

PILATES

The Balanced Body® Newsletter

CORETERLY



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PROGRAMMING FORUM

Adding Cardio to Pilates Mat and Equipment Classes

by Amanda Jessee, BA, MA, CSCS

Anyone working in the fitness industry, including Pilates professionals, knows that regular cardiovascular exercise is a cornerstone to a healthy lifestyle. Over the past 4 decades, numerous studies and scientific reports have reached the same conclusion. People must engage in some form of regular cardiovascular exercise. Time and time again, the benefits of cardio have been well documented. These include reduction of high blood pressure, body weight, and “bad” cholesterol, with an increase in “good” cholesterol. It can also favorably affect the body’s ability to use insulin, thereby reducing the risk of Type 2 diabetes. For heart attack patients, regular cardio activity can reduce death rate by 20 to 25% .

As Pilates professionals, our goal is to help clients achieve maximum health and well-being. But is the exercise method Joseph Pilates spent his life perfecting enough to generate cardiovascular benefits? As researchers from the University of Wisconsin, La Crosse concluded in a 2005 study: “Cardiovascular benefits [of Pilates exercise] appear to be limited. Even though participants feel as though they are working hard...they are not achieving significant aerobic or calorie-burning benefits from their efforts.”

Using a Circuit Format

Most experts agree the greatest cardiovascular benefits are realized when individuals are exercising for at least 20 minutes with their heart rate within the aerobic target range.

Adding cardio to mat and equipment classes presents an exciting challenge and opportunity for Pilates instructors and their clients. One way to incorporate cardio into Pilates classes is by using a Circuit or Interval format.

Interval training is defined as “a system of physical conditioning in which the body is subjected to short but regularly repeated periods of work stress interspersed with adequate periods of relief” (Fox et al). The first methods of interval training can be traced to a Swedish coach named Gosta Holmer in the 1930s. This early interval training was called “fartlek” training which means “speedplay.” Fartlek training was very informal and a fairly subjective approach. The coaches alternated fast and slow running, adjusting the intensity

based on how the athletes felt. Building on this type of training, Dr. Woldemar Gerschler, a famous coach from Germany, invented a type of interval training based on heart rate. Gerschler's method of training would advance how athletes train worldwide and is the training method coaches and trainers consider interval training today.

Interval training attempts to improve the cardio-respiratory system by challenging the participant to work at higher than aerobic, i.e. anaerobic threshold, heart rate intensities for short periods, allowing the participant to recover, and then repeating the work interval. Because interval training has historically been used to improve speed for running, the work and rest periods are usually sprinting, running, jogging, and walking. However, a creative trainer can introduce high intensity workouts into any exercise session by adding jumping rope, sport drills, or stepping. In the case of the Pilates Reformer we can include the jump board. This is the perfect tool to use when designing cardio-interval choreography on the Reformer.

Using the Jump Board

While it might be difficult to elevate the heart rate to the anaerobic threshold using the jump board alone, one can certainly elevate the heart rate into the upper levels of the training zone. Try alternating intense series of jumping with other exercises such as the arm circle series, strap work for the legs, hundreds and coordination. Keep in mind that your client's heart rate will be elevated after the jump sets. It is best to keep him or her in the same supine position until the heart rate has normalized before getting up and down on the Reformer.

Circuit training is a type of interval training which was first introduced by Morgan and Anderson at the University of Leeds in England (Cotton and Goldstein). It attempts to train for muscular strength and endurance, as opposed to cardio respiratory improvement. Circuit training is most effective when participants move around predetermined stations designed to work both upper and lower body muscles with little to no rest in between each station. While cardio respiratory improvement is not usually part of the prescription of a typical circuit format, instructors can add lower intensity "cardio" stations to keep the heart rate elevated within the target heart rate zone. Circuit training works well in a Pilates mat or equipment class because of the variety of exercises available from which to choose.

Formula for calculating target heart rate zone for a 45-year-old woman:

1. Start with the number 220
2. Subtract the age of exerciser (in this example, 45 years old)
3. $222-45=175$
4. 175 is the maximum heart rate (working above this rate will most likely exceed the anaerobic threshold)
5. Target aerobic heart rate zone (60 – 80% of maximum heart rate):
6. $175 \times .8 = 140$
7. $175 \times .6 = 105$

In order to achieve the greatest cardiovascular benefits, this 45-year-old woman would want to keep her heart rate between 105 and 140 beats per minute. Interval training would push her heart rate above her maximum heart for short bursts of time, followed by periods of recovery within the target heart rate zone.

In 1945, Joseph Pilates famously wrote in his groundbreaking book, *Return to Life Through Contrology*:

As the spring freshets born of the heavy rains and vast masses of melting snows on mountains in the hinterlands cause rivers to swell and rush turbulently onward to the sea, so too will your blood flow with renewed vigor as the direct result of your faithfully performing the Contrology exercises. These exercises induce the heart to pump strong and steadily with the result that the blood stream is forced to carry and discharge more and more of the accumulated debris created by fatigue.

A man ahead of his time, Pilates understood the importance of vigorous exercise to increase heart rate, an understanding we can continue today to improve the health and wellness of all our clients.

¹ACE sponsored study “Can Pilates Do It All?”, ACE Fitness Matters November/December 2005. For full study, visit www.acefitness.org

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