Strength You Can Use: The Paradox of Strength Development, Part I

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THIS COLUMN ON STRENGTH IS the first of a 2-part series. Its purpose is to discuss the different forms of strength and the different approaches to its development and finally to ask 2 major questions: “What kind of strength do I need?” and “How much strength is enough?”

Strength is the quintessential quality most sought by athletes and coaches. Look at any performance enhancement program and you will usually see the development of strength at the forefront of its objectives. Listen in on any conversation between coaches or between athletes, and you’ll hear a repeating theme: how much can you lift? Strength is one thing everyone can’t get enough of.

Strength development can be broken down into 3 basic phases, general, special, and specific. General strength is developed with your standard resistance-training modalities (e.g., weight training, body weight exercises, etc.). General-strength training does not mimic any specific athletic movement. The main objective of this training phase is to create anatomical adaptations geared towards increasing maximum strength and work volume. Cleans, squats, shoulder presses, and bench presses are examples of exercises used to develop general strength.

Special strength is enhanced by exercises that more closely resemble the actual mechanics of athletic movements targeted for improvement. Many of the exercises used in the special-strength phase have been classified as functional exercise. This training phase begins the process of transferring general strength to a more specific form. Basic medicine ball throws and plyometrics are examples of special-strength exercises.

Finally, specific-strength training is necessary to optimize the transfer of general and special strength to the target activity. This training phase tries to closely mimic athletic moves targeted for improvement, down to their exact speed, load, and mechanics. Hitting a blocking sled, throwing a weighted ball, swinging a weighted bat, and performing band-resisted, sport-specific mechanics are examples of specific-strength exercises.

Although there are many different types of strength, the expression of strength can be classified into 3 basic categories. First, there is absolute strength. The 1RM attained on the major exercises used in the general-strength phase are often a major criteria used to evaluate an athlete’s maximum strength, as well as the effectiveness of a strength and conditioning program.

Strength can also be expressed in a relative manner. Relative strength is expressed by dividing the weight lifted by the athlete’s body weight. Because this criterion is a judgment of strength per pound of body weight, it is generally better than absolute strength for gauging an athlete’s sports-oriented strength performance.

Finally, strength can be expressed in a very obvious but very subjective manner. We have all seen and experienced it: athletes who do not look very impressive and can’t lift very much weight in the gym. However, they display awesome qualities in their performance. These athletes possess what has been described as functional strength. Wrestlers, boxers, soccer players, and gymnasts are some of those who demonstrate functional strength within the athletic arena. “Functional strength is strength you can use.” However, it is very hard to measure through traditional means.

Does this mean that maximum strength and traditional strength training are not important? Of course not. They are im-
Important. Increases in maximum strength can result in improvements in just about every aspect of athletic performance. Running speed, vertical jump capability, and throwing speed are just some of the athletic components that improve after general-strength training. The problem arises when the expression of maximum strength begins to dominate the conditioning paradigm and the performance objectives become secondary; when strength is developed for the sake of strength and not for what it can do for you. The trap of overemphasizing strength is easy to fall into. The athletic world generously rewards strength because it has become synonymous with performance. Just look at the football combines. Contracts, bonuses, and drafting positions are based on expressions of strength that many times are unrelated to athletic performance.

As conditioning coaches, we must see the development of strength as an investment-versus-benefit endeavor. We must ask ourselves several questions. Will the time devoted to additional strength development yield improved performance? Would I better serve my athletes by maintaining reasonable strength levels and work on functional qualities that will significantly improve athletic performance? The answers are simple. If there is enough absolute strength, focus on the athlete’s ability to transfer and apply it. Don’t spend weeks or months increasing maximum strength by 5% and not be able to use any of it! Think about this. A 75%, explosive application of a 250-lb bench press capacity results in 187.5 lbs of devastating force. On the other hand, 40% transfer of a 300-lb bench press capacity is only 120 lbs. Which situation would you prefer for your high school linemen?

Part II of this column will offer a case study to better illustrate the real, live application of a multidimensional training paradigm, in which tradition meets innovation in a seamless integration of strength and function.

As the editor of this column, I welcome the submission of sportspecific conditioning columns from the NSCA membership, as well as general feedback. Please suggest future topics of interest or submit completed columns to the editorial office.

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