

WHAT IS "TRAINING"?

"If you have built castles in the air, your work need not be lost; that is where they should be. Now put foundations under them."

— Henry David Thoreau

To be a successful player in many sports, an athlete must bring to the sport certain native skills, among them high levels of coordination, speed, jumping ability, and sometimes even size. The athlete who lacks these natural skills can do little to develop them and is often doomed to frustration.

To be a successful cross country runner requires minimal coordination, minimal speed and jumping ability, and body size is of no particular advantage. What is required above all is endurance, and endurance is one physical capacity which can be acquired. **Training** is the process through which the athlete acquires endurance.

A good cross country training plan involves the application of a moderate stress, followed by a suitable recovery period, then another application of moderate stress and recovery, that cycle being repeated again and again throughout the season. Because our bodies are capable of **adaptation**, the normal response to a training stress is an improved ability to deal with the stress being applied.

It is critical that the training stress be **moderate**, because a moderate stress is the optimal stress for stimulating adaptation. If the stress level is too low, the body is not stimulated to improve. If the stress level is too high, the body breaks down. (The old coaching adage that "the harder you work, the better you will be" is untrue. It might best be replaced by "the more intelligently you work, the better you will be".)

If the training principle could be reduced to a formula, it might read something like this:

$$\text{TRAINING} = \text{ADAPTATION} = \frac{Y \times \text{Moderate Stress}}{\text{Adequate Recovery}}$$

where Y is the frequency of training sessions. The larger value assigned to Y, that is, the more training sessions the athlete experiences, the greater the expectation for improvement. This is why serious runners begin their cross country training early in the summer, then train year-round for maximum gains, usually including winter and spring track programs in their annual plan.

Because each athlete comes to cross country with different levels of physical maturity and different capabilities of strength and endurance, training is necessarily individualized to insure that the training stress is moderate **for each athlete** and that the recovery period between training sessions is also adequate **for each athlete**.

Obviously, the unconditioned first-year runner trains less arduously than the well-conditioned fourth-year athlete. But as physiological gains are made, the training load is gradually increased, each incremental increase targeted at creating the same stimulus of moderate stress for the athlete's present strength

country program is the myth of how "hard" we must train. In truth, the daily training of a senior runner in his fourth year of year-round training might appear intimidating to the novice runner who has yet to jog his first complete mile. But the training stress for that senior runner is moderate for his level of attainment. It is well within his ability to train at that level.

The fundamental rule of training, then, is that it must always be within the ability of each individual athlete. The application of this rule requires considerable judgment by coaches and comprises much of the so-called "art" of coaching. To help us in our judgments, we actively enlist the feedback of the athletes themselves, asking them, among other things, to keep a training diary in which their daily training is logged and their subjective responses to the training are noted.

Perhaps the most important concept to grasp about training is that if optimal gains are to be made, training must be a long-term, continuous activity involving a serious commitment of time and energy. Training that is sporadic and interrupted by frequent periods of inactivity is little better than no training at all. A muscle can lose up to 50% of its aerobic capacity in just one week away from aerobic training.

For that reason, we generally ask that the athlete train at least six days out of every seven. Our general training pattern is a "hard" day (remember, "hard" is a relative term; the stress level sought is always moderate) followed by an "easy" day to insure full recovery before the next "hard" session, with one day a week of total rest. The coaches like to plan the rest day for one of the weekend days, but our competitive schedule occasionally dictates another day as more logical for our rest day. (More frequently, the individual athlete's personal schedule of outside activities determines his weekly rest day independent of any coaching plan.)

The athlete who makes the commitment to daily training, who challenges himself on "hard" days, and who looks after the fundamentals of good nutrition and quality rest is virtually **guaranteed** to improve, **guaranteed** to maximize his potential, and **guaranteed** to achieve his own personal peak of excellence. Few sports can make those claims. But those are the rewards that await the cross country runner.

