

Workout Watchdog: An ACE-Commissioned Study

Is there no end to abdominal machines? Apparently not, so long as Americans continue to believe a quick fix actually exists. The latest product to hit it big on infomercials is the AB-DOer, and our phones have been ringing off the hook with consumers wondering if it lives up to the claims. So ACE turned to researchers at California State University, Northridge, to test the merits of the AB-DOer. Here is their report...

Is the AB-DOer a Don't?

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We guarantee you'll lose at least two inches from your waist in just ten days or your money back!" So goes the claim from the makers of the AB-DOer, the latest infomercial fitness craze. Here's how it works: From a seated position, AB-DOer users grip the shoulder-high handlebars and rotate the torso in various directions at various speeds to strengthen muscles and elevate heart rate. This product, which retails for \$89.95 to \$149.95 depending on source and model, is purported to target the abdominals, obliques and lower back muscles, and is "so advanced it aerobically burns fat and at the same time flattens your stomach in just minutes a day!"

Really? Rather than take them at their word, ACE commissioned researchers at the exercise physiology and biomechanics labs at the California State University, Northridge, to design and execute a study to analyze these claims.

The Study

Twenty-five men and women, age 18 to 40, were recruited to participate in the AB-DOer study. From this group, five college-age subjects performed exercises recommended on the accompanying video. These include three AB-DOer-specific exercises: good mornings (forward and backward movement), body bobs (side-to-side bends) and body boogies

(rotating the torso in a circle). Subjects then performed three traditional movements — the crunch, oblique crunch and trunk extension — for comparison with the AB-DOer exercises. Surface electromyography (EMG) was used to measure the muscle activity of each exercise.

To evaluate the aerobic benefit of the AB-DOer, the remaining 20 subjects were monitored while performing the eight-minute introductory video routine. This was followed by a three-minute session during which participants were instructed to go "as hard as possible" using any of the movements learned in the video. During this session, oxygen consumption and heart rate were continuously monitored, and exercise intensity was gauged using the Borg Rating of Perceived Exertion 10-point scale. Caloric cost was also calculated.

The Results

When evaluated simply by muscle activity, the AB-DOer exercises elicited less activity than traditional exercises in most of the comparisons*. As for aerobic benefits, subjects exercising on the AB-DOer had an average heart rate of 53 percent to 57 percent of their age-predicted maximum. This is below the recommended 65 percent to 85 percent target heart-rate range. And, when participants were asked to rate their perceived exertion, the average on the 10-point scale was 1.8, which

is considered "weak" according to the verbal anchors provided on the Borg scale.

Overall, the AB-DOer provides a relatively low-intensity workout that burns approximately 4 to 5 calories per minute (this figure is based on the average weight of subjects, which was 157 pounds). By comparison, walking on a treadmill at 3 miles per hour (which is the equivalent of a light-to-moderate walk) burns approximately 5.3 calories per minute.

Fifteen of the 20 participants provided general feedback after their 11-minute exercise session. Most mentioned that they enjoyed the body bobs, but none felt any fatigue in the muscles in the midsection. However, most felt fatigue in their shoulders from supporting the bar. The torsion bar began to "creak" during the metabolic evaluation, which many reported as annoying. More than half felt the massage roller was uncomfortable, but it should be noted that changes in the roller shape have been made on a more recent version of the equipment.

Study Results and Product Claims Don't Add Up

An effective weight-loss program, of course, requires proper nutrition and appropriate exercise. Over time, one must expend more calories than one consumes. The lower the intensity of exercise, the longer one must participate to expend a given number of calories. Because the AB-DOer provides a relatively low-intensity workout, one would have to exercise considerably longer to achieve the same calorie-burning effects of higher-intensity exercise such as indoor cycling or step aerobics. Therefore, the AB-DOer does not appear to live up to the claims made by its manufacturer. However, as with any exercise product, if it provides the necessary motivation to stick with an exercise program, it may be worth the investment.

**The exceptions were in the external obliques during oblique crunches compared to all AB-DOer movements, body bobs compared to the crunch, and the body boogie compared to trunk extension. In these exceptions, there appears to be no advantage to performing either traditional exercises or certain AB-DOer movements.*



Crunch



Oblique crunch



Trunk extension



Good mornings



Body bobs



Body boogies

References

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