



ACE-sponsored Research Study: The Perfect Pushup

What is your exercise personality? Are you constantly searching for the next new thing, the latest technique or gadget to perfect your form and elevate your results? Or are you a back-to-the-basics type, who prefers tried-and-true workouts that don't require special equipment or a degree in exercise science?

The Perfect Pushup by BodyRev® aims to appeal to both types of exercisers by claiming to maximize the effectiveness of this basic exercise. Created by a former Navy SEAL, the Perfect Pushup features rotating handles that are purported to "maximize strength in the arms, shoulders, chest, back and abdominals while reducing joint strain" at the wrists. Clinical tests cited by BodyRev suggest that users saw results after 10 workouts or less. ACE enlisted researchers, led by Nathan Boehlke and Dr. John Porcari, at the University of Wisconsin, La Crosse (UWLAX), to examine the validity of these claims, as well as to compare the Perfect Pushup to a conventional push-up.

The Study

Thirteen healthy male UWLAX students, all of whom had prior strength-training experience, were recruited to participate in the study. Each subject performed five repetitions of a push-up, with and without the Perfect Pushup, using three different hand positions: standard, wide and narrow. The maximal voluntary isometric contractions of the right pectoralis major, anterior deltoid, triceps brachii and trapezius were measured using surface electromyographic (EMG) analysis.

When subjects used the Perfect Pushup to perform standard and wide-position push-ups, the pectoralis major, anterior deltoid and triceps brachii were more highly activated than when conventional push-ups were performed. There were no differences for these same muscle groups when the narrow position was used, nor were there significant differences in EMG activation in the trapezius when using the Perfect Pushup for any hand position.



Perfect Pushup by BodyRev
\$39.95
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Overall, the Perfect Pushup does appear to elicit more muscle activation in the chest, shoulders and triceps than performing pushups on the floor. Boehlke and his team theorize that the greater EMG activity elicited by the Perfect Pushup is related to the fact that subjects were going through a greater

range of motion (4 to 5 inches greater) as compared to floor-based push-ups. This also explains why using a narrow hand position with the Perfect Pushup, which limits range of motion, didn't elicit a greater muscle response.

Practical Evaluations

To further examine the merits of the Perfect Pushup, we asked ACE exercise physiologists Fabio Comana, M.S., M.A., and Todd Galati, M.A., to spend some time using the Perfect Pushup and evaluate its accompanying workout materials.

"The goal of an elevated push-up," says Comana, "is to reduce stress across the wrist joint and this device helps achieve this (as would a set of dumbbells). However, given the dynamic nature of the pivoting handles, I found it harder to maintain a neutral wrist position in all positions." Comana also expressed concern over the accompanying US Navy SEAL two-minute workout, which he felt would compromise technique and increase risk of injury.

Galati believes that while the instability afforded by the Perfect Pushup may offer a welcome challenge to individuals with good shoulder stability and health, it could increase the risk of injury for those who have shoulder problems or lack the strength to maintain shoulder stability. He urges anyone with shoulder injuries to consult their physicians prior to performing push-ups of any kind.

The Bottom Line

At \$39.95, the Perfect Pushup is a budget- and space-friendly piece of exercise equipment that effectively targets the chest, shoulder and triceps muscles. It is, however, limited in terms of the range of exercises that can be performed with it. **A-**