity's problems stem from man's inability to sit quietly in a room alone," if sitting quietly alone were easy. For a boost or encouragement, consider taking a class on meditation, visiting a meditation Web site, or buying a how-to CD or book.

## Happiness Activity No. 12: Taking Care of Your Body (Physical Activity)

An impressive study of physical activity was published in the *Archives of Internal Medicine* in 1999.<sup>38</sup> The researchers recruited men and women fifty years old and over, all of them suffering from clinical depression, and divided them randomly into three groups. The first group was assigned to four months of aerobic exercise, the second group to four months of antidepressant medication (Zoloft), and the third group to both. The assigned exercise involved three supervised forty-five-minute sessions per week of cycling or walking/jogging at moderate to high intensity. Remarkably, by the end of the four-month intervention period, all three groups had experienced their depressions lift and reported fewer dysfunctional attitudes and increased happiness and self-esteem. Aerobic exercise was just as effective at treating depression as was Zoloft, or as a combination of exercise and Zoloft. Yet exercise is a lot less expensive, usually with no side effects apart from soreness. Perhaps even more remarkably, six months later, participants who had "remitted" (recovered) from their depressions were less likely to relapse if they had been in the exercise group (six months ago!) than if they had been in the medication group.<sup>39</sup> The researchers named the study the Standard Medical Intervention and Long-term Exercise study. SMILE.

The proverbial feel-good factor in exercise is well known. But the fact that the psychological benefits of physical activity trumped those of antidepressant drugs surprised even me. Could the exercise program in this study have boosted participants' self-esteem and sense of mastery over their training? Could the antidepressant medication, by contrast, have given participants a less self-affirming explanation for their personal improvement (i.e., "The drugs lifted my depression" versus "It was my own effort and commitment to the exercise program that helped me beat this thing")? In any case, the SMILE study epitomizes a flood of research corroborating the multiple benefits of physical activity for health and well-being. Physical activity reduces anxiety and stress; protects us from dying in general (and from dying of heart disease or cancer, in particular); reduces the risk of numerous diseases (diabetes, colon cancer, hypertension); builds bones, muscles, and joints; increases quality of life; improves sleep; protects against cognitive impairments as we age; and helps control weight.<sup>40</sup> In sedentary older adults, a very low-intensity exercise program (walking or resistance/flexibility training) reduces depression and increases confidence and maintains the improvement for an astonishing five years.<sup>41</sup> Finally, surveys show, and large-scale randomized interventions confirm, that exercise may very well be the most effective instant happiness booster of all activities.<sup>42</sup> Is that enough?

### WHY DOES PHYSICAL ACTIVITY MAKE PEOPLE HAPPIER?

Psychologists believe that several explanations underlie the well-being rewards of exercise. First is the self-esteem/mastery explanation I just mentioned. Taking up a sport or fitness regimen makes you feel in control of your body and your health. Seeing yourself get better at something—faster, farther, stronger—provides a terrific sense of agency and self-worth. Second is the possibility that physical activity offers potential for flow as well as a positive distraction that turns away worries and rumination. It essentially serves as a time-out from your stressful day, with

positive spillover effects for hours afterward. Interestingly, this view of exercise makes it sound a lot like meditation, and indeed, the few studies that have directly compared meditation with exercise show that the two activities often show identical effects, including reduced anxiety and increased mood-lifting hormones.<sup>43</sup> Of course the *experience* of exercise and meditation is very different, most notably, one generally producing so-called high-arousal emotions (energy, enthusiasm, and vigor), the other producing low-arousal emotions (serenity, peace, and calm). But they all are positive emotions that not only make you feel good but distract you from hassles and anxieties.

Third, physical activity, when performed along with others, can provide opportunities for social contact, thus potentially bolstering social support and reinforcing friendships. It can even lift the burden of loneliness or isolation. A former avid footballer (soccer player) in Birmingham, England, described how taking up the sport allowed him to take on a new social identity separate from his current one—namely, a person with a mental illness:

When you have had a bad day . . . then you can go out for football for an hour and a half with complete strangers and they don't know what I do, they just know me to play football with and that's how I like it. I've got friends who know about my illness but these people don't know nothing about me, they just respect that I am a good footballer and they like me because of that. It's kind of a therapy for myself because I don't have to justify who I am and what I have done in the past in terms of illness and they just respect me for being a damn fine soccer player because I am the captain of the team.<sup>44</sup>

The feel-good consequences of exercise could be physiological in origin. When you exercise, not only do you feel good that you're accomplishing something, but you also experience the fringe benefits of improved physical fitness, including greater cardiovascular endurance, flexibility, and strength. You may be able to lift heavier objects, walk farther, and avoid health problems into old age. This in itself can bring about

greater happiness. Indeed, exercise has been shown to elevate serotonin levels, similar to the effects of Prozac.<sup>45</sup>

But what about the endorphin hypothesis? Doesn't vigorous physical activity elevate endorphins, the brain's natural pain-killing and euphoria-inducing opioids, leading to the familiar runner's high? Unfortunately, there is not a great deal of support for this theory, although central opioids *have* been found to suppress the unpleasant symptoms of physical exertion, thus presumably reducing discomfort (though likely not producing an actual high).<sup>46</sup>

Finally, I should mention that physical activity really has two kinds of benefits. The first is the "acute" immediate boost you gain from a single bout of exercise, and the second involves the "chronic" improvements from an ongoing exercise program. These benefits are not one and the same. For example, you may feel wretched *during* exercise but experience feelings of motivation, exhilaration, lifting of anxiety, or general well-being immediately afterward. Alternatively, you may not encounter any enduring effects (such as the sense of mastery from sustaining your training or bolstered body image from dropping a pant size) until much later. The first time I resolved to become fit, back in school, I read in a running manual that it takes eleven weeks for a running program to "stick" and to obtain benefit. Eleven weeks are a long time to wait and endure, and unfortunately, many people give up before they reach that mark. But when you reach it, physical activity becomes a natural extension of your life, a habitual act that requires no decision making to initiate. When the alarm goes off, you don't contemplate whether you should drift back to sleep or get up and start moving; you just do it. It sure is worth it.

### WHAT IF EXERCISE MAKES YOU FEEL BAD?

Rigorous physical activity, no matter what it is, may cause you to feel terrible. Does this make you a bad person? No, but it probably means that you should change your exercise routine. First, consider finding an exercise that—magic word—fits your lifestyle, resources, and personality. Don't jog if you live in a rainy climate and hate being wet. Don't join a

gym if it strains your budget. Don't participate on a team if you're allergic to competition. Don't do aerobic exercise (e.g., elliptical machine) if you prefer anaerobic (e.g., stretching and toning). Do something that affirms some part of you. If you're a social person, acquire a running buddy or join a golf club. If you need more time with your children, buy a jogging stroller or join a baby yoga class. If you like nature, take up hiking or skiing. If you love the water, do a water-based sport. If you have only slices of time during the day, exercise in ten-minute chunks, or take the stairs everywhere you go, or do calisthenics in your office.

Second—and this is a crucial one—if exercise makes you feel bad, you are very likely overdoing it. Learn to measure your maximum heart rate (see below), and when you set out for your first session, do *not* exceed 60 percent of that limit. For some people, this may be walking briskly (running will come later) or simply walking. Too many start out an exercise routine working out too hard, leaving them feeling discouraged, frustrated and generally unwell, and so they quit.

In one study, participants were asked to cycle at 60 percent of their maximum heart rate. Over the course of thirty minutes, half the participants reported feeling progressively better, and half claimed to feel progressively worse. Researchers, who tend to study the average person, don't yet know why some people experience pleasure while exercising, and others displeasure, but you can take steps to figure out why you in particular feel good or bad.

## HOW TO DO IT

*Physical activity* is defined as “energy expenditure above that of resting level,”<sup>47</sup> so the field is really wide open, the options limitless. Researchers chide people who use the terms *physical activity* and *exercise* interchangeably (the latter is only a subset of the former, exercise being a specific kind of planned and structured physical activity, usually with the goal of improving physical fitness or health), but I choose to confound them anyway. If you resolve to undertake a program of physical activity after reading this chapter, you'll essentially be *moving* more. It's that simple. The

moving can be done as part of a formal, organized, and refereed sport or at home alone on a yoga mat.

Exercise professionals traditionally advise that you calculate your maximum heart rate (most simply defined as 220 minus your age) and strive to work out at a level between 65 and 80 percent of that figure. So, if you are thirty-two years old, your maximum heart rate is 188, and the range to aim for is between 122 and 150.<sup>48</sup> Don't be a slave to this range, however; it's approximate because the formula is designed for an average person of your precise age,<sup>49</sup> and at least those of us who've grown up in a Western culture know that we are definitely not average.

Few of us don't already have a pretty good idea how to start and implement a physical activity routine. But it doesn't hurt to add these several recommendations:

- Start slow—in the 60 to 65 percent range of your maximum heart rate.
- Decide ahead of time on specific dates, starting times, and durations of your exercise, and pencil or stylus them in, treating them like fixed appointments. Would you ever miss a meeting with your boss or to pick up your kid from school? Yes, but rarely and only in exceptional situations.
- If possible, choose a time to exercise during a time of day when you feel most energetic.
- Current guidelines recommend thirty minutes of moderate physical activity on most days of the week. But better to exercise for ten minutes than not at all. The most important thing is to stick with your plan.
- If you already engage in regular physical activity, up the ante. Run faster and longer; lift heavier weights; join a more advanced swim or dance class.
- An exercise routine is like a diet. It's okay to break it, but don't let guilt and shame so overwhelm you that you give up the whole thing. Get back on the horse (literally or figuratively) the following day.