IRON GAME HISTORY

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A Dream Come True

John D. Fair

The University of Texas at Austin

"Dream dreams, then write them. Aye, but live them first."

—Samuel Eliot Morison

My acquaintance with the Stark Center goes back several decades before it was the Stark Center, when it was just the Todd-McLean Collection housed in several upstairs rooms in the old Gregory Gym. I had been following the athletic exploits of Terry and Jan Todd along with their meanderings in Pennsylvania, Alabama, Georgia, Nebraska, and Nova Scotia for many years, during which time they accumulated a massive collection of physical culture materials. I had just started working in iron game history when I learned in a 1984 *Iron Man* article by Al Thomas that the Todds were in Austin (Terry's home), that they were on the faculty of the University of Texas, and that the materials they had been collecting were available for researchers. In October of 1985, while attending a British Studies conference in San Antonio, I hopped on a bus one sunny afternoon for Austin where Jan picked me up and introduced me to Terry and the collection. Former Weider magazine editor Charles A. Smith, then in his seventies, happened to be there helping to sort newspaper clippings. His opening remarks to me were memorable: "Young man, there's nothing new in this game. It's all been around since the 1920s." What impressed me most, however, was the collection and Terry's vision of how they were going to make it grow and expand into a first class archive complemented by a museum with Greek statuary along with paintings and photographs of physical culture icons—all within the restrictive confines of the then somewhat dingy Gregory Gym. "Dream on!" I thought to myself. I returned several months later to do research and kept returning regularly for the next twenty-five

Highland Games official Dr. Bill Crawford, John Fair, and David P. Webster pose for the camera in March of 2012 at the Stark Center.

years after the collection moved to even dingier but roomier confines in the basement of Anna Hiss Gym. That the Todds have been able to keep building their collection of manuscripts, books, pictures, and artifacts and find the resources to create the present H.J. Lutcher Stark Center for Physical Culture and Sports, prominently housed and fully staffed, in the largest structure on the University of Texas campus is a remarkable achievement—a tribute to their lifelong persistence and commitment to a worthy ideal.

About a year ago it became evident that I could play a larger role in this enterprise when I was granted a sabbatical from Georgia College to complete my book on "Mr. America" during the spring semester of 2012. With assistance from the Todds I was able to negotiate living quarters within walking distance of campus and acquire faculty status as adjunct professor of kinesiology, a private office, a computer, and access to the many resources available at the university. No less meaningful have been the friendships and working relationships I have been able to establish with members of the Stark staff—Kim Beckwith, Cindy Slater, Ana Gonzalez, Tommy Hunt, and Geoff Schmaltz—as well as various graduate students, especially Dominic Morais and Jason Shurley, and former UT students. One of the most enjoyable aspects of my experience was the interaction

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with the many academic visitors to the center—too numerous to mention—who come from the U.S. and beyond to do research for books, films, or articles. Even more exciting was my interaction with David Webster, widely recognized as dean of iron game authors, who was with us for several months, during which he and I were able to interact on an almost daily basis. His memory and range of experience constitutes the most valuable human resource from the past that we can currently tap. With only slightly less historical memory are the Todds, whose knowledge encompanses virtually all facets of the iron game and related scholarship over the past half century. Their physical culture connections and awareness of the current scene is unparalleled. Nor are their connections only within the academic side of physical culture. In fact, one of the reasons for our deepening friendship has been that Terry and Jan, since 2001, have been the organizers and directors of the Arnold Strongman Classic, which is held annually in early March in Columbus, Ohio, as part of the enormous Arnold Sports Festival. Because of my past involvement in both weightlifting and powerlifting—as a competitor as well as an official—Terry asked me to serve as an official at this event, which is considered to be the heaviest and truest test of basic body strength in the Strongman sport. For many years now, my wife Sarah and our son, Philip, have also worked as part of the scoring and timing staff at the "Arnold." The weekend has become a part of our lives.

Beyond that, during my time here this semester the Stark has experienced an almost constant stream of other visitors, including such notables as Tommy Suggs; Dr. Bob Goldman; Dennis Rogers; Mark Henry; Highland Games athlete and former NFL lineman Mike Baab; Dr. Fred Hatfield; Dr. Bill Crawford; the magician David Blaine; writer Ken O'Neill; and Jack LaLanne's daughter, Dr. Yvonne LaLanne. Over these past months I have also enjoyed many guest speakers, conferences, departmental-related events, and even "Movie Night" at the Stark, where we watched and then discussed such films as Garrick Daft's two-hour documentary about Strongman competitors Travis Ortmeyer and Derek Poundstone, Federico Fellini's *La Strada*, and one of the silent films starring the massive physical culture notable Bartolomeo Pagano as Maciste.

Perhaps the most appealing aspect of the Stark is the ambiance. Though embedded in a football stadium complex, everything in the Stark is tastefully designed and related in some way to physical culture or sports. The variety of materials is amazing. At the heart of the center is the collection of manuscripts and printed materials, many of which are priceless and consume dozens of rows of compact shelving. My only concern is that with the current rate of acquisitions, a remote storage site will be necessary to supplement this gigantic 27,500 sq. ft. facility.

By no means the least important aspect of my stay has been the experience of living in Austin for an extended period, during which time my wife has visited several times. Austin is a happening place. And for anyone working in the field of physical culture, the Stark Center is the place to be. For me, it's been a real learning experience, a kind of continuing education course that would be available nowhere else in the world. It has enabled me not only to complete my book manuscript on the history of Mr. America contests, but to finish a scholarly article (which appears in this issue of *Iron Game History*) as well as numerous smaller pieces. At the end of this semester I will be retiring from Georgia College, but I plan to return each spring semester to Austin for approximately six months to take advantage of the research materials and to mingle with the many iron game personalities associated with the center.

Although much of my work at the Stark is routine research and writing, hardly a day passes that I don't think about how Terry's vision of a first class center for the study and appreciation of physical culture, which seemed so outlandish in 1985, has come true. Beyond that, the Stark Center—which includes the Weider Museum of Physical Culture and the Long Art Gallery—has endowed this burgeoning field of scholarship with a degree of credibility and status that it has never had, not only by the size and quality of the collection but by its location in an academic department at a major research university. My wife, knowing my passion for iron game history, has told various acquaintances that she always knew I would end up here somehow. Indeed for me—no less than for Terry, Jan, and the growing number of people with a serious interest in physical culture—it is a dream come true.

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

Jason Shurley, Concordia University - Texas

Jan Todd, The University of Texas at Austin*

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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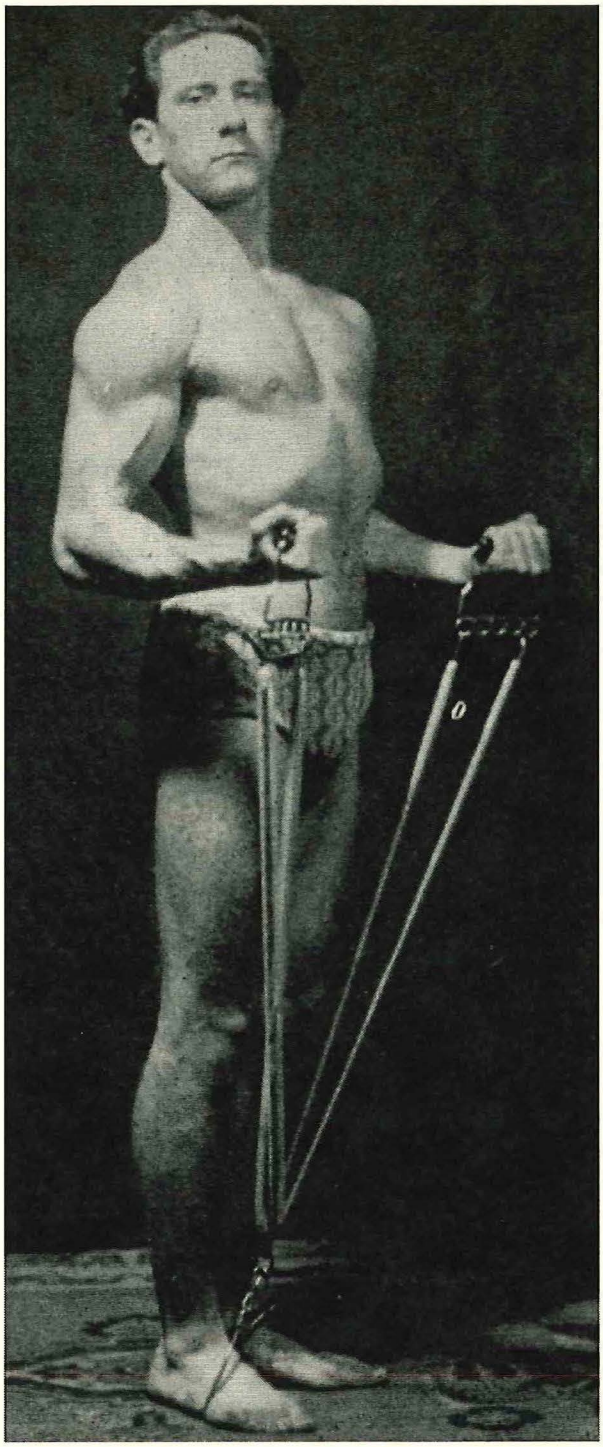
training began with the first issue of *Strength & Health* in an article entitled, "How to Improve at Your Chosen Sport," he was not alone in speaking out in favor of weight training for athletes during the middle decades of the twentieth century.[8] Although it falls outside the scope of this study, 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.



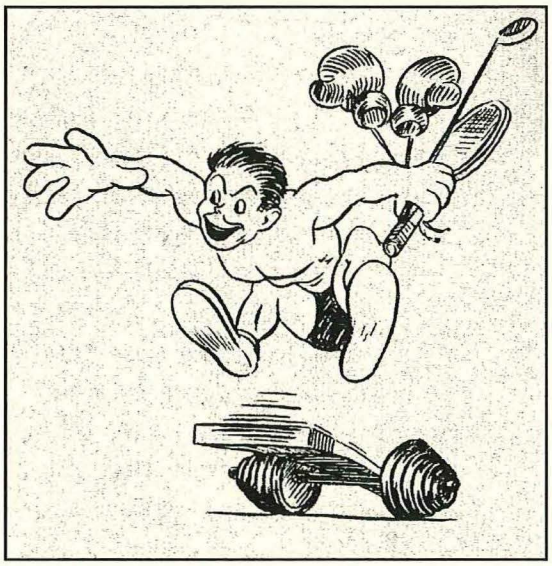
Joe Weider practiced what he preached and often used photos of himself in *Your Physique* and his other magazines to inspire his readers.

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.

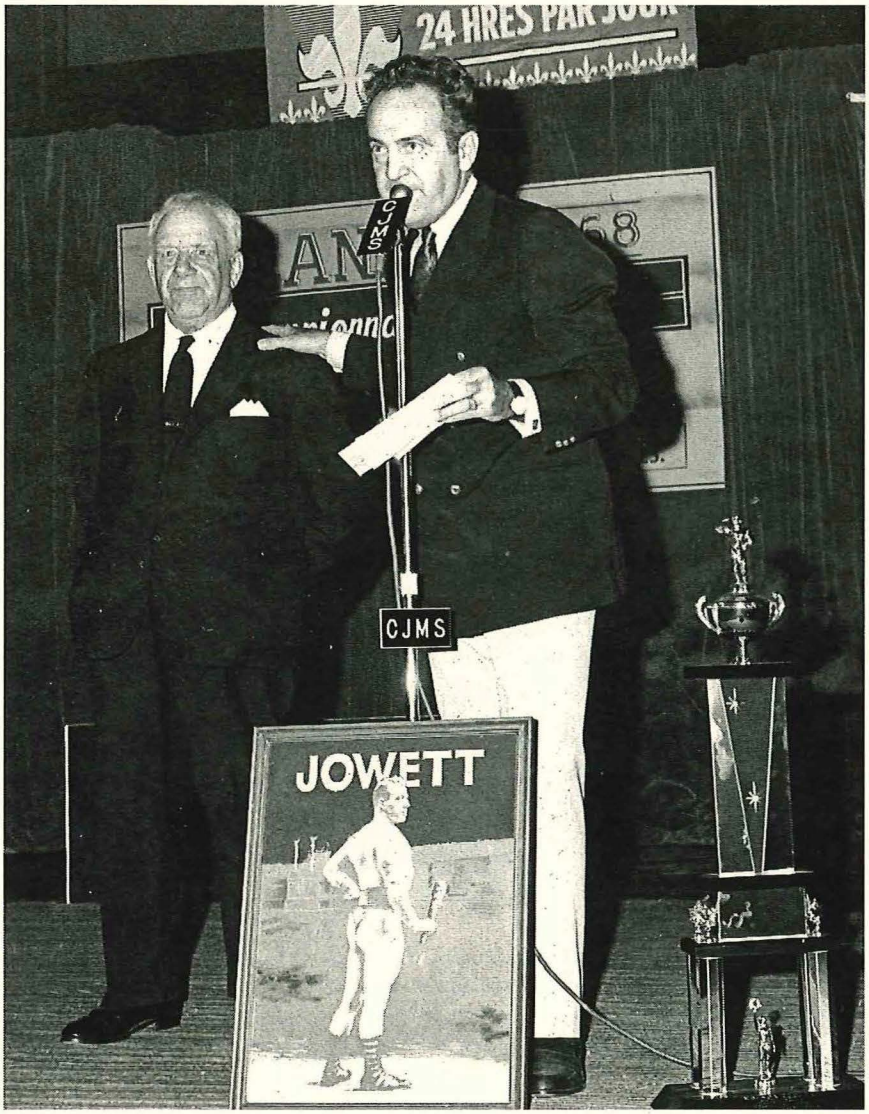
Apparently, weight training had given Joe a new physique, more strength, and new confidence. Weighing then about 165 pounds, he and Ben, who also began training, found that those who wished to jeer and make fun of Jews in their presence had largely disappeared, and as word got out about his strength 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]

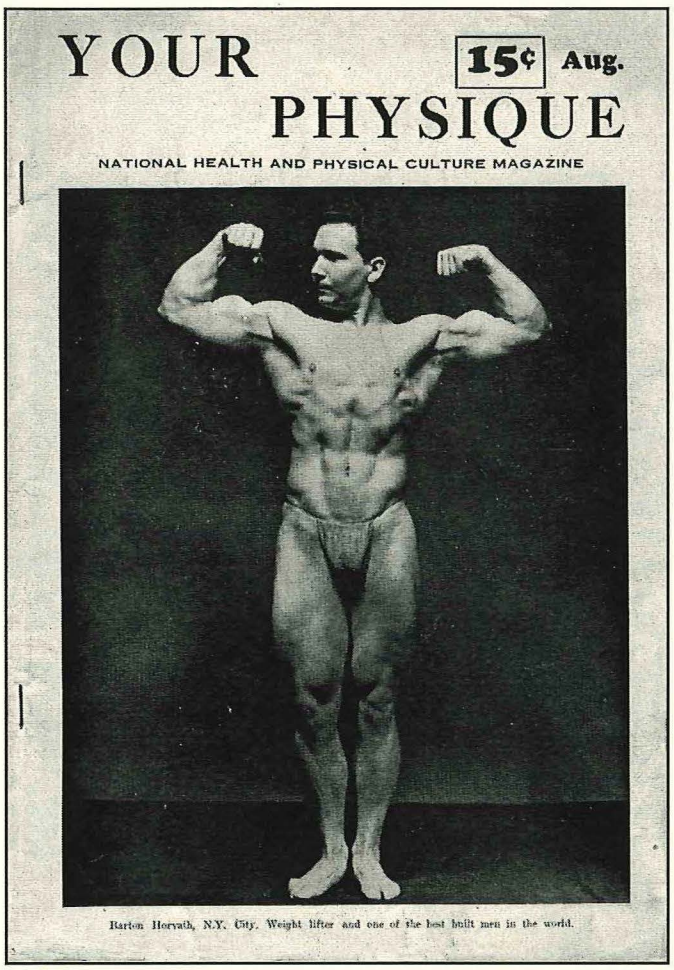
Indeed, Weider and others repeatedly stressed the Alger-like qualities of their own narrative. Frederick Tilney wrote an article in 1944 for *Your Physique* recounting Joe's early story and explained to readers how Weider transformed himself by "demand[ing] for himself a well-developed body" and then 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 cover-man. 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]

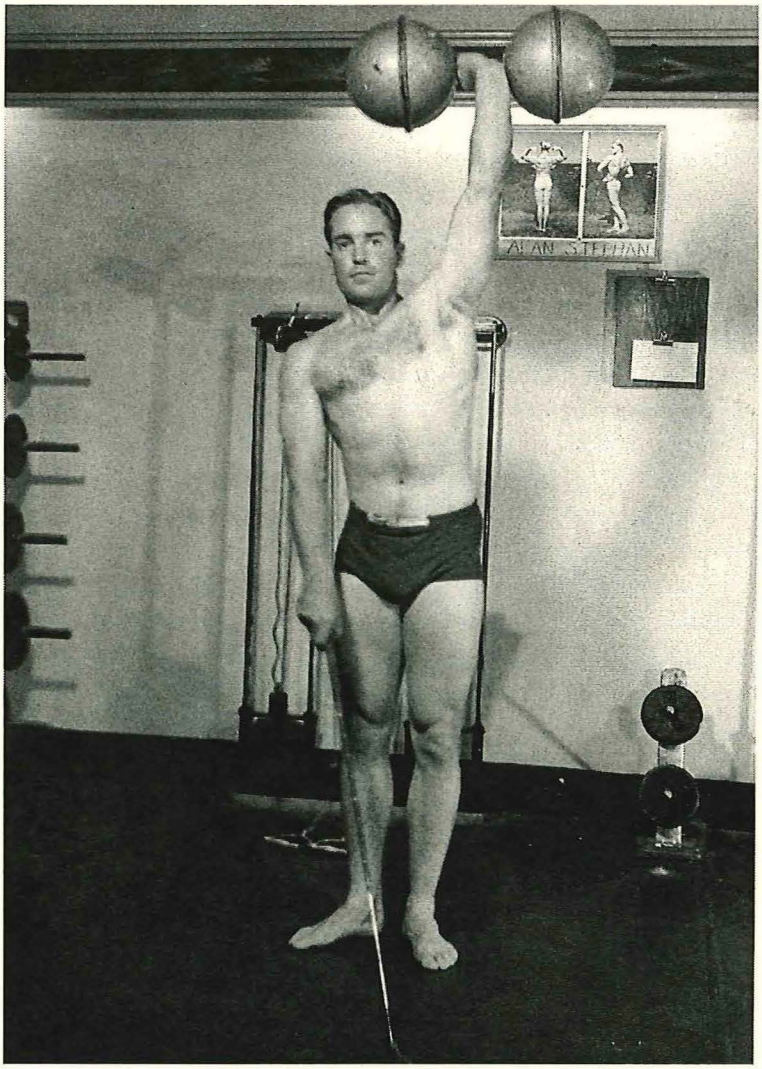
Another factor that Todd believes played a role in the growth of this pervasive myth of musclebinding was that many early fitness entrepreneurs tried to make a living by selling training courses through the mail. Todd documents that some of these men—who had built their own physiques with weights—nonetheless 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]

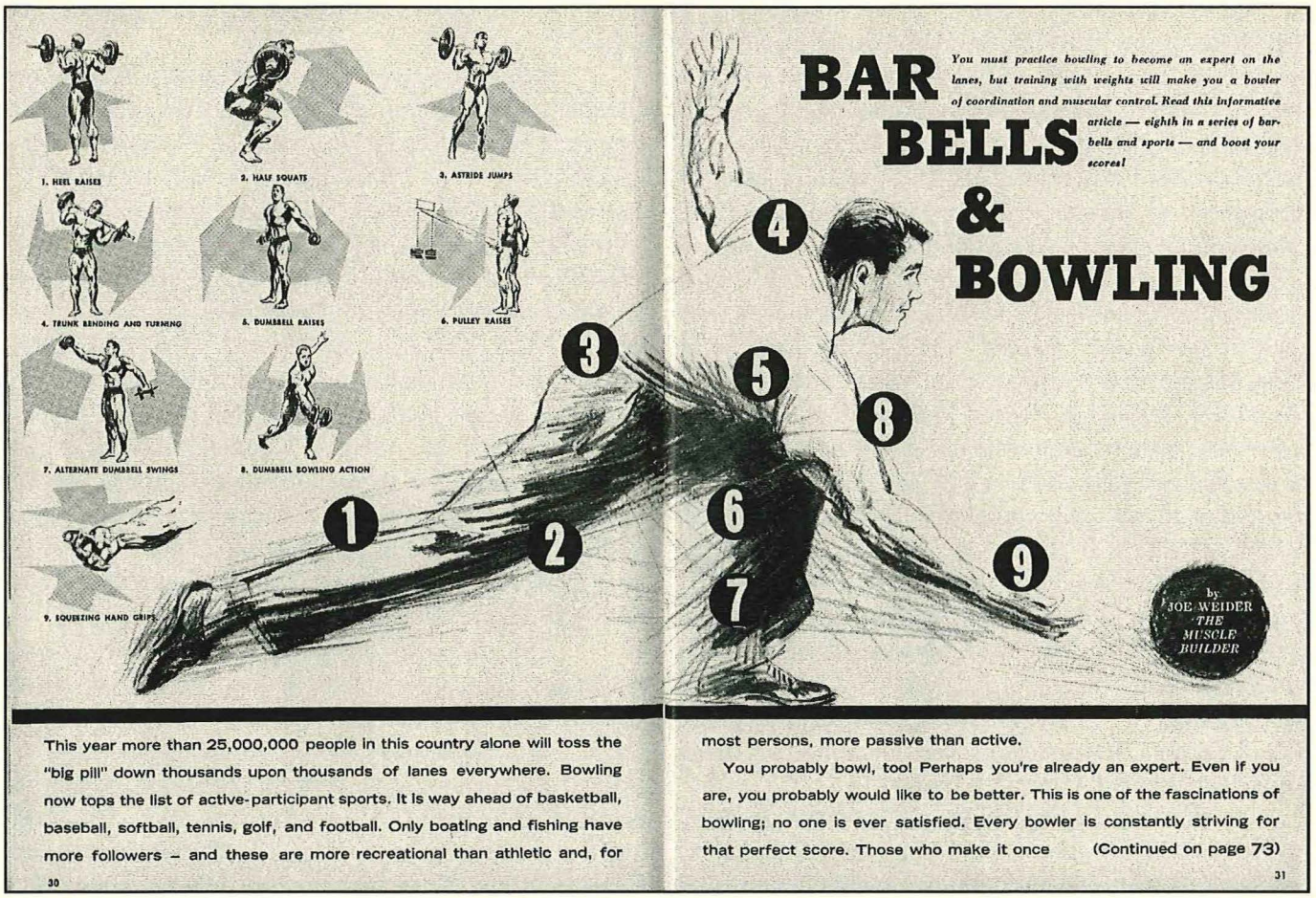
This was a recurring theme. In 1950, Joe Weider responded to an apparent deluge of reader letters inquiring about the advisability of weight training for athletes by providing a laundry list of prominent boxers who had trained with weights. Though he didn't discuss their specific programs or provide 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]

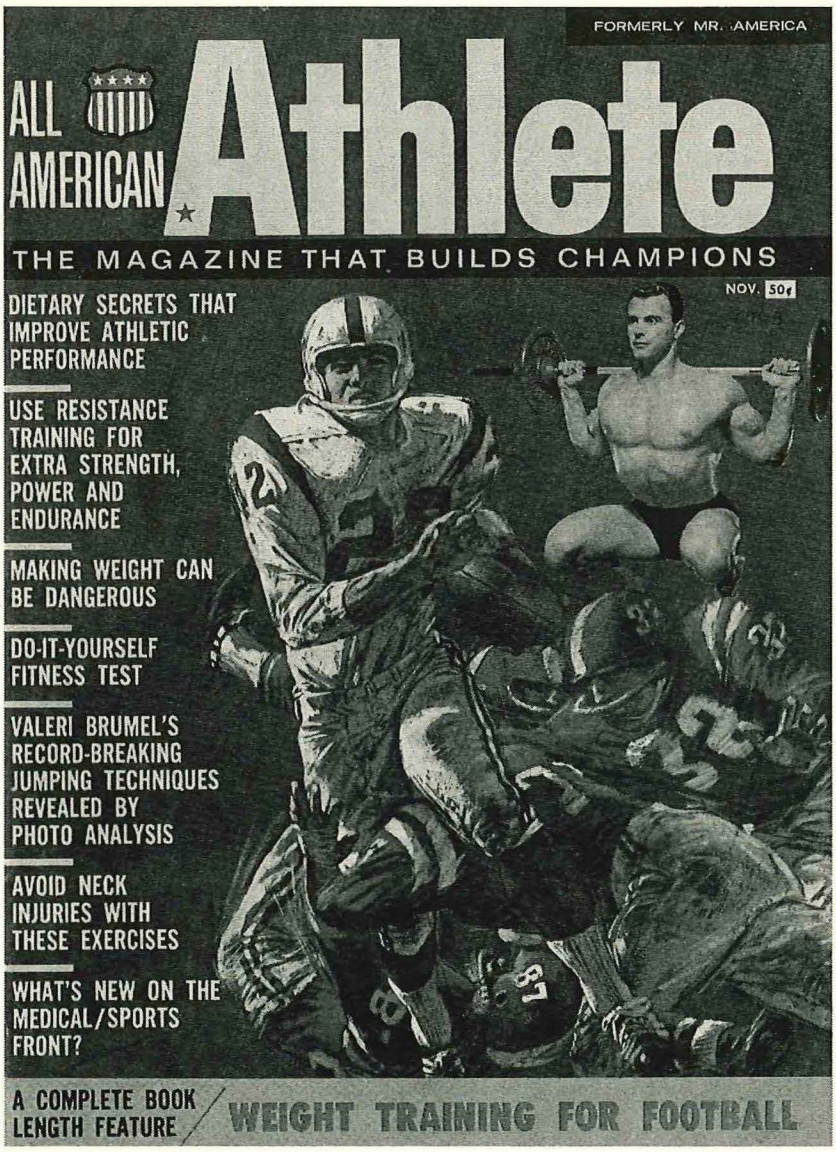
The launch of *Muscle Builder* coincided with Weider's increased involvement in the promotion of bodybuilding through the IFBB, and a growing friction with Hoffman and his York Barbell/AAU associates. Historian John Fair's *Muscletown USA* covers this feud in considerable detail and so we will not recount 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**

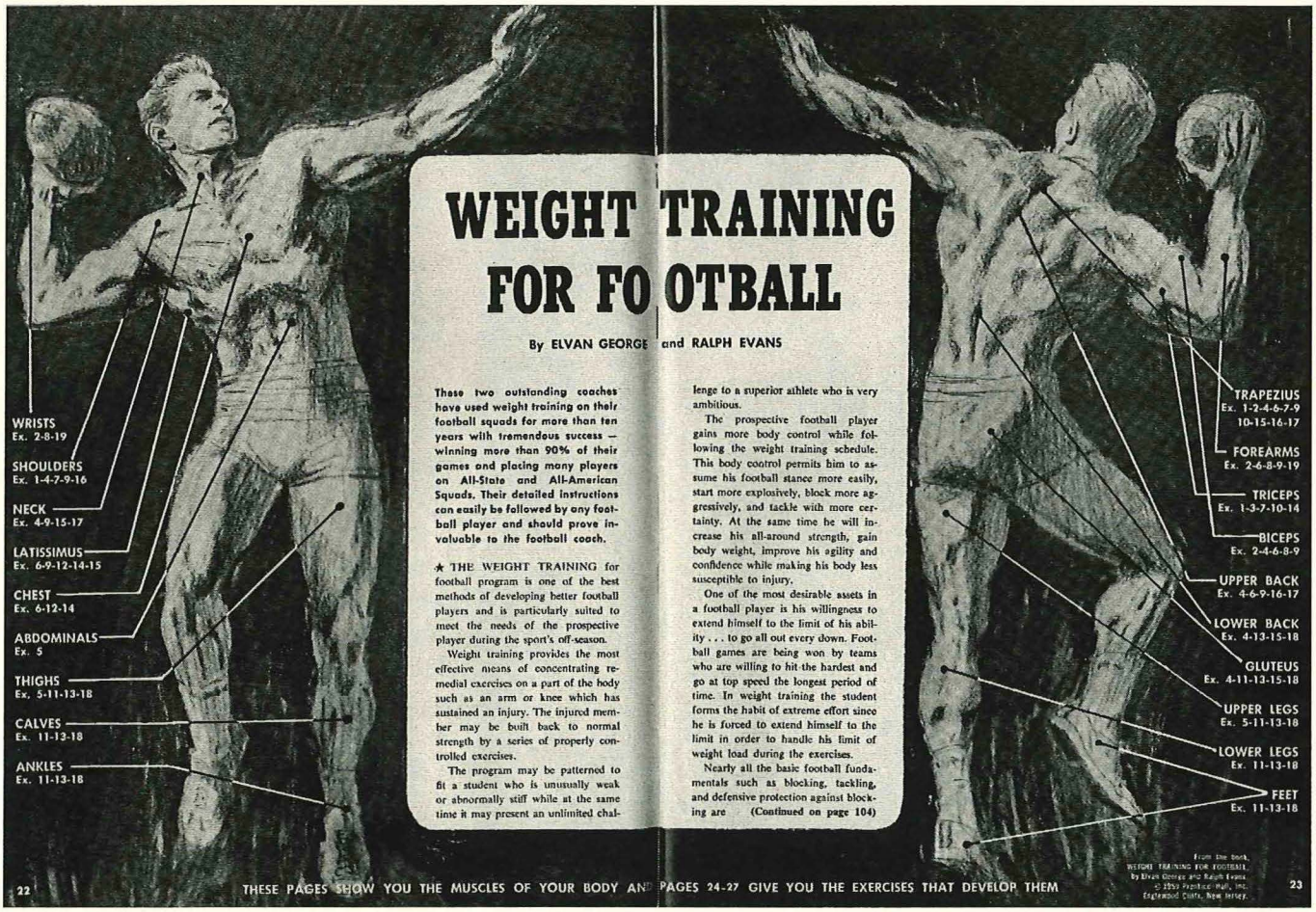


The first issue of *All American Athlete* appeared in November of 1963 with E.M. Orlick as editor. Orlick, who attended university in Canada and had been affiliated with several major universities there, wanted to create a magazine that would appeal to coaches and academics as well as serious bodybuilders. 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]

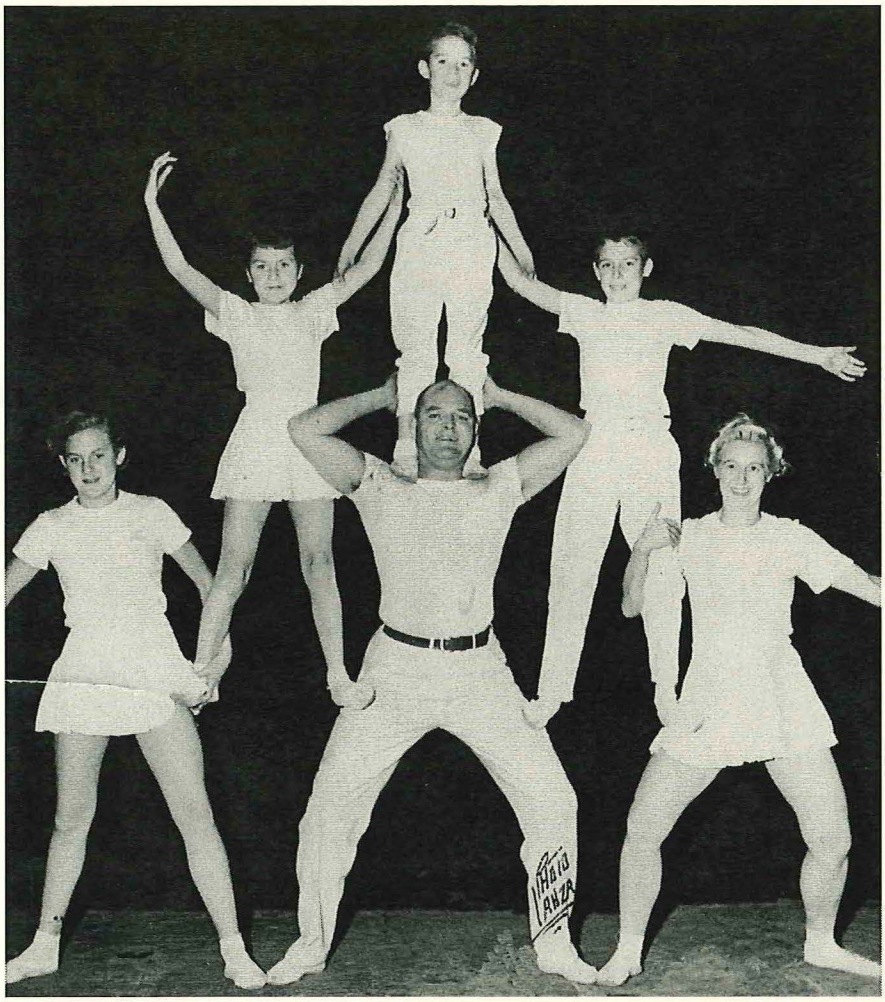
The series began with a jointly published article by E.M. Orlick and Joe Weider called "Barbells and Baseball" in June of 1962.[122] It was followed the next month by "Barbells and Swimming," and in succeeding months with articles on running, football, shot-putting, basketball, bowling, boxing, wrestling, 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.

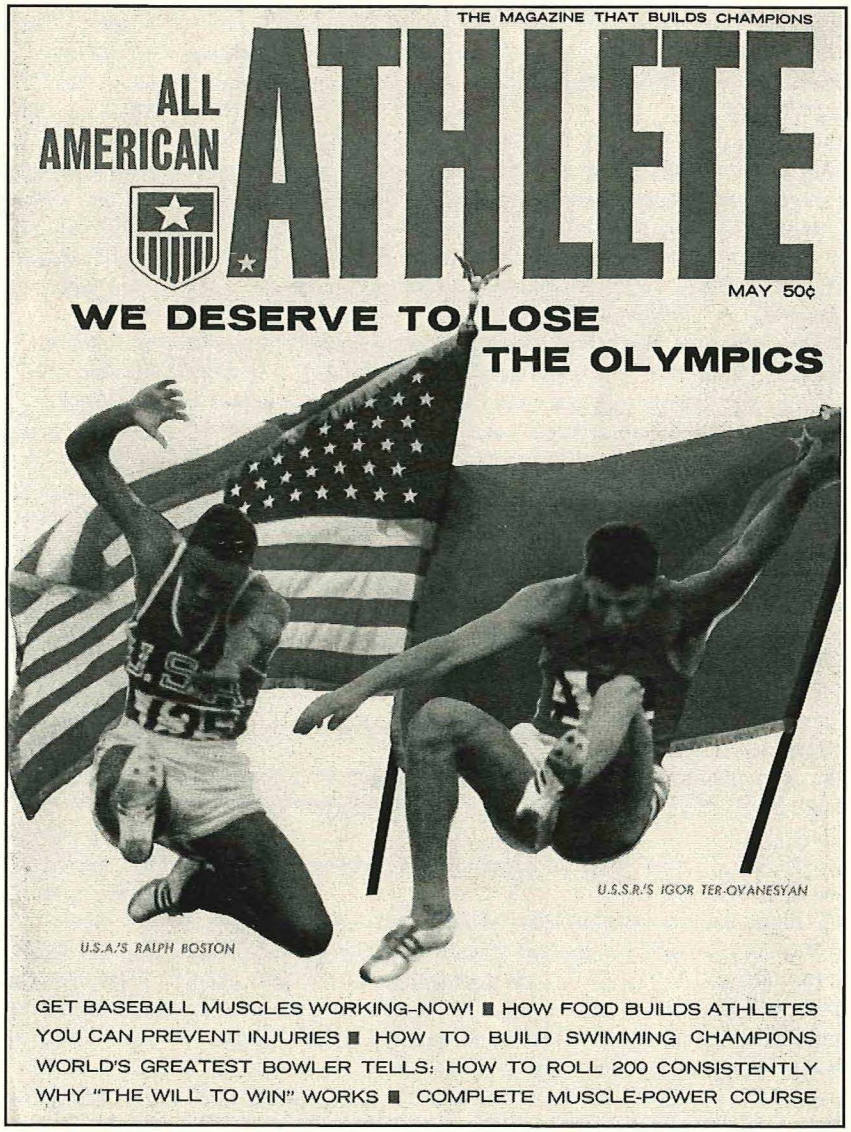
22. Jacqueline Reich, "The 'World's Most Perfectly Developed Man' — Charles Atlas, Physical Culture, and the Inscription of American Masculinity," *Men and Masculinities* 12, no. 4 (2010): 449. See also: Michael Kimmel, "Consuming Manhood: The Feminization of American Manhood and the Recreation of the 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.

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.

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.

"AS THE TWIG IS BENT" BOB HOFFMAN AND YOUTH TRAINING IN THE PRE-STEROID ERA[1]

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JOHN D. FAIR
THE UNIVERSITY OF TEXAS AT AUSTIN

It is therefore agreed that we should employ gymnastic training, and how we should employ it. For until puberty we should apply lighter exercises, forbidding hard diet and severe exertions, in order that nothing may hinder the growth; for there is no small proof that too severe training can produce this result.[2]

—Aristotle

Pandarus: Why, he is very young; and yet will he, within three pound, lift as much as his brother Hector.[3]

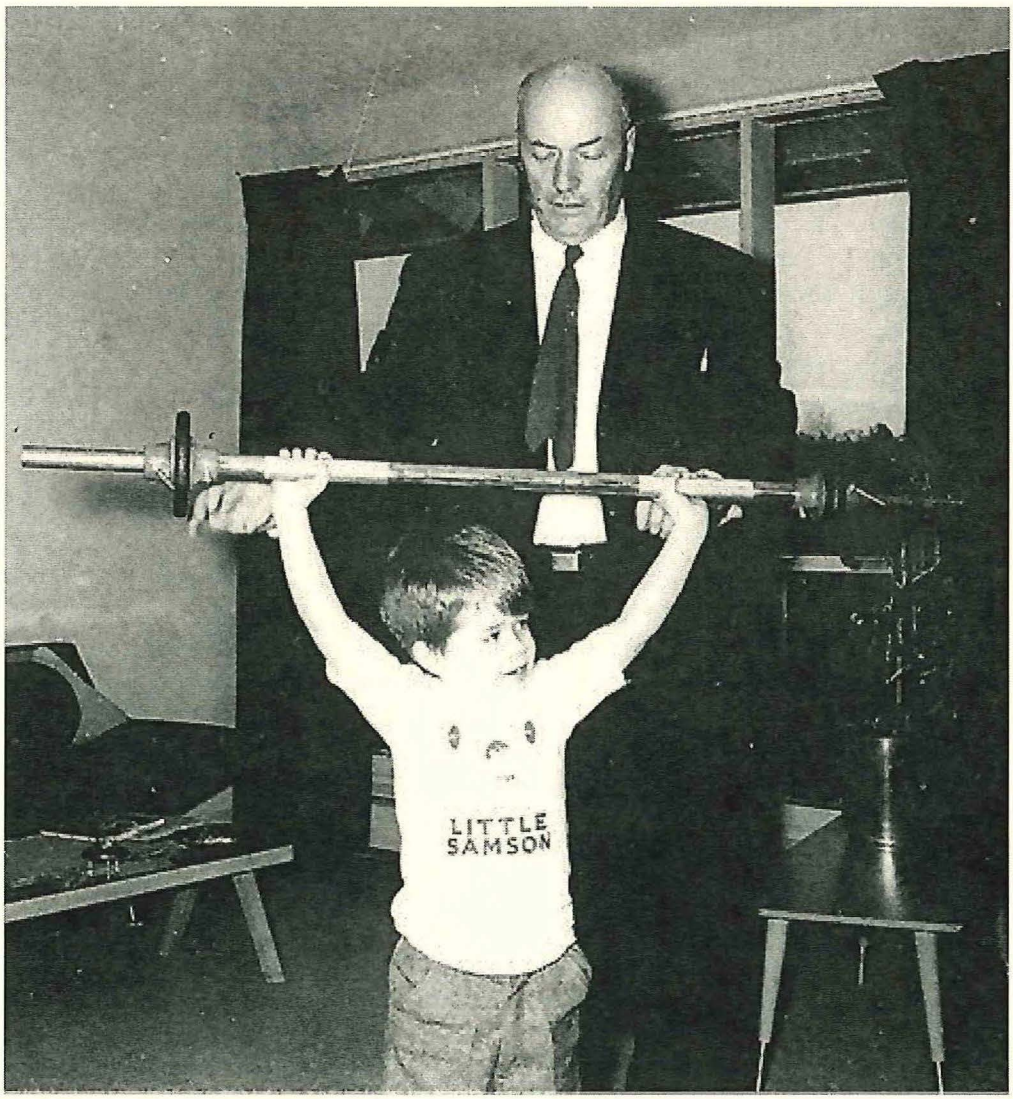
—William Shakespeare

For most of the twentieth century the American sporting community and general public doubted the efficacy of weight training as a means to develop health, fitness, and athletic performance. In fact, it was widely believed to cause such physical irregularities as muscle-binding, heart strain, or rupture. Even more controversial was the proposition that children should train with weights. While Bob Hoffman, proprietor of the York Barbell Company and editor of *Strength & Health* magazine, was a strong proponent of weight training since the 1930s, it was only after World War II that he embarked on a sustained campaign to incorporate preteens and adolescents into his programs. It was a bold promotional strategy designed not only to capitalize on the growing desire of consumers for his strength and fitness apparatus and food supplements but to provide a youthful base for nurturing American athletes. What began with a monthly magazine series, "Especially for S & H Boys," culminated in a popular "Boys Club" column launched by Hoffman in a 1956 editorial entitled "As the Twig is Bent." This feature was devoted to youth training and included articles, success stories, and advice to parents on ways to guide their children to a healthier and more athletic development. Its impact was enhanced by a focus on youth activities and achievements in other sections of the magazine and contributions of other members of Hoffman's staff, some of whom enlisted their own children to promote weight training for youth. Readers who joined the "Boys Club" were offered the opportunity to purchase a line of "Little Samson" products, including training shirts and barbell and dumbbell sets.

Eventually some of Bob's Strength and Health Boys grew up to become successful weightlifters and bodybuilders or accomplished athletes in other sports. Increasingly the magazine's emphasis shifted to the achievements of these young adults, and as American physical culture changed, athletes became aware of other training aids and opportunities to enhance their development. The waning popularity of "Boys Club" by the mid-1960s was partly a product of its success. Training with weights was becoming more acceptable generally and more accepted by youth hoping to be bigger and stronger. But they were soon supplementing their weight exercises with another training aid that was more controversial than previous innovations to induce more mus-

cular strength and size. However, York could not market or openly endorse steroids and, much to Hoffman's chagrin, the twig was being bent in a different direction.

Hoffman did not start lifting weights until 1925 when he reached the age of 27, and even then most of his iron game associates, including members of his own York Oil Burner Weightlifting Club, were young adults. The idea of youth training likely came from George Jowett, who was publisher of the first fourteen issues of *Strength & Health* with Hoffman serving as editor. Jowett, an Englishman who migrated to North America during World War I, borrowed much of the magazine's format from *Health & Strength*, founded in London in 1898 by Hopton Hadley. One of its most popular and ongoing features was the Health & Strength League, conceived in 1906 to establish a "robust brotherhood" of physical culturists throughout the world to disseminate the principles of health and strength. Leaguers were entitled to purchase badges, pendants, and brooches as well as a *Leaguer's Guide and Pocket Companion* and were invited to share news and experiences with others. By 1946 it boasted over 202,000 members.[4] The announcement of an American Strength & Health League that appeared in the first issue of *Strength & Health* in December 1932 bore a close resemblance to the English version, offering an array of medals, belts, shields, diplomas, and certificates to anyone interested in sport, exercise, bodybuilding, and strength. It was



Bob Hoffman believed—well before most "experts"—that weight training would be beneficial for children. In the 1950s he began marketing a "Little Samson" barbell set that fit the smaller stature of children and he also devoted a considerable portion of *Strength & Health* magazine to stories about boys who trained with barbells. This photo, taken at Hoffman's home in the mid-1950s, shows Hoffman helping an unidentified boy learn the basics of weight training. *Photo courtesy John Fair*

the place to bring your problems and find your pals. We keep on file here the names, ages, size, interest in sports, measurements, lifting ability and other athletic information about all subscribers to STRENGTH & HEALTH, all members of the A.S.H.L. We can tell you of athletic clubs in your territory, of those in your section interested in your sport. You can meet them personally or correspond with them. You can write to S. & H. Leaguers in this and other countries and never need be lonesome again in the happiness and good fellowship

> you will obtain from these enthusiasts the world over.[5]

It was not until the second issue, however, that special attention was placed on youth, it being noted that the object of the organization was to promote right living and proper physical training "to improve the health of the youth of our nation in particular, but persons of all ages as well." Jowett and Hoffman also put in place a system of military style ranks—sergeant, lieutenant, and captain—for those who organized local clubs, and a summer camp in Ocean City, New Jersey, for League members. It was a curious amalgam of the Boy Scouts and a pen pal club with a pronounced moral and nationalistic tone. While the organizers were no doubt sincere in their desire to "keep American citizens up with the rest of the world, mentally and physically," the Strength & Health League was also a clever strategy to market magazines.[6]

As the circulation of *Strength & Health* grew dramatically during the most difficult years of the Depression—from monthly sales of 4,800 in June 1934 to 51,333 copies in October 1936—the Strength & Health League played an integral role in delivering Hoffman's fitness message; and teenage weight trainees made up a substantial portion of its membership.[7] Hence when Bob prepared his primary statement on health, fitness, and well-being, *How to be Strong, Healthy and Happy*, in 1938, he dedicated it to "The Youth of America" and included a special chapter on the "Physical Condition of American Youth." Although he applauded the efforts of the YMCA for the physical improvement of young Americans, he feared the nation was falling behind dictatorships that were "building a superior brand of mankind." He estimated that "seventy-five per cent of the children in our schools have defects" and unless drastic changes were made it was possible to "lose our freedom and things worth more than life itself." Physical activity, he argued, was "good for the youngsters. It will make them grow larger and stronger."[8] This message was strongly reinforced by printed testimonies from Strength & Health Leaguers throughout the war.

Then suddenly this section of the magazine that seemed so mutually beneficial to publisher and reader alike was abruptly terminated with the January 1945 issue. A rationale for "No More S & H League" followed in response to an appeal for its reinstatement from a reader who shared a tale of betrayed innocence. Philip Miller of Brooklyn, New York, had "made an offer of three prizes for photos sent to me. I only received twelve replies and most of these were from fellows who wanted to trade pictures of a questionable nature. You know what I mean, unadorned." Bob replied:

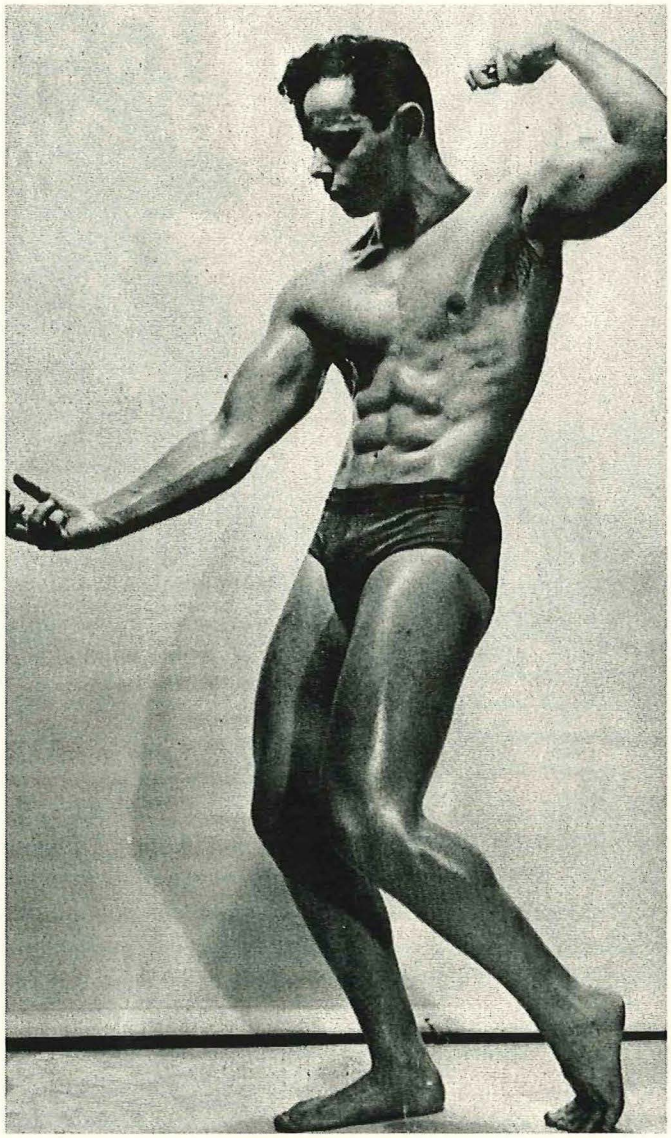
> It takes all sorts of people to make a world they say, but too many of the wrong kind, those with queer tendencies took advantage of the league notes and it came very close to putting us out of business. It cost us $10,000 in direct legal fees, and the case originated with post office inspectors who traced the writers of letters and the senders of the unadorned photos, who stated that they had found the names in the league notes. Although we were perfectly innocent . . . there was a serious attempt, to withdraw the mailing privileges from *Strength & Health* which would have put us out of business, and strange as it may seem to those who don't know the procedure in Federal court, it would have put Ye Olde Editor in jail for an indeterminate period. I can still hear the U.S. district attorney shouting and ranting about that 'Slimy Salacious *Strength and Health* magazine, that spawning ground, that breeding ground for unnatural sex practices. Why they even operate a department, in which they encourage readers to write to each other and exchange unnatural sex letters and pictures.' . . . So the league notes are out of the magazine for some time at least, possibly [until] we can figure out some way to continue them without the wrong sort of people taking advantage of it.[9]

Indeed such a lucrative component of Hoffman's growing business enterprise could not be allowed to lapse for long since the company was benefitting from a postwar boom in sales of barbells and other exercise apparatus to a heretofore untapped youth market. Company records indicate that gross sales increased from $282,900 in 1945 to $558,419 in 1946.[10] Following fast on the

removal of "League Notes" there appeared a new section of the magazine called "Especially for S & H Boys" which carefully avoided any hint of sexual impropriety or facilitation of interaction among young readers.

"Especially for S & H Boys" did, however, target youthful trainees. It was to be "a meeting place for young men who have made the right start on the road to health and happiness." Bob recognized that "the most critical stage of life is the period of puberty" which occurs for about two years between the ages of thirteen and seventeen. "During this period the young man is made over physically and spiritually. He comes into possession of all his bodily functions." Repeating a theme from his book, he believed that post-war Americans, though taller and heavier than their fathers, were "not active enough physically." Yet it was this new generation "on whom the future of our country depends."[11] Hoffman proudly illustrated the egalitarian nature of muscular manhood by displaying photographs and testimonials from all races, nationalities and regions, including such S & H Boys as Geddes Phillips (Trinidad); Richard Kajiyama (Hawaii); Steve Papadopoulos (Bronx); Irv Rutberg (Philadelphia); Reynaldo Raposo dos Santos (Rio de Janiero); David Collier (Tennessee); Alex Matika (New Jersey); Joseph di Nota (Brooklyn); John Iaccino (New York City): Bill Hill (Montreal): John Patrico (Detroit); and V. Krishna (Fiji).[12] Virtually none of them were older than 17, and one "young superman," Thomas Lincoln Smith of Hopewell, Virginia, was only five months old, having built himself up in two months "from a scrawny eight pound baby to eighteen pounds of healthy solid flesh."[13] Above all, Bob sought to dispel existing myths about weight training, often held by parents and other well-meaning adults. They will

> try to discourage you. They will try to frighten you with the common but untrue beliefs of those who do not know, that you will become muscle-bound, that you will injure or rupture yourself, that you will stunt your growth, shorten your life, have to exercise all your life or you will get fat or the muscles will waste away, you'll strain your heart, lose your vitality, so that you will not be the father of strong, healthy children when you have embarked on a life of marital bliss.



Paul Waldman of Erie, Pennsylvania, was a serious weight trainer who won the Mr. High School physique contest in 1953. Because of his proximity to York, Waldman became friends with Jim Murray, John Grimek, and Bob Hoffman and began writing articles for the magazine. Waldman, now 76, continues to train regularly and has become an artist of considerable note who makes his home in New York City. In a recent interview, Waldman told Jan Todd that on the matter of youth training Bob Hoffman was a visionary. He also recounted a discussion he once had with Mr. America Jim Park who told him, "It won't be long before everyone will understand that athletes need to lift weights, and that they should start while they're still teenagers."

Quite to the contrary, Hoffman argued that it was not possible to strain the heart through exercise. "It is a muscle, and like all other muscles it strengthens and improves with use." Likewise from stretching his ligaments, tendons, and joints, any advanced barbell man

This photo of, Paul "Butch" Ouidnot, at age eight, marked his first appearance in *Strength & Health*. He is shown here performing a wrestler's bridge with what's reportedly 150 pounds of additional weight via his sister and the old globe barbell he's holding at arms' length.

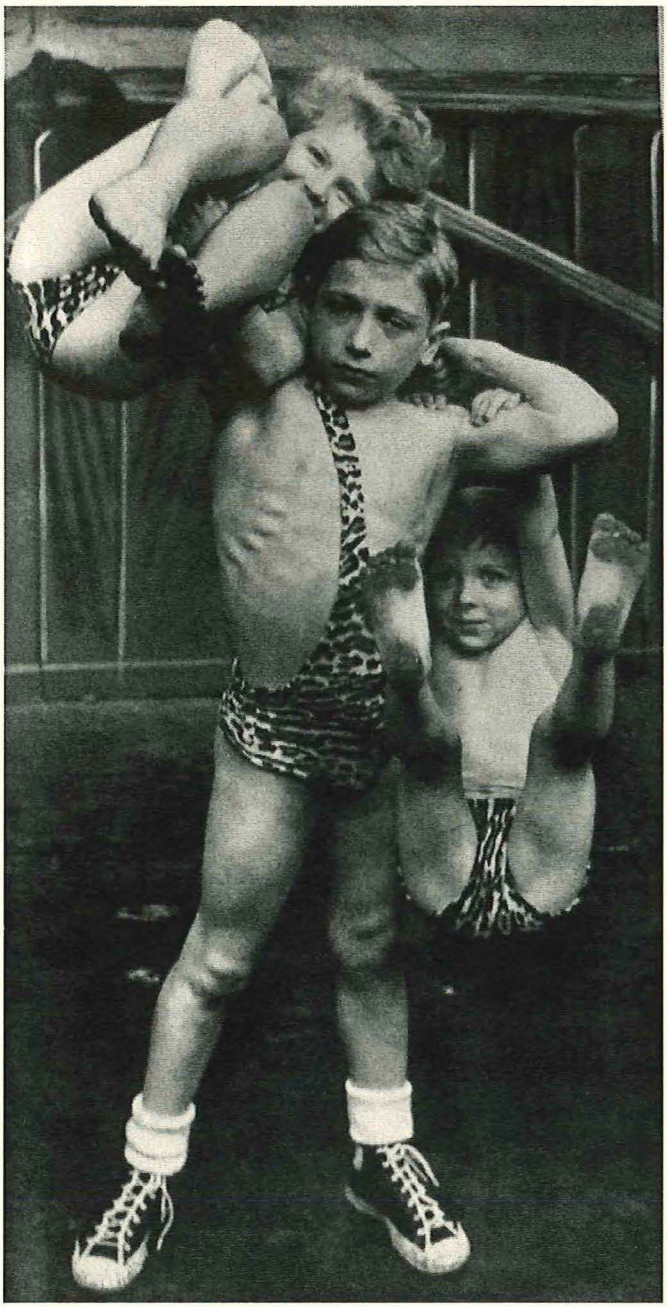
was "far more flexible than other athletes or ordinary people." Some could not only perform a full split but could even touch the floor with their elbows without bending their knees! More questionable was Hoffman's assertion that weight training would not only *not* stunt growth but could even enable youths to grow taller.[14]

As to when a child should start lifting weights, Hoffman believed the earlier the better. "Gains are much easier to make very early in life, when the boy enters his teens or even before," he advised. To illustrate his argument, he pointed out numerous strength stars who had started early, the most spectacular being John Davis, who won the world light-heavyweight championship in 1938 at age 17 and went on to dominate the heavyweight class until the early 1950s. Then there was Frank Orant of Philadelphia, who became the youngest and lightest lifter (at 179 pounds) to jerk 400 pounds overhead. Arguably the most remarkable illustration of Bob's point, however, was Pete George, a product of Larry Barnholdt's American College of Modern Weightlifting in Akron. Dubbed a "Boy Wonder," George became a national champion at age 16 and at 17 became world champion and set a lightweight world clean and jerk record of 354½ pounds. He went on to claim a gold and two silver Olympic medals and four more world championships.[15]

Also notable were some physique stars who started lifting at an early age. They included Armand Tanny of Rochester, New York, who was inspired to train at age 13 by his brother Vic and by reading *Strength & Health*. As a major bodybuilder, he won the Pro Mr. America (1949) and Mr. USA (1950) and later joined Mae West's famous troupe of musclemen. Another young talent, 17-year-old Marvin Eder of the East Side Barbell Club of New York City was a "superman" in both physique and strength. He later performed one of the most amazing feats in iron game history by doing parallel bar dips with 435 pounds. Little did Bob know that 17-year-old Eric Pedersen of Waterman, California, whose picture appeared in the August 1946 issue of *Strength & Health* would tie Steve Reeves for the Mr. America title the following year. Finally there was Gene Myers, a pupil of Vic Tanny in Santa Monica, California, who, by age 18 won the Mr. Los Angeles Contest. His fine physique merited him a cover shot and story in the July 1948 issue of *Strength & Health*.[16] Hoffman was emphatic that there was "no harmful stress or strain upon the immature body." To assuage parental concerns that even a hundred pounds might be too much weight, Hoffman made it "possible for the young fellows to get the weight they want, without their parents fearing they will injure themselves" by offering "a 70 pound set which will be enough to begin."[17]

Hoffman's "poster child," however, was Paul "Butch" Oudinot, Jr. of nearby Reading, Pennsylvania, who first appeared in the April 1950 issue of *Strength & Health* at age eight executing a wrestler's bridge of 150 pounds (with his sister Susanne and a barbell) and deadlifting 130 pounds.[18] By ten he was performing at annual *Strength & Health* picnics and Bob's birthday shows dressed in Sandow style breech clouts or a York Barbell Club t-shirt. His fame quickly spread with eight television engagements, including a prize-winning appearance on Paul Whiteman's *Goodyear Review,* the original "amateur hour," and a full-page feature in *Life* magazine. Weighing only 82½ pounds, Butch could press 105, snatch 105, clean and jerk 140, and squat 210, noted *Strength & Health* editor Jim Murray, as well as tear a Reading phone directory into quarters.[19]

> Another of Butch's stunts is reminiscent of the way Arthur Saxon used to toss barbells around. He lifts his 85-pound



Child sensation Paul "Butch" Ouidnot of Reading, PA, became known as the "strongest boy in America" and put together a strength act that he did in television appearances and at the annual York Barbell picnic. Ouidnot is approximatley ten in this photo and weighs about 80 pounds. *Photo Courtesy John Fair*

> weight overhead and then lowers it to his shoulders. From there, he allows the weight to roll down his back where he again catches it before lowering it to the floor. But that isn't all! Butch then deadlifts the weight, without letting go of it, to the small of his back, leans forward to allow it to roll up his back where he catches it at the shoulders and then jerks the 85 pounds from behind the neck. He then drops the bar, catching it in the crook of his arms before setting it down.[20]

Another strength prodigy that impressed Murray was Paul Waldman of Erie, Pennsylvania, who at age 14 did squats with 325 pounds.[21] By the time he was 16, he was bench pressing 325 and winning physique titles, including national Mr. High School in Chicago in 1953.[22] Waldman was not only good enough to merit a cover and feature stories, he started writing articles for *Strength & Health*. In the January 1952 issue he advised young readers that "one is never too young to lift weights."[23] Coverman for February 1955 was 19-year-old Glenn Bishop of Chicago, who finished second to Waldman in the Mr. High School contest. Bishop had been training since 1949 to strengthen his abdominal muscles after a hernia operation and could squat 300 pounds for ten repetitions.[24]

What confirmed Hoffman's belief that "one is never too young" was the victory of the American team under his tutelage at the 1950 world championships in Paris. All of his medalists—Joe Pitman, Pete George, Stan Stanczyk, and John Davis—had started training in their early teens and were now "Strength & Health Boys Grown Up," an expression Hoffman would use repeatedly over the next couple decades to express pride in his protégés, validate his recommendations for youth training, and strengthen the York/Hoffman brand. "Supermen, like Topsy, do not just grow. They are built, and the sooner they start, the more chance they have for outstanding success," he advised.[25] Soon support for this notion was being exemplified by members of the York staff who were raising children. Foremost attention focused on the "small fry" of John Grimek, who some regard as the greatest bodybuilder of all time. In an article entitled "How Young Should You Start 'Em?" Grimek advised that "if the child is carefully coached and a limited training schedule is given him, there shouldn't be anything but beneficial results." According to Grimek, the right age should depend on the child's desire and ability to do the exercises correctly.

Our first born, a girl, was provided with

> light dumbbells to play with, carrying them around the house and making attempts to lift them. It wasn't until she was a year old that she could lift one overhead, which weighed five pounds, and later after seeing several lifting contests, she did a perfect two hands swing with both dumbbells, splitting under the weight. I had never coached or demonstrated the lift to her but seeing the contests gave her the idea of how it must be done. . . . The 'small fry' is a great mimic, a kind of 'monkey see, monkey do' affair, and when he sees his dad training it is only natural for him to ask when will he be able to train with weights. . . One thing you must never do; force your child to train.

Pat Grimek Stover confirms that her father practiced what he preached and "never forced" her or her siblings to train. But it is Grimek's boys, Stevie and Bobby, ages six and five, who are primarily featured in the article with Bobby demonstrating five barbell movements and John "Mr. Everything" holding both boys aloft, one in each hand.[26]

Other members of the York gang followed suit. John Terpak was general manager of York Barbell and a former world champion. His son John Jr. was 14 years old and athletically inclined, lettering in football and track. John told Pudgy Stockton in California that his son had surpassed him in height and was lifting weights. As a "squatter," he had "cleaned 170 quite easily at 140 bodywt."[27] The namesake son of Jim Murray, Hoffman's managing editor since 1951, first appeared in the July 1952 issue with 3½-ounce dumbbells, and later his younger son, Jay, was shown in the September 1953 of *Strength & Health* with the same weights along with the elder son, Jim, who had graduated to an eight-pound barbell. No less notable was Rickey Terlazzo, pre-teen son of York loyalist John Terlazzo, shown with miniscule dumbbells, and pre-teen Donne Hale, Jr. whose father, at 15, had been an entrant in the first Mr. America Contest in 1939. A January 1956 article by the senior Hale closely mirrors Hoffman's approach to youth training, explaining how his ten-year-old son ("with a decade of training behind him!") was a "star performer" who "regularly defeats lads of twelve or thirteen in individual athletic events."[28] By the late 1950s Jim Murray had oriented the format of *Strength & Health* towards weight training for athletics and even published a book on it with Peter Karpovich, a leading kinesiologist. The book had obvious youth appeal.[29]

However gratifying it must have been for Hoffman to see the children of his staff and keen supporters taking to weights and for others to reveal a correlation between resistance training and athletic performance; the winning seasons of high school sports teams that adopted York-inspired programs proved this point even more convincingly. The first occurred at York High School in 1953 when it won its first Central Pennsylvania championship after not winning a conference game for five seasons. For some years Hoffman had offered weights to York High coaches, but to no avail. When Eddie Waleski took over the helm, however, he accepted Hoffman's offer of three barbell sets along with Hi-Proteen nutritional supplements.

> The boys on the football team made use of them during their spare time throughout the year, as a club activity. They had the advantage that one of the squad members is an 'old-time' weightlifter. Johnny Terpak Jr., while only a substitute halfback as a sophomore, has had the advantage of the best possible coaching in weight training and lifting, so was able to pass his knowledge along to his buddies. . . . They were the strongest team physically in the league.

In addition to its undefeated record, two team members, Wilmot Banks and John Watkins, won all-state honors, being selected to the Associated Press first and second teams.[30]

Soon other stories began emerging of the successful application of weight training to other sports, especially track and field. Such was the message conveyed by Jim Murray repeatedly in his *Strength & Health* articles. He relates the story of how he helped Pete Haupt, a football player from Hasbrouck Heights High School, New Jersey, set up a summer conditioning program in 1954. After the season Haupt explained that weight training enabled his team to win all nine games, compile the best defensive record in the state, and outscore its opponents, 330 to 6. In his book with Dr.

Karpovich, Murray provided examples of collegiate and professional players who benefited from weight training, including:

> Fullback Alan Ameche (Wisconsin, Baltimore Colts): tackle Stan Jones (Maryland, Chicago Bears): guard Alex Aronis (Navy): tackle-guard Walter Barnes (Louisiana State University, Philadelphia Eagles): and half back Steve Van Buren (L.S.U., Eagles). Ameche, Jones, and Aronis all began using the weights as high school boys, while Barnes first lifted as an already powerful collegian.[31]

Jones, who was an All-American lineman and played in seven straight Pro Bowls, attributes his success to weights. "I started lifting weights in high school in 1945," he explained in a 2003 interview, "I worked out pretty heavily. I gained 20 pounds a year for six straight years. If I hadn't lifted weights, I doubt if I could have played."[32] Foremost among the few educators who were subscribing to weight training by the mid-fifties was C. H. McCloy of the State University of Iowa. McCloy summarized the results of his studies, published mainly in scholarly journals, for *Strength & Health* readers. "Suffice it to say that in every case the trainees improved in speed and in muscular endurance." That there was "no evidence that they became any less flexible (more 'muscle bound') than they were before weight training" must have been music to the ears of Hoffman and Murray.[33]

The most convincing testimony for their cause came from Louisiana, which became a hotbed of lifting and football owing largely to the efforts of one man, Alvin Roy. A native of Baton Rouge, Roy graduated from Istrouma High School before going on to Louisiana State University (LSU) and joining the U.S. Army at the outset of World War II. Although he had started weight training prior to the war, his passion for it was aroused by his post-war assignment as an *aide-de-camp* for the American weightlifting team that was competing in the 1946 World Championships in Paris. As Terry Todd explains in a 1992 article, Hoffman's lifters made a deep impression on Roy during their five-week visit to France, and their association continued after Alvin opened his gym in Baton Rouge in 1948 and extended to the 1952 Olympics in Helsinki where Roy served as trainer for the American weightlifting team.[34] It was only after his alma mater's bitter loss to cross-town rival Baton Rouge High, however, that Roy was able to convince Coach James "Big Fuzzy" Brown and Principal Ellis "Little Fuzzy" Brown to let him install and supervise a weight training program at Istrouma. Little Fuzzy recalls that

Al was such a

John Grimek's husky young son, Bobby, was featured in the advertising for Hoffman's Little Samson set. The short bar, when fully loaded, weighed eight pounds. The two-pound dumbbells, painted red, were described in the ad copy as "so cute your wife will want to put them on the living room mantle."

> salesman and he believed so much in what he was doing that we decided to take a chance. He was relentless. But let me tell you, we were worried. We knew what it could mean if we got a bunch of boys hurt or if we had a real bad season. It could mean our jobs. Some of our friends in the business told us we were crazy. But the way Al told it, it sounded good and once we decided to do it, we went all the way.[35]

The results, as reported by Bill Williams in the *Baton Rouge State-Times* and later published in *Strength & Health*, were spectacular. Istrouma went undefeated through 13 games to win the state championship and "scored more points (432) than any team in state history. Four players were named to the all-state team. Only one boy on the squad of 40 failed to gain at least nine pounds before the season opener. Three of the standouts gained more. End Billy Castilaw gained 32 pounds of muscle, fullback Billy Cannon gained 28, and tackle Luther Fortenberry gained 15. Castilaw could deadlift 420 pounds, Cannon 410, and end Oscar Lofton 325." Later Cannon, who went on to become an All-American and Heisman trophy winner at Louisiana State "tied the state 100-yard dash record in 9.7 which had stood for 14 years," won the state meet in the 200 in 21.1 seconds, and also won the shot put. For Williams, such evidence put to rest the old canard that weight training would make athletes slow and muscle-bound.[36]

These revelations coincided with "The Fort Lauderdale Story" by Joe Kolb of the *Fort Lauderdale Daily News* in the same issue. Like Roy, local gym operator Al Christensen supervised a pre-season weight program in 1955 for the Fort Lauderdale High School football team which resulted in a 9-1 record, the best in school history. It was obvious to Coach Bill Armstrong that his players were stronger and had "more confidence." So popular was Christensen's program that another school employed him twice weekly to teach weightlifting, and two others were introducing it to their athletes.[37] The message was clear. Not only was weight training producing better athletes but it was teenagers who seemed most responsive to it. It was hardly a coincidence that a landmark editorial by Hoffman on youth training, "As the Twig is Bent," accompanied the Louisiana and Florida football stories.

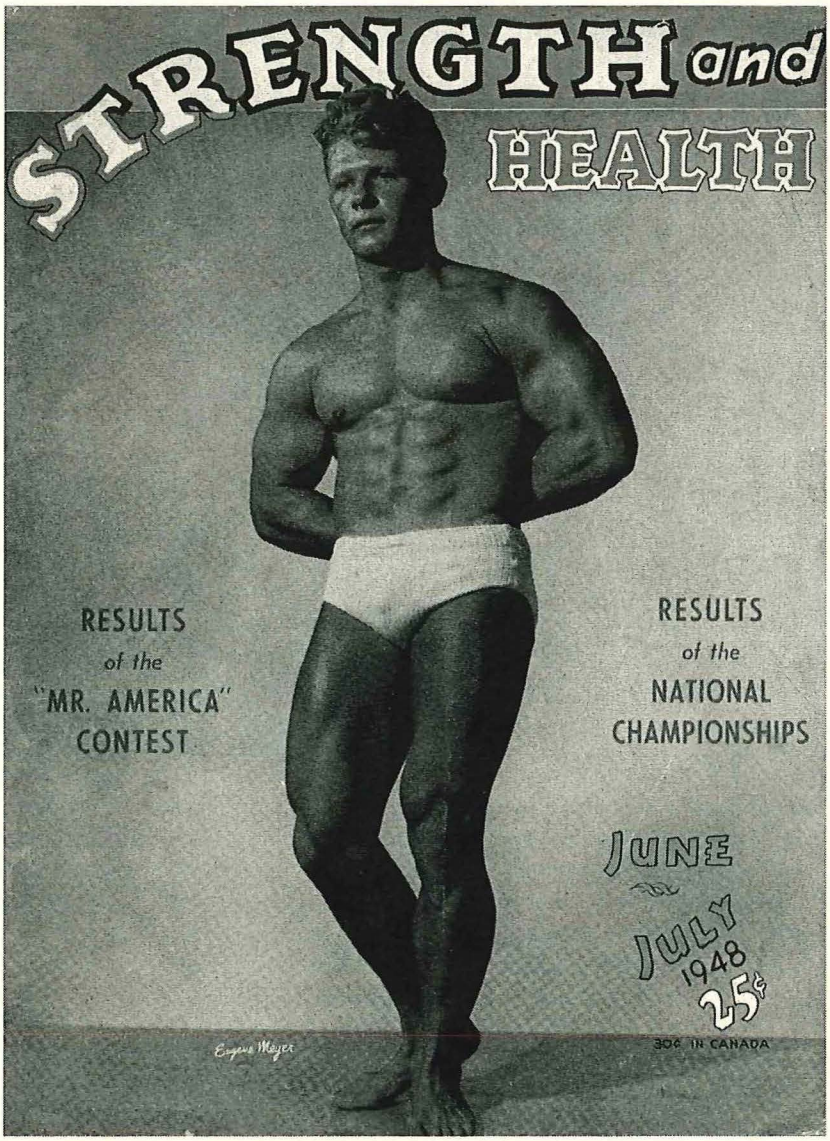
> We are often asked this question: 'At what age should I start my child on barbell exercise?' Many are of the belief that no formal exercise should be done until a child reaches the teens. This is a dangerous attitude, because the time to guide your child into proper living habits is as soon as he can walk. . . . We are also completely sold on the thesis that the stronger you are, the healthier you are apt to be. And it goes without saying that we believe that progressive barbell training is the best means known to strength and health. So it naturally follows that when parents ask us about exercise for their children, we say start them as young as possible. . . . The most important people in America today are our children. Let us bring them up in the way they should go. Good habits once formed are hard to break. *As the twig is bent, the tree's inclined.*[38]

Lest readers overlook the best way to become strong and happy, most pages of the magazine were littered with advertisements of Hoffman products to lift, eat, and wear. Specially designed for pre-teens was a York "Little Samson" set, made to "fit tiny hands" that parents could purchase for $6.95.[39]

In the meantime, "Especially for S & H Boys" had disappeared from *Strength & Health* and was replaced by a new monthly feature in January 1956 called "Boys Club." Exactly what inspired this latest surge of interest in youth training is unclear, but it closely coincided with the magazine's coverage of weight-trained high school football teams, and the title echoes a 1951 article by George Bruce, co-owner of a gym in Van Nuys, California, "Let's Start a Boy's Club."[40] No doubt the idea had been percolating in Hoffman's mind over the preceding five years, encouraged by the youthful achievements of his Strength and Health Boys Grown Up and the exuberance shown by the children of his own staff for weight training. "Never have we seen such a crop of prospective barbell men, and if this keeps up, we need have no serious fears about any of our S & H boys failing to chin themselves or being able to do push-ups." Many of the plans resembled features of the old Ameri-

can Strength & Health League, including awards, certificates, pictures, and inspiring stories of youthful accomplishments—but no reader interaction.[41]

Failing any possibility of resurrecting this risky stratagem, Hoffman latched on to the concept of reader identification. Boys Club would provide examples of teen and pre-teen boys for their peers to admire and emulate. Their impact would be enhanced by writings and illustrations of Hoffman's editor, Harry Paschall, who wielded the most powerful pen in iron game journalism. The most notable teenage role model was Roger "Rod" Allen, who trained at Vic Tanny's Santa Monica gym. At 4' 11" and 117 pounds, Allen could bench press 200 pounds and, according to Paschall, "has more shape than Steve Reeves. . . . This lad is a 'Wonder of Nature,'" he declared in the February issue of 1956.[42] Five months later, at age 14, Allen had grown 4½ inches, gained 17 pounds, and was the subject of a four-page article by Paschall.

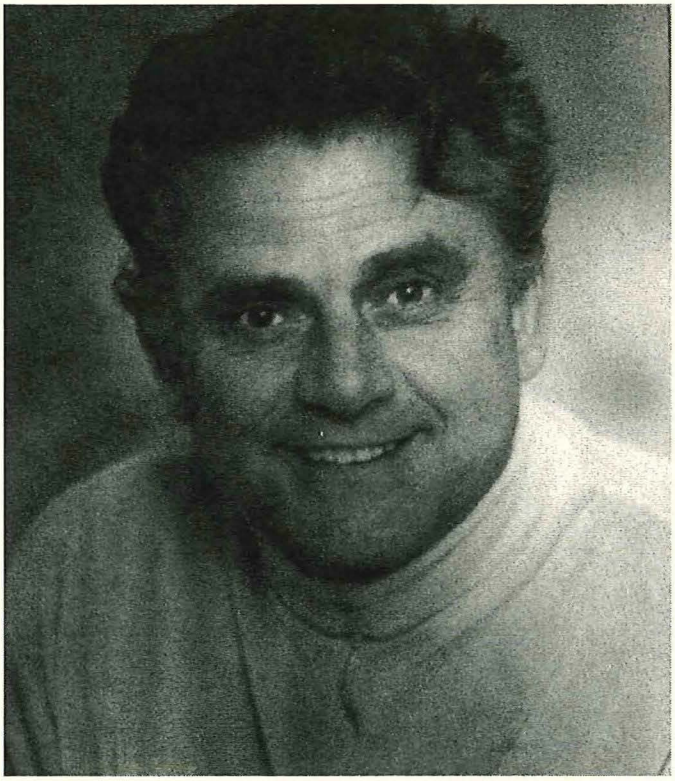


Eugene "Gene" Meyer was one of the first teenagers to appear on the cover of *Strength & Health*. Gene was trained by Vic Tanny at his gym in Santa Monica and won the Mr. Los Angeles Contest when he was only 18.

> Once in a long time a youngster appears on the sport horizon who seems to have everything. In the world of weights we have had such figures as John Grimek, Steve Reeves, and a sparse handful of others. When the first photo of young Roger Allen passed over my desk, I knew we had in this lad a muscular phenomenon of unusual possibilities.
>
> So . . . in the February Boys Club page we printed our first picture of Rod. What hoppen? The kids all over America took him to their collective hearts with all the juvenile enthusiasm of a school girl for Frank Sinatra. We got letter after letter wanting to see more pictures of the miniature superman and asking 'how he got that way?' . . . Doesn't look like weight training had stunted this lad, eh? Instead, he is growing up, down and sideways at an almost unbelievable pace.

Allen could now bench press 230, do 34 chins, 135 push-ups, and repetition squats with 255 pounds. Otherwise he was a normal ninth grader who was popular in school.[43] Although updates on Allen followed his interest and development in Olympic lifting, it was his physique that most captivated and inspired readers over the next two years.[44]

Physique was also implicit in the promotion of Stevie and Bobby Grimek, pre-teen children of the great-



Louisiana native Alvin Roy was one of the most influential figures in the movement toward weight training for sport at mid century. In Baton Rouge, Roy established a gym in which he trained dozens of teenage boys on an individual basis, and he also organized weight training for the football teams of local Istrouma High School and Louisiana State University. After working with Roy, both teams had exceptional seasons and won their respective championships. Because of his long-time friendship with Hoffman, Roy's successes in training these young teams were reported in *Strength & Health* and inspired other coaches and young athletes to begin using weight training. *Photo courtesy John Fair*

est star in York's firmament of champions. In a June 1956 article entitled "Boys . . . Meet Little Samson," Hoffman portrays the Grimeks as a model family and applauds John for getting his boys involved in physical culture at a young age.

> Bobby Grimek got a present on his eighth birthday—the very first *Little Samson* Barbell and Dumbell Shirt, plus a *Little Samson* Barbell and Dumbell Set, and Member Card Number one in the *Strength & Health Boys Club*. His younger brother Stevie got the Number Two Layout.
>
> Naturally the boys were eager to get down to business—the business of doing some training like their famous Pop. So, out into the Spring sunshine and with JCG shooting the pictures, we record for posterity the first official workout by the first authentic *Little Samsons*!
>
> When is the proper age to start your youngster at weight training? We hope to answer that question right now for all time. Just as soon as he feels like imitating his old man, he should be given his own little outfit and encouraged to do some simple exercises. You cannot start too young . . . but you may start too late!

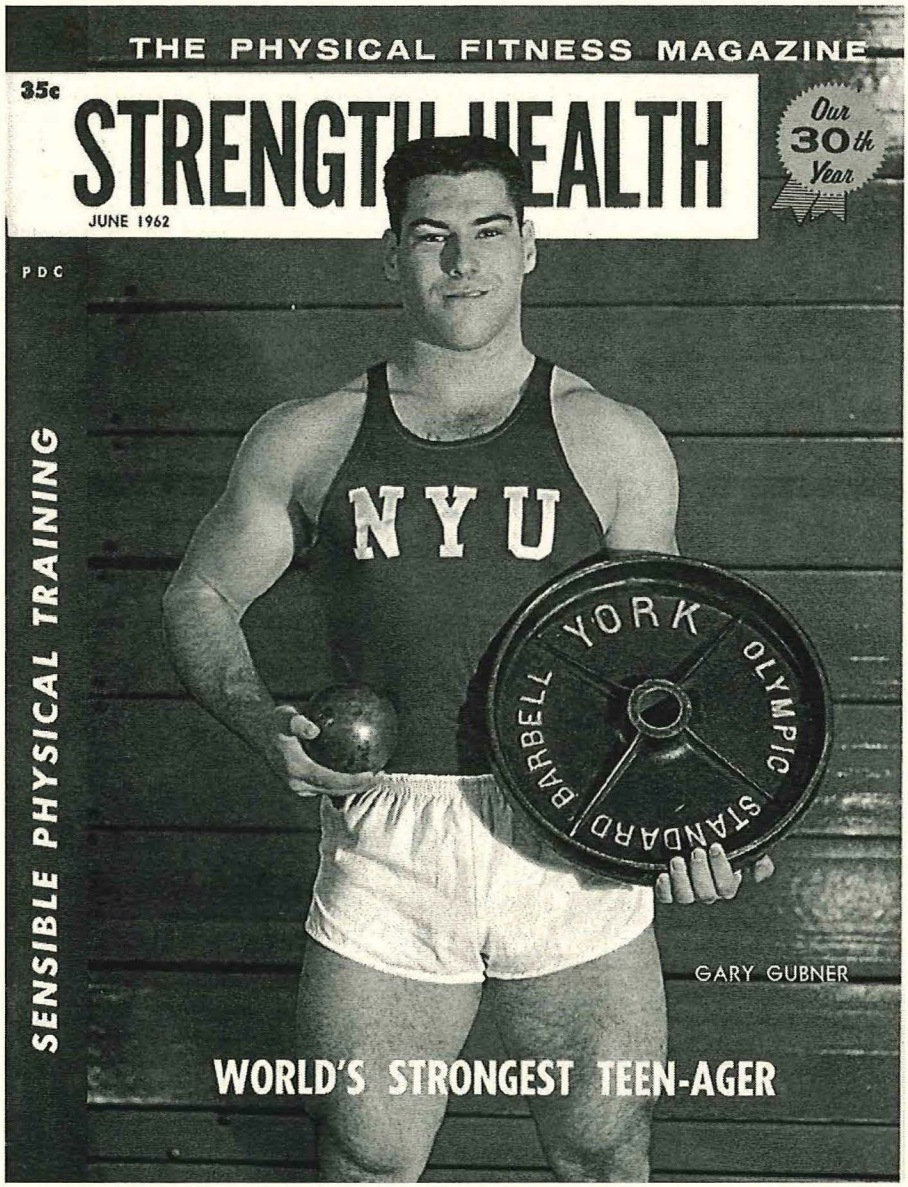
By training together, father and sons will "have a closer family relationship, and you'll all profit in better strength and health." "Like father, like sons" became one of Hoffman's favorite aphorisms. Although pictures of both boys appeared demonstrating exercises with their barbell on the lawn of the Grimek home, it was Bobby's likeness that appeared on monthly magazine ads into the early 1960s. A "Big Deal for Little Wheels" is how York pitched its *Little Samson* sets.

> *Just like Daddy's!* Why cut down your big York set to make up a barbell for your youngster? That is like cutting down Pop's pants to make hand-me-downs for your child, and is quite apt (say psychologists) to give the lil fella a terrific inferiority complex. You wouldn't want that, wouldja, Pop? Give him a barbell of his own![45]

This focus on family was later reinforced with a cover shot and article of a Labor Day gathering of all seven Grimeks (males lifting weights) entitled "Fun in Your Backyard."[46]

Hoffman, though once married, had no children of his own to showcase, but he must have gained a vicarious delight from seeing so many little Samsons emerging who seemed to be using his products and putting his ideas of youth training into practice. Some of their fathers were York loyalists, such as Joe Pitman whose 21-month-old son, Joe III, is shown pressing an eight-

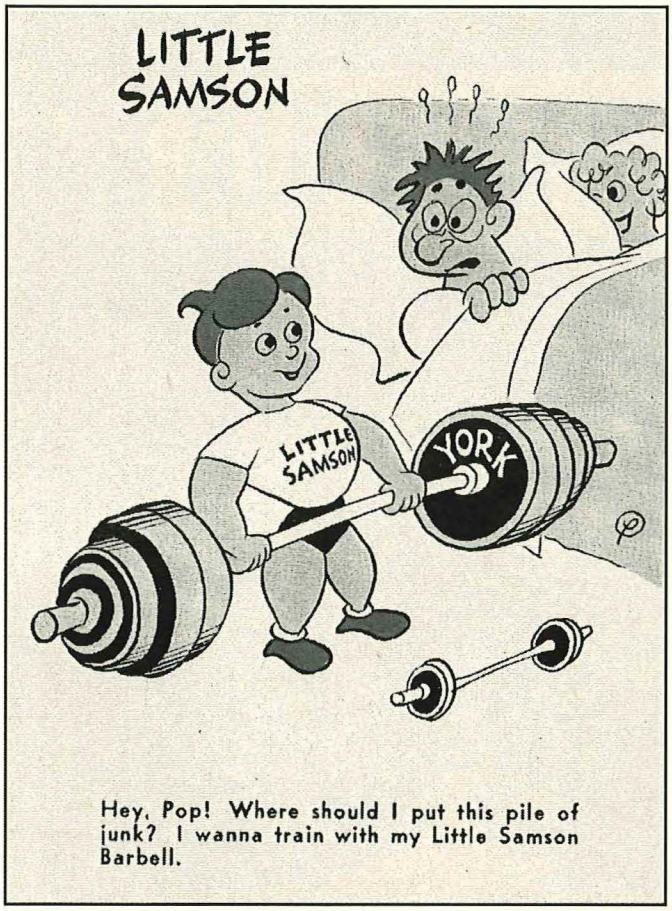
pound *Little Samson* barbell with "form that looks better than his dad's!" Three-year-old Bart Yarick, son of Ed and Alyce Yarick demonstrates the use of a *Little Samson* barbell in the show window of his parents' gym in Oakland, and two-year-old David Paul Bendel, whose father Bob was a veteran AAU official in Riverside, New Jersey, is pictured with a pair of *Little Samson* two-pound dumbbells and breaking into a box of Hoffman cookies "to get his protein the easy way."[47] And Hoffman showed no compunction to introducing his *Little Samson* sets to the grandchildren of his common-law wife Alda Ketterman for a little light exercise at family gatherings.[48] To what extent "Boys Club" figured into the profit margins of York Barbell in the mid-fifties is uncertain, but sales increased dramatically from $521,703 in 1954 to $1,280,056 in 1958.[49] And there was no reason for Hoffman not to think that his emphasis on youth training was part of this boom.



Teen-age shot put champion Gary Gubner was was one of the first track athletes to train with weights to enhance his performance. By the time he was 19, Gubner's best with the 16-pound shot was 65' 10½," a phenomenal throw for one so young. Gubner's coach, George Cohen, and Bob Hoffman in *Strength & Health*, attributed this success to barbell training.

It is hardly surprising that other muscle marketers, given the popularity of York's emphasis on youth, sought to capitalize on it, but none did it so systematically. Not unlike Hoffman, Peary Rader, editor of *Iron Man*, was an Olympic lifting enthusiast and "fathered" the first high school national weightlifting championships at the Duncan YMCA in Chicago in April 1956. Convinced that "by interesting the younger fellows in lifting that we can do more for the progress of the sport . . . than in any other way," he intended to dedicate "much space in *Lifting News* magazine to this phase of the sport." But Rader did little more than report the results of annual teenage weightlifting nationals and the Teenage Mr. America, also started in 1956. Rader's interest was also stimulated by his teenage son Gene, who won the featherweight class at the 1957 teen nationals in Berkeley.[50] *Tomorrow's Man*, edited by Irvin Johnson (Rheo Blair) and Paul Lange in the mid-fifties, featured a lot of teenage bodybuilders, but its singular focus was the male physique with no special emphasis on youth training. However, the September 1955 issue featured Paul Oudinot, Jr. as an age-group finalist in the magazine's annual physique photo contest.[51]

Joe Weider's publications were definitely oriented towards self-improvement, and ongoing columns entitled "Future Greats" in *Muscle Power* and "They Were All Weaklings" in *Muscle Builder* catered to this



Artist and *Strength & Health* editor, Harry Paschall, famous for his Bosco cartoons, also penned a series of Little Samson cartoons that appeared in the magazine in the 1950s.

concern. But ages of the subjects appearing in the many "before" and "after" pictures are not always clear, and there is little distinction for youth. Many appear to be young adults or older. For instance the "before" photo of Roger Rizzo in the June 1956 issue of *Muscle Power* depicts him as a child of no more than ten whereas he could easily pass for twenty in his "after" picture. Yet the caption reads that he "gained 41 pounds of He Man Muscle following The Weider System" in just one year. Even more unbelievable is a cover gambit, "How I Gained 85 Pounds of Solid Muscles in Two Months."[52] What is most evident in these before/after depictions is commercialization, far less subtle than Hoffman's—that all of these gains resulted from Weider training principles and products. In December 1955 Weider launched a publication called *Junior Mr. America* that appeared to be more focused on youth training. It was designed "for weaklings who want to build big muscles fast." In order to build a "sensational body" and be an "All-American He-Man" the answer was simple. "Order one of my sets and courses right away. You have nothing to lose but your skinny, weakling body."[53] Despite its youthful title, the magazine carried the same kinds of transformative stories as Joe's other publications, and there was no particular emphasis on youth. *Junior Mr. America* lasted only four issues, from December 1955 to August 1956. For Hoffman alone was youth training a crusade.

Meanwhile the Istrouma High football team continued its winning ways. In the 1956 season it again went undefeated on its way to a second state AAA championship. Once Alvin Roy instituted a rigorous program of weight training, Istrouma had not lost a game.[54] Roy then took his message across town to LSU whose new coach, Paul Dietzel, harbored the same doubts the Brown brothers had two years earlier. But Dietzel was aware of Billy Cannon's transformation and, as he related to Terry Todd,

> you have to remember that Jimmy Taylor had been a senior for us that year and I knew he'd been going to Al's Gym for a year or two, and he was as good a testimonial for the weights as you'd ever care to see. Not only was Taylor bull-strong and hard as a rock, but he had great hands, soft hands. He could catch anything. . . . All I can say is that after seeing what Taylor and Cannon could do and after listening to Al, I was sold.[55]

Roy's pitch was simple. "All you need is a barbell and a man to lift it." Weightlifters, he contended, were "the strongest men in the world," adding, "you must train your football players the same way."[56] While his prescribed routine included a wide variety of exercises, he did not, according to his brother and fellow trainer Ray Roy, shy away from squats—"full squats" and "front squats. We made them do both."[57] In 1958 LSU went undefeated, beat Clemson in the Sugar Bowl, and won its first national championship. Dietzel was named Coach of the Year and Cannon won the Heisman Trophy the next year. As Ace Higgins pointed out in *Strength & Health*, Louisiana State's line "averaged only 197 pounds. But from end to end, each player could dead lift at least 400 pounds." And Cannon—who could deadlift 600 by then—was, Alvin boasted, "the strongest football player in America." It is not insignificant that accompa-

nying photographs show a pre-teen youngster in a *Little Samson* t-shirt watching Cannon curl 150 pounds and Roy coaching him on a heavy deadlift.[58] The following spring Cannon ran a 9.4 hundred-yard dash on his way to winning the SEC title in the 100, 200, and the shot put at 54' 4½."[59] It was an extraordinary record that was rooted in ideas implanted in the mind of the young GI assigned to assist American weightlifters at the 1946 world championships.

Having developed a successful formula for athletic success, Alvin Roy went on to become the first strength coach in professional football with the San Diego Chargers in 1963, which was a critical factor in their winning the American Football League championship for that year. But his legacy lived on in Louisiana where Istrouma won five state championships from 1955 to 1961, and LSU had four winning seasons for a 35-7-1 record until Dietzel departed for West Point in 1961.[60] Alvin also displayed his entrepreneurial skills by establishing 38 fitness franchises (a la Vic Tanny), called Roy Studios, throughout the country. But his interest in youth training did not wane. "That's all we did," recalls his brother Ray. "That's basically all we worked with until we started working with the Chargers. Oh yeah, we had adult clients, but as far as training for athletes, we loved to start them as young as they came." The Roys' star pupil was Mark Lumpkin, who "was 11 years old when he started, and he ended up throwing the discus farther than anybody's ever thrown it before or since in high school here." At the Golden West Relays Lumpkin threw 184'4" feet which "shocked" his competitors. Notwithstanding all the stories about the hazards of youth training at the time,

> Alvin had a Saturday morning TV show called Alvin Roy's Future Champions. If I remember correctly, it started sometime in the fifties and was still going on in the sixties, and lasted about 30 minutes. It was on WBRZ in Baton Rouge which is ABC now. We became good friends with the guy that owned the station, Richard Manship. I don't know if it was Manship that brought up the idea, but we had a little house behind the health club where Alvin cooked boiled crawfish and crabs, and the TV studio was just right around the corner, and Manship used to come eat crabs and crawfish with us, and he'd work out in the health club, and so, over the years we became real close friends.[61]

It was Ray who discovered bodybuilding champion Boyer Coe when he was operating one of Alvin's gyms in Lake Charles. "I got him started and brought him to a certain point," he recalls, "but he was gaining weight and getting stronger, so I took him over to Red Lerille's gym in LaFayette. . . . First thing I knew he was winning Mr. New Orleans contests. . . . I was so proud of him."[62] Eventually, Alvin spent time as the strength coach for the Kansas City Chiefs, Dallas Cowboys, New Orleans Saints, and Oakland Raiders, but he never moved from Baton Rouge where he continued to train youth until his death in 1979.[63]

By the late 1950s a new cohort of youthful stars was emerging in Boys Club. Tony Garcy of El Paso was only 16 and weighed 146 pounds, but he could already press 195, snatch 195, and clean and jerk 250. His favorite exercises were the push press off the squat-rack where he could do two repetitions with 250 and squats where he did five with 300.[64] No less promising was Gary Cleveland of St. Louis, the 1958 winner of the Boys Club Self Improvement Contest. In the course of three months he had added 130 pounds to his three-lift total and 90 to his squat at a bodyweight of 190, which earned him an engraved trophy and a York Olympic Standard barbell. He was no *Little Samson,* but Cleveland claimed, according to Hoffman, that he "followed York methods exclusively and that he used Hoffman's Hi-Proteen daily during this contest."[65] The most spectacular child prodigy, however, was Gary Gubner, who broke into the lifting world in 1959 as a 16-year-old junior at DeWitt Clinton High School in New York City. He was not a weightlifter *per se* but used lifting to improve his shot put, which stood at 61' 3¾", and he was squatting 400 pounds for repetitions. By the time he was 19, Gubner's best with the 16-pound shot was 65' 10½", second only to the great Dallas Long, gold medalist at the 1960 Olympics. Gubner's coach, George Cohen, attributed this success to weightlifting.

> It would be impossible to say just how many feet less he would be throwing had he never lifted but surely the fact that he is the strongest and yet the

> youngest and least experienced of America's top tossers answers that question adequately. Obviously it is his great barbell-developed strength which has put him up with men who have thrown twice as long as he, so quickly.

It even seemed possible for the young New Yorker, at that time a sophomore at New York University, to become champion in two Olympic sports. He had recently totaled 1,075, via lifts of 360-315-400, squatted 630, and won three medals at the Maccabean Games in 1959. For Hoffman, Gubner was "our best bet to return heavyweight supremacy to the United States."[66] It no doubt disappointed Hoffman that neither Garcy, nor Cleveland, nor Gubner were medalists at the 1964 Olympics in Tokyo.

Meanwhile other promising Boys Clubbers from the fifties were maturing and leaving the iron game. Most notable were Rod Allen and Paul Oudinot, Jr., both of whom had taken up Olympic lifting for a while and then disappeared, never to reemerge as "S & H Boys Grown Up." The latter instance coincided with the tragic death of Paul Oudinot, Sr., who as a gym owner had fostered and carefully monitored the development of his children. That the elder Oudinot died of a heart attack at age 39 was not a ringing endorsement of the healthy family image Hoffman projected.[67] John Terpak, Jr. chose football rather than weightlifting as his sport and was a mainstay in the backfield of the University of Pennsylvania Quakers.[68] The Grimek children, on the other hand, at 11 and 12 were still at home and training with barbells. Papa John's 1959 article "They're Never Too Young," echoed the sentiments he expressed six years earlier on youth training, noting that "any age is alright" as long as the exercises are taught correctly. "Once a youngster is taught the right method of training he seldom deviates from it." But Grimek was more aware of the importance of training for other sports than in 1953.

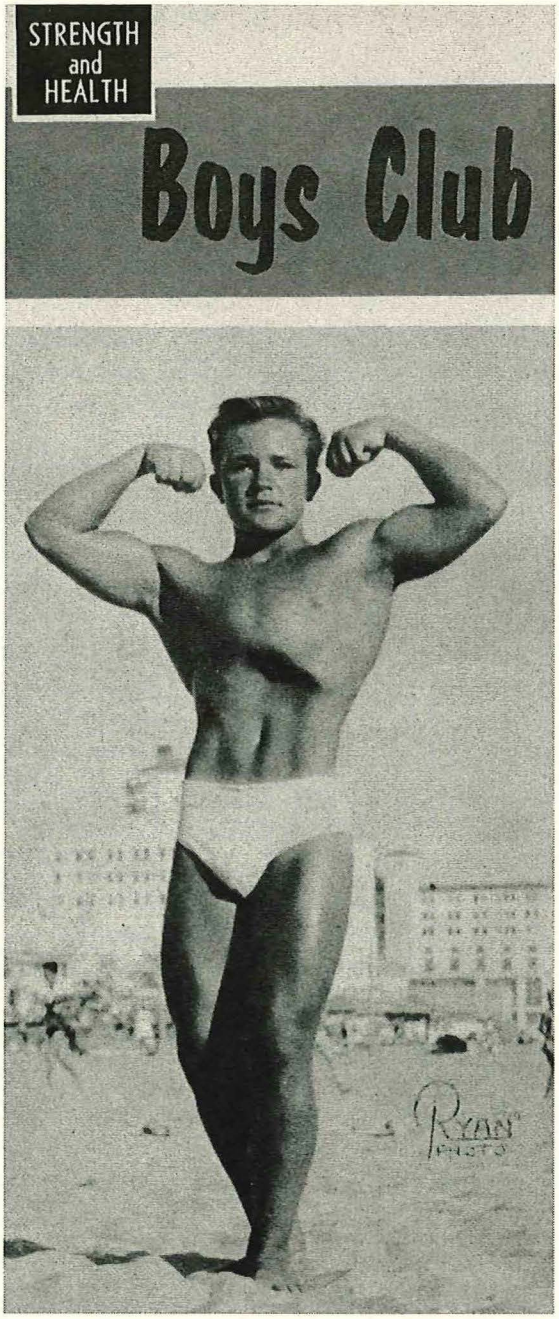
> Whenever I want to encourage any one of the 'small fry' I usually ask him what his favorite sport is. Invariably his reply includes baseball or football, usually both. I then tell him: If you expect to become a champion in your sport you must develop and strengthen your muscles . . . and weight training will do just that. Besides, your muscles will acquire greater speed and timing and better coordination that will make any champion even a greater champion.

Along with illustrations of Stevie and Bobby doing their favorite exercises, they were joined by their two-year-old neighbor, "strongman" Ronnie Rosen in a Little Samson shirt. He was rumored to "eat more Hi-Proteen cookies than any other kid in the neighborhood."[69] In the fall of 1960 both Grimek boys were "first stringers" for their basketball team, and Bobby shows up in "Boys Club" wearing an attractive York Barbell Club windbreaker that is available for members at $6.50. By this time they were joined by a baby brother, John D. Grimek, who was predicted to be "the first son of a Mr. America to succeed in his father's footsteps."[70]

Perhaps it was a premonition of the training changes on the horizon that there appeared in the January 1959 "Boys Club" column a picture of William Ziegler, "known around the neighborhood as 'Knee Deep' Ziegler," son of Dr. John Ziegler of Olney, Maryland, in a Little Samson shirt with two-pound dumbbells.[71] Dr. Ziegler regularly visited nearby York Barbell to administer functional isometric contraction, anabolic steroids, and other ergogenic aids to York lifters to enhance their performance. While the effects of steroids remained unclear, Hoffman identified isometrics as an innovation that could revolutionize training in the November 1961 issue of *Strength & Health*.[72] It required maximum exertion against an immovable object to obtain maximum strength. A Louisiana connection in its development was made possible for Hoffman and Ziegler through Alvin Roy and his association with Martin Bruoussard, trainer for the athletic department at LSU since 1943, and Dr. Francis Drury, an associate professor of physical education who had been doing research on isometrics since 1952. Hoffman, calling it "the greatest training system the world has ever seen," was soon marketing a "power rack" for individuals, schools, and colleges to use in training, and the idea was "sweeping the country like wild fire." Again, as with weight training in the fifties, York High and Istrouma High were major beneficiaries, as were the college and professional programs at LSU and San Diego with which Roy was associated.[73] Norm Olson, football and track coach at Florida State University, reported

"splendid results" from functional isometric contraction. In the 1961-62 season Olson's team had a 10-0 record, including nine shutouts. His track team was state runner-up. Jim Goosetree, trainer at the University of Alabama, was so pleased with the weight program Roy had helped him implement five years earlier that he eagerly embraced the idea of isometrics after meeting with Broussard.[74] Likewise Coach John Adcock of Tampa's Chamberlain High Chiefs that won the 1961 state championship believed this form of training could make his team even better. Tom Pruett, coach at Victoria (Texas) High School, was impressed with its convenience and availability. It was "the irresistible force meeting the immovable object."[75] Company records indicate Hoffman sold power racks to 20 high schools and colleges in 1962, but many others undoubtedly made contraptions of their own.[76]

Whatever effect functional isometric contraction might have had on the increased strength and performance athletes were displaying in the early sixties was soon disregarded and attributed to anabolic steroids, which also increased muscle mass. Again there was a York-Baton Rouge connection. Not only was Ziegler administering steroids, along with isometrics, to York lifters but he found a willing subject for both in Louis Riecke, a graduate of LSU and an acquaintance of the Roy brothers and Dr. Drury.[77] The extent to which Alvin Roy was culpable for the proliferation of performance enhancing drugs in the 1960s to American athletes in general and youthful trainees in particular is difficult to determine. It is well known that he introduced them to professional football as strength coach of the San Diego Chargers, and his brother, Ray Roy, confirms that Alvin's approach was defined in part by experimental use by the brothers and their nephew Norbert, one of Ziegler's original subjects who utilized both steroids and isometrics as captain of the Notre Dame football team. I got "bigger and stronger," Ray recalls, but he only stayed on them for a short time and was under a doctor's prescription. It was this protocol that Alvin followed at San Diego. "The Charger thing was done under a doctor. It was always done that way, but you can't help it when those other people find out about 'em, thinking if one's going to do so good, then 50's going to do better." As to whether Alvin also introduced them to LSU players, "I don't think so" was Ray's response, "at least not at first. That he would have corrupted the youthful innocence of the Istrouma High School boys was simply out of the question."[78] Boyer Coe, however, is not so sure. He suspects that Dianabol, along with its weight training regimen, might have contributed to LSU's success on the gridiron. [Editors' note: Coe is mistaken, unless he is referring to LSU players during the last year of Paul Dietzel's tenure as head coach, which was 1961, or later, because methandrostenelone (trade name Dianabol) was not developed by Ciba until 1958 and both Tony Garcy and Lou Riecke have said they did not even learn of it until John Ziegler introduced it to them in 1960.] As for



Roger "Rod" Allen, described by Harry Paschall as a "wonder of nature," could reportedly bench press 230 pounds and do repetition squats with 255 pounds. Trained by Vic Tanny, Allen was featured in *Strength & Health* several times in the 1950s but then disappeared from the weight scene.

Istrouma, Coe perceived Alvin as "the kind of guy whose passion was so great for football, if he could have come back as anything, he'd want to come back as a professional football coach. But I don't think he would knowingly give anybody something that he thought might be dangerous."[79]

It was steroids, not isometrics, that revolutionized strength training in the 1960s, but there was no evidence for most of the decade of the former's impact on youthful trainees. More than ever, Hoffman's approach and magazine content was oriented towards youth. Even Vera Christensen's "To the Ladies" column increasingly used photographs of teen models to illustrate exercises, and in the March 1961 issue she even used her own children, Cory at 3½ years and Cole at 21 months, in an article on "Exercise for the Small Child." Her advice resembled Grimek's, which was that the best way to encourage children is to do the movement yourself and that one should never force a child to exercise.[80] High school weight training received a special boost from 1961 to 1963, with coverage of programs in such disparate places as Sandia High (Albuquerque, New Mexico); Livonia High (Detroit, Michigan); New Hyde Park High (New Hyde Park, New York); Butler High (Butler, Pennsylvania); Herbert Hoover Jr. High (San Jose, California); and Jasper Place High (Edmonton, Alberta).[81] There was also an increased emphasis on collegiate programs as more of the nation's youth were seeking a higher education. The March 1959 issue of *Strength & Health* included an article on "Weight Training for Track and Field Men at Villanova," which highlighted Olympic champion and world record miler Ron Delany and marked the beginning of a "Barbells on Campus" series that extended into the 1970s. The July 1960 issue featured weight training at LSU with a photo of Harvey Cannon, Billy's father, beside a squat rack in one of the school's well-equipped dormitories.[82] "Today, as never before, the accent is on physical fitness, especially for the youth of America," observed Hoffman.[83]

The early sixties also featured the advent of a new group of Olympic weightlifting hopefuls, including Russell Knipp of Pittsburgh who eventually made nine world records in the press; five-time national champion Joe Puleo of Detroit; twice national champion Bruce Wilhelm of Sunnyvale, California; Bob Bednarski, the "Woonsocket Wonder" who was world champion in 1969 and set many world records; and Joe Dube of Jacksonville, four-time world record holder and America's last men's world champion.[84] Another remarkable youth of this period was bodybuilder Harold Poole, who not only placed second in the 1962 Mr. America Contest at age 18 but directly confronted the iron game with the civil rights issue the following year.[85] But Hoffman also tried to reach the grass roots level through periodic self-improvement contests. The 1963 version included 161 entrants from ages 9 to 18 representing 31 states and two Canadian provinces. The average age was 15.57 and the bulk of contestants (41%) hailed from the Middle Atlantic (New York, Pennsylvania, New Jersey, Maryland, and Delaware) region. The winner, Thomas Morelle, 15, of Utica, New York, had gained 25 pounds of muscular bodyweight in several months with impressive before/after dimensions—neck 14½ to 16¼, chest 40 to 46½, thigh 21¼ to 24, biceps 13 to 16, and waist 30 to 29½, and strength gains—squat 210 to 365, bench press 205 to 300, and press 135 to 180. Nothing more was heard of Morelle, but third place winner Bill Reynolds of Port Angeles, Washington, became a prolific bodybuilding author and editor of Joe Weider's *Flex* in the 1980s. John Coffee of Eastman, Georgia, did not place but eventually became a USA Weightlifting coach and benefactor.[86]

Changes too were underfoot at York that coincided with the influx of a new generation of editors that included Tommy Suggs, Terry Todd, Bill Starr, and eventually George Lugrin, all by way of Texas and more in tune with the times. By the mid-sixties, as Suggs once quipped, isometrics was perceived as a "national fad" that was "all too soon forgotten."[87] Boys Club remained, but the new editors expressed disappointment that they were not receiving enough good photos and stories to publish it every month. The feature also assumed a new title in 1965, "Bob Hoffman's Boys Club, The Place Where Future World's Champions and Mr. Americas Make Their Debut," but its days were numbered. A 1967 survey of readers by Starr indicated that only 3% chose it as a feature they most enjoyed, while 36% selected it as one they enjoyed least. That "Boys Club" was "very unpopular" was "surprising since almost half of the total readers are teenagers," observed Starr.[88] The concept for attracting youth to weight training that had worked so well for over three decades was apparently too old-fashioned. Likewise *Little Samson* seemed out-of-date, and ads featuring Bobby Grimek as an eight-year-old must have been embarrassing to a teenager of fourteen by the time they were pulled in the November 1962 issue of

Strength & Health. The *Little Samson* barbells, renamed *Little Hercules*, reappeared in the May 1963 issue and stayed on the market through 1967 with little fanfare. In the meantime the Grimek boys were pursuing other sports, Bobby played football for Catholic High and Stevie liked to bowl.[89] Hoffman, diagnosed in 1965 with serious health problems, seemed set in his ways, but his editorial on "The Younger Generation" in the November 1964 issue indicated that his commitment to youth was as great as ever.[90]

Fortunately his young editors were no less committed to youth training and continued to focus on school and college programs. Their "special teenage issue" of November 1966 with Phil Grippaldi, "America's Strongest Teen-Ager," on the cover, included articles on Teenage Mr. America Boyer Coe, Mexican Olympic hopeful Manuel Mateos, and the first teenage weightlifting camp that was held at York Junior College just after the Teenage National Championships in July. In his "America's Wonderful Teen-Age Lifters," Hoffman again applied his well-worn cliché, "As the Twig is Bent" to his successful mission in awakening the nation to the importance of youth fitness.

> It has been a privilege and an honor to have been associated with these wonderful teen-agers, these 'Bob Hoffman Boys Grown Up,' who have made their mark not only in the lifting world, but in all phases of life. . . . Some of them will go far. A wonderful lot of boys who will become a wonderful lot of men and have a great deal to do with keeping American lifting at the top of world weightlifting.[91]

America was hardly at the top of world weightlifting any more, but a significant number of sports medicine authorities and physical educators were now won over to Bob's principle of weight training for youth.

It was the view of chiropractor Samuel Homola in 1968 that "since weight training is now an important part of athletic training, the boy who begins a little lifting about 12 years of age will be a bigger, better, and stronger athlete when he enters high school."[92] Professor Eric Hughes used data from strength tests administered at the University of Washington in 1951-52, 1958-59, and 1966-67 to determine whether physical fitness had improved in the schools. "Have our youth become stronger?" His results showed "a very significant improvement" in the press, curls, squats, and pull-ups and a lesser increase in sit-ups, a change Hughes attributed to "better school and community physical education programs that are producing a stronger, more physically fit college student."[93] It was the view of Gene Primm, a physical education teacher at Bellevue School in Peoria, Illinois, that

> A well-established and well-supervised program of regular, progressive weight-training is one of the most beneficial and healthful activities in which a child may take part. The 'athletic heart' and 'musclebound' theories have gradually given way to the knowledge that weight training is not detrimental to the young person's health, and the same theory is proving true at the lower age level of grade school *if* the program is administered under the auspices of one who has an adequate knowledge of weight training and a sufficient amount of common sense.[94]

By 1970 it was evident to Charlie West that "in the last three years the coaches across the country have literally jumped on the bandwagon for weight training. There are very few holdouts in this day and age." Both coaches and parents understood the "importance of bigger and stronger athletes" and the "need to keep up with the competition."[95] Hoffman, after all, had been right for decades not only about the benefits of weight training but its applicability to other sports, even for youngsters.

There appeared to be no significant differences between Hoffman and his young cohorts throughout the sixties, most of whom were ardently spreading the gospel. Bill Starr relates that he, Tommy Suggs, Bill March, and Bob Bednarski did countless exhibitions "in every imaginable site: church basements, health fairs, Rotary Clubs, Lion's Clubs, Knights of Columbus, Kiwanis, Masonic Lodges, VFWs, lots of high schools," and the annual York Fair; and each exhibition added $25 to their weekly salaries of $100. Although Hoffman was apt to regard these outings as opportunities to "talk about himself and sell his products," according to Starr, he and Suggs started their own exhibitions where their sole aim

was "to get young athletes to lift weights."[96] Their enthusiasm for youth lifting was also reflected in their articles. To address the "regular flow of mail" from parents requesting information on how and when to begin pre-teen training, Suggs, as Grimek had done in the 1950s, used his own kids, Debbie and Bubba, to illustrate movements. Like Grimek, he believed that "some discretion is necessary in supervising their physical activity" and that one "should not push youngsters for records and all-out attempts." But he makes the important point that they are no more endangered from lifting than from other more popular activities like baseball ("little league elbow") or the rough-and-tumble sport of football. "A child is ready to start training any age after six. And after age 16 he is ready for heavier training that includes heavy single efforts."[97] How closely the ideals of Starr and Hoffman coincided on youth development is indicated in a series of articles on nutrition in 1968 and 1969. In an article on adolescent growth and nutritional requirements, Starr concluded that "proper nutrition, coupled with a sound exercise program . . . are the two keystones to a sound, healthy adult life. The foundation for this life of healthful living is laid in the formative years and most importantly when the boy or girl is passing through the teen years." Hoffman, in a subsequent article not only makes virtually the same points but uses many of Starr's words. That youthful nutritional habits lay the basis for adult health ultimately shows up in a final "As the Twig is Bent" editorial in which Hoffman reminds readers that "the future of America depends on the boys and girls of today."[98]

Notwithstanding this apparent meeting of minds over what was arguably the most important issue confronting American society, there was a growing cultural cleavage between Hoffman and his younger editors. On one level the generation gap was signified by longer hair, psychedelic sights and sounds, and a more casual lifestyle generally. Beyond that it took on political overtones, incorporating the anti-Vietnam War movement, civil rights protests, and women's liberation. But its most distinctive feature was the widespread use of drugs on all levels of society, particularly among young people. The younger generation at York was hardly immune to these influences, which included consumption of both recreational and performance enhancing drugs. The former took the form of parties—sometimes at the Suggs farm—or in town homes where lifters experimented with marijuana and hallucinogenic substances. Drugs, of course, had been a part of the training protocol at York since Dr. Ziegler's experiments in the early sixties, and even after steroids spread to all sports and parts of the country over the ensuing decade they remained a tightly-guarded secret for the record performances of Hoffman's lifters. Tensions at York were palpable. *[Editors' Note: For a more detailed discussion of the drug scene at York in the late 1960s see John Fair's Muscletown USA.]*

A crack occurred when Starr, reflecting the liberated views of his generation, printed a letter from Jeff Everson of Stoughton, Wisconsin, in the February 1971 issue of *Strength & Health* criticizing Hoffman's hypocrisy for condemning rebellious drug-taking youths while failing to mention the drug abuse at York. It was accompanied by an editorial defense of "anabolics and amphetamines" from Starr.

> Some go so far as to say that it is immoral to use anabolics. It should be considered cheating and any drug user should be banned. Yet anabolics are being used by just about everyone in the sport. I seriously doubt if there were over two lifters at this year's Senior Nationals who were not using anabolics. . . . I do believe that anabolics are safe when used properly and that they do result in a substantial strength gain. I believe that amphetamines do bring positive results to some lifters and are not harmful when used properly.[99]

After Starr was swiftly dismissed, there was a general policy of reaction and retrenchment that set into York Barbell in the early seventies. Hereafter Bob's management was controlled by traditionalists as the company went into a spiral of decline in the 1970s. Feeling betrayed by the youth in whom he had placed so much trust without ever comprehending their cultural values, Hoffman was bitter and disillusioned: "Three I'm sorry I ever met are Starr, Suggs and Lugrin."[100]

Other changes included an orientation of the magazine to family fitness, general health, softball, and a variety of other physical culture topics, with no obvious focus on youth training. The April 1972 issue marked the last appearance of Boys Club, an anachronistic concept for hip baby boomers. It would be easy to conclude that its demise was also symbolic of the failure

of Hoffman's concept of weight training for youth, but it would be more accurate to perceive it as a victim of its own success. By that time, though remnants of the supposed dangers of muscle-binding, stunted growth, athletic heart, and rupture remained among the unenlightened, the concept of weight training for pre-pubescent and adolescent youngsters was not only more widely accepted by practitioners of sport and exercise but embedded in much of the popular literature of physical culture. With its increasing general acceptance, the need to promote the concept was less urgent. As Bill Curry, noted Southern weightlifter and Merchandise Manager for Diversified Products, once observed, Bob was a "true missionary" in sports science.[101] But once his conversion of weightlifting's disbelievers was complete there was little need to continue proselytizing.[102]

Perhaps the truest test of whether children who participate in resistance training programs are safe and will increase in strength can be found in the many studies carried out within the scientific community since the 1970s. Early results were inconclusive, there being no indication of their effectiveness.[103] Scores of later studies, however, have verified Hoffman's pioneering principles. By 1993, according to William Kraemer and Steven Fleck in their widely used text, *Strength Training for Young Athletes*, there was a greater understanding among scientific and medical authorities on the subject and unrealistic fears were "starting to diminish." They concluded that children could "safely and effectively perform resistance training," although it should be done with proper supervision, correct technique, and never with maximum poundage.

> Proper program design along with knowledgeable supervision makes resistance training safe, rewarding, and fun. Improved physical function will in turn enhance physical fitness, health, injury prevention, and sport performance. ***Perhaps an even more important outcome is the child's development of an active lifestyle. Proper exercise behaviors can contribute to better health and well-being over a lifetime*** [authors' italics].[104]

While close counseling of young trainees reflect Grimek's approach with his boys, Kraemer and Fleck's latter lines echo Hoffman's "As the Twig is Bent" aphorism.

Thomas Baechle and Roger Earle, in the 2008 *Essentials of Strength Training*, have accumulated more up-to-date research evidence in support of weight training for children. They note that "clinicians, coaches, and exercise scientists now agree that resistance exercise can be a safe and effective method of conditioning for children" and "major sports medicine organizations support children's participation in resistance exercise provided that the programs are appropriately designed and competently supervised." Numerous studies demonstrated that "boys and girls can increase muscular strength" beyond normal "growth and maturation" and that "strength gains of roughly 30% to 40% have been typically observed in untrained preadolescent children following short-term . . . resistance training programs, although gains up to 74% have been reported." Contrary to the "common misperception . . . that resistance training will stunt the statural growth of children . . . it probably has a favorable influence on growth at any stage of development." Furthermore it would likely "minimize or offset the incidence and severity of sport-related injuries common to young athletes" and improve their performance. As to when to start a child on a lifting program they were in sync with the early practitioners at York.

> Although there is no minimal age requirement for participation in a youth resistance training program, children should have the emotional maturity to follow directions and should be eager to try this type of activity. . . . The goals of youth resistance training programs should not be limited to increasing muscular strength but should also include teaching children about their bodies, promoting an interest in physical activity, and having fun. ***It seems likely that children who enjoy participating in physical activities and sports are more likely to be active later in life*** [authors' italics].[105]

Although they were scientifically and independently derived, these findings were implicit in the empirically-based conclusions of Hoffman and Grimek two genera-

tions earlier.

The most definitive endorsement of youth weight training, summarizing 258 studies, appears in the 2009 position statement of the National Strength and Conditioning Association. Its seven authors, representing a variety of exercise and medical scientists and practitioners, concluded that "research increasingly indicates that resistance training can offer unique benefits for children and adolescents when appropriately prescribed and supervised" and that its acceptance "by medical, fitness, and sport organizations is becoming universal." Building on previous statements in 1985 and 1996, they affirmed under seven headings that youth resistance programs ("properly designed and supervised") were relatively safe, could enhance muscular strength, improve cardiovascular health, improve motor skill and sports performance, increase resistance to injuries, improve psychosocial well-being, and (*a la* Hoffman and Grimek) promote and develop exercise habits during childhood and adolescence.[106] But the most emphatic statement that weight training for youth was no longer an issue came from the sub-title of the first chapter of William Kraemer's 1993 book: "The Controversy Resolved."[107]

Or is it resolved? Its acceptance has given rise to new questions with no less serious consequences that are rooted in the rupture that took place at York in the early 1970s. Both Hoffman and Starr were strong believers in the merits of weight training for children and teens, and even after nearly a half century Starr remains unwavering in his commitment, having published two articles entitled "Youngsters Need Strength Too" in 2011.[108] It is doubtful, however, that he, any more than Alvin Roy, would condone or endorse administering steroids to youngsters, yet it has inadvertently become the logical endgame of youthful weight training. For Starr, and Hoffman too, it was "Catch 22." Data drawn from the Department of Health and Human Services for Alan Klein's 1993 book *Little Big Men* indicate that about 250,000 of the estimated million Americans who took steroids at that time were high school students. A multi-authored 2000 study for *The Adonis Complex* reckons that "a typical high school boy in the United States would think nothing of taking anywhere between 300 and 1,000 milligrams of steroids per week," and a competitive weightlifter "might take up to several thousand milligrams per week." And according to a 2009 CBS News report, based on figures from the Census Bureau and the Centers for Disease Control, almost 700,000 students admitted using steroids in 2005.[109] Bodybuilding promoter Cliff Sawyer believes that when track star Ben Johnson got caught at the Seoul Olympics in 1988 with steroids in his system, "it turned off a lot of parents to having their kids go to a gym and work out."[110] [*Editors' Note: Not all parents reacted in this way to the Johnson situation, and there were reports from gym owners that in the wake of his positive test they got calls from parents wanting to know how they could acquire for their sons the same sort of anabolic agents which had helped Johnson develop his heavily muscled and explosive body, especially since their sons would almost never have to face Olympic-style drug testing.]* Although proponents of weight training for children and teens can take satisfaction in debunking some of the most stubborn myths that have plagued physical culture for most of the twentieth century, their euphoria must be short-lived and accompanied by a realization that an even greater controversy has emerged, like the Hydra, over the health and well-being of youth who train with weights.

NOTES:

1. This familiar idiom is derived from Alexander Pope, "'Tis *Education* forms the Vulgar Mind, Just as the Twig is bent, The Tree's inclin'd," in *An Epistle To the Right Honourable Richard Lord Viscount Cobham* (London and Dublin: reprint by George Faulkner, 1734), 11.
2. Aristotle, *Politics*, Book VIII, Part 4, trans. H. Rackham (Cambridge, MA: Harvard University Press, 1959), 648-49.
3. William Shakespeare, *Troilus and Cressida*, Act I, Scene 2, Anthony B. Dawson, ed. (Cambridge: Cambridge University Press, 2000), 87.
4. "Health & Strength League," *Health & Strength* 26 (February 21, 1920): 128; and Laurie Webb, "League Notes," *Health & Strength* 75 (December 1946): 526.
5. "American Strength & Health League," *Strength & Health* 1 (December 1932): 13.
6. "American Strength & Health League," *Strength & Health* 1 (January 1933): 20; "American Strength & Health League," *Strength & Health* 1 (February 1933): 20; and "American Strength & Health League," *Strength & Health* 1 (May 1933): 24.
7. Sales Records, *Strength & Health*, Hoffman Papers, John Fair Collection.
8. Bob Hoffman, *How to be Strong, Healthy and Happy* (York, PA: Strength and Health Publishing Co., 1938), 7, 227, 303, 372.
9. "Letters from Readers," *Strength & Health* 15 (April 1946): 5. A decade later Hoffman's problem with the *Strength & Health* League was used against him by his commercial rivals, Joe and Ben Weider. "This column was the meeting place of more homosexuals than Kraft-Ebing or Kinsey ever dreamed of! Ostensibly a 'pen pals' club, it became notorious with the passing years and was finally discon-

tinued by 'request,' rumor hath it, of higher authorities." It was, the Weiders alleged "the first time in history the faggots have ever been organized." Joe and Ben Weider, "People Who Live in Glass Houses," *Muscle Builder* 9 (December 1957): 56. See also: David K. Johnson, "Physique Pioneers: The Politics of 1960s Gay Consumer Cultue," *Journal of Social History* 43, no. 4 (Summer 2010): 867-892.

10. Money Order Books, 1942-1950, Hoffman Papers.

11. "Especially for S & H Boys," *Strength & Health* 13 (October 1945): 16-17.

12. "Especially for S & H Boys," *Strength & Health* 13 (November 1945): 16-17; "Especially for S & H Boys," *Strength & Health* 14 (December 1945): 17; "Especially for S & H Boys," *Strength & Health* 14 (February 1946): 16-17; "Especially for S & H Boys," *Strength & Health* 14 (March 1946): 16; "Especially for S & H Boys," *Strength & Health* 14 (April 1946): 19; Bob Hoffman, "The Best Time to Start," *Strength & Health* 14 (June 1946): 22; and "Especially for S & H Boys," *Strength & Health* 15 (December 1946): 23. The first female featured was "barbelle" Mary Jean Allman of Battle Creek, Michigan, who celebrated her twelfth birthday by cleaning and jerking 75 pounds and deadlifting 180 pounds. "Letters from Readers," *Strength & Health* 17 (January 1949): 7.

13. Steve Stanko, "Self Improvement Contest Winners," *Strength & Health* 16 (December 1947): 18.

14. "Especially for S & H Boys," *Strength & Health* 14 (April 1946): 18-19.

15. "Especially for S & H Boys," *Strength & Health* 18 (April 1950): 15, 33.

16. John Grimek, "The Man on the Cover," *Strength & Health* 17 (April 1949); Steve Stanko, "Self Improvement Heroes," *Strength & Health* 9 (August, 1949): 22; "Especially for S & H Boys," *Strength & Health* 14 (August 1946): 23; and George Eiferman, "The Man on the Cover," *Strength & Health* 16 (June/July 1948): 8.

17. Hoffman, "The Best Time to Start," 23.

18. "Especially for S & H Boys," *Strength & Health* 18 (April 1950): 15.

19. "*Life* Tours the Children's TV Shows," *Life* 31 (December 24, 1951): 73; Jim Murray letter to John Fair, July 5, 2011, letter in possession of John Fair; and "Weight Lifting News," *Strength & Health* 21 (December 1952): 7.

20. Jim Murray, "Paul Oudinot Jr.—Ten-Year-Old Strength Prodigy," *Strength & Health* 20 (April 1952): 10-11.

21. Murray letter to Fair; and Steve Stanko, "Self Improvement Success," *Strength & Health* 19 (September 1951): 17.

22. Jim Murray, "Paul Waldman, Youthful Body Building Sensation," *Strength & Health* 21 (April 1953): 30-31; and "Weight Lifting News," *Strength & Health* 21 (August 1953): 7.

23. Paul Waldman, "My Training Experiences," *Strength & Health* 20 (January 1952): 32-33. See also Jim Murray, "Coverman Paul Waldman," *Strength & Health* 22 (August 1954): 9, 39; and Paul Waldman, "John Terlazzo Trains the Businessman," *Strength & Health* 21 (August 1953): 12.

24. Jim Murray, "Coverman—Glenn Bishop," *Strength & Health* 23 (February 1955): 31.

25. Bob Hoffman, "Building Young Supermen," *Strength & Health* 19 (February 1951): 9, 47; and "Especially for Strength & Health Boys," *Strength & Health* 21 (December 1952): 28.

26. John Grimek, "How Young Should You Start 'Em?" *Strength & Health* 21 (February 1953): 12-13; and John Fair interview with Pat Grimek Stover, July 28, 2011, York, Pennsylvania. Hy Schaffer, who coached strength prodigy Isaac Berger at his Adonis Health Club in Brooklyn, effectively responded to Grimek's query a year later in an article entitled "Start 'Em Young," *Strength & Health* 22 (March 1954): 16, 44.

27. John Terpak letter to Pudgy Stockton, October 20, 1952, Les and Pudgy Stockton Papers, H.J. Lutcher Stark Center for Physical Culture & Sports, University of Texas, Box 6, folder 141, 1951-52. See also Jim Murray, "Barbell Bits," *Strength & Health* 21 (December 1952): 14.

28. Jim Murray, "Barbell Bits," *Strength & Health* 20 (July 1952): 16; Ray Van Cleef, "Strongmen the World Over," *Strength & Health* 21 (September 1953): 23; Jim Murray, "Muscle Miscellanea," *Strength & Health* 21 (June 1953): 15; Steve Stanko, "Success Stories," *Strength & Health* 22 (August 1954): 20; and Donne Hale, "The Story of a Boy," *Strength & Health* 24 (January 1956): 34, 62-63.

29. Jim Murray and Peter V. Karpovich, *Weight Training in Athletics* (Englewood Cliffs, NJ: Prentice-Hall, 1956).

30. Bob Hoffman, "York High Wins First Football Championship," *Strength & Health* 22 (March 1954): 12-13, 44. See also Bob Hoffman, *Better Athletes Through Weight Training* (York, PA: Strength and Health Publishing Co., 1959): 225-28.

31. Murray and Karpovich, *Weight Training*, 115.

32. Matt Schudel, "Hall of Fame Lineman with the Chicago Bears; All-American at U-Md," *Washington Post*, July 26, 2010, B7.

33. C. H. McCloy, "Weight Training for Athletes?" *Strength & Health* 23 (July 1955): 8.

34. Terry Todd, "Al Roy: Mythbreaker," *Iron Game History* 2 (January 1992): 13-14; and John Fair interview with Ray Roy, January 18, 2012, Baton Rouge, Louisiana. That Roy was responsible for much of his lifters' success in Paris is the view of Hoffman in "Details of the World's Championships," *Strength & Health* 15 (January 1947): 10-11. For additional details on Roy's personal life, see Lee Feinswog, "Powerful Impact," *Our City* 225 (February 2009): 47-50.

35. Terry Todd interview with Ellis Brown, December 23, 1984, Shreveport, Louisiana, cited in Todd, "Al Roy," 14.

36. Bill Williams, "Barbells Build Winning Football Team," *Baton Rouge State-Times* in *Strength & Health* 24 (May 1956): 8-9, 39-42. See also Hoffman, *Better Athletes*, 217-224; Bob Hoffman, "Football and Alvin Roy," *Strength & Health* 38 (June 1970): 59, 70-71; and Bob Hoffman, "Weight Training and Football II," *Strength & Health* 38 (July 1970): 46-47, 79-80.

37. Joe Kolb, "The Fort Lauderdale Story," *Fort Lauderdale Daily News* in *Strength & Health* 24 (May 1956): 10, 42, 44.

38. Bob Hoffman, "As the Twig is Bent," *Strength & Health* 24 (May 1956): 3-4, 39.

39. The set included an aluminum bar with two 2½ and six 1¼ pound weights, a pair of two-pound dumbbells, a training course for boys, a Little Samson training shirt, and a membership card in the Strength & Health Boys Club. "York Barbell for Small Fry," *Strength & Health* 24 (May 1956): 63.

40. George R. Bruce, "Let's Start a Boys' Club," *Strength & Health* 19 (February 1951): 20.

41. "Strength and Health Boys Club," *Strength & Health* 24 (March 1956): 34-35.

42. "Strength and Health Boys Club," *Strength & Health* 24 (February 1956): 34.

43. Harry Paschall, "Rod Allen," *Strength & Health* 24 (July 1956): 12-13.

44. See "Strength and Health Boys Club," *Strength & Health* 24 (June

1956): 35; "Strength and Health Boys Club", *Strength & Health* 24 (October 1956): 36; "Strength and Health Boys Club," *Strength & Health* 25 (January 1957): 36-37; "Strength and Health Boys Club," *Strength & Health* 25 (February 1957): 36; and "Strength and Health Boys Club," *Strength & Health* 26 (March 1958): 41.

45. John Grimek and Bob Hoffman, "Boys . . . Meet Little Samson in which the Younger Grimeks become Little Samson Addicts," *Strength & Health* 24 (June 1956): 28; and "York Barbell for Small Fry," *Strength & Health* 24 (June 1956): 63.

46. "Fun in Your Backyard," *Strength & Health* 26 (February 1958): 33. Bobby, "Li'l Samson," is also depicted beside a pool in the "Boys Club" section as liking "most of the games and sports youngsters of his age play, but is especially fond of diving and swimming and does very well for his age." "Strength and Health Boys Club," *Strength & Health* 26 (February 1958): 40.

47. "Strength and Health Boys Club," *Strength & Health* 25 (December 1956): 37; "Strength and Health Boys Club," *Strength & Health* 25 (November 1957): 40; and "Strength and Health Boys Club," *Strength & Health* 26 (February 1958): 40.

48. Hoffman/Ketterman Family photographs, Hoffman Papers.

49. Money Order Books and Book Sales Records, 1953-58, Hoffman Papers.

50. See Peary Rader, "Editorial," *Lifting News* 2 (December 1955): 6; "Readers' Round-Up," *Iron Man* 15 (March 1956): 43 and 51; Peary Rader, "National Teen Age Lifting Tournament," *Lifting News* 2 (April 1956): 1; and Peary Rader, "New National Records Set at Teen-Age Nationals," *Lifting News* 4 (July 1957): 2.

51. "Now It's Your Turn to Choose the Winner," *Tomorrow's Man* 3 (September 1955): 17. *Muscular Development*, the sister magazine to *Strength & Health* that was launched in 1964, covered mainly bodybuilding and powerlifting and was virtually mum on the subject of youth training.

52. Roger Rizzo, "I Gained 41 Pounds of He Man Muscle following The Weider System," *Muscle Power* 19 (June 1956): 9.

53. Joe Weider, "I Want to Make You an All-American He-Man," *Junior Mr. America* 1 (December 1955): 3.

54. "Strength and Health Boys Club," *Strength & Health* 26 (December 1957): 41.

55. Terry Todd interview with Paul Dietzel, May 1987, Baton Rouge, Louisiana, cited in Todd, "Alvin Roy," 15.

56. Ken Leistner and Sandy McLeod, "Alvin Roy—Fitness for Football," *Strength & Health* 37 (November 1969): 51; and Alvin Roy, *Weight Training for Football* (York, PA: York Barbell Company, 1959): 11, cited in Todd, "Al Roy," 15.

57. John Fair interview with Ray Roy.

58. Ace Higgins, "Billy Cannon," *Strength & Health* 27 (November 1959): 34-35.

59. Ibid.; Mike Nettles, "Billy Cannon, LSU's All-American," *Sports Illustrated* 9 (October 17 1958): cited in Todd, "Al Roy," 15; and Terry Todd interview with Billy Cannon, December 1985, Shreveport, Louisiana, cited in Todd, "Al Roy," 15.

60. Bob Hoffman, Martin Broussard, Alvin Roy, and Francis Drury, *Functional Isometric Contraction, Advanced Course* (York, PA: The Bob Hoffman Foundation, 1962), 14.

61. In a resume, circa 1963, Alvin Roy notes that he had been conducting a public service program "without pay, on WBRZ-TV for three years in conjunction with President Kennedy's Proclamation on Physical Fitness for Youth." The show was titled, *Alvin Roy's Family Physical Fitness Program*. By this time he also claims to have "coached, trained and help develop 200 boys, ages 8-14, daily for the past 17 years. J. Alvin Roy, Physical Education Instructor, Baton Rouge, Louisiana," Scrapbook, Alvin Roy Papers in possession of Alvin Roy, Jr., Baton Rouge, Louisiana.

62. Interview with Ray Roy. "The interesting thing," says Boyer Coe, "is Ray [Roy] sends me just a tear of loose leaf paper and says, 'Boyer, the Mr. Louisiana contest is next weekend, if you want to enter.' I didn't even have an entry blank, and I just wrote out something and sent it in, and I guess they accepted it. I didn't have a pair of posing trunks. I just used a swimsuit. I kind of rolled it up, but anyway I was good enough to come out third, and I won several body parts. I was tickled to death. And I remember John Gourgott and Dr. Craig Whitehead were judges. And I was in the restroom taking a pee, and Dr. Whitehead came up and said, 'you know, you're pretty good for a kid.'" John Fair interview with Boyer Coe, June 3, 2011, Huntington Beach, California.

63. Interview with Ray Roy. The Roys also had a role in the successful basketball career of Baton Rouge native Bob Pettit, though not until he became a professional with the Milwaukee Hawks in 1954. "Here he is 6' 9", and when he came back home he weighed about 210 pounds, and he'd been beaten up so bad, he said, 'Man, they're beating the hell out of me.' He came to us and talked to Alvin, wondering if the weights would help him. And so, we started working with him." In 1958 Pettit, a regular trainer with weights, led the Hawks (then at St. Louis) to an NBA championship.

64. "Strength and Health Boys Club," *Strength & Health* 24 (August 1956): 36.

65. "Strength and Health Boys Club," *Strength & Health* 26 (May 1958): 40-41.

66. "The Iron Grapevine," *Strength & Health* 27 (November 1959): 26; and George Cohen, "Gary Gubner, Teen-Age Super Athlete," *Strength & Health* 31 (June 1962): 35, 52-53.

67. Bob Hoffman, "It Was a Sad Day," *Strength & Health* 26 (February 1958): 10.

68. "The Iron Grapevine," *Strength & Health* 26 (March 1958): 25.

69. John C. Grimek, "They're Never Too Young," *Strength & Health* 27 (January 1959): 36-37, 51-53.

70. "The Iron Grapevine," *Strength & Health* 29 (April 1961): 63; "Strength and Health Boys Club," *Strength & Health* 28 (October 1960): 40; and "The Iron Grapevine," *Strength & Health* 28 (November 1960): 27.

71. "Strength and Health Boys Club," *Strength & Health* 27 (January 1959): 40.

72. Bob Hoffman, "The Most Important Article I Ever Wrote," *Strength & Health* 29 (November 1961): 30-33.

73. See Hoffman, et. al., *Functional Isometric Contraction*, 5-8, 11. The Detroit Lions were one of the first professional teams to use isometrics. See Jim Lycett, "Lions Tap New Well of Strength," *The Detroit News Pictorial Magazine*, July 22, 1962. Bob Pettit, whose scoring average was 31 points during the first portion of the 1961-62 season, was so convinced of its efficacy that he had substituted isometrics for his weightlifting regimen. Pat Harmon, "Pettit Drops the Weights," *Cincinnati Enquirer*, December 1961, newspaper clipping in possession of John Fair.

74. Norm Olson letter to Bob Hoffman, July 16, 1962; and Jim Goosetree letter to Bob Hoffman, January 29, 1962, Hoffman Papers.

75. Bill Blodgett, "Isometric Contraction Builds Champions," *The Tampa Times*, September 1, 1962; and Vince Reedy, "Easy as ABC, and Economical," *The Victoria Advocate*, May 20, 1962.

76. "Power Rack Sales to High Schools and Colleges-1962," Hoffman Papers. Joe Weider, on the other hand, refused to join "the isometric craze" and to jump "on the gravy train to sell 'isometric torture

racks,'" claiming that he had already discovered isometrics and incorporated it in his principles "which have been used by bodybuilders the world over for years." Joe Weider, "The Isometric Bodybuilding Racket," *Muscle Builder* 12 (July 1962): 14-15.

77. John Fair interview with Louis Riecke, April 29, 1989, Harahan, Louisiana. For the story of Ziegler's experiments with Riecke and York lifter Bill March see John D. Fair, *Muscletown USA, Bob Hoffman and the Manly Culture of York Barbell* (University Park, PA: Pennsylvania State University Press, 1999): 199-200.

78. Interview with Ray Roy; and Hoffman et. al., *Functional Isometric Contraction*, 32.

79. Interview with Coe.

80. Vera Christensen, "Exercise and the Small Child," *Strength & Health* 29 (March 1961): 38. See also Christensen's "Exercise for the Young Teenager," *Strength & Health* 38 (May 1970): 32; and "Teenage Training," *Strength & Health* 41 (January 1973): 60.

81. Vic Westphall, "Summer High School Weight Program for Athletics," *Strength & Health* 29 (January 1961): 41; "Strength and Health Boys Club," *Strength & Health* 30 (July 1962): 41; "Strength and Health Boys Club," *Strength & Health* 30 (September 1962): 41; Paul Uram, "A New Outlook on School Fitness," *Strength & Health* 30 (October 1962): 40; Ray Van Cleef, "Making Huskies Out of Softies," *Strength & Health* 30 (November 1962): 40; and "Strength and Health Boys Club," *Strength & Health* 31 (May 1963): 41.

82. James P. Tuppeny, "Weight Training for Track and Field Men at Villanova," *Strength & Health* 27 (March 1959): 28; and George W. Ritchey, "L.S.U., Weight Training at Louisiana State University has many facets," *Strength & Health* 28 (July 1960): 36.

83. "Strength and Health Boys Club," *Strength & Health* 29 (September 1961): 40.

84. "Strength and Health Boys Club," *Strength & Health* 30 (August 1962): 41; "Strength and Health Boys Club," *Strength & Health* 31 (November 1963): 26; "Strength and Health Boys Club," *Strength & Health* 30 (April 1962): 41; and "Strength and Health Boys Club," *Strength & Health* 28 (June 1960): 41.

85. "Strength and Health Boys Club," *Strength & Health* 30 (May 1962): 40-41.

86. "Self-Improvement Contest," *Strength & Health* 31 (June 1963): 16-17, 60-62; "1963 Boys' Self-Improvement Contest Winners," *Strength & Health* 31 (October 1963): 38-39. See also Bill Reynolds, "Military Weight Training Facilities," *Muscular Development* 5 (May 1968): 19, 45.

87. Tommy Suggs, "Isometrics," *Strength & Health* 35 (September 1967): 28.

88. Bill Starr, "S&H Survey Results," *Strength & Health* 35 (May 1967): 34-35.

89. "The Iron Grapevine," *Strength & Health* 31 (January 1963): 65. Pat Grimek Stover recalls that her brother Steve continued training in later life and "did enter a contest." As to whether the son of her sister Bonnie, Timothy Day, who "still lifts weights," ever entered a contest she is not so sure, but iron game author David Gentle remembers an enquiry from him. "Isn't it weird. I'm getting Grimek's grandson asking me for info on John—strange family." Interview with Stover; and David Gentle letter to John Fair, November 2, 2006, letter in Fair's possession.

90. Bob Hoffman, "The Younger Generation," *Strength & Health* 32 (November 1964): 5. See also, Fair, *Muscletown USA*, 227.

91. Bob Hoffman, "America's Wonderful Teen-Age Lifters," *Strength & Health* 34 (November 1966): 5, 8.

92. Samuel Homola, "Keeping the Family Fit with Weights," *Strength & Health* 36 (September 1968): 48.

93. Eric Hughes, "Research and the Weight Man," *Strength & Health* 36 (May 1968): 45, 68-69.

94. Gene Primm, "The Establishment of a Weight Training Program in the Grade School," *Strength & Health* 35 (February 1967): 48-49. LeRoy Barney, Associate Professor of Education at Northern Illinois University, also addresses cherished myths held by parents about the dangers of weight training in "But I Don't Want My Child to Lift Weights," *Strength & Health* 37 (October 1969): 22, 69.

95. Charles West, "A Beginning Weight Training Program for Teen-Agers," *Strength & Health* 38 (June 1970): 18-19.

96. Bill Starr, "The York Barbell Series—Exhibitions," *Starting Strength*, January 26, 2012, viewed at http://startingstrength.com/index.php/site/article/the_york_barbell_series_exhibitions.

97. Tommy Suggs, "Facts about Weight Training for Youngsters," *Strength & Health* 37 (June 1969): 32-33.

98. See Bill Starr, "Planned Nutrition for the Teen-Ager," *Strength & Health* 36 (June 1968): 30, 75-76; Bob Hoffman, "Protein Needs for Adolescents and Young Adults," *Strength & Health* 36 (December 1968): 40, 77-78; and Bob Hoffman, "As the Twig is Bent," *Strength & Health* 37 (May 1969): 5-8.

99. "Letters from Readers," *Strength & Health* 39 (February 1971): 8-9; and Bill Starr, "Anabolics and Amphetamines," *Strength & Health* 39 (February 1971): 54-55, 68-69.

100. "A Sour Note," n.d., Hoffman Papers.

101. John Fair interview with Bill Curry, circa 1989, Opelika, Alabama.

102. An ongoing measure of the degree of acceptance of weight training for youth is indicated in an article by Scott Safe, "Making the Case for a National High School Weightlifting Program" in USA Weightlifting's E-Magazine, *The Lifter* (March 2012): 2-3, viewed at http://www.teamusa.org/USA-Weightlifting/Resources/E-Magazine.aspx.

103. See M. R. Hetherington, "Effect of Isometric Training on the Elbow Flexion Force Torque of Grade Fve Boys," *Research Quarterly* 47 (1976): 41-47; and J. Vrijens, "Muscle Strength Development in the Pre- and Post-pubescent Age," *Medicine and Sport* 11 (1978): 152-58.

104. William J. Kraemer, *Strength Training for Young Athletes* (Champaign, IL: Human Kinetics, 1993), 1, 4.

105. Thomas R. Baechle and Roger W. Earle, *Essentials of Strength Training and Conditioning* (Champaign, IL: Human Kinetics, 2008), 145-46, 148-49.

106. Avery D. Faigenbaum et al., "Youth Resistance Training: Updated Position Statement Paper From the National Strength and Conditioning Association," *Journal of Strength and Conditioning Research* 23 (2009): S60-61.

107. Kraemer, *Strength Training*, 1.

108. Bill Starr, "Youngsters Need Strength Too," and "Youngsters Need Strength Too, Part II," *Starting Strength* (2011) viewed at: http://StartingStrength.com.

109. Harrison G. Pope, Jr., Katharine A. Phillips, and Roberto Olivardia, *The Adonis Complex, The Secret Crisis of Male Body Obsession* (New York: Free Press, 2000), 107; Alan Klein, *Little Big Men, Bodybuilding Subculture and Gender Construction* (Albany, NY: State University of New York Press, 1993),149; and John Blackstone, "High School Athletes Turning to Steroids," *CBS News with Scott Pelley*, February 11, 2009, at http://www.cbsnews.com/2100-18563_162-3617414.html.

110. John Fair interview with Cliff Sawyer, March 22, 2008, Worcester, Massachusetts.

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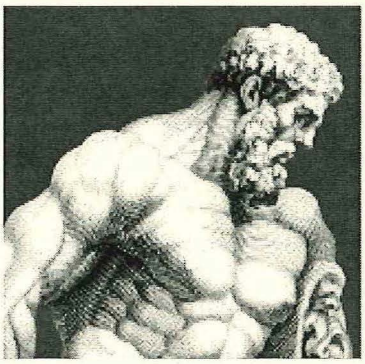

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