

The Power Clean

the lifter gets good at lifting them *at that slow speed*. He does not get good at lifting them at a faster speed. So slow deadlift training will not make the clean move faster. And if a lifter gets good at pulling a weight fast, as in a power clean, he gets good at generating force at that faster rate of speed. The rate of speed that is trained is the rate of speed to which we adapt. But this rule only works well in one direction: strength developed at a slow rate of speed can only be effectively used slowly, but strength developed at a high rate of speed can be used at that high speed *and* at speeds slower than that. It is incredibly important to understand this. **High speed training with enough weight to make high power production necessary makes for useable strength at a wide range of speeds, from fast with moderate loads where the training takes place to slow with heavier loads, where the contest squat, bench and deadlift are done.**



Figure 6-3. The power clean contributes to the deadlift, and the deadlift contributes to the power clean. The power clean teaches timing and athletic synchronization of complex, multi-joint movement; the commitment involved in getting under the bar, the all-or-none that is sometimes lacking in a deadlift attempt; it trains the rate of motor unit recruitment, thus improving neuromuscular efficiency; and it teaches explosion, the mental cue for highly efficient motor unit recruitment. The deadlift develops the concentric and isometric strength involved in holding the correct position through the slower parts of a heavy clean, and the ability to hold the back rigid during the explosive hip extension that makes for an efficient second pull; it increases the total number of motor units that can be recruited in a contraction; it teaches and enables “grind” – the patience necessary to maintain position through a long effort; it disinhibits the nervous system against heavier weights, so that heavy cleans feel light in contrast to heavy deadlifts; and it develops the good old-fashioned ability to produce force.

This is probably due to the way the central nervous system adapts to exercise, and the way it plugs in to the muscles. The most demanding way to use the muscles and the nerves that run them is explosively, with weights that require the production of maximum power. If muscles are trained to do this efficiently, the slower jobs, even with heavier weights, are a piece of cake.

So the next logical question is this: why do we need to squat and deadlift at conventional speeds – to develop strength at slow speeds – if we are training for explosive sports? The reason is that there are slow and isometric components in explosive movements that benefit from the strength developed at slow speeds. A clean has a slow phase off the floor that benefits from the strength it takes to maintain the position until the explosive phase, so deadlifts are useful for training the clean. The actual explosion at the top does not benefit from the slow strength developed in the deadlift and squat, but the whole of the lift does, from the pull from the floor, to the ability to hold the back locked, to the catch position, and finally the support position at