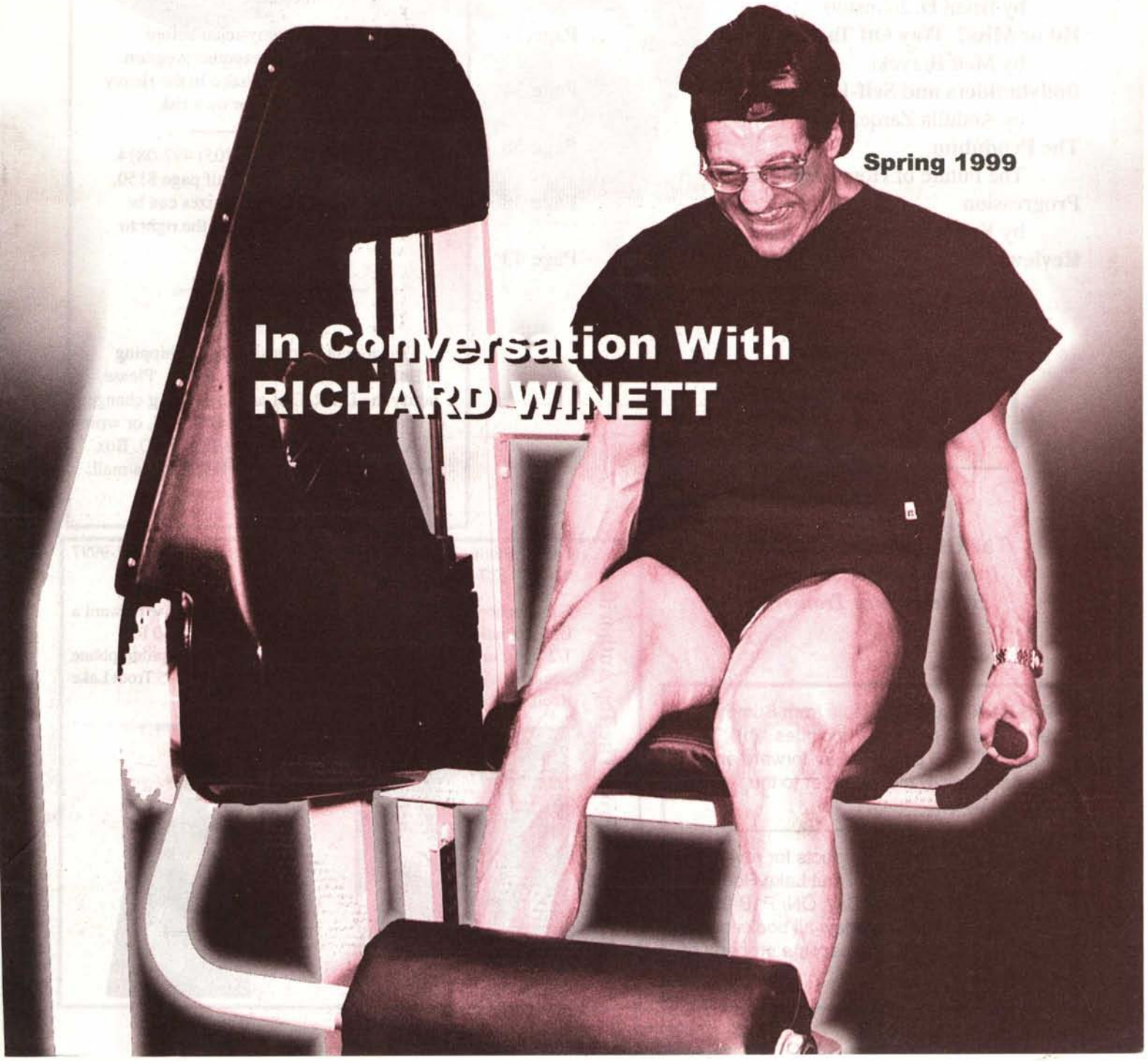
EXERCISE PROTOCOL



Spring 1999

In Conversation With RICHARD WINETT

Hit or Miss?
Way Off Target!

Matt Brzycki

Coordinator of Health Fitness, Strength and Conditioning
Princeton University

"High Intensity Training" or "HIT" is currently enjoying unprecedented popularity. While there are numerous interpretations of HIT, the term can be used to describe any type of strength training that is intense, brief and infrequent. There are many misconceptions and inaccuracies associated with HIT which are often advanced by a number of individuals who have absolutely no first-hand knowledge of a proper application of this type of training.

Numerous misconceptions and inaccuracies were circulated as facts in an article that appeared in the October 1998 issue of Powerlifting USA magazine and later on the internet. The article was called "HIT or Miss?" and was written by Louie Simmons. According to "The Official Louie Simmons Westside Barbell Home Page," Mr. Simmons "is world renowned as a 'tinkerer' of powerlifting." The following are some of the more outrageous comments made by Mr. Simmons (LS) in his article along with my rebuttal (MB).

LS: *Linemen are entering the National Football League (NFL) from HIT schools "that can't vertical jump 19 inches or squat 300 pounds."*

MB: Actually, this statement was attributed to a "head strength coach that has been affiliated with a winning tradition in the NFL." (Though not named, I'm fairly certain that I know his identity.) Nevertheless, the strength coach's statement was noted by Mr. Simmons and is laughable for several reasons. First of all, how many linemen from HIT schools is he referring to? Is it all linemen "from HIT schools" or -- since the noun is plural -- is it just two? Second, does this mean that every single lineman from non-HIT schools can vertical jump more than 19 inches and squat more than 300 pounds? I think not. Third, some HIT strength coaches at the collegiate level do not incorporate barbell squats in their program. Perhaps the most common reason that the strength coaches do not include barbell squats in their programs is because they feel that most of their players cannot perform the movement without experiencing an unreasonable amount of orthopedic stress. In this case, a player may go 4-5 years without ever doing this movement. Anyone who has ever done barbell squats knows that the exercise requires a certain degree of skill. A person who does not practice barbell squats on a regular basis will not perform the movement to the utmost of his or her capability. Fourth, weren't the linemen "from HIT schools" referred to by the unnamed strength coach tested by NFL scouts at some point prior to being drafted? I don't believe that players are tested in the squat at the NFL Scouting Combine -- which makes you wonder about the importance of this exercise -- but they are certainly tested in the vertical jump. And if these players were known to have such a poor vertical jump -- and/or barbell squat -- why were they drafted in the first place? Answer: Because they are outstanding football players.

An athlete's vertical jump and maximum barbell squat are only important if you are forming a vertical jump club or barbell squat team. They have absolutely nothing to do with an athlete's ability to play football -- or any other sport, for that matter. Football rosters at all levels of play -- high school, college and professional -- are loaded with athletes who have a great vertical jump and barbell squat. In many instances, however, the players with the best vertical jumps and barbell squats reside deep down on the depth chart because their football skills are inferior to those of their teammates.

In a study to determine the correlation between physical tests and football skills, Aaron Komarek -- the Assistant Strength and Conditioning Coach of the Tampa Bay Buccaneers -- researched data from five NFL Combines (1993-97). For each of the five years, he looked specifically at the fastest players in the 40-yard dash at each position (excluding quarterbacks, punters and kickers) and the top three bench pressers at each position (excluding quarterbacks, wide receivers, punters and kickers). Of the 105 players with the fastest time in the 40-yard dash during that 5-year period, Coach Komarek found that 20 (19%) weren't even drafted. Moreover,

an examination of their playing status during the 1997 playing season revealed that only 31 (29.5%) were starters while 31 (29.5%) were no longer playing in the NFL. Of the 95 top bench pressers during that 5-year period, he found that 28 (29%) went undrafted. Additionally, an examination of their playing status during the 1997 playing season showed that only 22 (23%) were starters while 41 (43%) were no longer playing in the NFL.

Why is there little correlation between football skills and physical testing such as a vertical jump or a maximum barbell squat? Answer: Because they're different types of skills with different types of requirements. Football is largely composed of "open" skills that are done in an environment that is variable and unpredictable. Essentially, the athlete must react and make proper adjustments to an opponent. Conversely, a vertical jump and barbell squat are "closed" skills that are done in an environment that is stable and predictable. In this case, there's no need to react or make adjustments since an object is waiting to be acted upon.

To summarize: In terms of predicting athletic ability, the vertical jump and barbell squat -- as well as the 40-yard dash and bench press -- are meaningless.

LS: *"Machines and HIT [are] useless."*

MB: This remark was attributed to an anonymous NFL lineman but it is a common misconception about machines and HIT. According to the article, the lineman "was placed on a HIT program in college" and played on a team that was in the Top 5 during his senior year. According to the article, the player "made a remark that machines and HIT were useless" which "got back to his old college team, who immediately banned him for life from their weight room."

Well, the fact that the unnamed NFL lineman played for a top-5 team in college which used a HIT program certainly narrows the possibilities as to his identity. Actually, Mr. Simmons may have inadvertently provided another clue as to the player's identity. Mr. Simmons wrote that he, himself, is "involved in the training of pro-football teams" and then noted two of those teams as the Green Bay Packers and the New England Patriots. I'm virtually certain that I know the identity of this nameless player and, if it's who I think it is, he's an offensive lineman -- more specifically, a left guard -- who was drafted in the sixth round in the mid 1990s. And he also presently plays for one of the teams with which Mr. Simmons is "involved in the training." If my suspicions are correct, there is another version of this story. According to the player's college strength coach, it goes something like this: The publisher of a quarterly magazine -- a publication that essentially serves as a vehicle to hype his training methodologies -- was in the weight room of a certain NFL team looking to write a feature. The lineman was in the room lifting weights and was noted as having played at a university which has incorporated a HIT program for a very long time (and also has, by the way, quite a "winning tradition"). The player was photographed doing barbell squats -- specifically "box" squats -- and was "interviewed" for the magazine. The player jokingly made a comment to the effect that his college strength coach would probably ban him from the weight room for life when he saw the article. The player was not "immediately banned for life from their weight room." As a matter of fact, I'm told by his college strength coach that the player has been -- and will always be -- welcome in their weight room.

Furthermore, it is also interesting to note that Mr. Simmons advances the notion that machines are "useless," yet "The Official Louie Simmons Westside Barbell Home Page" sells a glute/ham machine for $460, a reverse hyperextension machine for $995 that is "great for strength and rehabilitation" and a belt squat/deadlift machine for $2,000 that is a "Westside exclusive for building explosive power" and "a great addition to any gym." Perhaps all machines are "useless" -- except for those sold by Mr. Simmons which are "great for strength" and "for building explosive power." And Mr. Simmons offered absolutely no proof whatsoever in his article to back up the assertion that HIT is "useless."

LS: *"HIT views [intensity] as a feeling, like a pump, a term bodybuilders made popular."*

MB: This is unbelievably ridiculous. From whom did Mr. Simmons acquire this information? I've known about HIT since 1980 and I've never heard or read that intensity was likened to "a feeling, like a pump." Never. The most popular definition of intensity that is used by HIT enthusiasts is probably "a percentage of momentary ability" -- a definition which, incidentally, is often cited in this publication. Intensity has nothing to do with "a feeling, like a pump."

If anything, HIT proponents devalue the significance of a pump. In his recent audiotape series, Mike Mentzer states unequivocally that a pump is temporary and has nothing to do with muscular growth.

LS: *"Is a bodybuilder quick or explosive? No."*

MB: This is simply another preposterous comment by Mr. Simmons that is based upon wild speculation, not factual evidence. Indeed, does Mr. Simmons know for a fact that every single bodybuilder currently on the planet -- which must number in the tens of thousands -- is not quick or explosive? Or is he simply making this statement with the hope that it will be accepted by readers as fact? Besides, what do specific comments about bodybuilders have to do with an analysis of HIT?

LS: *"Strength endurance is basically all the HIT program can possibly build."*

MB: This inaccurate claim is based upon the notion that there are several different "forms" or "elements" of strength which are independent of each other and must be worked separately. In his article, Mr. Simmons stated that "Most authors who have studied strength as a physical quality examine it in four forms: absolute, speed, explosive and strength endurance." Yet, elsewhere in his article he curiously mentions three other types of strength: reversal strength, starting strength and accelerating strength. At any rate, these and other "elements" of strength are all directly related. If you improve your muscular strength, for example, you will improve your muscular endurance. If your muscle fibers become stronger, fewer are needed to sustain a submaximal work output. Additionally, a greater reserve is now available to extend the submaximal effort. So, increase muscular strength and you increase muscular endurance. Likewise, if you improve your muscular strength, you will improve your explosive power. If your muscle fibers become stronger, they can produce more force; if they can produce more force, you can move with less effort and do so more quickly/explosively.

LS: *"HIT may increase endurance, but it does not promote great strength."*

MB: This comment by Mr. Simmons is especially interesting in that it is a blatant contradiction of an earlier claim that he made. In the paragraph immediately prior to this statement in his article, he wrote that "Strength endurance is basically all the HIT program can possibly build. Strength endurance is characterized by a combination of great strength and significant endurance." If a HIT program can only build "strength endurance" and "strength endurance" is "a combination of great strength and significant endurance," doesn't it follow that a HIT program can build "great strength"? But here, Mr. Simmons claims that HIT "does not promote great strength."

Regardless, what exactly is meant by "great strength"? Is it the ability to bench press 400 pounds? 500 pounds? And how do various genetic traits -- such as limb length -- factor into this? For example, compare a person who bench presses 400 pounds a distance of 25 inches to a person who bench presses 335 pounds a distance of 30 inches. Obviously, the individual with the 400-pound bench press can lift more weight. However, what about the fact that shorter limbs give this person a distinct biomechanical advantage in the bench press? In this example, the 335-pound bench press is actually more impressive since the lifter performed more "work" (10,050 inch-pounds compared to 10,000 inch-pounds).

Strength is increased by a proper application of the Overload Principle -- that is, by providing increasingly greater demands on the muscles from one workout to the next. This can be accomplished by either doing more repetitions or by increasing the amount of weight used. Any strength training program will be successful provided that it involves progressive overload and adequate recovery.

LS: *"HIT proponents use a lot of machines."*

MB: Really? What exactly constitutes "a lot"? Further, has Mr. Simmons or any other HIT naysayers ever done any research to determine precisely what type of equipment is used by "HIT proponents"? Or is this yet another belief that's been repeated for so long by the detractors of HIT that it's been accepted as fact? Dr. Ken Leistner would certainly be categorized as a "HIT proponent" but the overwhelming majority of the exercises he typically prescribes are done with barbells and dumbbells. It is also interesting to note that more than a few HIT strength coaches trained predominantly with barbells and were reasonably successful as competitive powerlifters including Steve Wetzel, the Strength and Conditioning Coach of the Minnesota Vikings. The truth of the matter is that a wide variety of equipment modalities are incorporated in HIT programs to supply the resistance to build muscular strength including selectorized machines, plate-loaded machines, barbells, dumbbells, sandbags, Goodyear tires, other human beings and even the lifter's bodyweight (during dips and chins).

Besides, what would be so bad with using "a lot of machines"? Many productive exercises can be performed with machines that simply cannot be done in a practical fashion with barbells and dumbbells including the leg extension, leg curl, calf raise, lat pulldown and movements for the neck area (i.e., flexion, extension and lateral flexion). Other exercises offer significant improvements over their free weight counterparts in terms of providing proper resistance over greater range of motion such as the arm cross (i.e., a "pec deck" or "pec machine"), pullover and seated row.

As long as the muscles are progressively overloaded with increasing demands and they receive adequate recovery between workouts, a person will get stronger -- regardless of the type of equipment that

is utilized. Funny how some "experts" believe that if athletes increase the resistance that they use on a machine bench press over a period of time, they did so because they became better skilled at the movement. But if athletes increase the resistance that they use on a barbell bench press over a period of time, they did so because they got stronger.

LS: *"If you load a pec machine to the max, starting the movement requires a max effort, which is very difficult and dangerous."*

MB: It is very difficult to understand exactly what Mr. Simmons is trying to say here. By writing "If you load a pec machine to the max," does he mean loading it with the maximum weight that can be lifted for one repetition? If so, it would be extremely unusual for anyone to attempt a one-repetition maximum (1-RM) on a pec machine. Or does he mean loading it with the maximum weight that can be lifted for multiple repetitions? If so, why would "starting the movement require a max effort"? At any rate, wouldn't his claim also be true of a barbell? That is, substituting the word "barbell" for "pec machine" yields the following: If you load a barbell to the max, starting the movement requires a max effort, which is very difficult and dangerous.

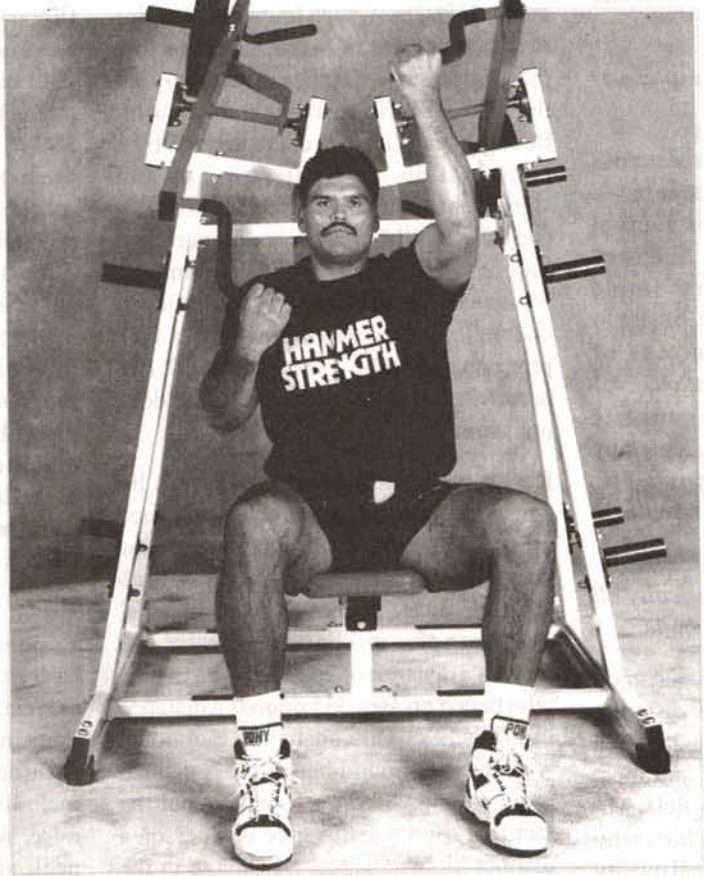
Or -- as his next claim implies -- is he suggesting that the strength curves of pec machines are such that there's far too much resistance in the starting position? If so, Mr. Simmons is assuming that all pec machines are designed poorly -- an assumption that isn't necessarily true.

LS: *"Yet at the finish, where the most weight can be lifted because of accommodating resistance, machines show their downfall."*

MB: Again, it's hard to understand what Mr. Simmons is trying to say. However, I think he's suggesting that the strength curves of pec machines are such that there's far too little resistance in the mid-range position. If so, Mr. Simmons is again assuming that all pec machines are designed poorly -- an assumption that isn't necessarily true.

Mr. Simmons also appears to be confusing "accommodating resistance" with "variable resistance." Machines in which the resistance is controlled by gears, friction, hydraulics or pneumatics provide accommodating resistance, which generates a load that is equal and opposite to the force exerted by a lifter; for the most part, machines in which the resistance comes from a selectorized weight stack provide variable resistance. The overwhelming majority of "pec machines" provide resistance that is variable, not accommodating.

Anthony Munoz, NFL Man of the Year-1991



LS: *"HIT proponents for some reason think that explosive weight training is dangerous."*

MB: Well, I agree with Mr. Simmons on this as it is really what most HIT proponents think. Are fast speeds of movement more dangerous than slow lifting speeds? Only three things are possible: (1) the faster you lift a weight the safer it becomes; (2) the faster you lift a weight the more dangerous it becomes; or (3) a change in the speed of movement has absolutely no effect in terms of the risk potential. Of the three, the first possibility defies common sense. Actually, it's completely absurd. And it's highly unlikely that there would be no difference between fast speeds and slow speeds in terms of potential risk. The only logical possibility is #2: The faster you lift a weight the more dangerous it becomes.

True, the viscoelastic properties of tissues are a variable in all this. Despite the viscoelastic nature, however, tissue failure will still occur at some point. Unfortunately, there's only one way to determine the precise tensile strength of tissue: when the structural limits have been surpassed. Then, of course, it's too late.

LS: *"Finally I ask, is anything more dangerous than football itself?"*

MB: For shame. Is Mr. Simmons suggesting that because football is a dangerous sport, the performance of dangerous activities is justifiable? To paraphrase Ken Mannie, the Strength and Conditioning Coach at Michigan State, "Using potentially dangerous movements in the weight room to prepare for potentially dangerous activities is like banging your head against the wall to prepare for a concussion."

LS: "HIT proponents also think that if you exercise slow, you won't become slow."

MB: Again, I'll agree with Mr. Simmons on this since it is what HIT proponents

do believe. For the moment, however, suppose that lifting weights with slow speeds did make you slow. It would be safe, then, to presume that the slower you lift a weight the slower you become. Stated otherwise, in order to become as fast as possible you should lift weights as fast as possible. And the only way to do that is not to use any resistance whatsoever when lifting weights. None. After all, isn't it true that the speed of your limbs will always be faster when using no resistance as compared to any resistance, no matter how little? But why, then, do some "experts" encourage athletes to run while dragging a parachute or wearing a weighted vest or pulling a sled? Won't you run slower when pulling added resistance as compared to no resistance? Then aren't you training yourself to run slower? So, why don't the "experts" who claim that lifting weights at slower speeds will make you slower also tell you that running at slower speeds -- such as when using a parachute or pulling a sled -- will make you slower? Is it because a few of these people can profit from the sale of parachutes, weighted vests, harnesses, tether cords, sleds and other "speed" paraphernalia?

The same is true for the use of weighted implements. If lifting weights at slower speeds trains you to become slower, what happens when athletes practice their sport skills with weighted objects such as baseball players who swing weighted bats, shot putters who toss heavier-than-normal shot puts, golfers who swing weighted clubs, boxers who throw punches while holding dumbbells and so on? Isn't your speed of movement slower when using weighted equipment as compared to regulation equipment? Why is it that many of the same "experts" who tell you not to lift slowly because it will train you to become slow don't tell you that you shouldn't practice athletic skills with weighted objects? In fact, many of them endorse the use of weighted objects.

The truth is that you won't get slower by lifting weights with slow speeds of movement. By practicing skilled movements with added resistance, however, it is possible that athletes may be training their neuromuscular systems to move slower. In addition, the added resistance will result in a movement pattern that differs from the original skill when done without the added resistance -- essentially it is a new movement pattern -- thereby temporarily confusing the previously established neuromuscular pathways of the intended skill.

LS: *"Wouldn't it be more beneficial to exercise for 7 to 8 seconds and repeat a set of weights? That's how the game [of football] is played, right?"*

MB: Using this reasoning, cross-country runners should perform each set in the weight room for at least 20 minutes. And pitchers should do each set for no more than about 0.46 seconds since that's how long it takes a fastball fired at 90 miles per hour to travel 60 feet, 6 inches. Further, they should perform about 100 sets -- each lasting about 0.46 seconds -- with about 20 seconds of recovery between sets. That's how the "game" is played, right?

The same twisted logic is also used by those who endlessly butcher the Principle of Specificity by reasoning that since athletes play football on their feet then they should exercise on their feet -- thus the fetish for the so-called ground-based training. It is ridiculous to think that athletes cannot improve their strength while sitting or laying down. It is interesting to note that while this misguided notion has caused many to condemn the leg press, the same individuals continue to endorse the bench press -- despite the fact that neither movement is done in a standing position. No contradiction there. And on a related note, why advocate split routines since sports require the integrated effort of the entire musculature at once not in parts?

LS: *"Using our program, [a coach] currently has over 68 men who can power clean 300 pounds or more, out of 90."*

MB: Well, I sincerely hope that the person coaches 90 Olympic-style weightlifters. Otherwise, this information is meaningless. Like the vertical jump and the barbell squat, the power clean is not an indicator -- or a facilitator -- of athletic ability.

While on the subject, there is exactly no scientific research that shows the power

clean -- or any other form of explosive lifting -- improves performance on the athletic field. Studies have demonstrated improvements in the vertical jump, force production and other "closed" skills that were accomplished in a controlled, stable and predictable environment in a nice, neat little laboratory. However, no studies have proven that the power clean produced improvement in specific "open" skills that are performed in the "real world" environment of athletics -- which is uncontrolled, unstable and unpredictable -- such as a lineman's ability to explode out of his stance DURING A FOOTBALL GAME or a forward's ability to rebound DURING A BASKETBALL GAME or a catcher's ability to throw out a runner DURING A BASEBALL GAME or a goalie's ability to react to a shot DURING A HOCKEY GAME or any athlete's ability to perform any other specific "open" skill used DURING ANY ATHLETIC CONTEST. Such "open" skills are totally different from some performance in a "closed" skill that was registered in a lab like improvement in a vertical jump where someone might imply or suggest or speculate or wish or pray that this betterment will somehow "transfer" to the explosiveness in other sport skills performed on an athletic field. Simply, there's no study that shows the power clean produces an honest-to-goodness, full-fledged improvement in explosiveness in a specific "open" skill during game conditions. And if there is no scientific evidence then there is only wild speculation, anecdotal evidence and wishful thinking about how the power clean can improve explosiveness or specific skills on the athletic field.

LS: *"[Recruiters for teams who use HIT] pick skilled people who can sometimes survive HIT, but the linemen cannot survive."*

MB: This statement contains several unfounded beliefs that have absolutely no factual basis whatsoever. The first relates to the outrageous belief that when HIT schools/programs are successful, it is because they've RECRUITED highly skilled athletes; when non-HIT schools/programs are successful, it is because they DEVELOPED highly skilled athletes. What an incredible coincidence that HIT schools somehow manage to get all the highly skilled athletes and the non-HIT schools somehow manage to get all the relatively unskilled athletes. Further, this is insulting to the sport coaches at HIT schools: It suggests that they cannot coach/develop unskilled athletes. And it is equally insulting to the recruiters at non-HIT schools: It suggests that they cannot recruit skilled athletes.

Saying that skilled people "can sometimes survive HIT" and "linemen cannot survive HIT" are truly bizarre remarks. And, as usual, Mr. Simmons offered exactly nothing in the way of evidence to support his position. What does it mean to "survive HIT"? When "linemen cannot survive HIT," does it mean that they literally died as a result of the training? Or when "linemen cannot survive HIT," does it mean that they were not mentally and physically capable of completing such a challenging type of strength training in a highly aggressive fashion? Finally, why is it that "linemen cannot survive HIT" while players of the so-called skilled positions "can sometimes survive HIT"? Is it because of their relatively larger size? Is it because they begin each play in a 3-point stance?

Is it true that "linemen cannot survive HIT"? Does the name "Anthony Munoz" ring a bell? Mr. Munoz -- widely regarded as the greatest offensive lineman in the history of the NFL -- was somehow able to "survive HIT" for 13 years with the Cincinnati Bengals. Despite suffering 3 knee injuries in 4 years as a college player -- including one in his senior year which caused him to miss all but one game -- Mr. Munoz missed exactly 4 games in 13 years with the Bengals. As a result, it's no surprise that he was once described in the media as being "an indestructible offensive lineman." But according to Mr. Simmons, "linemen cannot survive HIT." How did Mr. Munoz ever "survive" 13 years of doing HIT let alone get elected into the NFL Hall of Fame?

Another Cincinnati lineman who was able to "survive" HIT was Bruce Kozerski. Though not as celebrated as his Hall of Fame teammate, Mr. Kozerski somehow managed to "survive" HIT for 12 years with the Bengals (1984-95).

In reality, scores of other linemen have not only been able to "survive" HIT, but they've done so for rather long periods of time. Simply consider the Washington Redskins -- a team that has been using HIT from 1982 to the present. A list of their linemen -- who somehow managed to "survive" HIT for many years -- reads like a Who's Who of NFL greats: Jeff Bostic (C, 1980-93), Ray Brown (G, 1989-95), Dave Butz (DT, 1975-88), Russ Grimm (G, 1981-91), Joe Jacoby (T/G, 1981-93), Tre' Johnson (G, 1994-98), Jim Lachey (T, 1988-95), Dexter Manley (DE, 1981-89), Charles Mann (DE, 1983-93), Mark May (T/1981-89), Raleigh McKenzie (G, 1985-94), Mark Schlereth (G,

1989-94), George Starke (T, 1973-84) and Ed Simmons (T, 1987-95). As a tight end, James Jenkins has also played a position on the line of scrimmage and was able to "survive" HIT enough to play in 103 games in 8 years for the Redskins (from 1991-98). Interestingly, he also used a HIT program in college (at Rutgers University) for 4 years.

Recent examples of long-term survival of HIT by linemen? Look at the Minnesota Vikings -- a team that has been using HIT from 1992 to the present. Since 1992, the following 10 linemen have somehow managed to "survive" HIT while playing in a total of 788 regular-season games in the NFL: Derrick Alexander (DE, 1995-98), Jeff Christy (C, 1993-98), David Dixon (G, 1994-98), Jason Fisk (DT, 1995-98), Everett Lindsay (G/C, 1993, 1995,

1997-98), Randall McDaniel (G, 1992-98), Mike Morris (C, 1992-98), John Randall (DE, 1992-98), Todd Steussie (G/T, 1994-98) and Korey Stringer (T, 1995-98).

There are many other examples of linemen who were able to "survive" HIT but these miracles are far too numerous to mention. However, consider one more: 6'4" 300+-pound Scott Shaw. The Michigan State lineman managed to "survive" HIT long enough to bench press 225 pounds 38 times (with a barbell) at the 1998 NFL Scouting Combine -- the most by any college player that year.

LS: *"If you watch the Heisman Trophy winner who was on the HIT program as a college athlete and is drafted by a pro-team who uses HIT, invariably he is nonproductive or injury-prone."*

MB: Well, this description narrows it down to exactly one athlete: Desmond Howard who won the Heisman Trophy at the University of Michigan (a "HIT program") in 1992 and was drafted by the Washington Redskins ("a pro-team who uses HIT"). He played 3 seasons for Washington (from 1992-94) and has since played 4 seasons for several teams who don't use HIT (Jacksonville, Green Bay and Oakland). An examination of Mr. Howard's statistics as a professional football player should prove whether Mr. Simmons is right or wrong.

In 7 NFL seasons, Mr. Howard had his best year for receptions (43) as well as his two best years in total yardage (727 and 286) and yards per catch (18.2 and 12.4) while playing for "a pro-team who uses HIT." Mr. Howard also had career highs for receptions in a game (7) and receiving yardage in a game (130) while on "a pro-team who uses HIT." Playing 3 seasons for "a pro-team who uses HIT," Mr. Howard's annual averages were 22 receptions, 344.3 yards and 15.65 yards per catch; playing 4 seasons for "non-HIT" teams, Mr. Howard's annual averages have been 11.25 receptions, 104.25 yards and 9.27 yards per catch. If anything, Mr. Howard became "nonproductive" as a receiver after leaving "a pro-team who uses HIT."

Mr. Howard also returns kickoffs and punts -- and is very good at it, I might add. Playing 3 seasons for "a pro-team who uses HIT," Mr. Howard returned 43 kickoffs for 867 yards (20.16 yards per kickoff return) and 10 punts for 109 yards (10.9 yards per punt return); playing 4 seasons for "non-HIT" teams, Mr. Howard has returned 142 kickoffs for 2,996 yards (21.10 yards per kickoff return) and 154 punts for 1,872 yards (12.16 yards per punt return). While Mr. Howard certainly has had more opportunities to return kickoffs and punts while playing for "non-HIT teams," his averages per return are very similar. Based upon Mr. Howard's career statistics in these key categories -- that is, receptions and returns -- it would seem to be quite a stretch of the imagination to conclude that he was "nonproductive" while playing for "a pro-team who uses HIT."

What about the notion advanced by Mr. Simmons that Mr. Howard was "injury-prone" while playing for "a pro-team who uses HIT"? The term "injury-prone" suggests a tendency of being injured. From 1992-94, the Washington Redskins played 48 regular-season games. Mr. Howard played in all 48. If he was truly "injury-prone" as Mr. Simmons suggests, wouldn't it be expected that Mr. Howard would miss at least one game -- particularly with the violent collisions that routinely occur in the sport of football? After leaving "a pro-team who uses HIT," Mr. Howard did miss one regular-season game due to an injury (in 1997). For reasons that are unclear, Mr. Howard has also missed 4 other regular-season games since leaving "a pro-team who uses HIT." Well, one thing is for sure: At least Mr. Simmons is consistent in presenting inaccuracies.

LS: *"The truth is the HIT philosophy comes from companies that sell machines."*

MB: The truth is that HIT philosophy comes from strength and conditioning professionals who refuse to blindly lock-step with traditional party-line thinking and realize that proper strength training should be -- above all else -- practical, efficient and safe.

LS: *"Even Arthur Jones realized that doing one set to failure was a mistake and retracted his statements years ago."*

MB: His statements were misquoted and taken out of context. In 1986, Mr. Jones wrote that he "realized that [his] advice may have been wrong" and that "it is at least possible that a high intensity of exercise is not even needed." He speculated that he might have been mistaken about his recommendation of training to fatigue. Further, his comments were directed at certain populations -- specifically those with a high percentage of slow-twitch muscle fibers. To the best of my knowledge, he never "retracted" his recommendation of training to fatigue. Approximately a decade after Mr. Jones supposedly made "a mistake" and "retracted his statements" about doing one set to fatigue, he wrote: "Stopping one or two repetitions short of failure may stimulate growth, but not to the degree that going to failure will."

LS: *"[Mike Mentzer's] claim to fame was the one set-to-failure system. He was, I might add, the only [bodybuilder] to use it successfully."*

MB: Mike Mentzer's claim to fame is that he is a voice of information, logic and sanity in a murky sea of misinformation, illogic and insanity. As far as Mr. Menzter being "the only [bodybuilder] to use the one set-to-failure system successfully," can you say "Dorian Yates"?

LS: *"It's not a good idea to try to be the exception to the rule."*

MB: I disagree. If the rule is to (1) lift weights explosively such that the exercise is less efficient and more dangerous; (2) perform marathon workouts in the weight room; and (3) overcomplicate strength training by periodizing workouts; then I want to try to be the exception to the rule.

Other than the aforementioned statements by Mr. Simmons, the remainder of his article was mostly a collection of unintelligible, illogical and disjointed sentences and assertions. So, is "HIT or Miss?" a hit or a miss? I'd say that the article by Mr. Simmons is way off target. In summation and to quote Mr. Simmons: "If you're going to criticize something, you should understand it first."

*** ***

Matt Brzycki is author of several books and articles, including ***A Practical Approach to Strength Training*** (3rd Edition). Published by Masters Press, 2647 Waterfront Pkwy. E. Drive, Suite 300, Indianapolis, IN 46214. Or have your local book store place the order for you. Cost is $17.95.