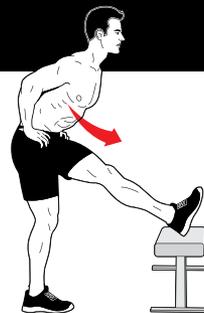


# MUSCLE

**BULLETIN**®

Edited by Laura Roberson

**FLEX YOUR MENTAL MUSCLE.** Tap into your brain to build brawn. Rehearsing lifts in your mind can improve your strength gains, according to a new French study. After training 3 days a week for 4 weeks, athletes who visualized the motion of a leg press during their rest periods improved their strength 5 percent more than those who idly relaxed between presses. A mental workout may boost motivation and improve execution, the scientists say.



## POWER STRETCHING

New lifters, loosen up: **Stretching makes you stronger**, say scientists at Hawaii's Brigham Young University. They found that beginners who did static stretching on their off days saw greater strength gains than those who didn't. One reason: "Longer muscle fibers generally permit faster contraction speeds, which can result in greater power," says study coauthor Arnold Nelson, Ph.D.

## The lean-body secret

Even if you're overeating, **pumping iron can ward off belly fat**, University of Missouri scientists report. In the study, obese people first lost weight by cutting calories and following a 5-day-a-week aerobic exercise plan. Then they boosted their food intake by 1,000 calories a day, ceased the aerobic work, and began weight-training 3 days a week. The result? They regained half the lost weight—but their average waist size stayed the same. That's because the excess calories were largely used for building muscle instead of increasing fat stores, says study coauthor Shana Warner, Ph.D.(c).

# 12 HOURS

## ABS SEEN ON TV

Are those infomercial exercise devices six-pack saviors, or money-wasting scams? You don't have to call an 800 number to find out. Researchers at Slippery Rock University, in Pennsylvania, measured muscle activation in five different abs gadgets and compared them with the classic situp. The verdict: Put your credit card away. The situp trains your abs effectively and won't clutter up your living room.

### Lower-abdominal muscle activation

- 1 Ab Sling
- 2 Situp
- 3 Ab Rocket
- 4 Bender Ball
- 5 Ab Lounge
- 6 The Bean

### Upper-abdominal muscle activation

- 1 Ab Sling
- 2 Ab Rocket
- 3 Situp
- 4 Bender Ball
- 5 Ab Lounge
- 6 The Bean

(highest to lowest)



**Ab Sling**  
These hanging straps activated people's abdominal muscles most—but were also the most despised exercise, says study coauthor Jeff Lynn, Ph.D. "It's very uncomfortable. Many complained about arm and shoulder fatigue, pain, and numbness."



**Ab Rocket**  
The makers of this abdominal rocking chair tout its neck-and-back-supporting design. But according to Lynn, users reported neck strain and thought the motion felt unnatural.



**Bender Ball**  
In theory, it sounds smart: Increase your range of motion with a squishy ball wedged beneath your lower back. But science finds otherwise: Standard situps produced 25 percent greater lower-ab activation than the Bender Ball. What's more, a rolled-up towel can serve a similar purpose.



**Ab Lounge**  
Testers enjoyed this exercise; their backs, however, did not. "It allows you to hyperextend your back," Lynn says. "This puts potentially damaging pressure on the low spine."



**The Bean**  
Banish this blow-up chair to the kiddie pool. "The Bean was the worst of the lot," Lynn says. "It actually facilitates movement forward, so you do less work."

The real secret to a six-pack: A smart diet and total-body training to burn off the fat hiding your abs.



From top: Kagan McLeod, MITCH MANDEL (5), SCOTT McDERMOTT

AMOUNT OF TIME AFTER YOU WAKE UP THAT YOUR MUSCLES NEED TO REACH MAXIMUM FLEXIBILITY

Source: Journal of Strength and Conditioning Research