



# The Health Nugget

## Fitness

The front covers of fitness magazines with the photographs of ripped, highly defined, impossible-to-look-like bodies lead many to conclude that this is what fitness looks like. Six-pack abs are prerequisite to be in the club. But I'm here to inform you this is not the case. Fitness includes various forms and encompasses a variety of sizes. One can even be overweight and fit. Fitness can be experienced at any age and at different levels. Fitness can be defined as a body being flexible, strong and lean enough to engage in daily activities with reserve energy to endure and meet added physical challenges.

Rather than simply an external, visible phenomenon, fitness is experienced by all body systems including the mind. The ability to handle mental and emotional challenges to withstand stress is also encompassed in the word fitness. The greatest hindrance to experiencing fitness is plain old inactivity.

Inactivity has been blamed for \$77 billion in health care costs in the United States alone. More than half the adults in the U.S. are not regularly active and 25% are completely inactive. When fitness is pursued the entire body improves in function. In general, some of the benefits experienced are: restful sleep, the ability to eat more food without weight gain, better body composition of lean tissue and muscle with relatively less body fat, greater bone density, enhanced immunity, lower risk of some cancers, improved circulation and lung function, lower risk of cardiovascular disease and diabetes, reduced gall bladder disease, less anxiety and depression, stronger self-image and improved quality of life.

The development of flexibility, muscle strength and cardiorespiratory endurance is important in experiencing fitness. Conditioning

is the physical effect of training the body in these three areas. To begin training, start with an activity at a moderate level and then slightly exceed the comfort capacity. Either add to the amount of time engaged in that activity, or heighten the intensity, or increase frequency. Depending on your present capabilities embark on something easily attainable. For example, begin walking, biking or jumping on a trampoline. Then weekly, increase your exercise time in 5-10 minute increments. Walk a bit faster. Engage in the activity five times a week instead of three. As you set goals for yourself such as climbing a set hill, or walking a mile in so many minutes, or lifting a certain amount of weight for so many repetitions, you will be inspired to push yourself. You will also be amazed at how the body adapts itself to activity and what you are capable of. This principle of overloading is this training of body systems in order to improve them. As you increase the amount of weight, amount of time or how often you exercise, you will reach higher levels of fitness. Progressing slowly is how the body best adapts.

It is important to remember that the intensity and type of workout that is good for one person may not be good for another. Preferences, age and level of fitness all should help determine your activity choices. The most important thing is to engage in activity. The American College of Sports Medicine has developed a physical activity pyramid to develop and maintain fitness. Their guidelines are:

Daily be as active as possible—use the stairs, walk the dog, garden, play, etc.

- 4-6 days a week —engage in moderate or vigorous activities such as walking fast, biking, sports, etc.

- 2-3 days a week—engage in strength and

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flexibility activities which include sit-ups, weight lifting, stretching, etc.

Do these guidelines sound overwhelming? How does your life compare with the pyramid? How could you reorient your life to adopt more of this simple plan? Your body may be so unfit that the goal seems impossible. Few people have ideal weeks in which this is all possible, but fitness is a journey. To be fit is to be always pursuing fitness. So the important thing is to start.

Having energy to begin on the path of fitness is crucial. Initially, you may experience lack of energy simply from muscles that are not conditioned to activity. But don't worry, that will disappear as you persevere and continue engaging in activity. To meet the demands of sustained activity, muscles use carbohydrates, fat and protein to generate energy. Carbohydrates are broken down into glucose, which is stored as glycogen in the liver and muscles. During exertion, the body breaks down glycogen to produce available glucose providing energy. The more glycogen stored, the longer one can engage in a physical activity. Diet and fitness levels determine how much glycogen is stored. Maximum glycogen storage and, therefore, maximum endurance are experienced on a high-carbohydrate diet.

Eating a high carbohydrate meal after activity enlarges glycogen storage. For example, if eaten within 15 minutes of exercising, it "accelerates the rate of glycogen storage by 300 percent."<sup>1</sup> Increasing glycogen stores also involves training the muscles. As glycogen is depleted, the body adapts to store greater amounts of it to support itself. In addition to this, conditioned muscles depend more on fat than on glycogen for energy. Training also stimulates the muscle cells to manufacture more and larger mitochondria, which are the powerhouses within cells that produce energy.

Intense activities where it might be difficult to catch your breath use glycogen quickly. Moderate activities on the other hand—especially when sustained for more than 20 minutes—use less glycogen and more of our body's fat for fuel. Training produces adaptations that cause the body to rely more heavily on fat for fuel.

Protein is not a major fuel source for physical activity. Even in a well-trained athlete whose body uses more protein as fuel, only about 10% of total fuel used comes from protein. Intense activity engaged in for more than an hour will deplete glycogen and the individual will rely more on protein for energy. But the higher the degree of training, the less protein a person will use during an activity. Anaerobic strength training does not use more protein for energy, but it does demand more after activity to rebuild muscle. Still a higher carbohydrate intake is recommended. "Without adequate carbohydrate intake, athletes will burn off as fuel the very protein that they wish to retain in muscle."<sup>2</sup>

Your body will become adapted to however you choose to train it. If you choose to train it to inactivity, it will adapt itself to that. But if you activate your body to being fit, it will become better able to perform. Fitness is not static. I see it as an experience, what will become an enjoyable journey rather than a destination.

Spiritual fitness can be viewed in a similar way. Man will never feel that he has attained a set standard qualifying him for an entrance to heaven. He looks at his Christian experience as a journey with the One who has made it possible. "The proud heart strives to earn salvation; but both our title to heaven and our fitness for it are found in the righteousness of Christ."<sup>3</sup>



<sup>1</sup> Rolfes, Sharon; Whitney, Ellie. *Understanding Nutrition*. Thomas Wadsworth, 2008, p. 488.

<sup>2</sup> *Ibid.*, p. 491.

<sup>3</sup> White, Ellen G. *Desire of Ages*, p. 300.