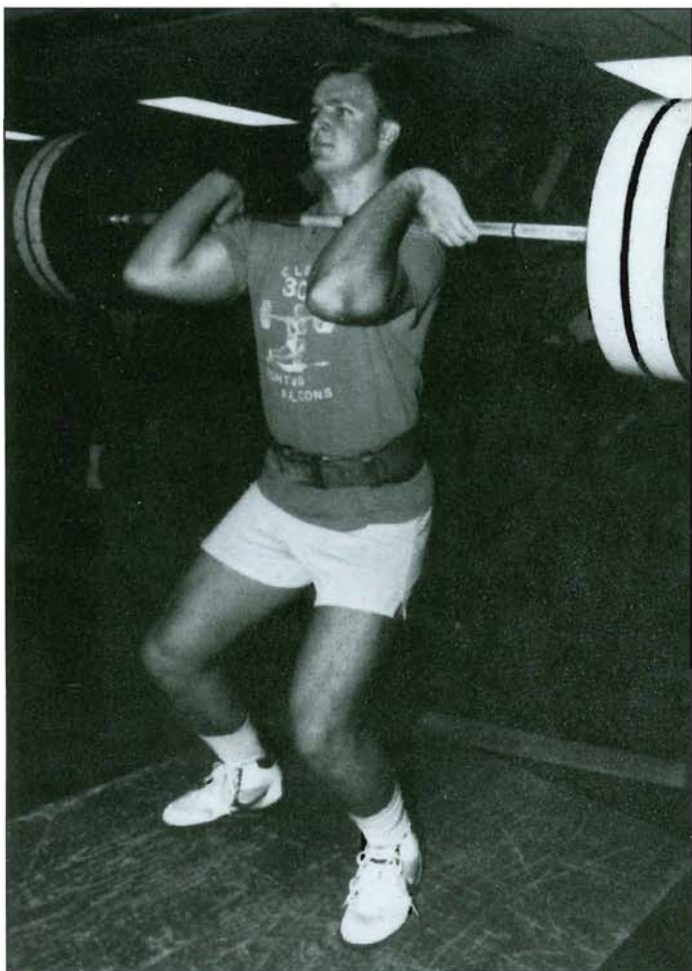


THE POWER CLEAN:

By Kim Goss, B.A., C.S.C.S.
 Assistant Strength Coach
 U.S. Air Force Academy



Steed Lobotske Air Force Offensive Tackle. East-West Shrine Game Participant. First Team All-WAC (Western Athletic Conference) First Team All-WAC Academic. (Photo By Daryl Page)

Many coaches are obsessed with finding new and exotic methods of training. They spend countless hours scanning sports journals from the Eastern Bloc countries for "secrets." They rave over the latest computerized gizmo that will supposedly give their athletes an edge. Although it's wise to try new training methods and exercise equipment for variety, coaches must focus on the basics. Basics like the power clean.

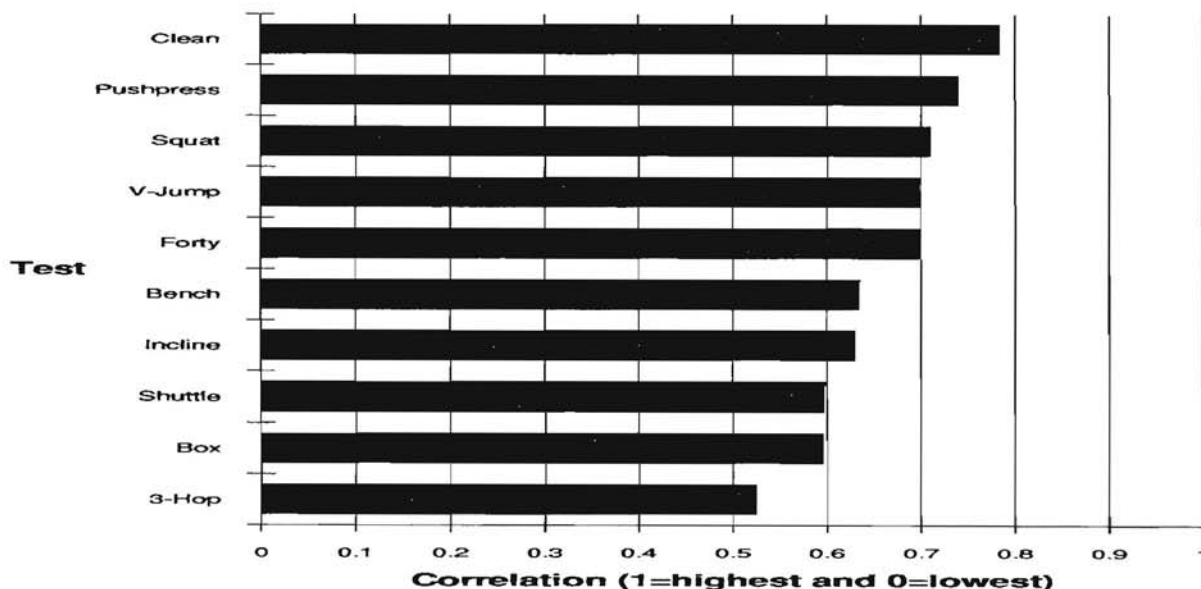
Lieutenant Jim O'Connell is a former Falcon football player, and Captain Robert Watkins is an instructor in our math department. Jim, Robert and I conducted a study on the 1989 Air Force Academy offensive and defensive linemen. Our purpose was to find a mathematical relationship between performance on the field (via our depth chart) and our weight training and field tests. *Figure 1* summarizes the results of this study, along with the longest lines representing the strongest correlation. As you can see, the best test for predicting talent for linemen is the power clean.

The power clean is appropriately named because it develops *power*. Power is the ability to produce strength rapidly. Being a fraction of a second faster can determine if the nose guard sacks the quarterback or if the fullback blasts through a hole. If one of our players complains to Defensive Line Coach Bill Stewart about holding, Coach Stewart will say, "If you were quicker, he wouldn't have been able to hold you!"

A core exercise like the squat is one of the best

Falcon Football 1989 Test Results for Linemen

Fig. 1



WHY IT WORKS!



*Air Force Fullback Jason Jones Power Cleans 305 at only a 205 lb. bodyweight
Photo by Arthur H. Bilsten*



*Inside Linebacker Kette Dornbusch Has Power Cleaned 345 Pounds weighing only 220 pounds.
Photo by Arthur H. Bilsten*

exercises for improving basic strength. But because it involves a plyometric action of the legs and hips, the power clean teaches the muscles to use that strength explosively. You might say the squat trains the muscle system and the power clean trains the nervous system.

Figure 2 shows the results of two different training methods. The top line represents the training of powerlifters, athletes who emphasize low speed exercises like the squat. Powerlifters can produce more strength (force) than any other athlete. The middle line represents the training of Olympic-style weightlifters, athletes who emphasize high speed exercises like the power clean. **Although they are not as strong as powerlifters, Olympic weightlifters can apply their maximum level of strength faster.**

The 40-yard dash is a standard test for all football players, but it probably isn't the best test for linemen because they seldom run more than a few yards each play. Canadian strength coach Charles Poliquin

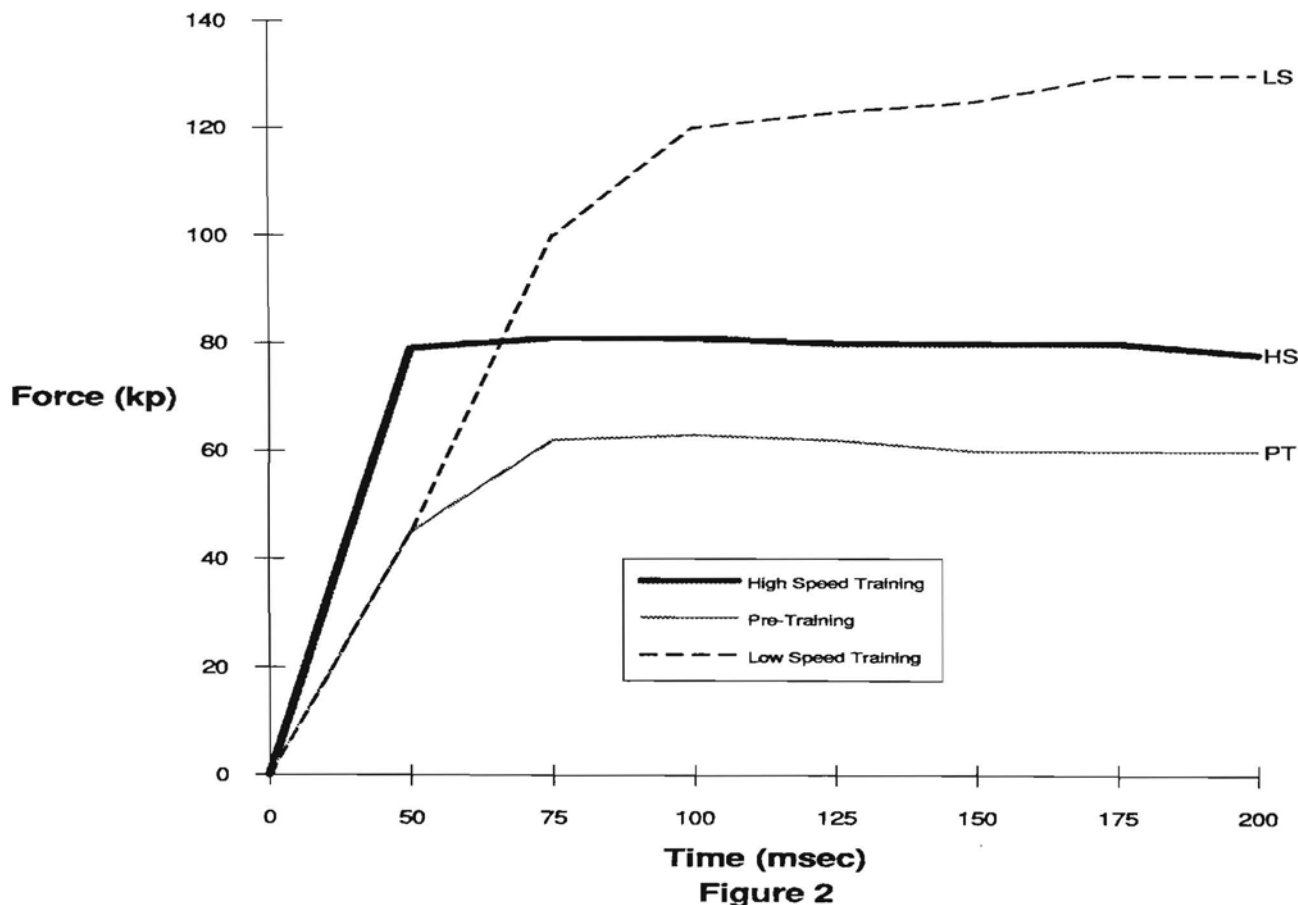
was a guest speaker at the National Strength and Conditioning Association's National convention in 1990. Poliquin said because the correlation between a 10-yard sprint and a 40-yard sprint is .3, which is quite low, it would be "a big mistake" to use the 40 as a test of speed for lineman. Poliquin also believes linemen don't need to run as much as other positions in football. "For them, maximal strength training is more important."

One way we have encouraged our players to improve their power clean is with T-shirt promotions. In 1988 we only had eight athletes who could clean 300 pounds before the start of the season. We felt this was unacceptable for a Division I football team, so we began awarding T-shirts for players who cleaned 275 and 300 pounds. **Before the 1991 season, we presented thirty athletes with the 300-club shirts.** What's more, many of these athletes weighed 200 or less!

Because of our efforts, a 275-pound power clean has become commonplace at the Air Force Academy. We

THE POWER CLEAN: WHY IT WORKS!

High Speed vs. Low Speed Training Poliquin 1990



have even been awarded several 275-club shirts to hockey and basketball players. For the 1992 season, we will add a 325-club shirt and drop the 275-club shirt. At the rate we're going, by 1993 we'll need a 350-club shirt!

Because the Air Force Academy cannot recruit as many blue-chip athletes as other major universities can, we have to train smart, and we believe a program that stresses the power clean as a core lift helps our athletes fulfill their physical potential. That's why the Falcon football coaching staff endorses the power clean. That's why *Bigger Faster Stronger* endorses the power clean. It works!

Success Is Not Measured By The Heights One Attains, But By The Obstacles One overcomes In It's Attainment.

Booker T. Washington (1856-1915)

Editor's Note: We thank Coach Kim Goss for this great article and also the many past articles of his in the BFS Journal. Air Force athletes continually amaze me. Pound for pound they are the toughest competitors in the nation.

POWER CLEAN VIDEO

Incredible 55 Minute Video It Will Move Your Team Up A Quantum Leap! ONLY \$29

Call BFS 1-800-628-9737