

Don't Worry—Lift Weights

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IT IS GENERALLY RECOGNIZED that participating in some form of exercise can help one feel better psychologically and improve one's mood. Most of the literature reports that the improving and regulating effects on one's mood may only come from aerobic exercise, however. In fact, negative mood states have been shown to follow intense resistance exercise. In the reported studies, moods returned to baseline values within 30 minutes. The current literature had not, prior to one particular study, considered the effects of preexercise mood on the exercise-mood relationship.

That study, entitled "The Effect of Resistance Exercise on Manipulated Preexercise Mood States for Male Exercises," by Bartholomew (1999, *J. Sport Exer. Psych.* 21:39–51) was designed to investigate the manipulation of mood between exercise and no-exercise conditions. Mood was manipulated at 3 levels—positive, negative, and neutral—and was randomly assigned between resistance and placebo activity conditions. Forty college-aged males were used as participants in the study. None of the subjects were members of intercollegiate athletic teams. All subjects attended 4 laboratory sessions with 2 experimenters.

The first session involved an explanation of the experiment before the exercise testing was conducted. Each of the 3 experimental sessions began with 20 minutes of mood induction, followed by 20 minutes of the assigned protocol and 45 minutes of recovery. All subjects experienced each of the 3 mood inductions (positive, negative and neutral). Resistance exercise was reported as a Rating of Perceived Exertion of 15 (Borg Scale), which is considered hard. Placebo activity participants were asked to recall as much detailed information from college yearbook personality profiles. Mood was manipulated in a guided-imagery session, followed by 3 mood inventories. Additional measures included heart rate, blood pressure, and a 3-ml sample of saliva that was assayed for testosterone and cortisol.

Results of the cortisol condition confirmed previous research in that intense resistance exercise produced an immediate, albeit short-duration, increase in negative mood. However, resistance exercisers also reported a delayed improvement in mood beyond that found in the placebo group, an effect that was replicated in the positive-mood condition. In both the resistance-exercise and placebo

activity groups, positive affect returned to baseline values within 5 minutes following exercise. Neither group was successful in sustaining the manipulated positive mood. In the neutral-mood condition, resistance exercise was shown to improve mood, but it did not maintain a positive mood. Results of the negative-mood induction showed that resistance exercise was successful at reducing the negative mood.

It is possible that resistance exercise may merely distract a person from the source of the mood state, resulting in a more neutral mood, and that it may also serve to distract a person from a negative mood. However, this study clearly showed a delayed benefit from resistance exercise that was not found in the placebo group. Resistance-exercise participants reported continued decreases in negative mood to significantly below the baseline, pre-mood-induction level. As a result, state anxiety at 45 minutes post-exercise was significantly lower in the resistance-exercise group than in the placebo activity group. Therefore, there appears to be something unique to resistance exercise that results in an improved mood. ▲