Joe Weider, *All American Athlete,* And The Promotion Of Strength Training For Sport: 1940-1969

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In the July 1950 issue of *Your Physique*, Joe Weider, publisher and editor, outlined ten predictions for the future. By the close of the twentieth century, he wrote, bodybuilding—by which he meant weight training—would become an international phenomenon; the general public, he proclaimed, would embrace fitness training for stress relief and enhanced health; the muscular physique would be valued and aesthetically appreciated; and the basic principles of bodybuilding—balanced diets, adequate sleep, fresh air, sunshine, and regular workouts—would be recognized as essential to healthy living.[1] Weider's sixth prediction, however, seems in retrospect to have been the least likely to be realized given the conservative attitudes toward strength training for sport that existed within North America in 1950.[2] Weider wrote, "I predict that bodybuilding will become the stepping stone to every other sport and physical activity."[3]

Over the next six decades, Joe Weider undoubtedly held these predictions in his head as he published more than thirty different magazines, including the well-known fitness publications *Your Physique*, *Muscle Builder*, *Muscle Power*, *Mr. America*, *Muscle and Fitness*, *Flex*, *Men's Fitness*, and *Shape*.[4] Through his publications the Weider name became synonymous with bodybuilding and fitness, and Weider's editorial decisions helped his predictions become reality. By the end of the twentieth century, weight training would explode in popularity in the United States; it would be widely accepted as a necessary part of fitness training; and the basic elements of what Weider called the "bodybuilding lifestyle" would be followed by millions of individuals around the world.[5] Weight training as an adjunct to sport training would also become so commonly practiced that a new profession—strength coaching—would emerge in the late twentieth century, a profession fostered in large part by the advocacy of magazine publishers Bob Hoffman and Joe Weider.

Surprisingly, Weider's contributions to changing the culture of America on such matters as muscularity and personal fitness have received only cursory attention by academics.[6] Even less attention has been paid by the academic and sport science community to Weider's role in encouraging the use of strength training for sport. York Barbell Company magnate Bob Hoffman—who began publishing *Strength & Health* magazine in 1932—has historically been credited as the advocate who almost singlehandedly championed the idea that barbell training could be used to enhance sport performance.[7] While it is true that Hoffman's promotion of strength

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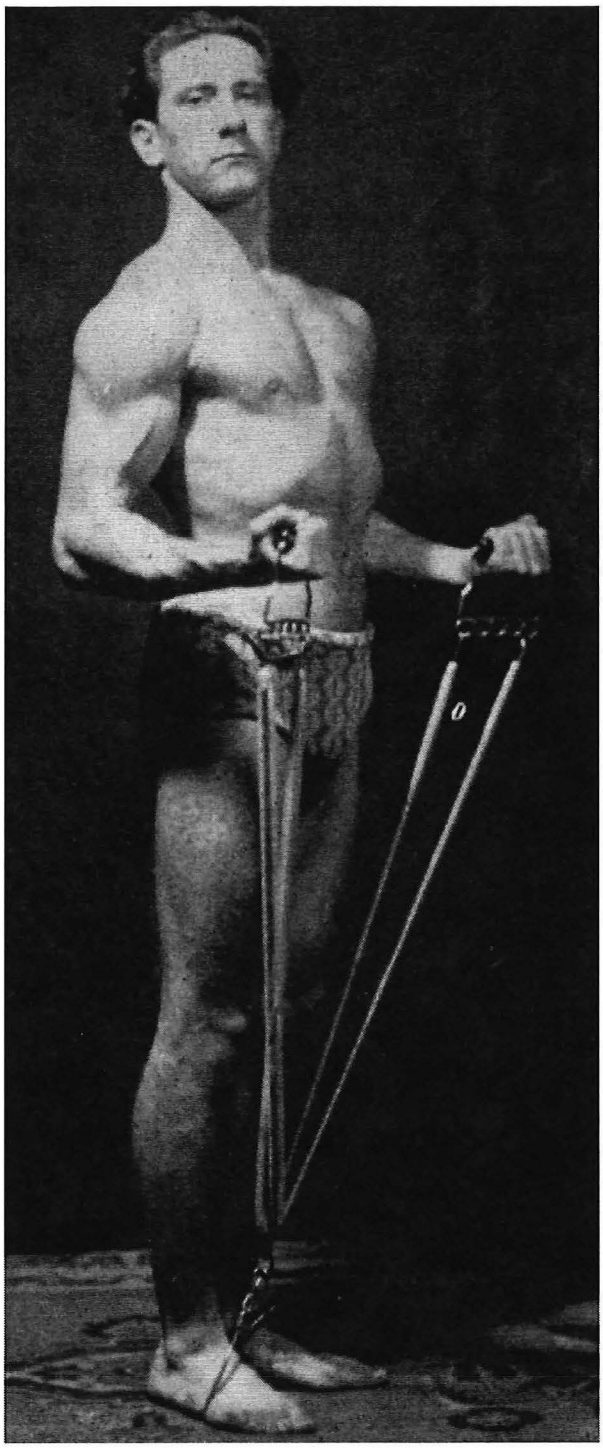
training began with the first issue of *Strength & Health* in an article entitled, "How to Improve at Your Chosen Sport," he was not alone in speaking out in favor of weight training for athletes during the middle decades of the twentieth century.[8] Although it falls outside the scope of this study, from 1960 to 1965 California gym owner Walt Marcyan also played a significant role in promoting strength training for sport with the publication of his magazine *Physical Power: Maximum Training Methods for Optimum Physical Efficiency*.[9] Far more significant are the contributions of Joe Weider, who not only published dozens of articles during the 1940s and 1950s debunking the myths that kept many athletes from training with weights but also, in 1963, launched *All American Athlete: The Magazine of Champions*, a publication that brought together many of the basic concepts of strength-training science well before the founding of the National Strength and Conditioning Association.



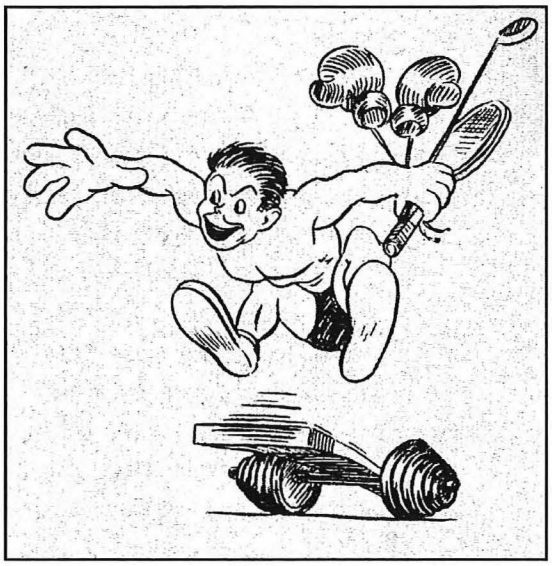
Joe Weider practiced what he preached and often used photos of himself in *Your Physique* and his other magazines to inspire his readers.

Becoming a Weight Trainer

Joe Weider was born on November 27, 1920 in Montreal, Quebec, to Louis and Anna Weider, who had immigrated to Canada from Poland ten years earlier.[10] He was the sixth child born to the couple, the third in Canada, and, to that point, only the second to survive past infancy. Their seventh child, Ben, born in 1923, would become Joe's life-long business partner and served, until 2006 as the president of the International Federation of Bodybuilding (IFBB), the organization they began in 1946.[11] The Weider brothers grew up as part of Montreal's Jewish community and, as such, they were often subject to harassment by classmates and others who acted on their prejudices against Jews. After years of taking what Joe described in his autobiography, *Brothers of Iron*, as "lots of crap" and periodically getting into fights, he decided he needed to learn how to defend himself.[12] His first thought was to take up wrestling but he was so thin and gangly that the local wrestling coach wouldn't let him try out because he feared he'd get hurt. Not long after that Weider happened upon an issue of *Strength* magazine while at the library. He recalled that one image particularly struck him—a photo of a young weight-lifter named John Grimek.[13] To Weider, Grimek's size and muscularity conveyed physical power, and it inspired Weider to take up weight training himself. If such muscularity and implicit power could be manufactured, he began thinking, perhaps he could transform himself into a man who would be respected and who would no longer have to fear the neighborhood bullies.[14]

According to his autobiography, Weider, then about thirteen years of age, attempted to acquire the type of weights he had seen in *Strength* in his hometown of Montreal. Unable to find any for sale locally, he convinced a foreman at a scrap yard to make a barbell for

him from some small flywheels and a rusted iron shaft. The set was carted back to a shed behind the Weider home and Joe lifted it religiously until his strength improved to the point that more resistance was needed. While the teenager didn't have the funds to buy a new set, he didn't lack moxie, and wrote a letter to George Jowett, then selling barbell sets, and asked Jowett to sell him a set over time. Jowett agreed, and Weider mailed him fifty cents each week until he had paid off the seven dollar price.[15] With his new adjustable set, Weider continued working on the Olympic lifts and made additional gains in muscle mass and strength. He even began competing, and the heavy lifting transformed Joe from a lanky waif to a strong, muscular young man. The evidence of this became fully clear to Joe and others when a local bully followed Ben home from school one day. Ben had attempted to avoid a beating by telling the larger and older boy that it would lead to a reprisal by his big brother. The bully apparently took it as a challenge and went to the Weider home to confront Joe. Joe later claimed that his weight-trained muscles allowed him to punch the young man with such force that the bully was knocked unconscious.[16]



Throughout the 1940s and 1950s Weider's magazines promoted the idea that barbell training should be viewed as the "springboard to success" in sports. This December 1946 cartoon from *Muscle Power* graphically illustrates that idea.

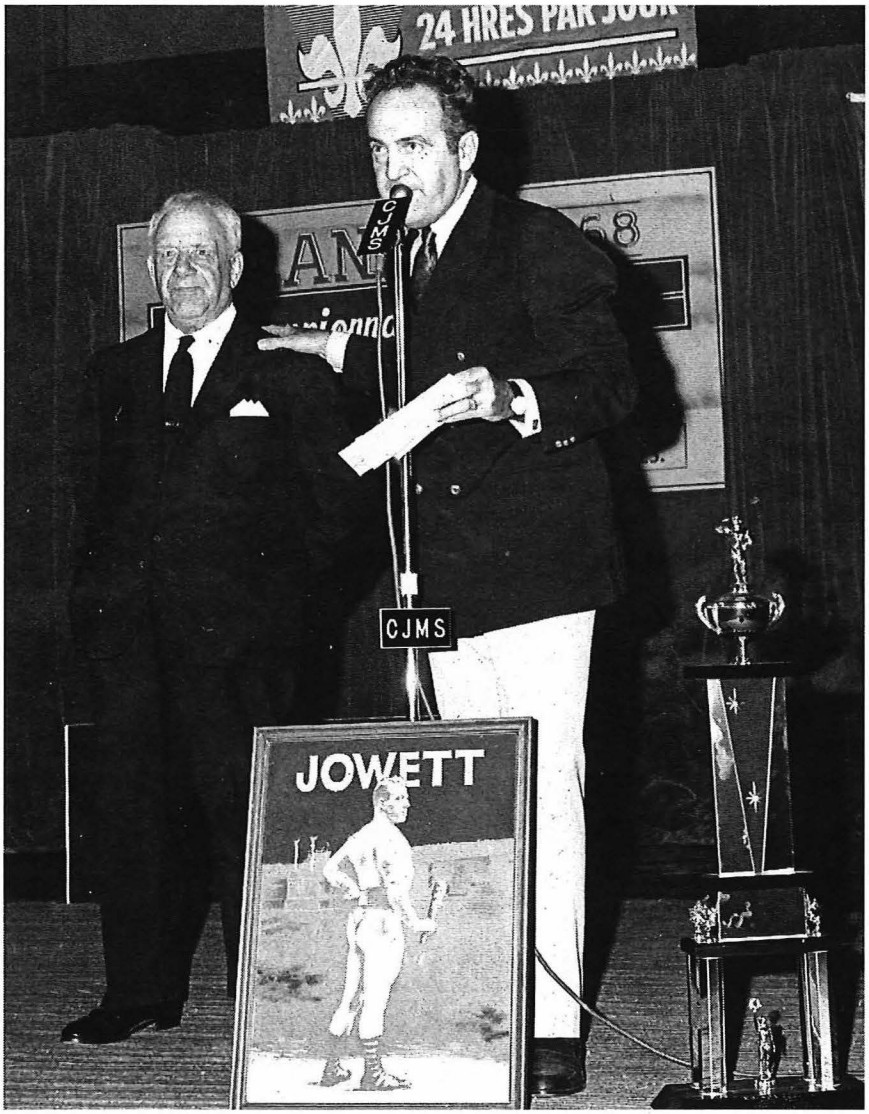
Apparently, weight training had given Joe a new physique, more strength, and new confidence. Weighing then about 165 pounds, he and Ben, who also began training, found that those who wished to jeer and make fun of Jews in their presence had largely disappeared, and as word got out about his strength and prowess, those who chose to challenge Joe paid a price. It also wasn't unnoticed by Joe that he had begun to receive extra attention from girls, and that adults showed him more respect because of his physique. "Bodybuilding changed me—body, mind, and soul," Joe claimed in later years; it also altered his social and financial circumstances.[17]

While Joe's story is inspiring, it is certainly not unique in the annals of physical culture history. His story is just one more example of the oft-told tale of the transformative power of weight training. It was first used in America by George Barker Windship in an article for the *Atlantic Monthly* in 1862.[18] In Windship's version of the tale, he was a freshman at Harvard in 1850, weighing a mere hundred pounds and mocked and picked on by classmates because of his small size. Quickly tiring of the derision, Windship took up first gymnastics and then heavy weight lifting so that by the time he graduated he was known as "the strongest man at Harvard." He then spent the rest of his life proselytizing about the benefits of what he called the "Health Lift."[19] Charles Atlas (Angelo Siciliano) similarly marketed his mail-order training course—*Dynamic Tension*—based on the idea that manhood (and strength and courage and success) was equated with the possession of muscles. So effective was Atlas's advertising campaign that it is regarded as the most successful print advertising campaign of all time.[20] First run in 1929, the advertisement titled "The Insult that Made a Man out of Mac," showed a skinny teen-age boy and a young attractive girl sunbathing at the beach when a bully comes along and kicks sand in their faces. Afraid to respond, and embarrassed to be seen as a coward in the eyes of the girl, the boy sends away for Atlas's *Dynamic Tension* course, and in the next frame of the ad, a newly muscular young man returns to the beach several months later, fells the bully with a single punch, and then walks out of frame with an adoring girlfriend on his arm.[21]

Weider's strikingly similar story and the notion of achieving manhood through a tangible, physical transformation was a common component of "masculine conversion narratives" in the late nineteenth and early twentieth century.[22] Anxiety about masculinity began to take shape during the middle of the nineteenth century due to various factors, chief among them industrialization and urbanization. The shift from agriculture and artisanal employment to factory work with little chance of advancement led many men to turn to recreational pursuits to find a sense of achievement and fulfillment.[23]

By the early twentieth century, the sense of emasculation was heightened further by the sedentary nature of most jobs.[24] The muscularity produced by weight training, then, was a very obvious sign that one had become a convert to the cult of the body. In addition to serving as an emblem of health, muscularity also conveyed a sense that the person possessed self-control and was willing to make sacrifices for a greater good, like improved health. Weider's transformation, like that of "Mac" in the Atlas advertisement, thus fits nicely alongside other early twentieth-century tales of self-improvements such as Horatio Alger's tale of Ragged Dick, the young boot-black who rose to middle class prosperity through determination, honesty and consistent, hard work.[25]

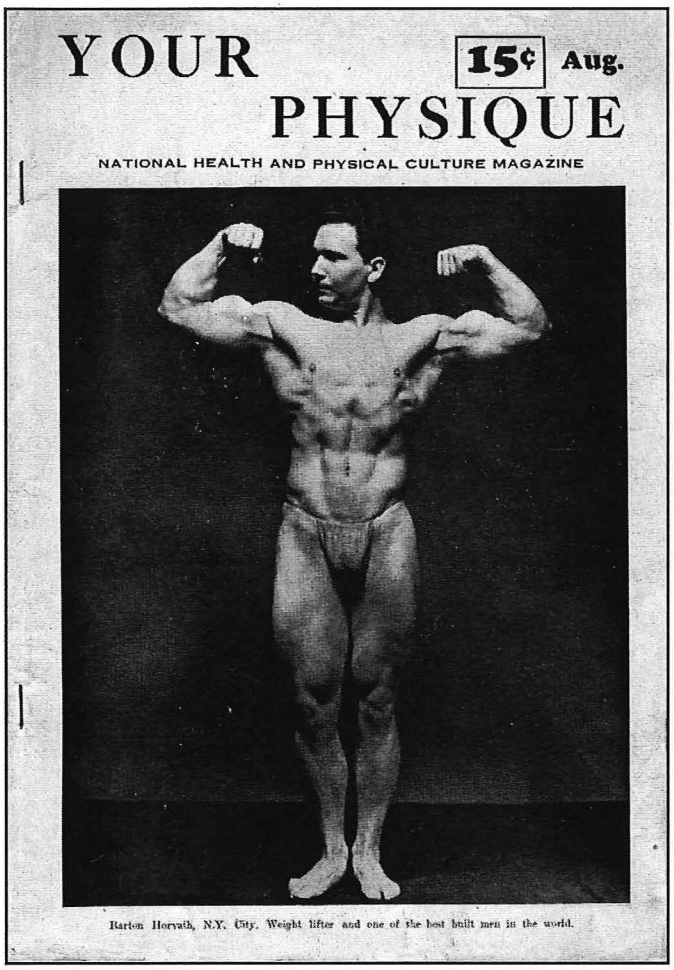
Indeed, Weider and others repeatedly stressed the Alger-like qualities of their own narrative. Frederick Tilney wrote an article in 1944 for *Your Physique* recounting Joe's early story and explained to readers how Weider transformed himself by "demand[ing] for himself a well-developed body" and then started his first magazine, *Your Physique,* in his parents' kitchen "with a paltry twenty dollars!"[26] Much like Alger with "Ragged Dick," Tilney emphasized the temperance, hard work, and frugality of Weider's early life.[27] In his autobiography, Weider reinforced this portrayal by writing, "I didn't drink or go wild like other young people. I had to be sharp for work in the morning, and I had to save my money."[28] In the years ahead, Weider (and his rival Bob Hoffman) would sell untold thousands of magazines by recounting the stories of dozens of other men who underwent similar muscular conversions and thereby found success.[29]



In 1968, Ben Weider honored George Jowett for his many contributions to the field of weight training at the Mr. Canada contest. Although born in England, Jowett lived in Canada after 1945 and wrote for the Weider magazines for many years. Jowett, unknowingly, helped both Weider brothers get started in their publishing business by allowing Joe to buy a barbell on a layaway plan.

Celebrating Strength *and* Beauty

Joe Weider's physical transformation would permanently color his view of the utility of weight training. His new physique had led to a change in how he was perceived by women and other men and the new respect he found had a profound impact on him. In his first editorial for *Your Physique* in 1940 he addressed his Canadian readers and reminded them that at one time Canada had possessed the strongest men in the world. "Why are we so far behind other countries," he asked his readers, "What has caused this downfall?" Weider then went on to explain that his hope was that *Your Physique* would provide Canadians with the information they needed to regain their international standing in competitive weightlifting. It was time, he explained, for Canada to



The first issue of *Your Physique* consisted of 22 pages of mimeographed material with hand-drawn illustrations stapled inside this printed wrapper. Barton Horvath was *Your Physique's* first coverman. To view the entire first issue as a "flipping book," go to the Stark Center's Digital E-Book Arcvhive at: http://www.starkcenter.org/todd-mclean-library/digital-books/.

build a team that would be known as the "Champion Weight-Lifting Team of the World."[30] Weider's plea to Canadian nationalism was strikingly reminiscent of Bob Hoffman's first editorial in *Strength & Health* in which he also wrote of the importance of barbell training as a means to ensure physical superiority over other nations.[31]

Unlike Hoffman, who wasn't particularly interested in promoting competitive bodybuilding in the early days of his magazines, Weider's first editorial goes on to explain that each issue of *Your Physique* will contain information on competitive weightlifting *and* building a better physique. Weider's hero—Arthur Dandurand, the "well-known Canadian authority"—he explained, will write in each issue on developing the various parts of the body, and "well known trainer," William Oliphant, Weider continued, would dispense advice on both weightlifting and bodybuilding.[32] Although there are no references to using barbells for sport training in this first issue, what is most striking—given Weider's close association with the growth and expansion of bodybuilding around the world—is the magazine's strong focus on competitive weightlifting.[33] Perhaps this should not be too surprising as Weider was actively competing in weightlifting at that time. In fact, the results of his victory in the 165-pound class in the "Montreal & District Senior Meet" appear in the first issue, and it is noted by author Harvey Hill that Weider pressed 190 pounds, snatched 200 pounds, and cleaned and jerked 270 pounds. His 660-pound total was the highest in the meet.[34] In some ways, the best statement of Weider's true views on the value of weight training at this stage of his career appear in an article on nutrition in that same issue. There, Weider writes definitively, "Weight-lifting is an ideal form of exercise. It develops the muscles to their full form and beauty, it increases chest expansion, and thereby the lung capacity. It aids to strengthen the abdominal wall which protects our vital internal organs; it gives us a sense of superiority over our fellow man by giving us strength and beauty."[35]

Strength for Sport: Hoffman's Early Years

Robert (Bob) Hoffman had a different transformative experience because of weight training. As historian John Fair has documented, Hoffman, born in 1898, became a member of the Pittsburg Aquatic Club and competed in swimming and canoeing events for the club. Although he later grew to 6'3" and weighed well over 200 pounds, Hoffman was a slender boy, who decided to try to get fitter in order to be a better athlete. As a teenager he first practiced calisthenics to help his canoe racing.[36] Following his service in the First World War, Hoffman returned home to Pennsylvania and again began to compete for the club. It was then, he told readers in a 1933 *Strength & Health* article, that he decided "barbell training was the way to gain the strength and muscle [I] much desired," and so he ordered a set of weights from the Milo Barbell Company.[37] Hoffman later claimed that his weight-trained muscles were the edge that allowed him to win more than 600 different contests in sports such as boxing, wrestling, handball, and canoeing.[38]

So, unlike Weider, who began training to ward

off bullies, Hoffman's motivation was the desire to become a better athlete. Thus it is not surprising—even after he became totally enamored of competitive weightlifting and stopped competing in canoeing and other sports—that Hoffman's outspoken advocacy of strength training for athletes never wavered. In his various publications, training was always functional. One should either train for competitive weightlifting or use the strength gained through weightlifting to improve at "your chosen sport." While Hoffman "equated size with manliness," as Weider did, *Strength & Health* magazine remained primarily committed to competitive weightlifting along with frequent articles on sport training. In the early decades of the magazine he did not promote weight training solely for aesthetic reasons. Training solely for muscular size, or "beauty," as Weider had described it, mattered little to Hoffman unless there was some meaningful utility implicit in that size.[39]

Fighting the Negative Mythology Surrounding Weight Training

Regardless of why a man might choose to take up barbell training in the early twentieth century, North Americans almost universally considered such training to be wrong-headed. This belief was based on a set of persuasive, yet erroneous, myths that characterized weight training as hazardous to both health and athletic performance. Various professional physical educators and medical doctors had linked barbell training in the public's mind with such theoretical maladies as "athlete's heart," muscle-binding, rupture (hernia), stunted growth, and a general decline in vitality.[40] In order to convince men to take up strength training and then, it was hoped, to become magazine subscribers, Weider and Hoffman had to first dispel the notion that lifters would experience any of these adverse effects.

Weider tackled this negative mythology in the first issue of *Your Physique* in an article credited to Canadian strongman Arthur Dandurand.[41] In "I am Young at Sixty-Two," Dandurand claimed that he had been warned heavy lifting would make him "muscle-bound," would give him a weak heart, would create high blood pressure, and cause him to develop a rupture, or hernia. In spite of these dire warnings, he assured readers, "a lifetime spent in strenuous sports did not have ill effects" on him.[42] Several months later, in the fourth issue of *Your Physique*, Olympic weightlifting coach Mark Berry explicitly denied the existence of "athlete's heart" as a pathological condition.[43] Many physicians in the early twentieth century did not understand that it was normal for a heart to grow larger as a result of regular exercise—of any kind. Like skeletal muscle, heart tissue also adapts to stressful stimuli and the increased size facilitates improved function.[44] In the early twentieth century, however, this adaptation was believed to be pathological—not beneficial. The argument made by most physicians was that "violent athletic exercise," whether strength-based or endurance-based, placed a "great mechanical strain on the heart," and "that . . . prolonged training in successive years may lead to permanent injury of the heart."[45] Concern about the condition called "athlete's heart" was not limited to weightlifting; football, track, basketball, and many other activities were also considered too rigorous by some "experts."[46] Weider's authors addressed the topic of "athlete's heart" on a number of occasions in *Your Physique*, a fact that suggests just how pervasive and powerful this negative myth was in that era.[47]

While an enlarged heart presented one set of concerns for those interested in weight training, another negative belief concerned muscle itself. According to historian John Hoberman, enlarged skeletal muscle was also seen as a potential marker of ill health at the turn of the twentieth century. In 1892, a meeting of the Medical Society of Berlin included the examination of an "impressively muscled individual" who had respiratory difficulties. The physicians at the conference assumed that the insufficient ventilation and subsequent vertigo reported by the man were due to his hypertrophied chest musculature which, they assumed, prevented his chest from fully expanding.[48] The idea that muscle posed dangers to the organism can also be seen in the work of Randolph Faires, a physician and instructor of physical education at the University of Pennsylvania in the 1890s. Faires cautioned that the "overdevelopment of one part (of the body) is always accompanied by a corresponding weakness."[49] To justify this assertion, Faires discussed the limited quantity of blood and claimed that directing it toward one area of the body deprived other areas, causing them to "suffer."[50] Another physician, G.F. Lydston, similarly warned readers in 1905 that over-exertion produced weakness because it resulted in a "waste of powers that will be needed in middle life."[51] Some physicians went so far as to classify hypertrophied muscles as "parasitic" because they "impose[d] a severe strain on the rest of the organism."[52]

Historians Rob Beamish and Ian Richie point out that "Scientific discourse [in the late nineteenth and early twentieth centuries] was contoured by the law of the conservation of energy . . . in accordance with the conception of science at that time and the concomitant belief that scientific laws applied universally, the laws of one area were applied to others."[53] The notion of conservation of energy or the first law of thermodynamics, they argue, also applied to human physiology. Human capacities, Beamish and Ritchie point out, were generally understood as a bank from which only withdrawals could be made. As a result of this misunderstanding of the conservation of energy and an inability to distinguish between pathology and adaptation, fitness enthusiasts in the early twentieth century were repeatedly warned to avoid overtaxing their systems.[54] Training and exercise were intended to help the individual reach their "hereditary potential," or "natural limits," rather than expand their natural capacity.[55] The notion of "natural limits" became pervasive within the medical and physical education communities in this era and adult men, in particular, were warned not to overdo. Those who wanted to go beyond genetics and build a muscular body through barbell training were warned that muscle beyond their genetically predetermined "natural limit" would be a drain on their system—blood would be diverted to muscle that was needed for other bodily functions. The theory was that because their natural constitution had been violated, a diseased state was almost certain to follow.

Even if the muscles that resulted from weight training weren't viewed as a drain on the organism, they were still viewed as abnormal by many and were assumed to have substandard function. The physiological aspects of muscular hypertrophy were not yet understood and so it was theorized that the reason muscles grew larger with training was due to a buildup of "fibrotic" tissue rather than growth of individual muscle cells because of additional contractile proteins. This hard, inflexible "fibrotic tissue" supposedly did not function like regular muscle and served to slow down muscle contraction and make the muscle containing it stiff and inelastic.[56] It is difficult to believe that cadaver studies didn't refute this notion but apparently no one ever thought to look.

Another reason that the concept of musclebinding became so pervasive in the early twentieth century was that it was buttressed by factors beyond muscle physiology. Exercise physiologist Arthur Steinhaus, for example, told an interviewer in 1944, "And what good are big muscles anyway? Certainly not everybody needs them. Some people have the constitutions for them. Others do not." According to Steinhaus, "There is the truck-horse type of individual and the buggy-horse type. What is needed is just a little bit more muscle-strength than is needed for each day's work in their particular job."[57] Steinhaus' introduction of the draft horse/buggy horse analogy to explain the difference between a well-built weight trainer and the average man has a long history. In the 1860s light gymnastics advocate Dr. Diocletian Lewis had similarly warned of the dangers of heavy lifting when he wrote, "Moving great weights produces a slow, inelastic, inflexible man." Those who practice heavy lifting, he continued, "will become as inflexible as a cart-horse."[58]

As historian Terry Todd argued in his seminal article "The Myth of the Musclebound Lifter," it is not surprising that men and women who lived in close proximity to horses of all kinds in this era before automobiles would compare weightlifters to the slower, thickly built Clydesdales and Belgians they saw pulling wagons and plowing fields.[59] Earlier Todd had also suggested that another aspect of their faith in the concept of musclebinding probably came from the limited knowledge most North Americans had of professional strongmen in this era. In the late nineteenth and early twentieth centuries, many of the professional strongmen appearing in the circus or variety theater were large, somewhat lumbering men whose size would have put the men of the period in mind of a massive draft horse.[60] Some of these men, like 5'9", 315-pound Louis Cyr, became internationally famous, and pictures of them appeared in newspapers, magazines, and on posters when the circus came to town. As Todd put it, "most of those who saw these enormous men drew the erroneous conclusion that their ponderous size was a direct result of their heavy training, not realizing that these men were for the most part natural giants possessed of undeniably healthy appetites."[61]

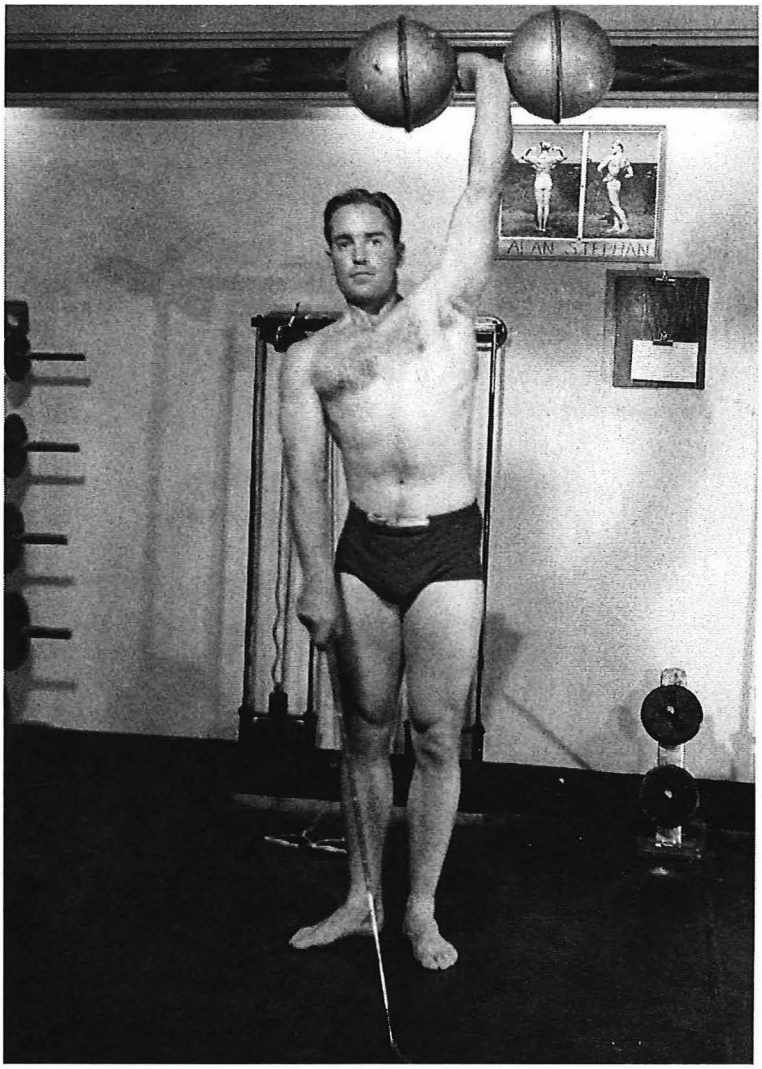
Another factor that Todd believes played a role in the growth of this pervasive myth of musclebinding was that many early fitness entrepreneurs tried to make a living by selling training courses through the mail. Todd documents that some of these men—who had built their own physiques with weights—nonetheless denigrated barbell training in their advertising, and in their courses, claiming that it would lead to a muscle-bound condition. He speculates that this was done because it

was more profitable for these mail-order merchants to pay a few pennies to ship an exercise booklet that described a system of light exercises, than it was to pay the much more expensive freight bill required to ship a barbell set.[62]

"We Need Have No Fear of Strength"

Weider and his various writers expended a significant amount of ink attempting to dispel the myths of muscle-binding and "athlete's heart."[63] Weider author Herbert Shelton vigorously attacked Steinhaus' restrained approach to muscle in *Your Physique* in 1944. To Steinhaus's suggestion that what a man needed was just a "little more muscle than is needed for each day's work in their particular jobs . . ." Shelton replied, "This represents a very low ideal. It is an ideal of weakness, of ugliness; the ideal of a very lazy man."[64] Continuing, Shelton wrote, "let the physicians get their exercise playing dominoes if they want to; we need not be disturbed by their effort to get us to conform to the minimum needs of our industrial civilization. We need have no fear of strength. It is not dangerous. None of us will ever become so mighty that he will die of too much might."[65]

Shelton's article makes clear that Weider's editorial policy by the mid-1940s was to attack those "experts" in the medical and physical education communities who were antagonistic to weight training. Signs of this anti-medical bias first appeared in 1943 when Weider alleged in an article entitled "Our Teachings Have Been Proven Best After All," that "we have been held in bondage by what the medical profession has said . . . I ask what authority are they?"[66] In the same article he quoted the prominent sports physician S.E. Bilik as having claimed "the average physician knows little more about healthful living than the average layman."[67] In waging this battle, Weider generally relied on non-traditional physicians such as Herbert Shelton, who had a Doctor of Naturopathy (N.D.) degree—not an M.D.—as his "medical" experts.[68] As George Russell Weaver explained it, one should not generally be surprised that the medical establishment was against weight training. "After all, the physician is a specialist in pathology...[and] has had little chance to acquaint himself with health and physical perfection."[69]



With a dumbbell in one hand and his club in the other, Frank Stranahan was the poster child for weight training for sports in the 1950s. Stranahan was featured in both the Hoffman and Weider magazines and was an extremely important role model for athletes who wished to train but had been afraid they would become musclebound.

Whether done by intention or simply through luck and circumstance, a two-pronged attack on the negative myths surrounding weight training emerged in *Your Physique* and Weider's second magazine, *Muscle Power*, that he began publishing in 1945: 1) articles (like Shelton's) appeared directly attacking the so-called experts who were antagonistic to weight lifting; and, 2) Weider began including athletic profiles in *Your Physique* (and his later magazines) that demonstrated the muscular and healthful benefits of barbell training. Shelton's article, for example, included two sets of "before and after" photos in its layout. In the caption under Roger Eells "before" photo the caption writer

explains that Eells had suffered from tuberculosis but ignored his doctor's advice to rest, and began weight training to build the "big, powerful body" he showed in his "after" photo.[70] Later in that same issue, in another photo caption, Weider again gigs Steinhaus and writes, "Our modern muscular marvels are not just hefty truck horses, but men of artistic grace and beauty."[71] In April of 1949, Stuart Rose also attacked those experts who called bodybuilders musclebound. In "Who's Muscle Bound?" Rose wrote emphatically that "Anyone who calls a well-built fellow musclebound is just as qualified to pass judgment on the condition of a man's muscles as the paper hanger is qualified to tell the pilot how to fly his plane."[72] According to Rose, the term was used out of sheer jealousy. "We all admire health, strength and physical well-being," he wrote. "However, the vast majority of us are too lazy to do anything to achieve this well-being, this physical perfection." The truth, Rose explained, is that we all envy the man who possesses fitness. "This envy and its attempted revenge," he continued, "is responsible for the term musclebound and nothing else."[73] George Weaver also attacked the experts in October of 1950:

> One of the most peculiar and mysterious phenomena of modern times is the apparent prejudice against strength and muscular development which is found not only among non-athletic persons, but among experts in physical education. For some strange reason, all other physical qualities, such as coordination, speed, endurance, suppleness, and agility are praised to the skies, but strength is sneered at, or damned with the faintest praise. Just why physical training experts think it their duty to disparage the quality of strength and to discourage its cultivation is a mystery. It seems nonsensical and inconsistent.[74]

Of all the negative myths surrounding weight training for sport, the myth of musclebinding was by far the most powerful. It was also the most difficult to fight because almost no scientific research examining the effect of strength training on speed and range of motion had been done by scientists in the first decades of the twentieth century. It was the early 1950s before the first true studies examining musclebinding—done by Edward Chui, John Endres, Edward Capen, and, of course, Peter Karpovich and his grad student William Zorbas—appeared in the scientific literature, and it was several more years before their work began to be widely known outside the academic community.[75]

There was one scientist, however, who reported on the beneficial aspects of weight training in the mid-1940s. Thomas Lanier Delorme, an army physician during World War II, had begun experimenting with weight training as an aid to knee rehabilitation. DeLorme was a serious weight trainer who began lifting after being stricken with rheumatic fever as a teenager and told by his physician that he "must never again exert himself."[76] Rather than follow the advice of his physician, however, DeLorme began reading muscle magazines and decided that barbell training could help rebuild his strength. Like Weider, DeLorme also crafted weights from train wheels and eventually became a competitive weightlifter. After finishing medical school in 1943, he joined the Army and was sent to the Army's rehabilitation hospital in Chicago where he began using resistance exercise as an aid in knee rehabilitation.[77] Soldiers in DeLorme's care recovered much more quickly and completely than soldiers trained using the traditional light-weight, high-repetition protocols, and he published the results of his work in several distinguished medical journals beginning in 1945 and, in 1951, in an important book titled *Progressive Resistance Exercise*.[78]

In 1949, Philip Rasch—who would go on to have a distinguished career as an exercise physiologist—reported on DeLorme's work in an article for *Muscle Power*.[79] Rasch discussed both the unconventionality and effectiveness of DeLorme's approach to knee rehabilitation and also noted with obvious satisfaction the implications of the findings. "This must bring a wry smile to the older weight trainers," he wrote. "For the last quarter of a century, we have been trying to pound these exact facts into the medical fraternity . . . at long last the medical profession has caught up with the weight trainers."[80]

While Weider was waiting for the scientists to "catch up" he, like Hoffman, peppered his magazines with articles and captions attacking the idea of musclebinding. The articles were largely anecdotal in nature and most discussed champion athletes who practiced one form of weight training or another. One of the earliest examples was provided by Bill Pullum, who cited a

British boxer, Joe Wakeling, a multi-class champion and "one of the fastest men of his weight ever seen in the ring."[81] Pullum claimed to have trained the boxer personally and wrote that Wakeling "himself used to say that the using of weights had actually made him faster."[82] References to boxers and wrestlers dominated *Your Physique* in its first decade. A three-part article appeared on heavyweight champion Jack Johnson, the Indian wrestler known as the Great Gama made his first appearance in 1947, and "Youssef"—the wrestler known as "The Terrible Turk"—appeared in 1949.[83] Later, in *Muscle Power* magazine, writer Martin Franklin quoted strongman Arthur Saxon, who had pointed out that many boxers and wrestlers were, in fact, doing resistance training, although not with barbells.[84] Saxon asserted that weight training had made boxer Tommy Burns faster. Additionally, the strongman discussed the training techniques of boxers Tommy Sayers and Tom Cribb, both of whose training methods included heaving bricks or sacks of coal, which Saxon argued are "crude forms of weightlifting."[85] Even the spectacular Jack Johnson, Saxon claimed, "occasionally performed the wrestler's bridge while handling heavy weight."[86]

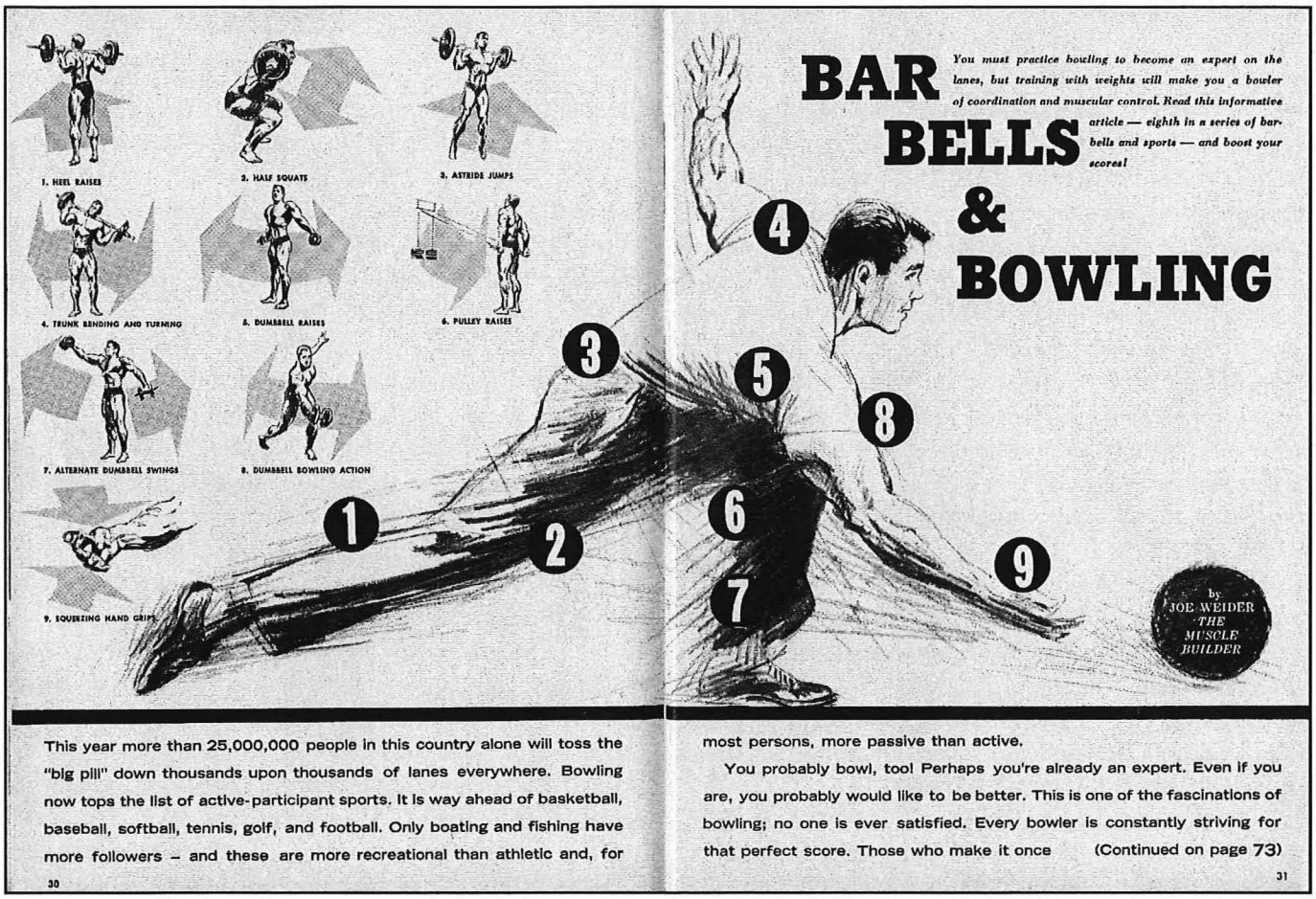
This was a recurring theme. In 1950, Joe Weider responded to an apparent deluge of reader letters inquiring about the advisability of weight training for athletes by providing a laundry list of prominent boxers who had trained with weights. Though he didn't discuss their specific programs or provide evidence, Weider asserted that such champions as Joe Lewis, Primo Carnera, and Max Baer were weight-trained athletes and then made the blanket statement that it was a known fact that "at least 99 % of all the great wrestlers used weights."[87] In that same issue in "What's Wrong with Strength?" George Russell Weaver also offered as evidence a number of weight-trained athletes, writing, "Frank Strafaci is a barbell trained man who has won golf championships. Joe Walcott was a circus strong-man before he became one of the greatest boxers . . . Emile Maitrot, a wrestler and weight-lifter, won a world's championship in speed-cycling. Eugen Sandow, the professional strongman, surpassed Mike Donovan, one of the most agile boxers in a special test of speed in response to a signal. James Hudson, a barbell trained man broke the Georgia State record in the 100-yard breast-stroke swim . . . Charles Steinman, an active weight-lifter, was also captain of the Ohio State tennis team." According to Weaver, "Such facts as these show the remarkable versatility of weight-lifters."[88]

The first active athlete who wasn't a boxer or wrestler to be featured in a major article in a Weider magazine was golfer Frank Stranahan.[89] Earle Liederman's 1949 article, "Barbells and a Golf Champion!" argued that weight training had made Stranahan a longer and more accurate hitter and, most importantly, that "barbells do not conflict with the delicate sense of touch" necessary for golf.[90] Two years later, Barton Horvath profiled Stranahan again for *Your Physique* and explained how Stranahan had begun lifting weights for football in high school, then found that it also made him a better golfer. According to Horvath, when he asked Stranahan about the theory of musclebinding, "Frank replied with a curt, 'rubbish.'" Many coaches and other golfers had warned him that weight training would only be detrimental to his game, Stranahan explained, but he'd just ignored them and followed his own path.[91]

The inclusion of Stranahan in *Your Physique* was especially important as he was one of the most famous athletes of the mid-twentieth century to be open about his barbell training.[92] Although Stranahan is briefly mentioned in a column by Jules Bacon in *Strength & Health* in 1941, and his career is touched on again in an editorial by Hoffman in 1947, the articles by Liederman and Horvath far more fully introduce this remarkable athlete to those interested in weight training.[93] Recognized as one of the greatest golfers in the world, Stranahan had won the British Amateur Championship in 1950, and he regularly played and beat the best pros in the world. And, most importantly, Stranahan did more than train with weights; he also competed in weightlifting and, in 1950, the same year that he won the British Amateur Championships, he entered the Ohio State Weightlifting Championships and pressed 225 pounds, snatched 220 pounds, and cleaned and jerked 300 pounds. According to Horvath he could also "squat with over 400 and deadlift over 500 pounds."[94] A realist about training, Stranahan told Liederman that one "cannot expect weight training alone to make you a champion athlete." Being a champion, he explained, also required "many long hours of practice at the sport you are trying to improve."[95]

Reaffirming Bodybuilding in the 1950s

In the early 1950s Weider began experimenting with a number of new magazine titles and formats for his publications. In August of 1952 he stopped publishing



In 1962 Weider began a new series of articles in *Mr. America* that provided a primitive biomechanical analysis of a specific sport and then provided a routine based on the biomechanical needs of that sport. The article on bowling, shown here, appeared in February of 1963. As noted in the copy at the bottom of the two page spread, more than 25,000,000 Americans participated in bowling in this era.

Your Physique and incorporated it into a new magazine called *Mr. America: A Man's Magazine*, with a note on the cover that it also contained *Your Physique*.[96] With artwork covers of brawny soldiers, sailors, scuba divers, pilots, and other "manly types," the early issues appeared to be vying more with such pulp magazines as *Argosy, True*, and *For Men Only* than with bodybuilding magazines.[97] *Muscle Power*—the magazine Weider began in 1945—continued throughout the 1950s and in terms of content covered bodybuilding, weightlifting, and other aspects of the physical culture lifestyle. In August of 1953, however, Weider launched *Muscle Builder* magazine, his first publication to exclusively cover bodybuilding. He told readers in the opening editorial that as a boy:

> I was a real muscle fanatic, and can still recall how annoyed I was when I found that all muscle magazines devoted space to general health, diet, sex and female pictures. . . . I remember promising myself . . . that if *I* were ever a publisher of a muscle magazine that I would see to it that nothing but exercises, programs, stories about the stars, and muscle pictures would fill *my* magazine . . . Then the day came when my first dream came true and I was the publisher of my first magazine. . . .Talking over my plans with my distributor I was shocked when he said 'I'm sorry, but if you insist on putting out a magazine of that sort, dedicated 100% to muscles, we won't handle it. You have to make it more general.' . . . I never forgot the promise I made to myself as a boy, and never lost sight of the fact that someday I *would* put out a 100-percent muscle magazine,

> whether it was a financial success or not . . . I feel that this new *Muscle Builder* is such a magazine.[98]

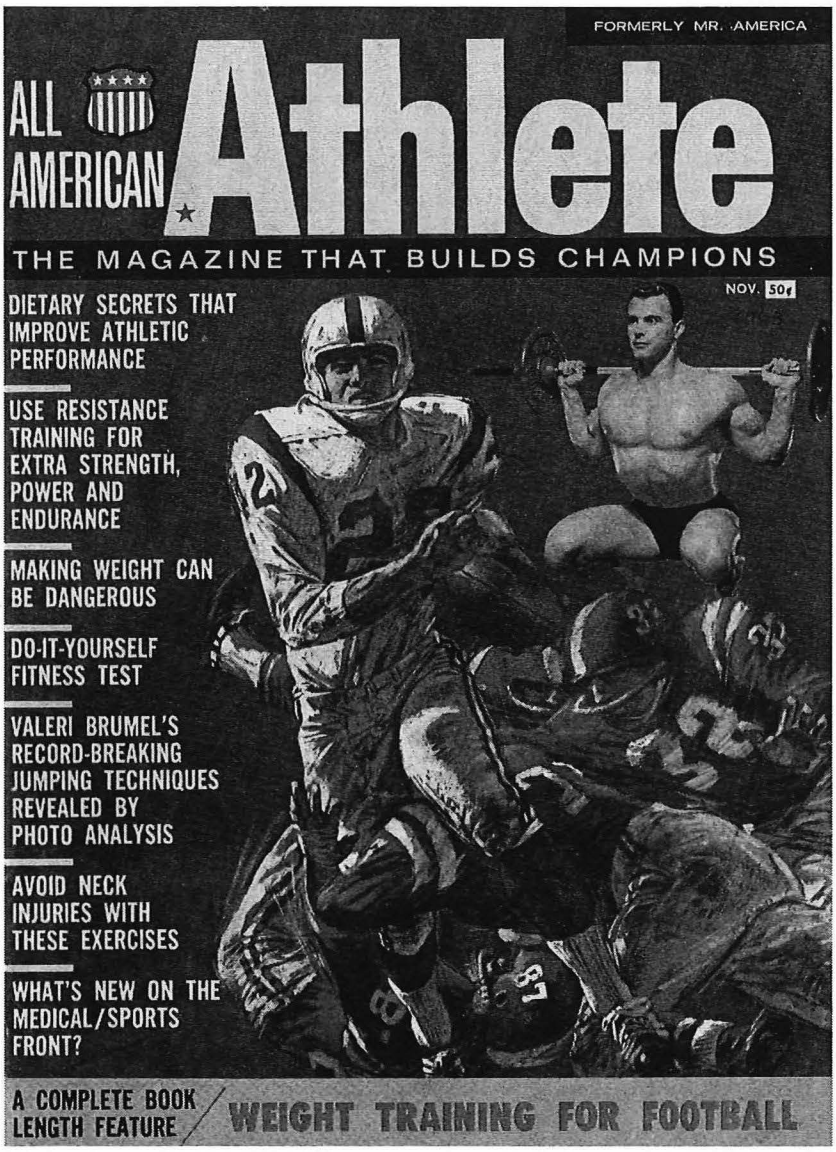
The launch of *Muscle Builder* coincided with Weider's increased involvement in the promotion of bodybuilding through the IFBB, and a growing friction with Hoffman and his York Barbell/AAU associates. Historian John Fair's *Muscletown USA* covers this feud in considerable detail and so we will not recount it here.[99] However, the rivalry between the two publishers may have also impacted sport training information in the Weider magazines as discussions of weight training for sport diminish somewhat in the 1950s in *Muscle Power* and *Muscle Builder*.[100] One reason for this change in editorial policy was undoubtedly the fact that Joe and Ben Weider were trying to establish bodybuilding as a sport in its own right by this time. When they began the IFBB in 1946, Joe wrote in an editorial that "bodybuilding is not a competitive sport in any sense of the word," a statement made at a time when he and Ben hoped to be able to work out their differences with the AAU.[101] By 1950, however, subsequent articles specifically refer to bodybuilders as "athletes" and to bodybuilding as a sport.[102] Further, they began advancing the idea that bodybuilding was the "stepping stone" for all other sports and activities and bodybuilding exercises were discussed as a prerequisite to develop the musculature necessary for Olympic lifting, for playing football, and for many other activities.[103]

Many of the early articles about strength training and sport did not discuss ways that strength training could improve sport performance. Rather, they were intended to encourage bodybuilders to take up "second choice" sports.[104] In this way, bodybuilders were encouraged to be ambassadors of physique development and to show that the muscles they had developed were "useful." Summarizing this view, Bob Leigh urged readers to "build the bodies and then take them to other activities."[105] This desire to show the utility of muscles created by bodybuilding was due in part to attacks from the Hoffman camp.[106] Hoffman and, especially, *Strength & Health* editor Harry Paschall portrayed the "lumps" created by bodybuilders as useless muscles.[107] In their official York view these "lumps" were created through deliberate high-repetition, moderate-weight exercises intended primarily to cause muscle growth. Hoffman and Paschall argued that the physiques of bodybuilders were not useful and that they featured mirror-muscles, bred by vanity.[108] Hoffman, because of his love of weightlifting, always viewed that sport as the *sine qua non* of weight training. In contrast to bodybuilding, he wanted men to train like competitive lifters with lower repetitions and heavy weights. For Hoffman, the physique a man acquired through training was a byproduct of those workouts and not the primary goal.

It should be noted that the philosophies of both Hoffman and Weider have been incorporated into modern sport training. In the contemporary model of periodization, for example, strength training begins with the "anatomical adaptation" or "hypertrophy" phase.[109] For several weeks the athlete is essentially doing bodybuilding training because of the now widely-affirmed belief that larger muscles are stronger muscles.[110] Following the hypertrophy phase most sprinter/power athletes, like football and basketball players, incorporate Olympic-style lifts and other kinds of explosive movements in their workouts, especially in fourth phase of periodization, sometimes referred to as the power phase or peaking.[111] Here, just as Hoffman claimed, snatches and cleans and jerks are now acknowledged as excellent methods for improving the rate of muscular force production. These lifts are included because they mimic the powerful hip, knee, and ankle extension required in explosive jumping and running movements.

However, while both philosophies have been vindicated, Weider's discussion of strength training for sport differed from Hoffman's in one key respect. Hoffman focused almost exclusively on the claim that strength training would improve an athlete's sport performance, whereas writers for the Weider magazines also stressed the need to also spend a great deal of time on sport practice.[112] The writer Bob Leigh even took a jab at Hoffman's claims for the utility of weight training in 1946, writing, "Certain publications . . . proclaim, 'Lift and be a Champion in all sports.' That is ridiculous because no one ever becomes a champion in any sport without specialization and concentrated training."[113] George Eiferman also stressed that, "it doesn't follow that if you build a high degree of muscularity and strength, you will automatically become a good athlete. To become proficient at any sport, you have to practice faithfully until you master the techniques of the game."[114]

All American Athlete: Bridging the Gap

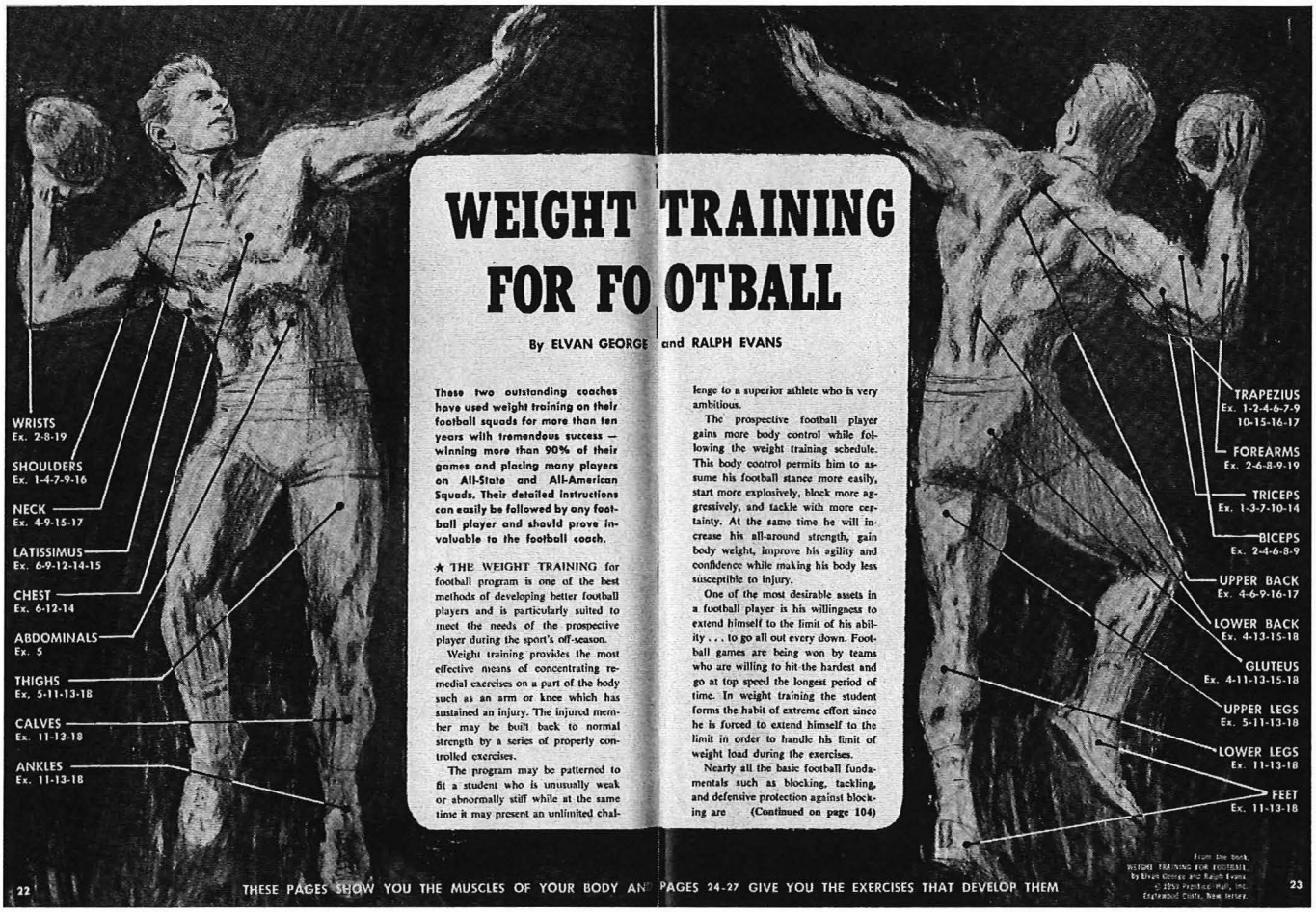


The first issue of *All American Athlete* appeared in November of 1963 with E.M. Orlick as editor. Orlick, who attended university in Canada and had been affiliated with several major universities there, wanted to create a magazine that would appeal to coaches and academics as well as serious bodybuilders. From this first issue, *All American Athlete* relied heavily on sport science to bolster the claims Orlick, Jim Murray, and other writers for the new magazine wanted to make on behalf of weight training for sport.

In the late 1950s and early 1960s both Hoffman and Weider began increasing the amount of coverage they devoted to strength training for sport in their magazines. In 1959, Hoffman added a new column, called "Barbells on Campus" which helped to demonstrate the growing use of barbells at various American universities.[115] Each article featured a different college or university and discussed young men who competed in Olympic weightlifting, took classes in weight training, and/or trained for sport.[116] The previous year, Weider had once again shuffled magazine titles and changed *Muscle Power* to *Mr. America: The Magazine of Champions*.[117] This title change accompanied a gradual increase in the number of articles stressing strength training for sport that culminated, in 1962, with the launch of a special series of sport-specific instructional articles.[118]

Weider's "Barbells and ..." series was a significant development in the evolution of weight training for sports as it marked the first time a mainstream magazine began to systematically address the important concept of sport specificity.[119] In our modern era the idea that sport training must mimic the energy systems used when playing a particular sport playing as well as the movements of that activity, is well understood and considered by most authorities to be fundamental to successful training.[120] However, until Jim Murray and Peter Karpovich published their landmark book, *Weight Training in Athletics*, in 1956, little attention was paid to the fact that different sports needed different kinds of strength training regimens. In their work, Murray and Karpovich included individualized routines for football, baseball, and track and field, and provided limited advice for what they called the "minor sports" of wrestling, swimming, boxing, rowing, tennis, golf, and fencing.[121]

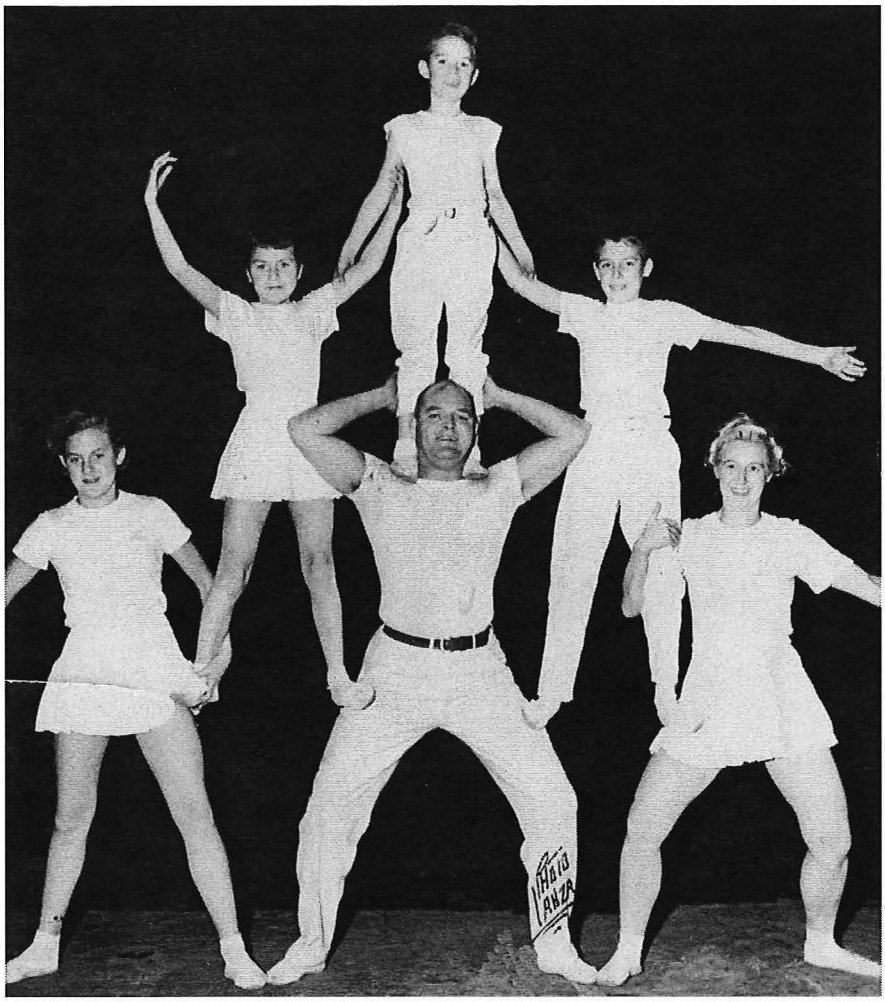
The series began with a jointly published article by E.M. Orlick and Joe Weider called "Barbells and Baseball" in June of 1962.[122] It was followed the next month by "Barbells and Swimming," and in succeeding months with articles on running, football, shot-putting, basketball, bowling, boxing, wrestling, and the decathlon.[123] The article on bowling, one of America's most popular recreational sports in the 1960s, is a good example of the level of detail to be found in these articles. The cover graphic showed a bowler, covered in numbers, releasing the ball. The numbers corresponded to the exercises pictured at the left of the page, exercises which strengthened all aspects



Although it is now common to see articles recommending exercises based on a biomechanical analysis of the muscles used in that sport or exercise, it was not common in 1963 when *All American Athlete* began publishing. This lengthy article was part of a "book-length" feature in this first issue entirely devoted to strength training for football. Written by coaches Elvan George and Ralph Evans, the article provided step-by-step instructions for both players and coaches who, were largely unfamiliar with the use of weights for football.

of the movement. The article even included instructions for practicing the actual bowling motion with a dumbbell.[124] Similarly, a running workout incorporated such novel resistance movements as running in water, running with ankle weights, and running stadium steps. These were performed in addition to more traditional bodybuilding movements such as squats, calf raises, and leg presses.[125]

By August of 1963, *Mr. America* featured the subtitle "All American Athlete," and the number of sport training articles inside the magazine dramatically increased. Surviving letters between E.M. Orlick and Joe and Ben Weider—now in the collection of Reuben Weaver and graciously provided to us for use in this article—demonstrate that plans were being laid in the summer of 1963 to start a new kind of magazine. Orlick, who had been a university faculty member and had affiliations with several professional coaching and physical education associations, wrote to Ben Weider outlining steps that needed to be taken to assure that the new magazine would reach the right hands. "Canada is ripe for our new magazine and all that goes with it," he explained, before cautioning Ben that the readership for *All American Athlete* will be different than for other Weider publications. "The 'intellectuals' will have to be treated a little different than the musclemen," he explained to Ben. "We've got to reach them thru [sic] their own thinking and language." Orlick then told Ben how to get the addresses of high school coaches, college coaches, and physical educators so that they could be informed of the new magazine. They also needed, he told Ben, to write all YMCAs, YMHAs, the Canadian Olympic Committee, and the National Fitness Council to get the word out. "Mention my name," wrote Orlick,



All American Athlete **editor E.M. Orlick loved handbalancing and gymnastics and got his whole family involved when they posed for the great physique photographer Tony Lanza. His wife, Agnes, is on Orlick's left as they support their four children, Sandy, Karen, Terry and Ron.** *Photo Courtesy Reuben Weaver*

"and some of the Universities I was at—McMaster, Western, Sir George Williams, McGill—it might still-help to open up some sticky doors. Also, I was on the Olympic Committee, Pan Am Games Committee, British Empire Games Committee, was Vice President of the AAU of C(anada) . . ."[126] Ben Weider wrote back the following week reporting that he was "following through with this immediately." He added that he felt "All American Athlete will be a smashing success, and we will do everything we can in Canada to promote it."[127]

All American Athlete: The Magazine that Builds Champions finally launched in November of 1963 with E.M. Orlick as editor.[128] The first issue included two lengthy articles on strength training for football; an article by Orlick on dietary advice for athletes; a feature story on sprinter Frank Budd, described as the world's fastest human; a biomechanical analysis of the football punt; several medical and scientific reports gleaned from research publications; and an article by former *Strength & Health* editor Jim Murray, entitled "Added Resistance for Overload."[129]

In the months that followed, *All American Athlete* continued to feature strength programs for various sports, coaching and technique tips, discussions of strategy, and nutritional advice. The second issue of the magazine, for example, was primarily dedicated to training for track and field and included another Jim Murray article—this one detailing a step-by-step strength training program for the decathlon—along with six articles discussing coaching techniques for different track and field events written by prominent coaches.[130] The early issues of the magazine were more than one hundred pages in length and the expansive format created room for training programs for a wide variety of sports—even surfing, canoeing, and less traditional sports were covered at times. Throughout the articles in *All American Athlete* the concept of sport-specific training was increasingly affirmed and refined.[131]

In addition to recommending exercises based on the actual muscles used during various sporting activities, Weider's new magazine also addressed the need to think about speed of movement as an aspect of barbell training. An important aspect of the application of strength training to sport is that it has to require the athlete to contract certain muscles quickly and simultaneously. Consistent heavy training does not necessarily do this because maximal lifts require incredibly forceful but often slow contractions. It is generally agreed that to teach the rapid muscle recruitment required in quick sport movements the movements must periodically be performed rapidly.[132] This is an adaptation on the part of

the nervous system, not the muscular system *per se*, but it is, nonetheless, an important training adaptation. George F. Jowett, one of Weider's long-time mentors, had recognized this basic idea at least as early as the 1930s when he wrote about it in *Strength & Health*.[133] He advocated a similar program in 1962 in *Muscle Builder* which called for light weight, low repetition exercises performed as rapidly as possible to "coordinat[e] the nervous forces with the muscular."[134] In 1965, in *All American Athlete*, Ben Weider also advised a fast training program which called for first using heavy weight, then reducing it twenty percent and deliberately attempting to move it faster.[135]

On the opposite end of the speed-of-movement spectrum, Jim Murray consistently advised against the practice of isometric exercise. Isometrics involve maximum contractions without producing any change in a joint's angle. This type of training gained immense popularity in the early 1960s when three York lifters made tremendous gains in size and strength which Bob Hoffman credited to isometric training. What Hoffman did not reveal was that these men were among the very first strength athletes to use anabolic steroids in the United States. This was kept secret.[136] Murray recognized that isometrics were not a "normal expression of strength," due to their static nature, and he speculated that such static training would likely only adversely affect sport performance.[137] To help debunk the fascination of many coaches and athletes with isometric contraction—and to highlight Hoffman's misplaced enthusiasm—Weider published "Top University Scientists Blast Isometric Faddism: Researchers who Started Craze Warn Against Its Improper Use" in *All American Athlete* in February of 1964. The article, written by four scientists from Southern Illinois University, labeled the unwarranted claims being made for isometrics as "pseudo-science propaganda" and told readers that in this case the "scientific literature has often been exploited, misquoted, and removed from proper context in order to substantiate such claims."[138] Weider's choice of the scientists was inspired, no doubt by a letter from E.M. Orlick the previous summer warning Joe to be careful in taking on the isometrics issue. "If you were writing just to the muscle heads it would be different," Orlick wrote, "but in *All American Athlete* you are reaching top physiologists, researchers, etc. and would look pretty stupid making statements you can't back up with solid facts."[139]

Throughout 1964, *All American Athlete* appeared on a monthly basis and continued to bring science and sport into the homes of thousands of individuals around the globe.[140] In that Olympic year, the magazine was, to no one's surprise, filled with Cold War concerns that began with Orlick's "Let's Answer the Communist Sports Challenge," in March of 1964. That article was followed by cover stories in May and June discussing the need for America to adopt a national sport program in order to combat the rise of communist sport.[141] In October of 1964, editor Orlick announced that *All American Athlete* was taking on an even larger role in the Olympic movement and that the magazine was actually helping to design strength training programs for some of America's Olympic teams. According to Orlick, at the request of the Olympic canoeing coach he and other experts "took into consideration the anatomy, physiology and kinesiology involved. And, after weeks of intensive study, backed by a lifetime of training and experience . . . we developed a scientific strength building program . . . one of the first such scientific programs for USA athletes in any sport."[142] Wrote Orlick, "There exists a big gap between scientific knowledge and its practical application, especially with respect to sports . . . we have taken a big step to bridge this gap."[143]

Despite the important role *All American Athlete* hoped to play in advancing the cause of sport training, the magazine ultimately failed to catch on as Weider and Orlick hoped. In an appeal to advertisers in 1963, advertising manager Ronald J. Orlick, son of editor E.M. Orlick, claimed that the magazine had a circulation of more than 81,000 made up of 26,000 coaches, 1,200 gym owners, 48,000 individual athletes, 1,700 department of recreation officials, 1,800 athletic directors, and 3,200 athletic trainers.[144] E.M. Orlick's correspondence files reveal, however, that the magazine's decline might also be attributed to people not receiving their magazine in a timely manner. In November of 1963, for example, Orlick wrote Joe Weider to tell him that "I have already had letters from people who have not yet received *All American Athlete* . . . This definitely hurts our image and business," he continued, "and the negative experience of one or two can definitely influence the many others who might subscribe."[145] In December, Orlick wrote again to tell Joe that "things are worse . . . 18 complaints today." Continuing, Orlick urged Joe to take this matter seriously as *All American Athlete* had a different readership than his other magazines and because high schools and colleges, "have organizations at all levels from local,

Although ravaged by age, this rare photograph shows Jim Murray, second from the right, standing with (from left to right): John Terpak, Bill Colonna, Earlene Colonna, Paul Anderson and on the right, 1952 Mr. America Jim Park. It was taken at Bill Colonna's 1953 picnic in Virginia. at which Paul Anderson set an unofficial world record in the squat with 762 pounds. At the time this was taken, Murray had been acting as managing editor of *Strength & Health* for two years. At York, and later with Joe Weider's magazines, Murray was constantly pushing to include more information about weight training for sport. His dozens of articles on the subject, and the publication of *Weight Training for Athletics* with co-author Peter Karpovich, make Murray one of the most significant figures in the move toward the acceptance of strength training for sport in the twentieth century.

through district, state, to national and such things will be brought up at conventions, etc. and we'll find ourselves black-balled, but good."[146]

Orlick's concerns had not diminished by February of 1964 when he wrote to Joe again about the subscription problem, closing the letter with, "I am very much concerned not only for you but also for me as I will be destroyed along with you."[147] One week later, Orlick wrote again, asking Joe to read two enclosed letters from dissatisfied coaches who had not received their magazines. "These people are not dumb muscle heads," wrote Orlick, "they hold positions of prominence and some wield lots of power."[148]

Another reason for the decline of the magazine may well have been a lack of outside advertisers. Orlick's son, Ron, listed as advertising manager in the magazine, wrote Weider at one point about $600 worth of advertising he had sold that never appeared in *All American Athlete*. "It is absolutely ridiculous to work our guts off getting orders, and then not filling them," he wrote.[149] In any case, by April of 1965, the magazine fell to only sixty-six pages in length and Weider stopped producing it as a stand-alone magazine. He'd apparently been thinking about stopping it for several months, however, having written in a personal letter in January of 1965 that although "we all want to keep AAA going," he'd already lost $50,000 on the magazine and it had only developed a circulation of 23,000 subscribers.[150]

Although the first iteration of *All American Athlete* was over, Weider's interest in marketing a sport training magazine remained. According to writer Jim Murray, Weider even approached him about working for him on a full-time basis in the late 1960s so that he could run a new version of the magazine. Murray, who played football and threw the javelin at Rutgers University at the same time he lifted weights, always believed that a magazine such as *All American Athlete* was needed and could succeed. However, he reported, "by the time Joe approached me, I was working for Johnson and Johnson, and I really didn't want to give up the security that that

job offered."[151] So, Murray explained, he worked for Joe as a freelancer and helped during 1968 and 1969 when *All American Athlete* once again appeared on American newsstands for five additional issues. The last two issues list Murray as the editor in chief.[152] Said Murray, "After writing the book with Dr. Karpovich, I knew how important it was to bring science and sport together, but somehow we could never quite make it all work at Weider's as it should."[153]

Conclusion

Although *All American Athlete* did not last, it—and Weider's other publications—had a profound effect on the creation of today's sport training environment. Weider publications recognized and discussed in some capacity all of the modern principles of a sport conditioning program—overload, progression, injury prevention and sport specificity—and they also identified for the public a host of role model athletes who used weight training in their preparation for competition—athletes ranging from golfer Frank Stranahan to baseball star Mickey Mantle to field event specialist Jay Sylvester.[154]

Weider could not have known that his decision to end the magazine in the fall of 1969 would coincide with the hiring of Boyd Epley as the first collegiate strength coach in America.[155] Nor could Weider have known—though he might have suspected—that Epley would go on to do exactly what *All American Athlete* urged in 1965 when Orlick wrote in an editorial about the need for a national clearinghouse to relay the findings of the emerging sport sciences to coaches so that they could be used to maximize performance.[156]

In 1978, Epley formed the "clearinghouse" that *All American Athlete* had envisioned when he called the first meeting of the National Strength Coaches' Association (NSCA) to facilitate the sharing of information between conditioning professionals and researchers regarding best practices in the enhancement of sport performance.[157] Although Epley wasn't a reader of the early *All American Athlete* issues, he was definitely aware of the magazine—and recalls that he had a picture of bodybuilder Sergio Oliva taped to his fridge in those years, a fact which suggests that Weider's message of bodybuilding as the foundation for all sport training had been heard.[158]

Over the years since that time, the NSCA has become even more fully the clearinghouse Orlick envisioned, with the launch, in 1979, of the *NSCA's Strength and Conditioning Association Journal.* Its founder and editor, exercise physiologist William Kraemer—considered by many to be the world's leading authority on strength and conditioning science—has clear memories of reading the articles in *All American Athlete* and being inspired by them as a teenager. "They excited me with new programs and ideas," he recalled, "and they even served in some ways as a model for the early issues of the *NSCA Journal.*" Kraemer added, "I wanted it (the *Journal*) to have training discussions, research and education on training, famous athletes on the cover with their coach, and so on. . .These magazines . . . were inspirational. . . they opened my eyes."[159] Asked if he remembered Orlick's use of the phrase "Bridging the Gap," which is now the NSCA's motto, Kraemer claimed he didn't. "I thought I came up with it . . . but I must have read it and not remembered by 1978."[160]

It is impossible, of course, for historians to precisely assess the impact of any man, or magazine—especially a series of magazines published over a long period of time. However, it is clear that Joe Weider played a key role in the development of strength training for sport. Weider's publications battled the myths which hindered strength training, particularly the concepts of muscle-binding and athlete's heart. His publications also consistently advocated the model of progressive overload to improve physique and performance and they embraced and promoted sport science as the means to greater athletic performance. Moreover, Weider, Murray, Orlick, and the other writers most closely involved with *All American Athlete,* helped develop the concept of sport-specific strength training, particularly with regard to movement specificity. It is an impressive legacy and one that deserves recognition within the sport and academic communities.[161]

NOTES:

The authors would like to thank Reuben Weaver for allowing us to use materials from his collection for this article.

1. Joe Weider, "Editorial – I Predict," *Your Physique* 13, no. 4 (July 1950): 5.
2. Terry Todd, "The Myth of the Muscle-bound Lifter," *National Strength and Conditioning Association Journal* 7, no. 3 (1985): 37-41.
3. Ibid.
4. In addition to the titles mentioned above, Joe Weider launched the following magazines during the 63 years he ran Weider Publish-

ing: *American Manhood, Fury, Muscle Power and Weightlifting, Sante et Force, Lutte et Boxe, Boxing and Wrestling, Muscle, Animal Life, Safari, American Beauty, Body Beautiful, Adonis, Junior Mr. America, Mr. America/All American Athlete, Shape-Up, The Young Physique, Demi-Gods, Health Vigor, Sports Fitness, Fit Pregnancy, Living Fit, Prime, Senior Golfer,* and *Cooks.* For publishing years and additional information go to: Jan Todd, Joe Roark and Terry Todd, "A Briefly Annotated Bibliography of English Language Serial Publications in the Field of Physical Culture," *Iron Game History: The Journal of Physical Culture* 1, nos. 4 & 5 (March 1991): 25-40.

5. It is impossible to know for certain how many people actually train with weights as many individuals train at home or in school and university settings where they do not have to register. However, the International Health, Racquet and Sportsclub Associations (IHRSA) reported in April 2012 that more than 51 million people belong to health clubs in the United States and that 29,960 individual health clubs exist in the United States. "51.4 Million Americans Are Health Club Members, Up 2.4%; Club Usage at Record High, Industry Revenue Up 5%," IHRSA Website: http://www.ihrsa.org/media-center/2012/4/2/514-million-americans-are-health-club-members-up-24-club-usa.html.

6. John Fair, *Muscletown USA: Bob Hoffman and the Manly Culture of York Barbell* (University Park, PA: Pennsylvania State University Press, 1999), 114-119, 143-145, 352-354; Alan Klein, *Little Big Men: Bodybuilding Subculture and Gender Construction* (Albany, NY: State University of New York Press, 1993), 85-88, 96-107; Rick Wayne, *Muscle Wars: The Behind the Scenes Story of Competitive Bodybuilding* (New York: St Martin's Press, 1985), 4-6, 109-138; Alan Klein, "Muscle Manor: The Use of Sport Metaphor and History in Sport Sociology," *Journal of Sport and Social Issues* 9, no. 1 (1985): 4-19; Randy Roach, *Muscle, Smoke & Mirrors, vol. 1,* (Bloomington, IN: AuthorHouse Publishing, 2008), 134-168, 347-363; Benjamin Rader, "The Quest for Self-Sufficiency and the New Strenuosity: Reflections on the Strenuous Life of the 1970s and 1980s," *Journal of Sport History* 18, no. 2 (Summer 1991): 255-266; Jan Todd and Terry Todd, "Legacy of Iron: A History of the Men, Women and Implements that Created the Iron Game,'" in *Resistance Training: The Total Approach,* ed. Lewis Bowling (Durham, NC: Carolina Academic Press, 2007), 165-215.

7. In 1987 Bob Hoffman was posthumously designated as a recipient of the National Strength and Conditioning Association's Alvin Roy Award. The award "recognizes an individual whose career achievements have made a major historical impact on the scientific understanding, methodologies, practices and general awareness of resistance training as a component of sports conditioning." See: NSCA Award Recipients, http://www.nsca.com/WorkArea/DownloadAsset.aspx?id=1112. For additional references to Hoffman as an integral figure in the application of strength training to sport, please see: Terry Todd, "Remembering Bob Hoffman," *Iron Game History* 3, no. 1 (September 1993): 18-23; Jan Todd & Terry Todd, "Peter V. Karpovich: Transforming the Strength Paradigm," *Journal of Strength & Conditioning Research* 17, no. 2 (May 2003): 213-220; Jim Murray, "Weightlifting's Non-Lifting Patron Saint," *Iron Game History* 4, no. 5 (August 1997): 3-5; Jan Todd, "The Origins of Weight Training for Female Athletes in North America," *Iron Game History* 2, no. 2 (April 1992): 4-14; Fair, *Muscletown USA,* 166-167.

8. Bob Hoffman, "How to Improve at Your Chosen Sport," *Strength & Health* 1, no. 1 (December 1932): 6.

9. *Physical Power* ran from 1960 to 1965. Its circulation was relatively small and the magazine was not exclusively about sport training as Marcyan also published information on Olympic lifting and bodybuilding. However, the primary emphasis was on weight training for sport and Marcyan was among the first to argue for sport specific programs. Todd, et.al, "Breifly Annotated Bibliography," 35. See also: Michael Kinsman, "Walt Marcyan, 94, In Vanguard of Fitness Movement," *San Diego Union Tribune,* September 28, 2007.

10. Some confusion exists about Joe Weider's actual birth date. In *Brothers of Iron* he writes, "Ma had a rough idea that it was November 29th, either 1920 or 1922." (p. 5). Using 1922 as his birth year supports the idea that he started his magazine empire at the age of seventeen, which is claimed in several places. Joe Weider, Ben Weider and Mike Steere, *Brothers of Iron: How the Weider Brothers Created the Fitness Movement and Built a Business Empire* (Champaign, IL: Sports Publishing, 2006), 2-5. See also: Randy Roach, *Muscle Smoke and Mirrors—Volume I,* 145; David Ferrell, "Body Building: Joe Weider's Iron Grip on an Empire," *LA Times,* March 2, 1989; Frederick Tilney, "Getting Acquainted with Your Editor-in-Chief Joseph E. Weider," *Your Physique* 4, no. 4 (November 1944): 8. United States immigration documents accessed via *Ancestry.com* suggest Weider was actually born earlier. On immigration forms he filled out in 1948 and 1950 when he flew into New York City, Joe lists his date of birth as November 27, 1920. Jan Todd Collection.

11. Ben Weider died in 2008. "Bodybuilder Created an Empire," *The* (Montreal) *Gazette,* October 19, 2008.

12. Weider, et al., *Brothers of Iron,* 14-15, 24-25, 28-29.

13. Ibid., 19-20.

14. Ibid., 14-19.

15. Ibid., 19-20,

16. Ibid., 28.

17. Ibid., 24.

18. G. B. Windship, "Autobiographical Sketches of a Strength Seeker," *Atlantic Monthly* 9 (January 1862): 102-115. See also: Harvey Green, *Fit for America: Health, Fitness, Sport, and American Society* (Baltimore, MD: Johns Hopkins Press, 1986), 199.

19. Windship, "Autobiographical Sketches," 104. See also: Jan Todd, "'Strength is Health': George Barker Windship and the First American Weight Training Boom," *Iron Game History* 3, no. 1 (September 1993): 5.

20. Sammy R. Dana, "Charles Atlas," in *The Guide to United States Popular Culture,* ed. Ray Broadus Browne and Pat Browne (Madison, WI: Popular Press, 2001), 50.

21. Sam Danna, "The 97 Pound Weakling . . . Who Became the 'World's Most Perfectly Developed Man,'" *Iron Game History* 4, no. 4 (September 1996): 3-4.

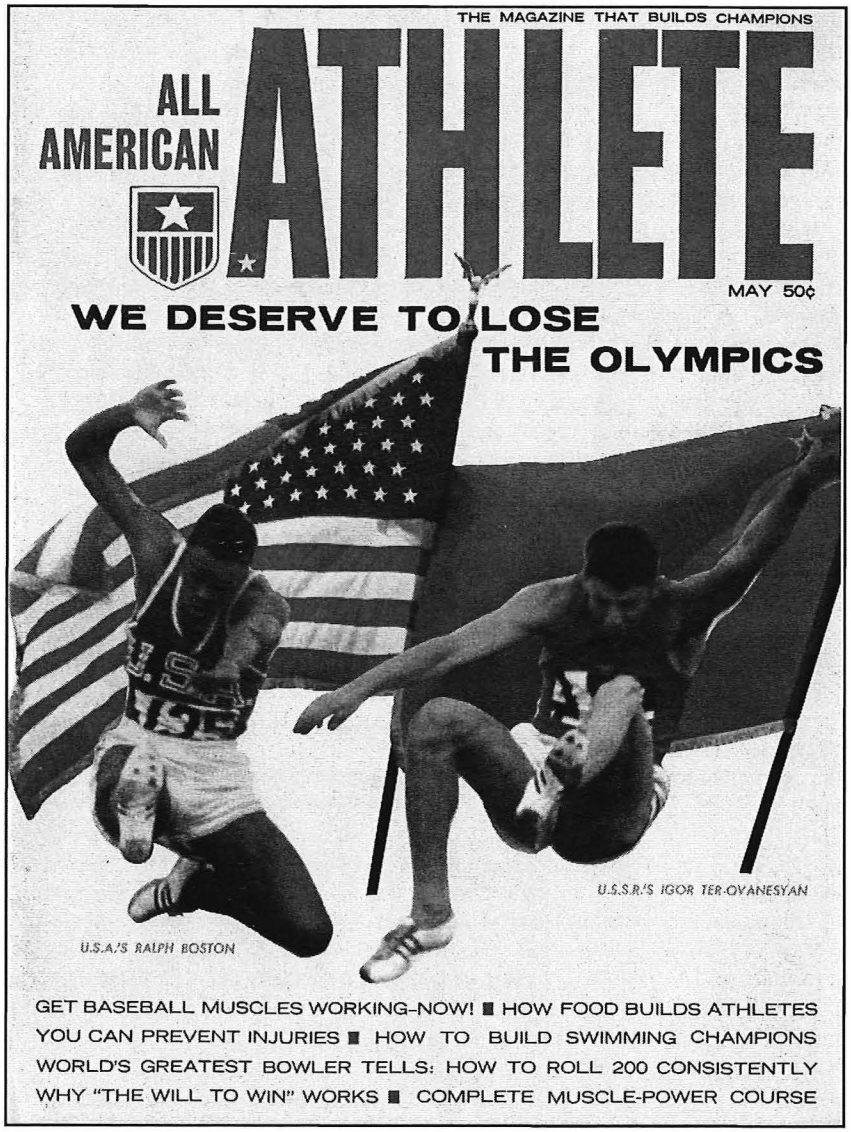
22. Jacqueline Reich, "The 'World's Most Perfectly Developed Man' — Charles Atlas, Physical Culture, and the Inscription of American Masculinity," *Men and Masculinities* 12, no. 4 (2010): 449. See also: Michael Kimmel, "Consuming Manhood: The Feminization of American Manhood and the Recreation of the Male Body, 1832-1920," *Michigan Quarterly Review* 33, no. 1 (1994): 7-36.

23. Elliot Gorn, *The Manly Art: Bare-Knuckle Prize Fighting in America* (Ithaca, NY: Cornell University Press, 1986), 129-133.

24. Bob Hoffman was particularly adamant that "modern" life was making American men soft. Some of the earliest *Strength & Health* editorials were aimed at dispelling the notion that physical strength was no longer necessary in the modern world. See for example, "Why You Should Be Strong," *Strength & Health* 1, no. 7 (June 1933): 5-6. His particular equation of strength and masculinity was almost

always presented in nationalistic terms. He urged readers to take up weight training because the physical decline associated with modernity would otherwise allow stronger nations to conquer the United States.

25. Horatio Alger, *Ragged Dick; or Street Life in New York with the Boot Blacks* (New York: Signet Classics, 2005).
26. Tilney, "Getting Acquainted," 8-9.
27. Alger, *Ragged Dick*.
28. Weider, et al., *Brothers of Iron*, 48.
29. See, for example, Joe Weider, "Editorial — Bring Out Your Reserve Power!" *Your Physique* 2, no 5 (August/September 1942): 3. In the article, Weider assured the reader that, whatever their affliction, it could be overcome by a strong will and exercise. Similarly, some of the earliest issues of Hoffman's *Strength & Health* featured multiple articles by Alan Carse, titled "Survival of the Fittest," in which the author asserted that, "All of life is a fight . . . The man who, through heredity, training or mode of living learns to excel physically is the man who succeeds most." Alan Carse, "Survival of the Fittest," *Strength & Health* 3, no. 12 (November 1935): 18; Alan Carse, "A Tale of Survival of the Fittest," *Strength & Health* 4, no. 1 (December 1935): 18, 44-45. Also see: Barton Horvath, "What Can Weight Training Do for Me Besides Build Big Muscles?" *Muscle Power* 18, no. 9 (November 1955): 22-23, 50-52; Joe Weider, "You Can be Strong and Muscular!" *Muscle Builder* 1, no. 6 (January 1954): 10-13, 58-60; Charles Smith, "Jack Delinger — From Rheumatic Fever to the World's Perfect Man," *Muscle Builder* 2, no. 3 (April 1954): 5, 64; Joe Weider, "Alex Aronis Makes Good," *Muscle Builder* 2, no. 4 (May 1954): 28-29, 50.
30 Joe Weider, "Editorial," *Your Physique* 1, no. 1 (August 1940): 4, 1.
31. Bob Hoffman, "Editorial," *Strength & Health* 1, no. 1 (December 1932): 1. "We must keep our country physically equal to or superior to all other countries," he wrote. "To the task of showing the way, of helping to encourage mass athletics and physical training in the youth of the nation in particular and persons of all ages as well, this magazine is dedicated."



In 1964, the year the Olympic Games were held in Tokyo, *All American Athlete* took on a new nationalistic tone suggesting that America's system for preparing athletes for international competition was far behind other nations. In the magazine it is evident that Weider and Orlick wanted the government to get more fully behind the idea of scientific training and to help fund research on various aspects of Olympic sport.

32. Weider, "Editorial," 1.
33. To view the entire first issue of *Your Physique* as a "flipping book" go to: http://www.starkcenter.org/todd-mclean-library/digital-books.
34. Harvey Hill, "Canadian Weightlifting News," *Your Physique*, 1, no. 1 (August 1940): 15. In this meet Weider lifted on the Young's Studio team.
35. Joe Weider, "Vitamins for the Bodybuilder," *Your Physique*, 1, no. 1 (August 1940): 8.
36. Fair, *Muscletown,* 14-16.
37. The program Hoffman followed called for lifting as much weight as one could handle for five repetitions. As the lifter's strength increased, he increased the number of times he lifted the weight until he reached ten repetitions. He would then add more weight until he could only do five repetitions and restart the process. Bob Hoffman, "How I Learned the Quickest and Easiest Way to Strength and Health," *Strength & Health* 1, no. 2 (January 1933): 3-5.
38. Ibid. Hoffman's claim of six hundred victories in sporting events has never been fully substantiated. See also: Fair, *Muscletown*, 15-16, and 395.
39. Ibid., 30.
40. Bob Hoffman, "There Should be a Law Against It," *Strength & Health* 4, no. 6 (May 1936): 14, 36-7; A.M. Gibson, "Does Exercise Harm the Heart?" *Strength & Health* (March 1959): 37, 57; A.M. Gibson, "Is Weightlifting Dangerous?" *Strength & Health* (October 1959): 24-5, 46-7; Arthur Dandurand, "I am Young at Sixty-Two,"

Your Physique 1, no. 1 (August 1940): 5, 18, 22; Joe Weider, "Our Teachings Have Proven Best After All," *Your Physique* 3, no. 5 (November/December 1943): 6-7, 33; Herbert Shelton, "Medicine Discovers Weightlifting," *Your Physique* 4, no. 4 (August/September 1944): 14-15, 49.

41. Dandurand, "Young at Sixty-Two," 5. In July of 2011, Weider told author Jan Todd that he had personally written all the articles in the first issue of the magazine. Interview with Joe Weider by Jan Todd, July 23, 2011, Austin, Texas.
42. Dandurand, "Young at Sixty-Two," 5, 18, 22.
43. Mark Berry, "Physical Training Problems Simplified," *Your Physique*, 1, no. 4 (March/April 1941).
44. The myocardium actually makes slightly different adaptations to the different stimuli of strength or endurance training. For more detail on the distinct adaptations for each mode of training, please see: Thomas Baechle and Roger Earle, eds. *Essentials of Strength Training and Conditioning* (Champaign, IL: Human Kinetics, 2008): 110-112, 127-131.
45. "The Dangers in Competitive College Athletics," *The Christian Advocate* 77, no. 47 (1903): 1882.
46. Ibid.
47. See for example: Paul Van Boeckman, "Watch Your Heart," *Your Physique* 2, no. 6 (December/January 1942): 8, 26; W. A. Pullum, "Weight-Training and the Strained Heart," *Your Physique*, 3, no. 6 (February/March 1944): 7, 46; Earle Forbes, "Dan Lurie Strengthened His Weak Heart by Barbells," *Your Physique* 3, no. 6 (February/March 1944): 8-10.
48. John Hoberman, *Mortal Engines: The Science of Performance and the Dehumanization of Sport* (New York: The Free Press, 1992): 47-49.
49. Randolph Faires, "Physical Education," *Medical News* 64, no. 7 (1894): 173.
50. Faires' understanding of blood shunting is correct, to a degree. During exercise, blood is directed toward the working musculature at the expense of the viscera. This is, of course, a short-term adaptation which reverses with the cessation of exercise and is not so pronounced as to cause ischemia and damage to the organs. It should be noted that the opposite scenario occurs at rest, with skeletal muscle receiving very little blood flow relative to the kidneys, liver, stomach, and intestines. See also: Shelton, "Medicine Discovers," 14-15, 49.
51. "The Future of College Athletics," *Congregationalist and Christian World* 90, no. 34 (1905): 274.
52. Victor Vaughan, "Hygiene and Public Health," *American Journal of Medical Sciences* 140, no. 5 (1910): 778.
53. Rob Beamish and Ian Richie, "From Fixed Capacities to Performance-Enhancement: The Paradigm Shift in the Science of 'Training' and the Use of Performance-Enhancing Substances," *Sport in History* 25, no. 3 (2005): 415.
54. Green, *Fit for America,* 213.
55. Beamish and Richie, "Fixed Capacities," 416.
56. John Capretta, "The Condition Called Muscle-Bound," *Journal of Health and Physical Education* 3, no. 2 (1932): 43, 54.
57. Arthur Steinhaus quoted in: Shelton, "Medicine Discovers," 15.
58. Quoted in Jan Todd, "Physical Culture and the Body Beautiful: An Examination of the Role of Purposive Exercise in the Lives of American Women, 1800-1870" (Ph.D. Dissertation, University of Texas at Austin, 1995), 375-6.
59. T. Todd, "Myth of the Musclebound Lifter," 39.
60. Terry Todd, "The History of Resistance Exercise and Its Role in United States Education," (Ph.D. Dissertation, University of Texas at Austin, 1966): 177.
61. Ibid.
62. T. Todd, "Myth of the Musclebound Lifter," 39-40.
63. For additional examples of refutation of the existence of athlete's heart, see: W.A. Pullum, "Are Weightlifters Slow?" *Muscle Power* 1, no. 6 (September 1946): 72-75; Martin Franklin, "Arthur Saxon's Views on Weightlifting," *Muscle Power* 4, no. 6 (March 1948): 20, 42; A.T. Petro, "The Effect of Barbell Exercise on the Heart," *Muscle Power* 7, no. 5 (April 1949): 5, 45-46; Bob Hoffman, "Your Heart and Exercise," *Strength & Health* (March 1936): 12, 38-39.
64. Shelton, "Medicine Discovers," 15.
65. Ibid., 49.
66. Weider, "Our Teachings," 3.
67. Ibid. Bilik was a prominent figure in the field of athletic training (sports medicine), authoring *The Trainer's Bible* in 1916. He would later be recognized as "The Father of Athletic Training," both for his publications and for helping athletic trainers organize. Richard Ebel, *Far Beyond the Shoe Box: Fifty Years of the National Athletic Trainers' Association* (New York: Forbes Custom Publishing, 1999), 2.
68. Joe Weider, "Debunking the Opponents of Weight Training," *Your Physique* 12, no. 1 (October 1949): 16-17, 30-31. See also: Petro, "Effect of Barbell Exercise on the Heart," 4, 56-6; Benedict Lupica, "Muscle Power and Reflexes," *Muscle Power* 7, no. 4 (March 1949): 23, 46; Wilbur Bohm, quoted in: Earle Liederman, "What the Champs are Saying," *Muscle Power* 17, no. 9 (November 1954): 7, 42. Shelton studied at the American School of Chiropractic and graduated from the American School of Naturopathy with a Doctor of Naturopathy (ND).
69. George Weaver, "The One Way to Physical Perfection," *Muscle Power* 1, no. 1 (September/October 1945): 43.
70. Shelton, "Medicine Discovers," 14.
71. Dr. Walter Baptiste, "Your Body Building Problems Solved," *Your Physique* 4, no. 3 (August/September 1944): 20.
72. Stuart Rose, "Who's Musclebound?" *Your Physique* 11, no. 1 (April 1949): 28.
73. Ibid., 33.
74. George Weaver, "What's Wrong with Strength?" *Muscle Power* 10, no. 5 (October 1950): 9.
75. See, for example: John Paul Endres, "The Effect of Weight Training Exercise Upon the Speed of Muscular Movement," (Master's Thesis, University of Wisconsin 1953); Edward Capen, "The Effect of Systematic Weight Training on Power, Strength, and Endurance," *Research Quarterly* 21, no. 2 (1950): 83; Edward Chui, "The Effect of Systematic Weight Training on Athletic Power," *Research Quarterly* 21 no. 3 (1950): 188; William Zorbas & Peter Karpovich, "The Effect of Weight Lifting Upon the Speed of Muscular Contractions." *Research Quarterly* 22, no. 2 (1951): 145. For more information on Karpovich's research, see: Jan Todd and Terry Todd, "The Conversion of Dr. Peter Karpovich," *Iron Game History* 8, no. 4 (March 2005): 4-12.
76. Bob Collins, "His Fight Was Against a Frail, Weak Physique," *Birmingham (AL) Post*, July 21, 1939.
77. Jan Todd, Jason Shurley and Terry Todd, "Thomas DeLorme and the Science of Progressive Resistance Exercise, *Journal of Strength and Conditioning Research* (In press: scheduled for November 2012). Rehabilitation literature in the early twentieth century was extremely conservative. For example, physician Frank Butler Granger wrote, "In all treatment, care should be taken not to overtire the weakened

muscles." Frank Butler Granger, *Physical Therapeutic Technic* (Philadelphia: WB Saunders Publishing, 1932), 244. Similarly, R. Tait McKenzie, the first professor of physical therapy in the United States advised, "[exercises] should never be continued beyond the point of moderate fatigue." He went on to explain that hypertrophy was likely detrimental because "if the entire muscular system be developed to its physiologic limit a very considerable drain on vitality is inevitable." R. Tait McKenzie, *Exercise in Education and Medicine* (Philadelphia: WB Saunders Publishing, 1923), 321-2, 368-9.

78. Thomas DeLorme, "Restoration of Muscle Power by Heavy Resistance Exercises," *Journal of Bone and Joint Surgery* 27, no. 4 (1945): 645-667; Thomas L. DeLorme, "Heavy Resistance Exercises," *Archives of Physical Medicine and Rehabilitation* 27 no. 10 (1946): 608; Thomas DeLorme and Arthur Watkins, "Technics of Progressive Resistance Exercise," *Archives Of Physical Medicine And Rehabilitation* 29, no. 5 (1948): 263-273; Thomas Delorme, Robert Schwab, and Aurthur Watkins, "The Response of the Quadriceps Femoris to Progressive-resistance Exercises in Poliomyelitic Patients," *The Journal Of Bone And Joint Surgery* 30, no. 4 (1948): 834-847; Thomas DeLorme, Francis West, and William Shriber, "Influence of Progressive Resistance Exercises on Knee Function Following Femoral Fractures," *The Journal of Bone And Joint Surgery* 32, no. A:4 (1950): 910-924. Thomas DeLorme, B.G. Ferris, and J.R. Gallagher, "Effect of Progressive Resistance Exercise on Muscle Contraction Time," *Archives of Physical Medicine* 33, no. 2 (1952): 86-92; Thomas DeLorme and Arthur Watkins, *Progressive Resistance Exercise: Technic and Medical Application*. (New York: Appleton-Century-Crofts, 1951).

79. Phillip J. Rasch, "In Praise of Weight Training," *Muscle Power* 8, no. 1 (June 1949): 12-13, 33-35. Rasch also discussed the work of C.H. McCloy, who had designed a strength training program for the University of Iowa's basketball team that resulted in a two and a half inch average improvement in the players' vertical jump scores and a national ranking for the squad. For additional information about McCloy see: Terry Todd, "A Pioneer of Physical Training: C. H. McCloy," *Iron Game History* 1, no. 6 (August 1991): 1-2.

80. Rasch, "Praise," 34-5.

81. Pullum, "Are Weight-Lifters Slow?" 75.

82. Ibid.

83. Wilf Diamond, "The Story of Jack Johnson," *Your Physique* 10, no. 1, 2 & 3 (October, November and December 1948): 14-15, 22-23, 26-27; Charles B. Roth, "Toughest Man on Earth," *Your Physique* 8, no. 3 (December, 1947): 16-17, 40. See also: S. Muzumdar, "The Great Gama," *Your Physique* 10, no. 4(January 1949): 8-9, 34; Edmond Desbonnet, "Yousouf: The Terrible Turk," *Your Physique* 11, no. 1 (April 1949): 14-15, 36.

84. Franklin, "Arthur Saxon's Views," 20, 42.

85. Ibid., 42.

86. Ibid.

87. Joe Weider, "Sports and Lifting," *Muscle Power* 10, no. 5 (October 1950): 8-9.

88. Weaver, "What's Wrong with Strength?" 9, 31-2.

89. Barton R. Horvath, "Weight Training Helped Make Him a Champion," *Your Physique* 15 no. 2 (May 1951): 18-19, 38.

90. An article on swimmer and film star Johnnie Weissmuller appeared in *Your Physique* in March of 1948 and discusses his use of weights for keeping fit for his films. However, at the time he was already retired as an athlete. George Lowther, "How Johnny Weissmuller Keeps Fit," *Your Physique* 8, no. 6 (March 1948): 8-9, 43; Earle Liederman, "Barbells and a Golf Champion!" *Muscle Power* 8, no. 2 (July 1949): 32, 49.

91. Horvath, "Weight Training Helped," 38.

92. Stranahan was also featured in: Joseph Weider, "Weight Training Made Frank Stranahan a Champion," *Muscle Builder* 6, no. 2 (March 1956): 18-19, 48-50. Stranahan was also on the cover.

93. Jules Bacon, "What Can We Do?" *Strength & Health* (September 1941): 19, 44-46; Bob Hoffman, "Editorial—Weightlifters Are Successful in Other Sports," *Strength & Health* (August 1947): 3-4. Stranahan was featured later in Leo Stern, "How Frank Stranahan Trains for Golf," *Strength & Health* (April 1958): 26.

94. Horvath, "Weight Training Helped."

95. Liederman, "Golf Champion!" 49.

96. The last issue of *Your Physique* was numbered vol. 17 no. 4. The first issue of *Mr. America* was numbered vol. 17 no. 5, indicating that it was indeed a continuation of the earlier magazine. It appears that with the demise of *Your Physique*, Weider actually launched two magazines based on *Your Physique's* volume and issue numbers for *American Manhood* also appeared in August of 1952 and was also labeled vol. 17 no. 5. *American Manhood* is described as dealing with adventure, sports, bodybuilding, exposes and crime. In January of 1953, Weider rolled back the numbering of *Mr. America* to vol. 1, no. 1. For more info on Weider magazines see: Todd, Roark & Todd, "Briefly Annotated Bibliography," 31.

97. For information on pulp magazines in the 1950s see: Peter Haining, *The Classic Era of American Pulp Magazines* (Chicago: Chicago Review Press, 2001).

98. Joseph Weider, "A Dream Come True," *Muscle Builder* 1, no. 1 (August 1953): 42.

99. Fair, *Muscletown*, 114-119.

100. An examination of all the articles in the two magazines in these years yielded only the following articles in which sport training is mentioned: Joe Weider, "Sports and Lifting," *Muscle Power* 10, no. 5 (October 1950): 8-9; Weaver, "What's Wrong with Strength?" 9, 31-2; Earle Liederman, "What Barbells Have Done for Joseph Baratta," *Muscle Power* 15, no. 1 (December 1952): 31, 51-2; Clarence Ross, "The Secret of Speed and Endurance," *Muscle Power* 15, no. 6 (June 1953): 17-18; Earle Liederman, "What the Champs are Saying," 7, 42; Barton Horvath, "What Can Weight Training Do for Me," 22-23, 50-52; Ed Theriault, "Your Bodybuilding Problems Solved," *Muscle Builder* 2, no. 1 (February 1954): 5, 40-41; Joe Weider, "Weight Training Made Frank Stranahan a Champion," 19, 48-50; George Eiferman, "Weight Training — The Key to Greater Athletic Ability," *Muscle Builder* 9, no. 3 (November 1957): 32-5, 65-6, 70; E.M. Orlick, "How Bodybuilding Can Make You a Better Athlete," *Muscle Builder* 19, no. 9 (June 1959): 34-5, 61.

101. Joe Weider, "International Federation of Body Builders to be Formed," 28.

102. See, for example: Ed Theriault, "Your Bodybuilding Problems Solved," *Muscle Builder* 2, no. 1 (February 1954): 40; and E.M. Orlick, "Body Building vs. Athletics," *Muscle Power* 10, no. 5 (October 1950): 29.

103. See, for example: Harvey Hill, "Training the Lifter," *Your Physique* 1, no. 5 (May/June 1941): 4; and Ross, "Secret of Speed and Endurance," 17-18.

104. Dan Lurie, "Heavy Exercise and Sports," *Muscle Power* 1, no. 3 (April/May 1946): 61-64.

105. Bob Leigh, "Barbells, A Springboard to Sports," *Muscle Power* 2, no. 2 (December 1946): 129.

106. It was also due to the fact that the AAU required bodybuilders to demonstrate some sort of athleticism other than bodybuilding when they registered to compete. Many men satisfied this require-

ment by lifting in the weightlifting contest that often preceded AAU bodybuilding contests. Others, however, brought evidence to the judges that they ran track or competed in some other sport.

107. Caricatures of bodybuilders in *Strength & Health* drawn by Harry Paschall included "Abysmal Q. Multiflex," a cartoon character whose unnatural muscles served only to impress women. In contrast, Paschall used Bosco, an old-time strongman whose square musculature appeared to be carved from stone, to symbolize the superiority of weightlifters. Bosco's physique and great strength were often used to deride bodybuilders and "Weider men." In response to Hoffman's criticism and Paschall's cartoons, the Weider writers stressed the usefulness of muscles built through bodybuilding-style training. They insisted that the training would improve conditioning in preparation for sport. Harry Paschall, "Bosco," *Strength & Health*, (March 1949): 12; Jack LaLanne, "Do You Want Strength Plus Endurance," *Your Physique* 10, no 5 (February 1949): 37; I.J. MacQueen, "Recent Advances in the Technique of Progressive Resistance Exercise," *Muscle Builder* 4, no. 3 (April 1955): 36.

108. Weider responded to Hoffman's innuendoes about bodybuilders in "Getting it Off My Chest: Cream Puff and Mirror Athletes," *Your Physique* 12, no. 5 (February 1950): 24-25, 34.

109. Tudor Bompa and Gregory Haff, *Periodization: Theory and Methodology of Training* (Champaign, IL: Human Kinetics, 2009), 140.

110. Mel Siff, *Supertraining: A Scientific Teaching Method for Strength, Endurance, and Weight Training* (Denver, CO: Supertraining Institute, 2004), 33-34.

111. Jay Hoffman, "Periodized Training for the Strength/Power Athlete," *NSCA's Performance Training Journal* 1, no. 9, viewed at: http://myweb.wwu.edu/~chalmers/PDFs/Periodized%20training%20for%20the%20strength%20and%20power%20athlete.pdf.

112. Bob Hoffman, "How to Become an Athletic Star," *Strength & Health* 1, no. 2 (January 1933): 8-9.

113. Leigh, "Barbells, A Springboard to Sports," 54-55.

114. Eiferman, "Weight Training—The Key to Greater Athletic Ability," 65. See also: Ross, "The Secret of Speed and Endurance," 55; and E.M. Orlick, "How Bodybuilding Can Make You a Better Athlete," 34-35, 61-62.

115. Jan Todd, Matt Bowers, Peter Ullmann, and Terry Todd, "The Quest for Victory: A History of Weight Training for Sports," (H.J. Lutcher Stark Center for Physical Culture and Sports, 2010) http://www.starkcenter.org/research/web/questforvictory/.

116. See, for example: James Tuppeny, "Barbells on Campus: Weight Training for Track and Field Men at Villanova," *Strength & Health* (March 1959): 28-29, 54-56; Wesley Ruff, "Barbells on Campus: Stanford University," *Strength & Health* (March 1960): 24-25, 59; Roy McLean and Karl Klein, "Barbells on Campus: The University of Texas," *Strength & Health* (January 1960): 34-35, 53-57; William Hottinger, "Barbells on Campus: The University of Illinois," *Strength & Health* (January 1961): 36-37, 50-52.

117. Weider's earlier *Mr. America* stopped publication in 1953. Todd, et al., "Selected Bibliography," 31.

118. Charles Sipes, "How I Use Weider Power Methods to Build Championship Football Teams," *Mr. America* 2, no. 10 (February 1960): 32-33, 64-65; E.M. Orlick and Joe Weider, "Barbells and Baseball," *Mr. America* 5, no. 1 (June 1962): 38-39, 75-77; Joe Weider, "Barbells and Swimming," *Mr. America* 5, no. 3 (July 1962): 24-25, 62, 64, 67; Ed Theriault, "Barbells and Running," *Mr. America* 5, no. 3 (August-September 1962): 38-39, 76, 78-79; Joe Weider, "Barbells and Football," *Mr. America* 5, no. 4 (October 1962): 22-23, 53, 55; Joe Weider, "Barbells and Shot-Putting," *Mr. America* 5, no. 5 (November 1962): 42-43, 88, 90; Joe Weider, "Barbells and Basketball," *Mr. America* 3, no. 7 (December 1962): 40-41, 86; 88; Joe Weider, "Barbells and Boxing," *Mr. America* 5, no. 7 (January 1963): 18-19, 86-87; Joe Weider, "Barbells and Bowling," *Mr. America* 5, no. 8 (February 1963): 30-31, 73, 76; Joe Weider, "Barbells and Wrestling," *Mr. America* 5, no. 9 (March 1963): 28-29, 75; Ben Weider, "Barbells and the Decathlon," *Mr. America* 5, no. 10 (April 1963): 24-25, 67-68, 72; Jim Murray, "Weight Training for the Shot Put," *Mr. America* 5, no. 12 (July 1963): 30-31, 86-88.

119. Baechle and Earle, *Essentials of Strength Training and Conditioning*, 379-380.

120. "Energy systems" refers to whether the adenosine triphosphate (ATP) molecule that actually "fuels" muscle contraction, is produced with or without oxygen. Specific training can increase the enzymes and substrates, as well as facilitate structural changes which make the body more efficient at producing energy aerobically or anaerobically.

121. Jim Murray and Peter Karpovich, *Weight Training in Athletics* (Englewood Cliffs, N.J.: Prentice Hall, 1956), 114-153.

122. Orlick and Weider, "Barbells and Baseball," 38.

123. Theriault, "Barbells and Running," 38-39, 76, 78-79; Weider, "Barbells and Football," 22-23, 53, 55; Weider, "Barbells and Shot-Putting," 42-43, 88, 90; Weider "Barbells and Basketball," 40-41, 86, 88; Weider, "Barbells and Boxing," 18-19, 86-87; Weider, "Barbells and Wrestling," 28-29, 75; Weider, "Barbells and the Decathlon," 24-25, 67-68, 72; Murray, "Weight Training for the Shot Put," 30-31, 86-88.

124. Weider, "Barbells and Bowling," 30-31, 73, 76.

125. Theriault, "Barbells and Running," 38-39, 76, 78-79.

126. E.M. Orlick to Ben Weider, July 19, 1963. E.M. Orlick Papers, Collection of Reuben Weaver.

127. Ben Weider to E.M. Orlick, July 26, 1963. E.M. Orlick Papers, Collection of Reuben Weaver.

128. In keeping with Weider's tradition of not changing volume and issue numbers when titles changed, the first issue is designated Volume 6, Number 4, a continuation of the *Mr. America* numbering system.

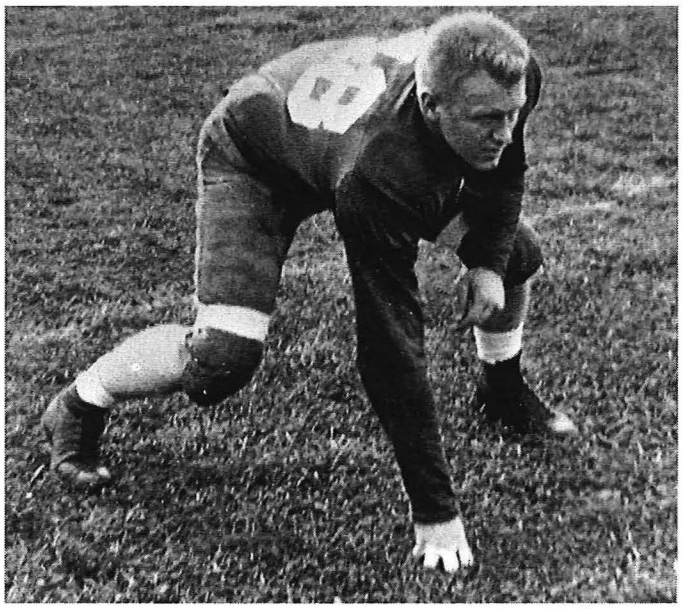
129. More than twenty articles appear in the first issue of *All American Athlete* 6, no. 4 (November 1963). See, for example: E.M. Orlick, "Athletic Diets—Fads or Facts," 5-7; The Editors, "Mr. America Salutes Frank Budd," 1- 15; Elvan George and Ralph Evans, "Weight Training for Football," 23-28; Murray Warmuth, "Conditioning Football Players," 28-32; Jim Murray, "Added Resistance for Overload," 38-42; Weider Research Clinic, "What's New on the Medical/Sports Front," 7-9; and Weider Research Clinic, "Monthly Report on Nutrition/Sports," 51-53.

130. The articles were taken from a 1961 book: Tom Ecker, ed., *Championship Track and Field by 12 Great Coaches* (Englewood Cliffs, NJ: Prentice Hall, 1961). Printed in *All American Athlete* 6, no. 4 (December 1963) were: Oliver Jackson, "The Sprint," 38-39; Jim "Jumbo" Elliott, "The Quarter-Mile," 40-41, 100; Brutus Hamilton, "The Distance Races," 42-43, 101; Larry Snyder, "The Hurdles," 44-45, 101; Ed Flanagan, "The High Jump," 46-47, 102; Gordon Fisher, "The Broad Jump," 48-49, 104.

131. Armand Tanny, "The Man on the Surfboard," *All American Athlete* 6, no. 4 (November 1963): 53-56, 98. Ronald James, "Olympic Paddlers Swing to Scientific Weight Training," *All American Athlete* 6, no. 9 (October 1964): 20-25, 60-62.

132. Siff, *Supertraining*, 265-271.

133. George Jowett, "Speedy Muscles," *Strength & Health* 1, no. 10 (September 1933): 3-5.
134. George Jowett, "How You Can Build Super Speed in Your Muscles," *Muscle Builder* 12, no. 7 (October 1962): 29. Specifically, he called for using 50% of 1RM for sets of three to four repetitions. Quite similar to contemporary programs which often call for 20-40% 1RM and the same repetition range.
135. Ben Weider, "Helpful Hints for Athletes," *All American Athlete* 7, no. 2 (February 1965): 66. It is highly likely that Ben did not write this article as he told E.M. Orlick on July 26, 1963, "Do not forget to insert my name to at least one article in each edition of the *All American Athlete*." Ben Weider to E.M. Orlick, July 26, 1963. E.M. Orlick Papers, Collection of Reuben Weaver.
136. Terry Todd, "Anabolic Steroids: The Gremlins of Sport," *Journal of Sport History* 14, no. 1 (1987): 93-94.
137. Jim Murray, "Isometric Exercise," *Muscle Builder* 12, no. 9 (February 1963): 85; Jim Murray, "More About Isometric Contractions," *Muscle Builder* 13, no. 5 (March 1963): 26-27, 74-75, 78.
138. Jay Bender, Harold Kaplan, Alex Johnson and Hoy Rogers, "Top University Scientists Blast Isometric Faddism: Researchers Who Started Craze and Warn Against Its Improper Use," *All American Athlete* 6, no. 6 (February 1964): 38-39, 82-88.
139. E.M. Orlick to Joe Weider, June 25, 1963. E.M. Orlick Papers, Collection of Reuben Weaver.
140. In March of 1964, a note explains that original editions of the magazine are being published in German, French, Spanish and Italian and that it is also being reprinted in Russian, Chinese, Bulgarian, Hungarian, Polish and Yugoslavian. See: "For the Athlete in Action," *All American Athlete* 6, no. 7 (March 1964): 98.
141. Irving Jaffee, "We Deserve to Lose the Olympics," *All American Athlete* 6, no. 9 (May 1964): 20-21, 51-55; Elliot Denman, "Russia Wins the Olympics," *All American Athlete* 6, no. 10 (June 1964): 14-17, 52-61.
142. E.M. Orlick, "Introducing a New Scientific Strength Building Service," *All American Athlete* 6, no. 9 (October 1964): 54.
143. Ibid., 5.
144. "Why You Should Advertise in *All American Athlete*," *All American Athlete*, 6, no. 4 (November 1963): 114. Because *All American Athlete* split off from *Mr. America*, this 81,000 figure probably represents that publication's circulation. In a "Publisher's Sworn Statement" dated June 14, 1963, Weider reported a circulation of 82,300 for "All American Athlete – Mr. America." E.M. Orlick Papers, Collection of Reuben Weaver. In a letter to "Elliott," last name unknown, but probably Denman (who also wrote for him in this era), Weider claimed that *All American Athlete* had only 23,000 subscribers. Joe Weider to Elliott (no last name), January 5, 1965, E.M. Orlick Papers, Collection of Reuben Weaver.
145. E.M. Orlick to Joe Weider, November 27, 1963. E.M. Orlick Papers, Collection of Reuben Weaver.
146. E.M. Orlick to Joe Weider, December 4, 1963. E.M. Orlick Papers, Collection of Reuben Weaver.
147. E.M. Orlick to Joe Weider, February 4, 1964. E.M. Orlick Papers, Collection of Reuben Weaver.
148. E.M. Orlick to Joe Weider, February 11, 1963. E.M. Orlick Papers, Collection of Reuben Weaver.
149. (Ron?) Orlick to Joe Weider, Undated, E.M. Orlick Papers, Collection of Reuben Weaver. This letter is not signed but Reuben Weaver believes it came from Ron Orlick.
150. Joe Weider to "Elliott."
151. Jan Todd interview with Jim Murray, August 11, 2012.
152. After the April 1965 issue of *All American Athlete*, the magazine essentially disappears until July 1967, when the title of *Mr. America* adds the subhead *All American Athlete* once again. Then, in August 1968 it appears again as a stand-alone magazine numbered vol. 10, no. 1, and that is followed by: November 1968, vol. 10, no. 2; March 1969, Vol. 10, no. 3; July 1969, Volume 10, no. 4; and October 1969, vol. 10, no. 5.
153. J. Todd interview with Murray.
154. Mantle appeared on the cover of *All American Athlete,* 6, no. 7 (April 1964); Olympian Jay Sylvester is on the cover of vol. 10, no. 4 (July 1969).
155. Jason Shurley and Jan Todd, "'If Anyone Gets Slower You're Fired': Boyd Epley and the Formation of the Strength Coaching Profession," *Iron Game History* 11, no. 3 (August 2011): 4-18.
156. E.M. Orlick, "Editorial – Let's Close the Scientific Sports Gap!" *All American Athlete* 7, no. 2 (February 1965): 5, 46.
157. Shurley and Todd, "'If Anyone Gets Slower," 4-18. The NSCA later changed its name to the National Strength and Conditioning Association.
158. Email from Boyd Epley to Jan Todd, August 5, 2012. Author's collection.
159. Email from Bill Kraemer to Jan Todd, August 5, 2012. Author's collection.
160. Email from Bill Kraemer to Jan Todd, August 7, 2012. Author's collection.
161. In 1985 Weider once again attempted a sports training magazine with the publication of *Sports Fitness*. The first issue appeared in January of 1985 and the last was in June of 1987. Weider then renamed it *Men's Fitness* which continues to be published and contains both sport training and general fitness information.



Jim Murray was an outstanding athlete who played football and threw the javelin at Rutgers University in New Jersey. After *All American Athlete* folded in 1969, Murray continued to promote weight training for sport through articles in the major fitness magazines and then founded a small newsletter called *Coach & Trainer Athletic Newsletter.* The first issue appeared in January of 1972 and it ran through October of 1973.