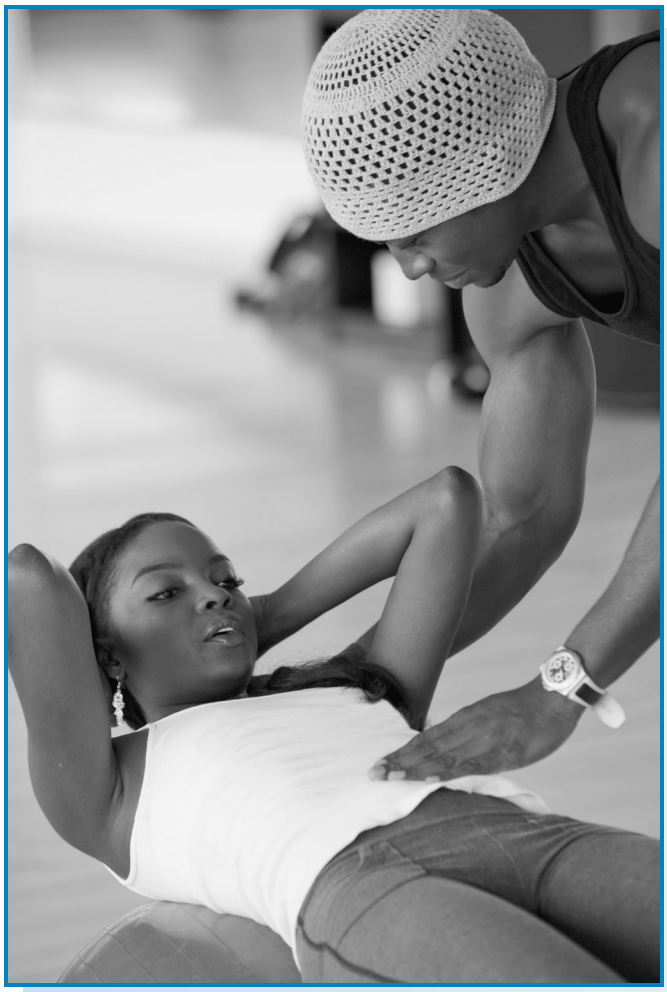
You Asked for It

Question Authority

by David C. Nieman, Dr.P.H., FACSM

Q: I'M NOT SURE WHAT TO BELIEVE ANYMORE ABOUT WHAT EXERCISE CAN OR CANNOT DO FOR YOU. CAN YOU EXPOSE SOME COMMON MYTHS REGARDING EXERCISE?

A: There is no doubt that there is much confusion regarding the fitness and health benefits of exercise and the type and volume of physical activity needed to be fit. As requested, here is my list of 10 common exercise myths.



1. *Exercise burns lots of calories*. To the contrary, your body is very efficient during exercise and expends far fewer calories than most people realize (1). For example, a 1-mile brisk walk or jog burns about 90 to 110 kilocalories or the energy contained in one banana. Thirty minutes of moderate-to-vigorous aerobic exercise (no matter if it is swimming, cycling, or sports) will burn only 200 to 400 calories for most people or the energy found in a bagel. Regular physical activity has many health benefits, but the real power in controlling body weight for the long-term is tight regulation of food and beverage intake.
2. *Sit-ups are a good way to reduce belly fat*. One pound of human fat contains 3,500 calories. Sit-ups burn only 3 to 5 calories per minute (and most people can't go beyond 1 minute) (1). Do the math — there is no magic. Also, muscles use fuel from within the muscle or from the blood and do not reach out and borrow energy from abdominal fat folds. A regular program of abdominal exercises will tighten the muscles and reduce the waistline, but the layer of fat over those muscles will remain unless the overall energy balance favors more energy out of the body than in.
3. *After exercise, your metabolism is revved up all day, burning many extra calories*. The truth is that after 30 to 45 minutes of vigorous exercise, the body's metabolism quickly returns to preexercise levels, and only 10 to 25 extra calories are expended (or the energy found in one good bite out of an apple) (5). If an obese individual takes a 20- to 30-minute

walk, only 10 extra calories will be burned afterward, hardly enough to be meaningful when balanced against other factors such as food intake.

4. *Just 15 minutes of aerobic exercise, 3 days a week, is enough to promote health*. This recommendation from the 1960s has not withstood the test of more than 40 years of solid research. We now know that the body needs a lot more exercise than originally thought (or hoped for). Instead, the current recommendation is that adults should do at least 150 minutes a week of moderate-intensity or 75 minutes a week of vigorous-intensity aerobic physical activity, or an equivalent combination of moderate- and vigorous-intensity aerobic activity (6). For additional and more extensive health benefits, the level of aerobic physical activity rises to 300 minutes a week of moderate-intensity or 150 minutes a week of vigorous-intensity aerobic physical activity. Additional health benefits are gained by engaging in physical activity beyond this amount. For example, many people need to do more than 300 minutes of moderate-intensity activity a week to meet weight control goals (6). The good news is that these minutes can be accumulated by performing aerobic activity in episodes of at least 10 minutes spread throughout the week. The bottom line, however, is that the body's anatomy and physiology favor a good dose of physical activity on most days, and no small amount will do.

5. *Aerobic fitness is a lot more important than muscular fitness for health*. This is another myth from the 1960s that has not held up. Your brisk walking, jogging, or cycling program is not enough for good fitness and health. This needs to be supplemented with exercises directed toward muscle strengthening (*e.g.,* weight lifting and calisthenics) (7). Muscular fitness is critical for some aspects of health including strong bones and prevention of osteoporosis. The American Heart Association (AHA), a long-time advocate of aerobic exercise, has since the year 2000 recommended resistance training for persons with and without cardiovascular disease. As emphasized by the AHA, "The potential benefits, not only to cardiovascular health but also to weight management and the prevention of disability and falls, are becoming more widely appreciated (7)." The *2008 Physical Activity Guidelines for Americans* state that "adults also should do muscle-strengthening activities that are moderate or high intensity and involve all major muscle groups on two or more days a week, as these activities provide additional health benefits."
6. *Exercise depletes the body of many vitamins and minerals so use supplements to stay in balance*. Companies that sell supplements would like you to believe that this is true, but the best research studies show that other than extra water and carbohydrates, a balanced diet will provide all of the vitamins and minerals needed for muscular exertion (2). As emphasized by the American Dietetic Association, "In general, no vitamin and mineral supplement should be required if an athlete is consuming adequate energy

from a variety of foods to maintain body weight (2)." Although a nutritional deficiency (*e.g.,* low dietary iron leading to anemia) can impair physical performance and can cause several other detrimental effects, there is no conclusive evidence of performance enhancement with intakes in excess of the recommended levels.

7. *Stretch before you exercise*. There are two problems here. First of all, stretching is more effective when the muscles have been warmed from aerobic activity. Thus, it is more important to stretch *after* exercise than before. Second, stretching has turned out to be of far less value to health than originally claimed. It seems that stretching is important for athletic performance, not health. In the *2008 Physical Activity Guidelines for Americans*, no specific recommendations for flexibility exercise were advanced (6). People were still encouraged to stretch because the increase in flexibility can allow people to "more easily do activities that require greater flexibility" (6). Stretching also is useful during the rehabilitation process from joint injuries. In general, there is little need to place much emphasis on stretching in your exercise routine, at least from a health or injury prevention perspective.
8. *The best time to exercise is in the morning*. The good news for people who can't get up in the morning is that the health benefits of exercise are the same whether you exercise in the morning or afternoon. I conducted an exercise training study with half of the subjects exercising in the morning and the other half in the afternoon (4). Improvements in physical fitness, disease risk factors, and psychological health were the same for both groups. So choose a time of the day that works best for you and is conducive to long-term adherence and enjoyment.
9. *Individuals who regularly exercise need less sleep than their sedentary peers*. To the contrary, the best studies show that people who exercise need more sleep to help restore the muscles. One meta-analysis of the sleep-exercise literature concluded that individuals who regularly exercise fall asleep faster and sleep longer and deeper than individuals who avoid exercise (3).
10. *You need to join a health/fitness club or enlist the services of a personal trainer to be fit*. Clubs and trainers know that many people who sign up soon fade away (thus, they can sign up many more people than can use the facility). The best motivation for long-term exercise comes from within — if you really want to get fit, find a routine that fits into your schedule, does not impose time barriers, and works for you (*e.g.,* something convenient such as brisk walking on hilly terrain combined with basic calisthenics). Some people need a health/fitness club environment or personal trainer to stay motivated, and this is fine. Your challenge is to make your exercise routine as regular and necessary as eating and sleeping.

References

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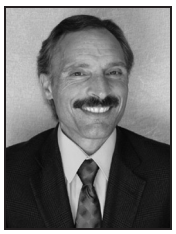

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