

# **ATHLETIC STRENGTH AND POWER**

## **Five Game Changers in the Strength and Conditioning Field**

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Every strength training aficionado has heard and repeated the ancient tale of Milo of Kroton. Born over 2,000 years ago in a Greek colony, he won the Olympic wrestling championships six times between 540 and 516 BC. So great was his strength that he supposedly supported the roof of a collapsing building, giving those inside time to escape unharmed.

As the legend goes, Milo's incredible strength was cultivated from the time he was a small boy and his father gave him a bull calf to nurture. Everyday his father would yell, "Milo, how big is your bull today?" Milo would then pick-up the bull and bring it to his father.

Needless to say, the cumulative years of bull lifting contributed some welcomed strength and muscle that helped Milo accomplish his fabled feats.

Milo would undoubtedly be amazed at how the science and art of strength training and conditioning have burgeoned over the centuries, and most significantly in recent decades. These advancements are replete with a cadre of new modality technology and an earnest effort to delineate safe, effect, and productive training protocols.

Research journals are currently brimming with studies in the field to assist practitioners with the organization and administration of their day-to-day operations.

And while there have been myriad advancements, ever-evolving scientific pronouncements, continuing debates on a wide range of issues, and ongoing upgrades taking place at a frenetic pace, the following occurrences have left indelible fingerprints on the strength and conditioning profession:

- 1. The proliferation of professional organizations** – Seventy-five years ago, you would have been hard-pressed to find a legitimate strength/conditioning organization to join for learning purposes and professional growth aspirations. Actually, the strength and conditioning field was, for many years, a “profession” in name only. Just about anyone with modest experience or more than a mere casual interest in competitive weightlifting or bodybuilding was considered an “expert.” Not so in the modern era. Within the past 30 years especially, there has been an exponential increase in the number and categories of professional strength and/or fitness associations that have branched into specialized areas. Whether you are an Olympic/Power Lifting coach, personal trainer, high school teacher/coach, collegiate strength/conditioning coach, professional strength/conditioning coach, fitness/wellness instructor, or just someone interested in general fitness, there is a professional organization and certification opportunity available to fit your educational background and assist with your professional growth. One notable organization is the *Collegiate Strength and Conditioning Coaches Association (CSCCa)*, which has unified collegiate strength and conditioning professionals with a highly respected certification process and a host of educational and professional growth initiatives, while maintaining an open-mind to various training approaches.

- 2. The development and advancement of modern training equipment --** The equipment landscape has changed dramatically, especially during the past 50-plus years. Regardless of your personal favorites in strength training tools – i.e., any of the members of the free weight family, the wealth of machine designs, or a marriage of both modes -- there is a virtual melting pot of useful, productive equipment on the market. In the strength training lines, there are unique structural motifs, varying resistance sources, and custom-made designs that meet the needs of all ages and both genders. Computerized cardiovascular equipment with all of the high-end technology neatly packaged to make workouts more challenging and competitive has stripped it of the once common tag of “boring exercise.” Innovative designs that offer motivational feedback such as metabolic rate, target heart rate, calorie expenditure, power output, etc., have served to aid trainees with exercise compliance. And the news only gets better – there are a lot of great designs on the horizon.
- 3. The emergence of the Internet –** As with just about every other phase of life, the Internet has had a profound impact on the strength and conditioning profession. Strength and fitness professionals are now able to access current scientific literature and exchange ideas and training protocols at the touch of a keyboard. Many of the aforementioned professional organizations have their own websites which promote the recruitment of new members, provide scientific and equipment information updates, list international job opportunities, and furnish available resources for obtaining continuing education units (CEU’s) in order to upgrade and maintain professional certifications. There are also a wide-range of

educational web sites – such as the outstanding *Athletic Strength And Power (ASAP)* – that provide readers with a wealth of useful, updated training information.

- 4. The elevated status and increasing need for qualified strength/conditioning professionals** – Just about every Division I-A collegiate athletic program employs at least of one full-time strength/conditioning coach who has a minimum of a bachelors degree – with many holding a masters degree or higher -- in an exercise science area of emphasis. Many larger universities have multiple full-time S&C coaches in order to adequately service the large number of athletes – which can exceed 600 – within the athletic department. A welcomed and much needed trend is the growing contingent of females entering the profession. Division I-AA institutions have, for the most part, followed suite by hiring full-time strength/conditioning personnel, but just as with Divisions II and III, the implementation of qualified strength and conditioning professionals at every level of collegiate athletics needs to accelerate and become the status quo. The professional leagues, of course, initiated the hiring tide and set many of the currently held standards. An interesting and fitting occurrence is the hiring of full-time strength and fitness coaches/instructors at the high school level. Their job description usually calls for teaching strength and personal fitness as part of the physical education curriculum, training the school’s athletes, and conducting adult fitness courses for the community. Many times, this individual has an educational background and certifications in both strength/conditioning and athletic training (ATC).

## 5. The inculcation of performance-enhancing drugs and the ongoing fight

**against them** – One prominent negative that, unfortunately, deserves an ominous mention, is the uptrend of performance-enhancing drugs in athletics. These compounds have blemished the entire sports arena, ruffled the rules of fair-play, and disfigured the playing landscape. The onus has been placed ---and rightfully so – on strength and conditioning professionals to be the tip of the spear in mentoring, educational efforts, and incessant public denouncement of these perilous substances. An important lesson that we all have learned from the Congressional Hearings on the Hill in March '05 regarding steroids in Major League Baseball is that weak check and balances, finger-wagging disciplinary stunts, and public relations smoke screens in lieu of serious, properly implemented drug testing are a recipe for disaster. The regrettable reality is that androgenic-anabolic steroids, their precursors, along with the recent and, by all indications, continuing unearthing of designer anabolic compounds, are here to stay. And now, with human growth hormone (HGH) finding more abusers due to its stealth nature and gene-doping on the horizon, the fight will intensify before it wanes. Our duty as strength and conditioning professionals is clear: ***Take off the gloves, fight this menace with our bare knuckles, and enable our athletes to compete and grow on the common grounds of good health and great integrity.***

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