



## Introducing Kate Buffett's high-intensity, abdominal-sculpting workout.

When amateur athlete Kate Buffett found herself sidelined from her favorite sports with a knee injury in December 2003, she had to find a new form of exercise to maintain her cardiovascular endurance and muscle tone. According to Buffett, "I couldn't stand, run or do any of my regular workouts. I needed time to heal, but didn't want to lose strength and aerobic fitness during recovery."

For nearly two decades, Buffett had maintained her strength and endurance with a program of whole-body exercise called Panaerobics, developed by Heavyhands inventor Dr. Leonard Schwartz. Faced with her knee

injury, Buffett began to look at Panaerobic principles in a new way. Whatever Buffett did had to conform to the limitations of her healing, yet painful knee. "I wanted to design an exercise program for my recovery that would provide a high-intensity, aerobic workout, maintain strength and lean body mass and still be fun to do!"

Lying on a mat, Buffett began practicing some of the movement combinations that had been part of her Panaerobic workout while upright. The results were so encouraging she began to experiment and refine the program—and AeroAbs was born.

BY LEIGH CREWS • PHOTOS BY JEFF CREWS

# AeroAbs

### What's in a Name?

As the name implies, AeroAbs is an aerobic workout that also strengthens the core. It is a continuous, rhythmic sequence of arm and leg patterns counter-resisting the core musculature. The core is engaged isometrically to stabilize and maintain neutral spinal alignment, arms and legs always working in combination. By altering the specific muscle combinations—for example, alternating biceps with triceps or deltoids, or quads with adductors or abductors—the muscles of the extremities are provided variations in training focus while maintaining core muscle endurance training. During AeroAbs, the body is continuously working to maintain a neutral spine and seemingly unlikely balance systems are challenged, providing reactive training and developing proprioceptive and kinesthetic skills.

AeroAbs workouts are meant to be done slowly with awareness, giving attention to the breath with each movement. This inward focus imparts a mind/body component to the exercise. Relaxed, unlabored breathing assists overall performance of moves and allows the participant time to correct misalignments and develop good form.

Abdominal crunches may not be recommended for those with arthritis and osteoporosis due to compression of the anterior spine.<sup>1</sup> AeroAbs supports the spine in a supine posture, which allows decompression and does not require any spine flexion, as crunches do. It is also customizable for every fitness level and age group.

### Preliminary Scientific Research

The Exercise Physiology Lab at Central Oregon Community College has performed testing on the AeroAbs program in a pilot study conducted in October 2004.<sup>2</sup> The study looked at oxygen consumption and heart rate during a typical 20-minute workout session. Director of the lab, Julie Downing, PhD, ACSM, HFD, used the Korvonen Formula to determine a target heart rate zone of 50 to 85 percent of heart rate reserve. "The average heart rate over the 20-minute workout was 144.5 BPM. This is right in the middle of the pre-calculated target zone," says Downing. "Next, we looked at oxygen consumption. After warm-up, average oxygen consumption was 24.1 ml/kg/minute. Again, the result is in the middle of the zone."

These results are largely empirical and a larger study is needed to establish statistical relevance. But, it does indicate that AeroAbs generates a training heart rate and a relatively high  $\text{VO}_2$  max. The original data is posted on AeroAbs' Web site, [www.aeroabs.com](http://www.aeroabs.com).

### How AeroAbs is Done

AeroAbs can be a group-fitness class, directed by personal trainers or performed at home. Only light dumbbells (one to eight pounds) and a mat are needed. A beat range of 100 to 120 BPM is recommended if using music. A cueing CD is available, freeing instructors for hands-on corrections during class. Instructors should focus on the essential requirement of maintaining a



neutral spine, and have modifications of the exercises prepared to accommodate varying fitness levels.

Nancy Ludeman, group-exercise program director and personal trainer at the Athletic Club of Bend, Oregon, says she uses the program with her personal training clients. "They like the variety of arm and leg movements while feeling it is a great ab workout. Most of my clients can keep their heart rate in their 'training zone' throughout the session."

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**Leigh Crews**, owner of Think-GPS™ Adventure Training and Dynalife, Inc., is an AFAA, ACSM and ACE certified instructor, and licensed corporate WellCoach and Power Bor Team Elite member. She is a freelance writer and consultant for print and electronic media. For more information, visit [www.leighcrews.com](http://www.leighcrews.com).

## REFERENCES

- <sup>1</sup> Meeks, Sara, PT, GCS. *Walk Tall! An Exercise Program for the Prevention and Treatment of Osteoporosis*. Triad Publishing Company, 1999.
- <sup>2</sup> <http://www.aeroabs.com/aaresearch.htm> (accessed January 19, 2005).

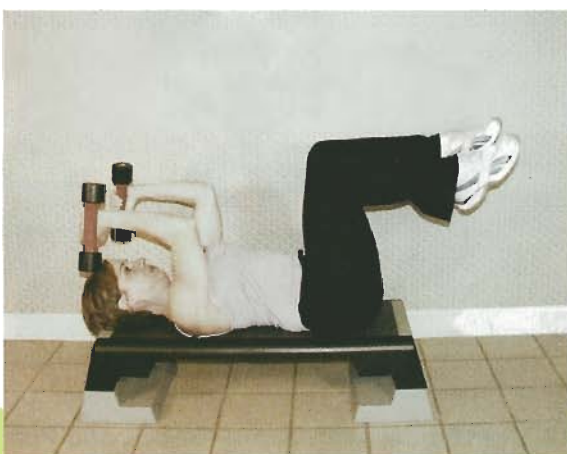
## < AB Stairclimber with Arms—Reach and Pull

- a. Begin supine with arms straight up from shoulders and legs up and in line with hips.
- b. Legs move as though walking on a Stairmaster.
- c. Reach toward shoelace of stepping foot with same-side hand, and pull down (toward the body) as though pulling the foot toward your face.
- d. To advance the exercise, punch toward each "same side" foot as it moves from forward to a kick.

## ^ The Swim

- a. Begin supine with arms straight up from shoulders and legs up and in line with hips.
- b. With knees relaxed and toward each other, bring arms out, down and around, as if doing the breaststroke. Legs follow arm pattern.
- c. Return hands and legs to start position, repeat for as long as you can maintain neutral spinal position.





### Overhead Triceps/Leg Flex

- Begin supine on bench or mat with arms straight up from shoulders and legs up and in line with hips.
- Bend elbows to 90 degrees, lowering weights and keeping elbows in line with shoulders.
- At the same time, flex at knees, lowering feet towards buttocks. As strength improves, you may lower leg toward bench or floor.
- Individual range of motion will vary according to core musculature fatigue.

### Ladder Climb

- Begin supine with arms straight up from shoulders and legs up and in line with hips.
- Using alternate arms and legs, pretend there is a ladder suspended above you, parallel to the floor. Reach above your head for a rung as you step up a rung with your opposite foot.
- Maintain a neutral back throughout.
- Now climb to the next rung by reaching with the other hand as you "step and climb up a rung" with your opposite foot. Pull on the rung as you reach to exaggerate engagement of abs and core.



### Leg/Arm Scissors with Chest Press

- Begin supine with arms straight up from shoulders and legs up and in line with hips.
- Legs and arms cross in as horizontal a position as comfort and spine control allow.
- Alternate arm and leg crossing on top.




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