fewer sets be performed due to more direct muscle overloading and less energy available for forthcoming sets," says Tom Kelso, the Strength and Conditioning Coordinator at Saint Louis University and a longtime advocate of HIT. "One set can do it or even a second or third set. But if the effort is truly high, doing too many sets eventually leads to diminishing returns. It is not just a one-set-and-done proposition but more a question of quality versus quantity."

Mat Borger, a Fitness Tech who works for the federal government, offers this thought-provoking perspective: "Many individuals confuse the end with the means. Often, it is forgotten that the 'end' of a set is to safely fatigue the targeted muscle or muscles. Muscular fatigue elicits adaptation which is the ultimate 'end' of strength training and why it is done in the first place. Sets are merely a measure of the work required to reach that end, thus making them the 'means to the end.' It is not a matter of whether or not muscular fatigue is reached in a specified number of sets; rather, it is a matter of whether or not maximum stimulation was provided at all."

Repetitions

Another misconception is that HIT always uses 8 - 12 repetitions. "A repetition range of 8 - 12 fits within the anaerobic nature of strength training," explains Coach Kelso, "and it works for *any* program, provided that progressive resistance is used. Since individuals have different muscle fiber types and nervous systems, various repetitions can be used to maximize their response and add diversity to training. It is all about producing muscular fatigue and HIT can use many repetition ranges for that purpose."

Interestingly, Jones actually suggested a variety of repetition goals including as few as 6 and as many as 20. For some exercises, he recommended a reverse pyramid of three sets consisting of 10, 8 and 6 repetitions.

Consider the approach of Kim Wood who was the Strength and Conditioning Coach of the Cincinnati Bengals for almost 30 years. A devotee of HIT since the early 1970s, Coach Wood keeps it basic: He recommends a target of 20 repetitions for the lower body and 10 repetitions for the torso.

With more than 25 years of experience as a strength coach in the National Football League, Dan Riley is also a practitioner of HIT. Coach Riley recommends a variety of set/rep schemes to his professional athletes including three sets of six repetitions in the bench press with a barbell (but more on equipment selection in a bit).

Chip Harrison, the Strength and Conditioning Coach at Penn State University and another advocate of HIT, frequently manipulates the repetition ranges of his athletes. "It is common for our athletes to use varied repetition schemes throughout the course of a season or over time in order to produce the desired training response," notes Coach Harrison. "While we may invest a good bit of time using a repetition range of 8 - 12, it is just as likely that our repetition range will be 4 - 6 or 15 - 20."

Equipment

A third misconception is that HIT always incorporates a Nautilus machine (or some other machine). "Unfortunately, too many people still associate HIT with using Nautilus machines," says Mike Shibinski, the Strength Coach at Princeton High School in Cincinnati. "To truly understand the basis of HIT is to realize that you do not have to use just Nautilus machines."

In order to increase muscular size and strength, a muscle must be loaded with some form of resistance. The source of that resistance really does not matter. Mike Bradley, an Assistant Strength and Conditioning Coach at Florida State University and yet another longtime supporter of HIT, says, "The main factors that determine gains in size and strength are genetics and the level of intensity, not the type of equipment that is used." He continues, "Muscles do not have eyeballs that allow them to see if the resistance comes from a machine or a barbell." Coach Kelso takes this point one step further: "Trust me, I have seen strength increases realized by athletes who used barbells, dumbbells, sandbags, manual resistance, plate-loaded and selectorized machines and their bodyweight."