



FITNESS HOMEWORK:

35 Minute Aerobics

The 35 Minute Aerobic Exercise Threshold

In another article, we've discussed the myth that a minimum of 20 minutes of continuous exercise is needed to produce aerobic improvement. Although 20 minutes isn't an exercise threshold as was commonly believed, a review of endurance literature has identified a different threshold—one that takes place after 35 minutes of exercise.

Literature Review

This discovery was made by Howard Wenger of the U. of Victoria, in British Columbia. After reviewing 78 scientific papers on endurance training, he came to the conclusion that workouts longer than 35 minutes are more efficient in improving aerobic fitness (VO₂ max) than shorter sessions.

He found this to be true even when shorter sessions were more frequent and added up to a greater weekly exercise duration. For example, 3 x 40-minute exercise sessions (120 minutes/week), produced greater improvement in VO₂ max than 5 x 30-minute sessions (150 minutes/week).

Explanation

Wenger believes this occurs because slow-twitch muscle fibres, which are predominantly used in low intensity endurance training, become fatigued after 35 minutes of steady running.

As a result, fast-twitch muscle fibres (which are preferred for high-intensity anaerobic exercise) kick in after 35 minutes to supplement the tired slow-twitch fibers. The involvement of fast-twitch fibres in aerobic training "converts" them, providing an athlete with additional muscle fibres that can be used during endurance exercise. The result is an increase in overall aerobic capacity.

Recommendations

If an athlete asks for an exercise program, the first thing to realize is that anything is better than nothing—even 10 minutes of continuous movement has been shown to increase aerobic fitness.

However, if you have students who must be as efficient as possible in improving their aerobic fitness (e.g. distance runners), their "endurance training" workouts should involve continuous exercise that lasts more than 35 minutes—providing they can perform them at the same intensity as their shorter sessions.