



IRON GAME HISTORY



THE JOURNAL OF PHYSICAL CULTURE

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Weiders Formalize Second Million Dollar Gift: Also Pledge Rare Artifacts to Museum

Three years ago, we announced that Joe and Betty Weider had established a million dollar endowment at the University of Texas in support of our physical culture collection. Shortly thereafter, Joe told us that if we could convince the University to provide the space to build a permanent home for our collection he would give us additional funds as well as many of his rare paintings and sculptures so they could be displayed and shared with the world. Accordingly, when we convinced a prominent Texas foundation to provide 3.5 million dollars to UT in 2006, the University established the H.J. Lutchter Stark Center for Physical Culture and Sports. At that point we began to discuss with Joe how his additional gifts would allow us to create a museum devoted entirely to the many aspects of physical culture.

These discussions resulted in a formal pledge from the Joe Weider Foundation and Weider Enterprises of an additional million dollars as well as at least 25 rare artifacts and a number of books and photographs. We also received the first \$400,000 of that pledge, which will be completed by July of 2010. To say we are grateful for these gifts is an understatement. For one thing, the additional funds will help with a great many things which will benefit our work, such as staffing, museum displays, theater construction, photo galleries, and interactive museum sites. The artifacts and related items,

however, are gifts from the heart. For Joe and Betty to share these unique paintings and sculptures speaks more eloquently than money can of Joe's personal commitment to the Iron Game and of his and Betty's understanding that in order to plan wisely for the future fitness of our nation we need to contemplate the past.

These artifacts have been personally selected and acquired by Joe and Betty over many years and displayed in the Weider Building in Woodland Hills, which Betty designed and which Joe has used for decades as the Command Center of his publishing and business empires. We lack the words to adequately thank them for what they have done. The artifacts include such treasures as the originals of the bronze sculptures Joe commissioned of Eugen Sandow, Louis Cyr, and Arthur Saxon; the painting of Joe by Boris Vallejo; a Renaissance-era bronze sculpture of two wrestlers; a large bronze of a circus strongman; a bronze bust of a mature Eugen Sandow; a life-size bronze by Robert Berks of Vic Tanny's upper body; the seven larger-than-life-size paintings by Tom Beecham of the early Mr. Olympias; and the imposing, 1889 oil painting by Aubrey Hunt of Eugen Sandow as a gladiator.

What the University of Texas will do, in response to the generosity of the Weiders, is to put their names on what will become known around the world as



In January of 2008, University of Texas President William A. Powers visited with Joe and Betty Weider in their Woodland Hills offices to tour their building and to thank them for their support of the Todd-McLean Collection and for their stated intention of providing additional support.

The Joe and Betty Weider Museum of Physical Culture.

The Weider Museum will contain a number of individual areas devoted to such subjects as Muscle Beach; Historic Gyms, featuring a recreation of the Professor Attila-Sig Klein studios; the Myth of Musclebinding and the Rise of Strength Coaching; Anti-Aging; Fitness on TV; a gallery in which to showcase revolving photographic exhibits from the collections of Peary Rader, Joe Weider, Ottley Coulter, and other photo archives; a theater; a professional strongman tent; Muscles in the Movies; Physical Culture Art; The Dream of Transformation, featuring "Before and After" photos; and a Gallery of

Greats.

As I have written in the past, Jan and I could never have assembled the collection that forms the basis of the Stark Center for Physical Culture and Sports or raised the funds to build the Center without the help of people like Joe and Betty Weider. We have done what we can do, personally, and we will continue to do so for as long as we're able to contribute to the support and the work of the Center. But we're just two people, and our dreams are larger than our pocketbooks. However, with friends like Joe and Betty Weider these dreams will soon come true.

—Terry Todd

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Size Matters: Reflections on Muscle, Drugs, and Sport

Jan Todd

The University of Texas at Austin

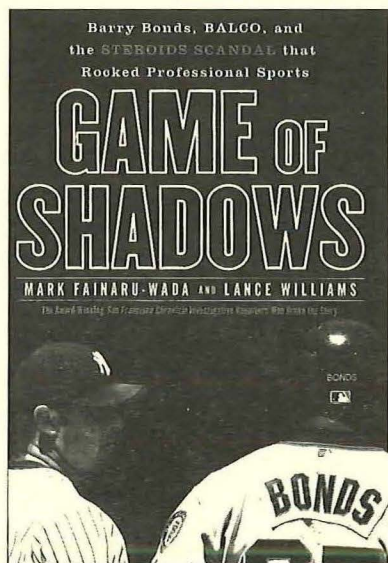
Editor's Note: Each year at the annual meeting of The North American Society for Sport History (NASSH) a member is asked to deliver a special honor address—NASSH's equivalent of the keynote speech given at other conferences. For the 2008 conference, Jan Todd was asked to deliver the Seward Staley Honor Lecture, and the article which follows is the text of her speech. When she delivered this lecture to several hundred international scholars in Lake Placid, New York, on 24 May 2008, Jan illustrated the talk with a PowerPoint presentation containing 87 slides. Space doesn't permit us to use all of the images she showed the audience, but we are including more pictures than normal since the argument she is making is based on visual evidence and interpretation. Although this lecture was prepared for presentation to NASSH, we hope IGH subscribers will be interested in her discussion of the connection between baseball star Barry Bonds and a misunderstanding of bodybuilding history.

In the closing pages of *Game of Shadows*, the 2006 book on Barry Bonds and the BALCO scandal, the book's authors, Mark Fainaru-Wada and Lance Williams, include an appendix containing additional evidence they believe proves Barry Bonds was an anabolic drug user. "The belief that changes in Bonds' body

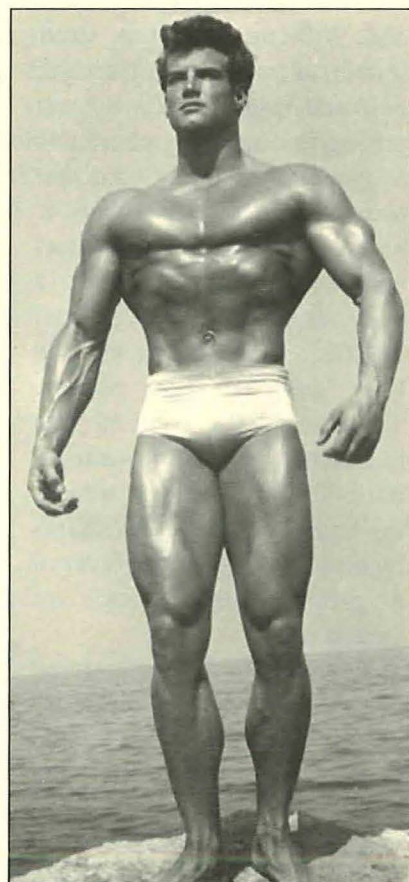
reflect steroid use," they write, "is supported by the research of Harvard University psychiatrist Harrison Pope, an expert on the mental-health effects of steroid abuse." Pope and his colleagues, they explain, published an article in *The Clinical Journal of Sports Medicine* in 1995 that contained "a mathematical formula for use in determining whether a person used steroids." The formula, called the Fat Free Mass Index (FFMI), "predicts steroid use

from a series of computations involving the subject's lean muscle mass, which is determined from height, weight and percentage of body fat."¹ Fainaru-Wada and Williams go on to explain that according to Pope's article, the higher the Fat Free Mass Index, the more likely that person is to be using anabolic drugs. An average, non-obese college student would score about 20 on the FFMI, they explain.

Steve Reeves' body, as it looked in 1947 the year he won the Mr. America Contest, should be considered as an example of the upper limit of muscularity possible without using steroids, according to Dr. Harrison Pope and his colleagues.



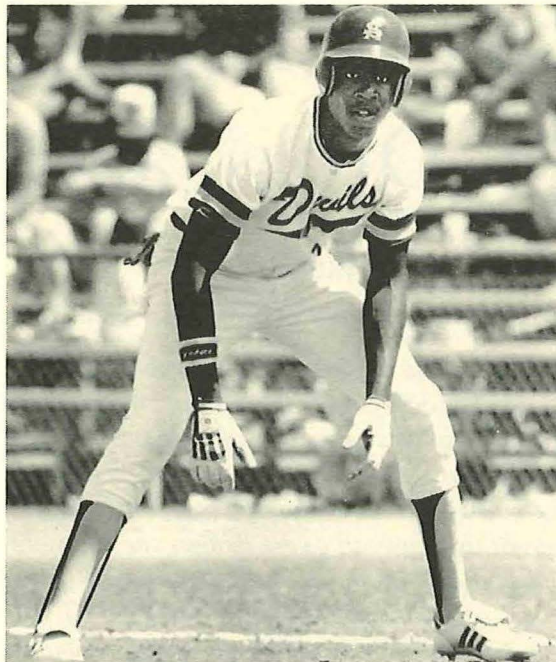
Game of Shadows was written by San Francisco Chronicle reporters Mark Fainaru-Wada and Lance Williams after several years of investigative reporting.



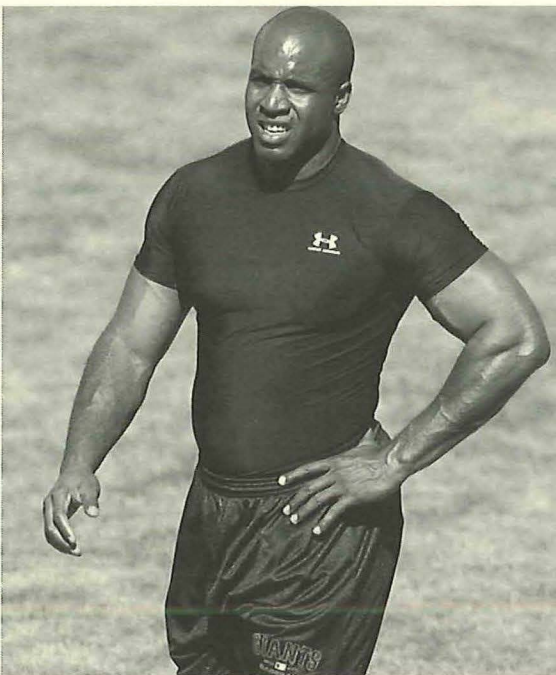
The former Mr. America Steve Reeves, cited in the article by Pope and his colleagues as the “most famous muscle man of the pre-steroid era,” and, to quote Pope directly, “as an example of the upper limit of muscularity that we believe can be attained without drugs”—was a 25.7 according to Pope.² So confident is Pope of his formula that he wrote in 2000, “*Any male scoring 26 or higher who is not visibly somewhat fat, and claims that he has achieved this physical condition without the use of drugs . . . is almost certainly lying.*” [Italics in original]³

When Fainaru-Wada and Williams read this strong statement from one of Harvard’s best and brightest, it’s not surprising that they felt comfortable using Pope’s formula to shore up their contention that Barry Bonds was a drug user. After all, Greg Anderson, Bonds’ personal trainer had self-servingly boasted that he’d helped Bonds achieve a body fat reading of 6.2 percent in 2002, when the home run king weighed 228 pounds. These numbers, factored into the formula, gave Bonds a reading of 28 on the FFMI, a reading Fainaru-Wada and Williams argue is “well-over the level of a ‘presumptive diagnosis’ of steroid use.”⁴

When I encountered these claims in *Game of Shadows*, I was at first surprised and then increasingly concerned about what I was reading. It wasn’t that I believed Barry Bonds to be innocent of steroid use. On the contrary, the weight of evidence suggests that Bonds probably did use anabolic agents—knowingly or



As a minor league player in the early days of his career, Barry Bonds weighed about 185 pounds at a height of 6’2”.



In 2002, Bonds weighed 228 pounds and, as can be seen in this photo, had added considerable muscle to all parts of his physique.

unknowingly—in the latter part of his career.⁵ What upset me was the blind faith that Fainaru-Wada and Williams and a large number of journalists and other individuals are placing in Pope’s formula and the data and assumptions on which the formula itself is based.⁶

It’s normal, of course, to embrace new tools that appear to make life simpler. Wouldn’t it be nice, as Pope and his colleagues suggest, if the formula could actually be used to screen for steroid abuse, especially in the athletic and forensic situations in which individuals so often attempt to deny such behavior?⁷ Pope’s formula sounds like it could be a cheap, relatively non-invasive way to test, doesn’t it? Coaches could simply order body composition tests for their athletes and they’d know almost immediately if they had any potential drug users on the team. Just weigh and measure the kids, plug their scores into the automatic calculator now readily available at: www.bodybuilding.com, and you’d know who your drug users are.⁸

While this may sound promising to some, it seems wrong-headed and potentially dangerous to me. And, when I began looking into the FFMI and how Pope had derived the formula, I was struck by the role that history—or should I say “bad history”—had played in its creation. Pope’s lack of understanding of the history of physical culture and sport training has caused him to base the FFMI on historical assumptions that are simply incorrect. I will show today why Pope’s assertion that Steve Reeves’ body

The Fat Free Mass Index for Males (FFMI)

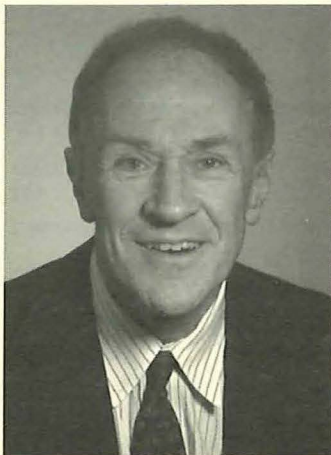
$$\text{FFMI} = \text{LBM} + \frac{6.1 \times (1.8 - H)}{H^2}$$

LBM = Lean Body Mass in Kilos
H = Height in Meters

represents the pinnacle of non-drug-using muscular development is wrong, and I will further show why Pope's predictions about the kind and amount of muscle one can build without steroids are based on an incorrect understanding of the history of resistance training.

I raise these issues because—as the existence of the Fat Free Mass Index becomes more widely known through the publicity surrounding *Game of Shadows*, and the soaring sales of Pope's popular book called *The Adonis Complex*—I fear we will begin to see the “false naming” of individuals as steroid users who have never

touched an anabolic drug.⁹ In the wrong hands—in the wrong circumstances—what the *New York Times* has dubbed “The Buff Equation” could be used as a new form of profiling that will tarnish the reputations of some athletes and recreational weight trainers who are legitimately drug-free.¹⁰



Psychiatrist Harrison Pope, lead author of *The Adonis Complex*, teaches at Harvard University Medical School, and specializes in research on men's perceptions of their body image and appearance.

My other fear is that the existence of such a formula may fuel the desire of some young men and women to *begin* using steroids. Why should anyone pay attention to the old coaching homily about seeing how far you can

take your body without drugs, when Pope and his colleagues write, “on the basis of our research, we believe that it is impossible to be extremely muscular and lean without chemical assistance.”¹¹ Such a bald statement in a book that's been reviewed and discussed in nearly every major newspaper in America—and that's mentioned on thousands of websites—can't help but suggest

to some that steroids may be their only path to the body they desire.¹² Just remember how Androstendione sales skyrocketed after Mark McGwire admitted he was using it back in 1998. People didn't turn away.¹³

Please don't misunderstand my intent here. I'm not suggesting that there are no limits to the amount of muscle an individual can build without steroids. I'm not trying to argue that professional bodybuilding is a clean sport, or that thousands of athletes in a variety of sports aren't using drugs—and aren't bigger and stronger because of those drugs. My concern is with Pope's suggestion that we should be profiling people as potential drug users because of an arbitrary number he mistaken-

The ADONIS COMPLEX

How to Identify, Treat, and Prevent Body Obsession in Men and Boys

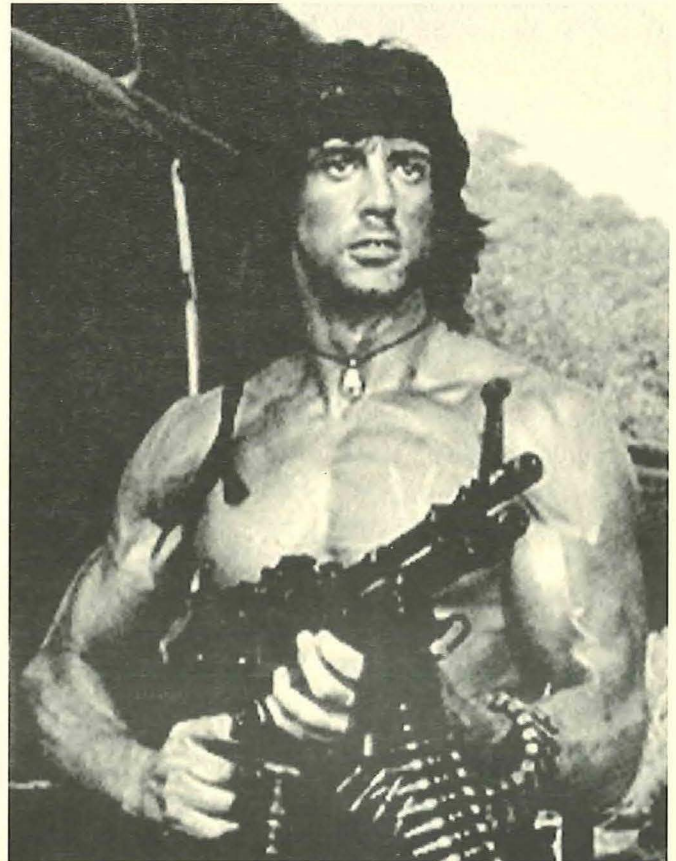
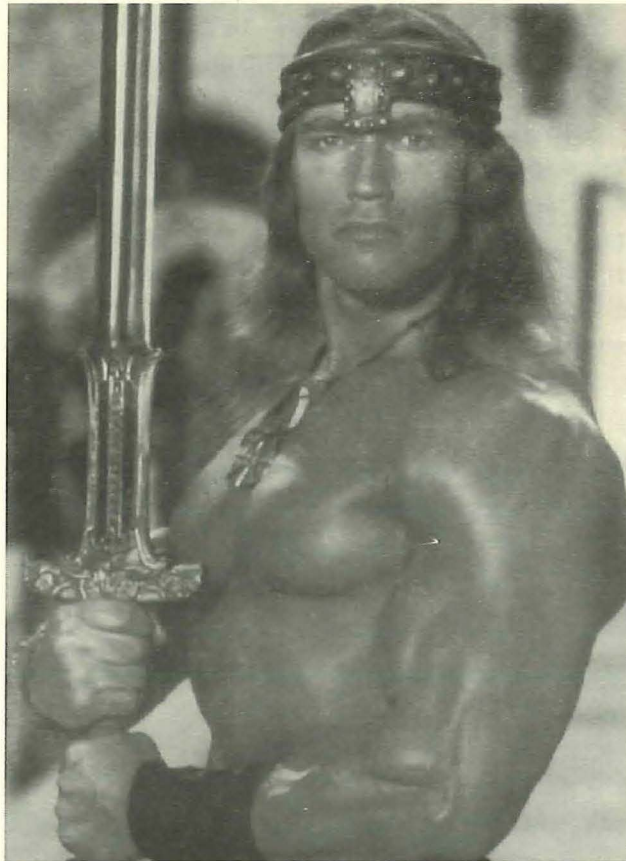
“Ten years after *THE BEAUTY MYTH* we finally understand the relationship between society's expectation of boys and men and how they think about their bodies.”

—WILLIAM POLLACK, PH.D.,

author of *REAL BOYS: RESCUING OUR SONS FROM THE MYTHS OF BOYHOOD*

HARRISON G. POPE, Jr., M.D.,
KATHARINE A. PHILLIPS, M.D.,
ROBERTO OLIVARDIA, Ph.D.

Published in 2000, *The Adonis Complex* argues that a growing number of men suffer from “body dysmorphic disorder,” a psychiatric condition that causes them to be so dissatisfied with their physical appearance that they begin having mental problems. Many of them, according to the book's authors, become obsessive about weight training and begin using anabolic steroids and other drugs.



The year 1982 was pivotal in the history of the male body in American cinema. Arnold Schwarzenegger played the lead in *Conan the Barbarian* that year and the film proved so popular with young moviegoers that Schwarzenegger was quickly hired for a sequel, *Conan the Destroyer* (1984). Sylvester Stallone, already well known to movie audiences for his athletic body in the first two *Rocky* films, stunned moviegoers in 1982 when he appeared as John Rambo in *First Blood* sporting a much more defined and muscular physique than in his previous films.

ly believes represents what he calls “Mother Nature’s Limits.”¹⁴

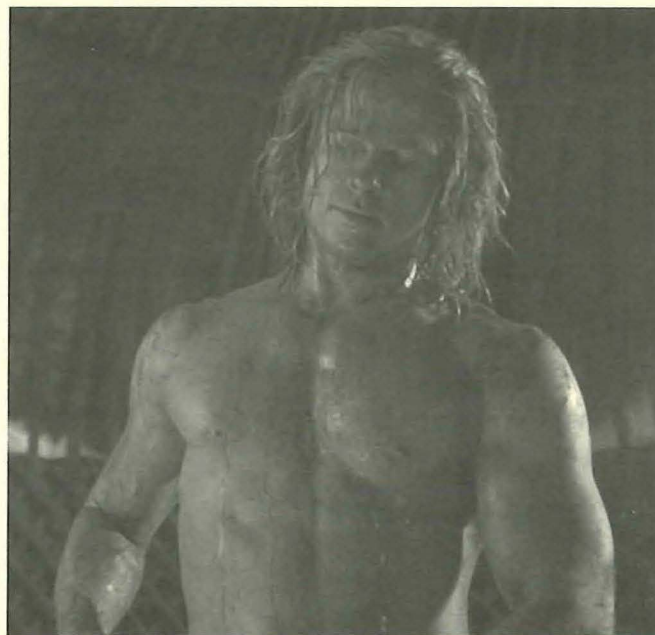
The Fat Free Mass Index was derived by Pope and several psychiatric colleagues at Harvard’s Medical School as part of their research related to a new psychiatric condition, called at various times in their research articles, “bigorexia,” “reverse anorexia nervosa,” “body dysmorphic disorder,” and, most recently, the “Adonis Complex.”¹⁵ According to Pope, who’s played the leading role in this on-going line of research, men suffering from the Adonis Complex become obsessive about the appearance of their bodies in much the same way that anorexic women avoid eating because they constantly worry about whether they are fat.¹⁶ Although body dysmorphic disorder can cause men to obsess about hair loss and whether certain body parts are out of proportion, most of Pope’s research subjects are young men who want to be larger and more physically imposing and who have a skewed conception of what their own bodies

look like. To correct this, Pope contends, many of them head to the gym where they become obsessed with weight training and the pursuit of greater muscular size. Those in whom the affliction is the strongest, Pope argues, often turn to steroids and other ergogenic drugs such as Human Growth Hormone.¹⁷ They generally do this not to become better athletes but for the sake of their appearance and self-concept. The Adonis Complex, he cavalierly claims—and here I quote—“afflicts millions in our society and around the world,” and it has been brought on by “modern society’s and the media’s powerful and unrealistic messages emphasizing an ever-more muscular, ever more fit, and often unattainable male body ideal.”¹⁸ Perhaps we should rename all gyms—if there are truly millions of such folks—Body Dysmorphic Centers.

To his credit, Pope has demonstrated in several important research studies that boys born after 1970 have been increasingly bombarded with images of mus-

cularity and male nudity that were not common in the early twentieth century.¹⁹ I agree with his contention that images of idealized male bodies may be partly responsible for some young men's obsession with muscularity and appearance. Arnold Schwarzenegger and Sylvester Stallone created an unprecedented interest in the physique in Hollywood; and it's no secret that these days when a leading man takes his shirt off—be it Brad Pitt in *Troy*; or Will Smith in *I am Legend*; or Daniel Craig, the new James Bond; or even Matthew McConaughey—the body on display will be vastly different than those of leading men from the first half of the twentieth century. Take a look, for example, at the painfully thin Humphrey Bogart, the lanky Randolph Scott, and heartthrob James Dean, on page 8. Note that even such action heroes as Tarzan, played by the somewhat fleshy Johnny Weissmuller, just didn't have the big biceps, developed pectorals, or six-pack abdominals we associate with leading men today.

One of Pope's most interesting studies, published in 1999, was an anthropometric analysis he and his colleague, Roberto Olivardia, did of the changes in the body of G.I. Joe dolls and other superhero action figures.²⁰ The researchers measured the waist, chest, and biceps of the dolls and then projected those measurements onto the body of a 5'10" male. If the original G.I. Joe—shown on the left in the picture on page 9—were a

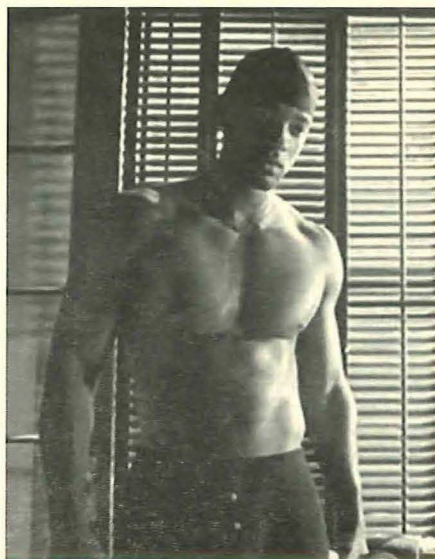


After Brad Pitt agreed to play Achilles in *Troy* (released in 2004), he began a seven-month diet and weight training program that helped him add more than 20 pounds of muscle to his already lean frame.

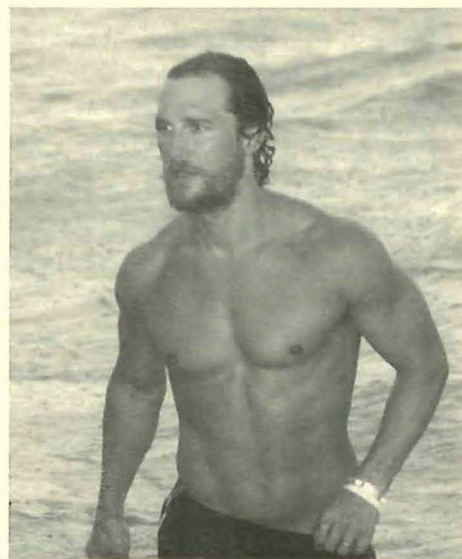
real man standing 5'10" high, Pope and his colleagues claim he'd have a 32" waist, a 44" chest, and he'd measure about 12" around his upper arm. Our modern version, the G.I. Joe Extreme—a product of the post-steroid era—would measure 57" in the chest and have 27" arms



Daniel Craig in *Casino Royale*

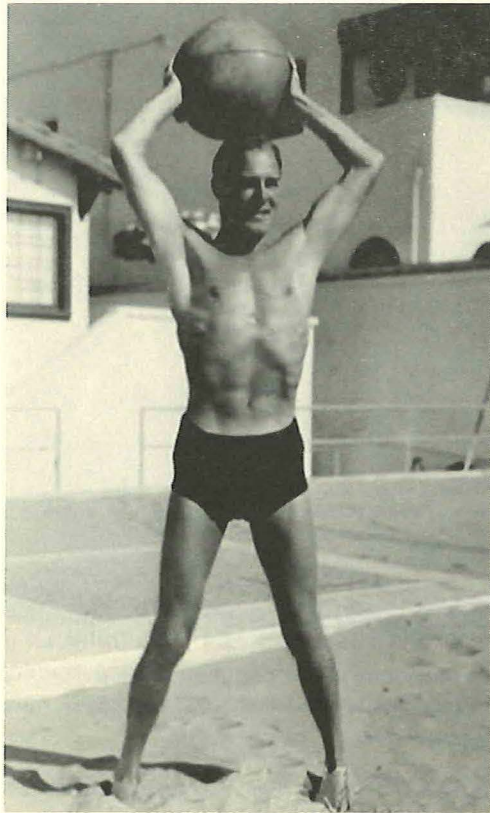


Will Smith in *I Am Legend*



Matthew McConaughey in *Sahara*

Modern film stars such as Daniel Craig, Will Smith and Matthew McConaughey work nearly as hard on their physiques as they do learning their lines for a new film. As can be seen in these photos, the level of muscularity many modern film stars achieve is truly impressive.



Early twentieth-century leading men like Randolph Scott (left) and Humphrey Bogart (above in a photo from 1948) presented the public with a different image of the male body than the post-Arnold-era movie stars of today.

if he were human. G.I. Joe is not alone—modern Batman dolls measured by Pope also had the equivalent of a 30” waist, 57” chest and 27” biceps.²¹

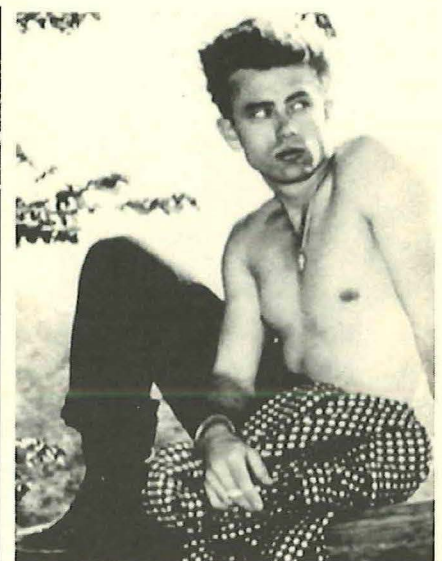
It’s not surprising that children’s toys have changed so dramatically since the comic book figures on which these action figures are based have also gone through what I believe is a steroid-driven metamorphosis. For instance, take a look at the photos of Superman on page 10, showing his transformation from the “normal looking” male body used on the cover of his first comic book in 1938, and then see how Superman’s body changes over time—

The extra flesh around Tarzan star Johnny Weismuller’s waist, and the undeveloped pectorals and slender arms of heartthrob James Dean would be ridiculed by modern audiences who are now used to seeing male film stars who are lean and muscular.

and gets larger and larger—especially after steroids are introduced in the late 1950s. Batman, whose body appears simply athletic in 1939, when his first comic book appeared, goes through a similar metamorphosis into hyper-muscularity as does, as I’m sure most of you are aware, just about every other superhero who appears in comic books, or in TV cartoons, or in the new graphic novels and video games so popular with the young. After all, what child could believe that Superman possessed superhuman strength if he didn’t look at least as muscular as the humans who now inhabit our world—men such as Ronnie Coleman, for example—the

eight-time Mr. Olympia who at a height of 5’11” has competed in bodybuilding contests weighing as much as 296 pounds?²²

Where I think Pope and his colleagues went astray is NOT in their assessment of the changing cul-





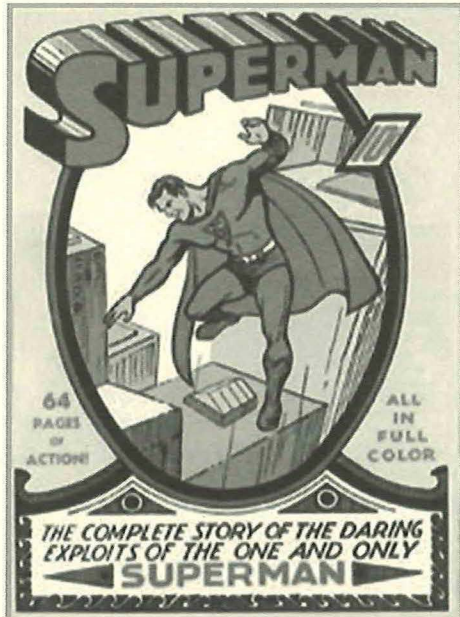
In a study in which they looked at the changing dimensions of children's toys, Pope and his colleagues measured the 1964 version of G.I. Joe and then extrapolated the doll's measurements onto the body of a man standing 5'10" high. According to their calculations, the doll on the left above would have a 32" waist, a 44" chest, and upper arms of approximately 12" if he were of human dimensions. In the center, the modern, GI Joe Extreme—a product of the post-steroid era—would measure 57" in the chest and have 27" arms if he were a man standing 5'10" in height. The Batman action figure, on sale in 2007, is another example of Pope's belief that steroids have changed our vision of the ideal male body. Batman action toys measured by Pope, which were similar in dimension to this doll, would have a 30" waist, 57" chest, and 27" biceps, if the doll was made the height of a human male of 5'10".

tural milieu or of how important the appearance of fitness and muscularity is to our notion of an ideal body. Where they went astray is in the way they derived the FFMI itself and in the images they've chosen to use as evidence of what males can achieve who train with weights and don't use drugs. In the article in *The Clinical Journal of Sports Medicine*, Pope and his colleagues explain that they used two sets of subjects to create the formula. The first group consisted of 157 young men whom they found by soliciting for volunteers in gyms in Boston and Los Angeles. Their second set of "subjects" was a series of photographs of the Mr. Americas from 1939-1959 and the various muscle magazine reports that contained the measurements of the winners. These men were chosen, Pope explained, because they competed before steroids were used by athletes and bodybuilders.²³

The gym members—the living subjects that

Pope and his colleagues actually weighed and measured—had agreed to participate in a larger psychological assessment about their perceptions of their body. Pope and his colleagues did skin-fold caliper measures on 83 steroid "users" and 74 "nonusers."²⁴ The length of time these subjects had trained was not noted, although Pope and his team reported that the non-users included "many dedicated bodybuilders," but then did not define what they meant by their use of that term. This is an important distinction since "bodybuilder" is frequently used to describe recreational weight trainers rather than competitors in physique contests. "Several" of them, Pope and his research team wrote, had competed "successfully" in natural bodybuilding contests, although they did not define how they measured "success" or—just as important these days—which federation was sanctioning the contest. This matters because there are multiple fed-

The Evolution of Superman



1938



1955



1965

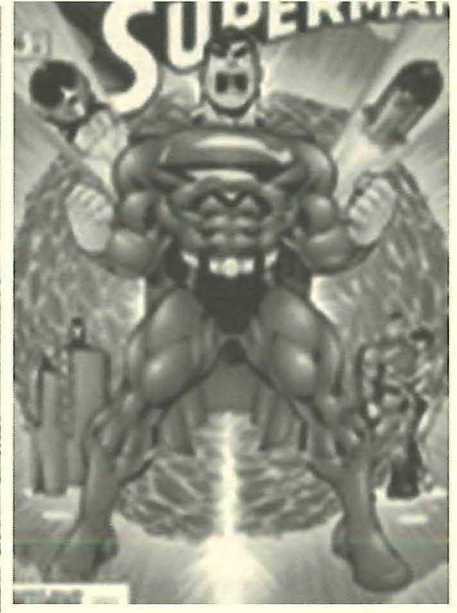
Volume 1, Number 1 of the Superman comics appeared in 1938. Over the next seventy years Superman's body would — like the bodies of modern bodybuilders — grow larger and larger while also becoming increasingly defined and vascular as the steroid era moved into full swing.



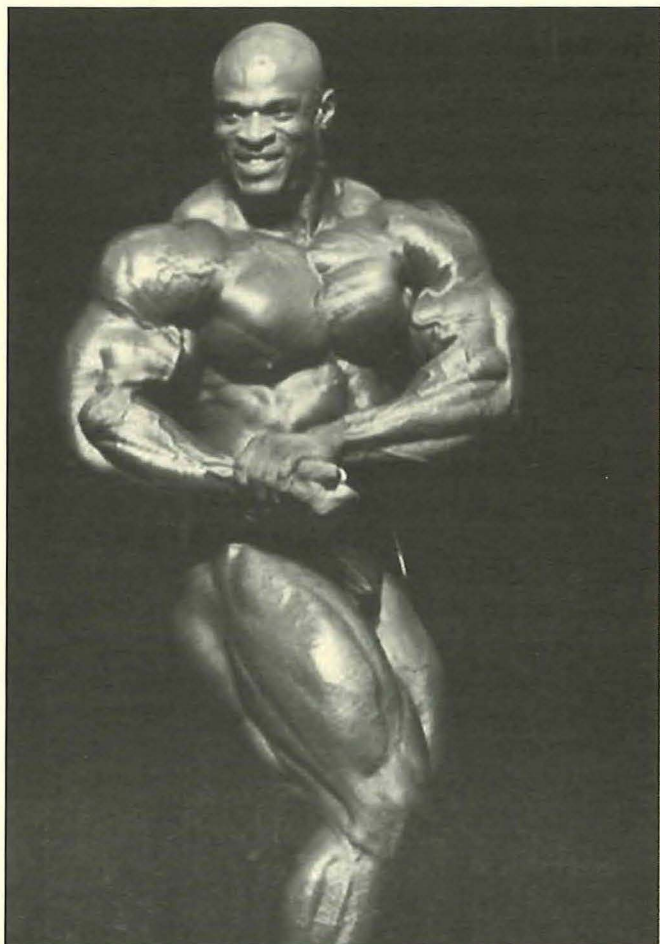
1974



1985



1995

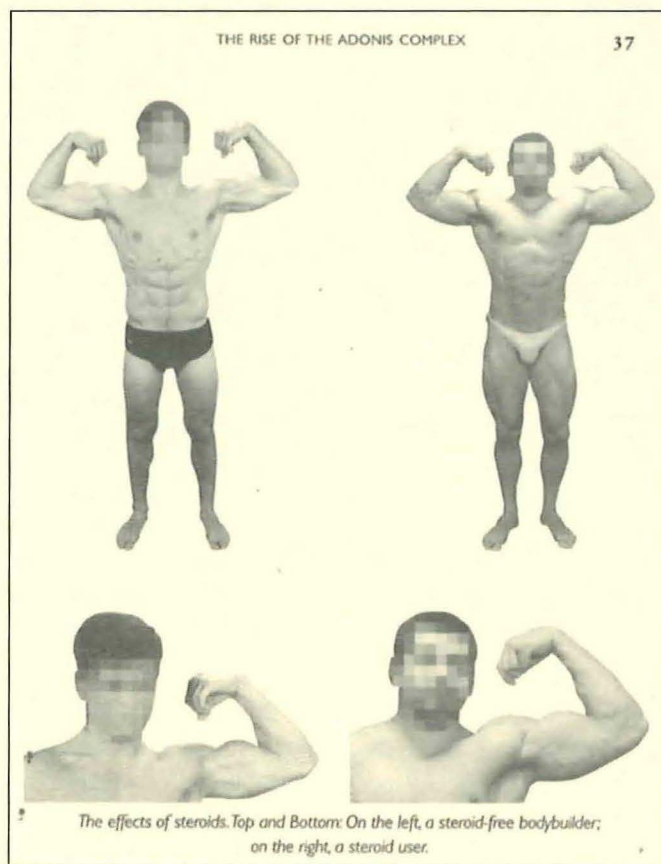


Ronnie Coleman, the eight-time winner of the Mr. Olympia title, weighed 296 pounds when he won the Mr. Olympia contest in 2004.

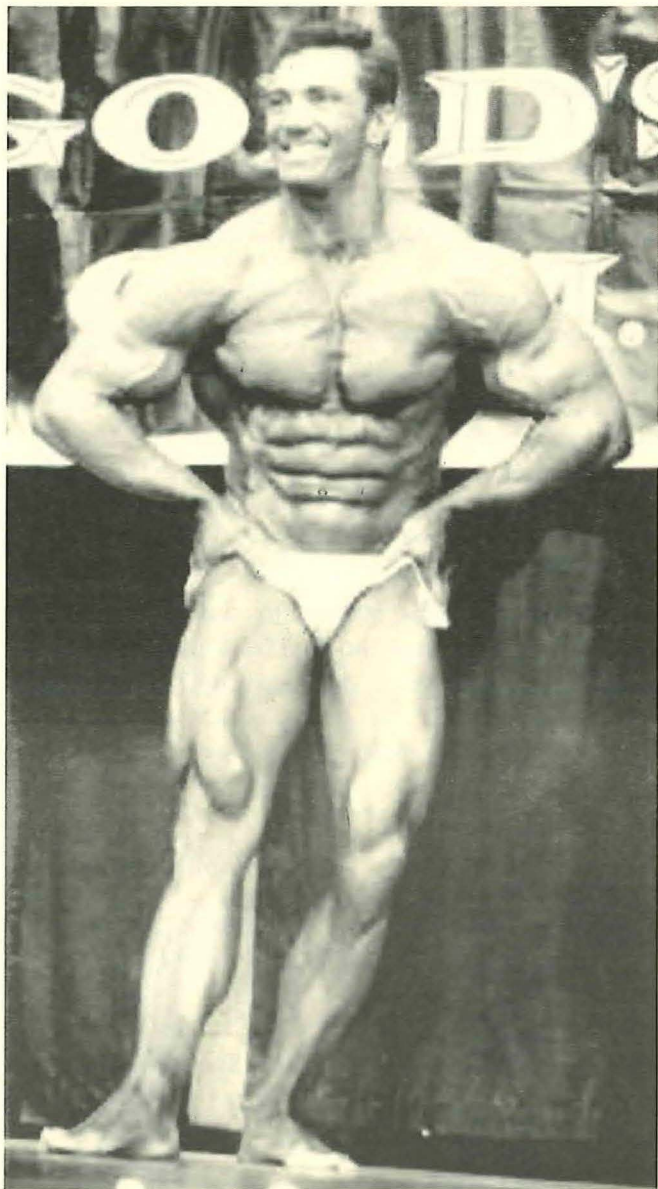
erations in bodybuilding, and these different associations hold contests in a variety of divisions, and with different drug testing protocols. Two of the subjects, Pope claimed, held “world records” in strength events—although, again, he and his colleagues do not provide details about this. If the records were set in powerlifting, the concept of being a world record holder may be virtually meaningless since at last count there were more than ten different world powerlifting federations—with ten different sets of world records.²⁵ (In fact, powerlifting is now so fragmented that there are more than 15 American federations.) And finally, they wrote, “many others were recognized by their associates as highly successful weightlifters,” although technically a weightlifter is an athlete who performs snatches and clean and jerks—lifts in which the barbell ends up overhead. These lifts are not commonly done in commercial gyms. Pope meant, I’m sure, “weight trainers”. . . or maybe “bodybuilders.”

This lack of accurate use of the vocabulary of lifting is frustrating, to say the least. In any case, Pope and his colleagues conclude the description of their human subjects by stating, “Thus, the nonuser group probably included individuals who closely approached the maximum limits of muscularity that could be attained without drugs.”²⁶

While Pope and his colleagues may believe that his volunteers “approached the maximum limits of muscularity that could be attained without drugs,” I certainly wasn’t convinced that they’d found the “maximum limits of drug-free muscularity” when I saw the photo that Pope and his colleagues included in *The Adonis Complex* as an example of what’s possible for a steroid free “bodybuilder.”²⁷ While the young man on the left below is certainly lean—calling him a “bodybuilder” is a bit misleading. Even taking into consideration that the photographer may have shot him from an overhead angle that skewed the image, his body does not begin to



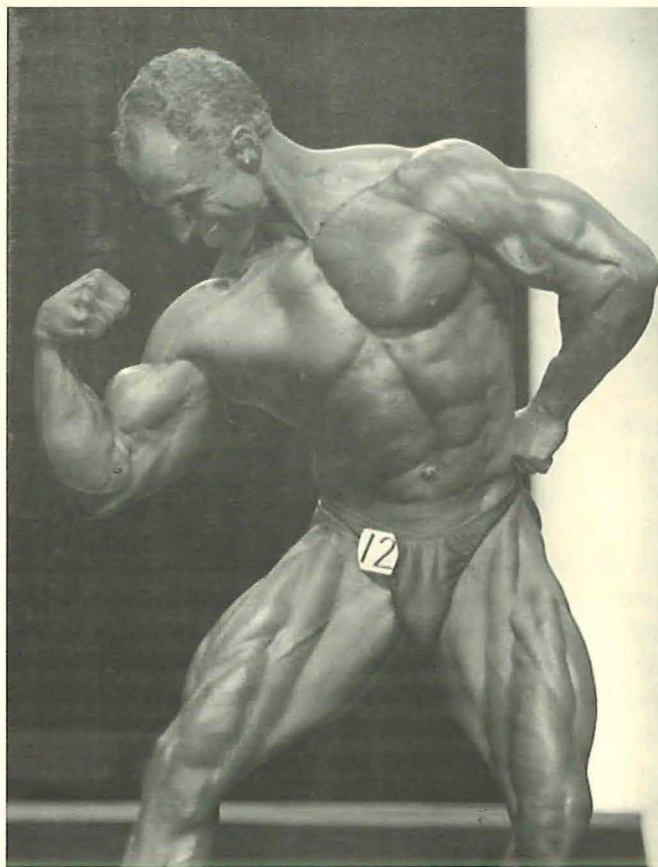
In this picture from page 37 of *The Adonis Complex*, the young man on the left is described as a “steroid-free bodybuilder,” whose physique should be considered as an example of the upper limit of muscularity possible without taking drugs. The man on the right is identified as a steroid user.



John Hansen, who's held both the Natural Mr. Universe and Natural Mr. Olympia titles, has trained for more than 20 years and possesses a body that carries far more muscle than the young man chosen by Pope as an example of the maximum muscularity possible without the use of drugs.

approximate what I know to be possible with proper training. This young man, who Pope tells us is only 20 years old, shows no signs of any serious leg training, and he has none of the fullness and thickness of muscle that years of training can produce—even without drugs. As a counterpoint, here is a photo of John Hansen, who has held the Mr. Natural Universe and Mr. Natural Olympia titles and who's undergone drug testing many times. I've met John only once and so I certainly can't testify to the veracity of his claim to being drug free—although I've read his book *Natural Bodybuilding* and I have no

particular reason to doubt his assertion.²⁸ As you can see, John bears little resemblance to Pope's so-called "bodybuilder." Another example of what's possible without drugs can be seen in this picture of my long-time friend Dave Goodin. Dave took a masters degree in exercise physiology at the University of Texas back in the early 1980s just as he was getting involved in bodybuilding. Dave and I officed on the same hallway during his years at UT, and after graduation he opened a gym just north of the campus where I sometimes train. For twenty-five years he's competed only in drug-free bodybuilding contests (and occasionally a drug-free powerlifting contest), and he keeps his body fat under 5% year-round. Dave now promotes bodybuilding shows in Texas but sponsors only drug-free events, and so, as much as you can know about anyone, I feel pretty comfortable stating that Dave's body is truly the work of his lucky genetics, his close attention to the latest developments in nutrition, and his many years of regular, heavy training.²⁹ Still actively competing at age 49, he



Dave Goodin, at age 49, is still actively competing in drug-free bodybuilding contests. During his long career, he's won nine international titles in drug-free bodybuilding and has been a three-time winner of the World Natural Bodybuilding Championships.

uses exercises, routines, and weights that, I'd bet, the vast majority of Harrison Pope's subjects were not using in their training. Bodybuilding training, as opposed to the kind of workouts regular citizens do who simply want to maintain fitness, generally requires many more sets, the use of more difficult multi-joint exercises, and heavier weights than most people care to attempt. To think that Pope found 157 serious bodybuilders who train at all like Dave or John do week in and week out stretches my imagination.

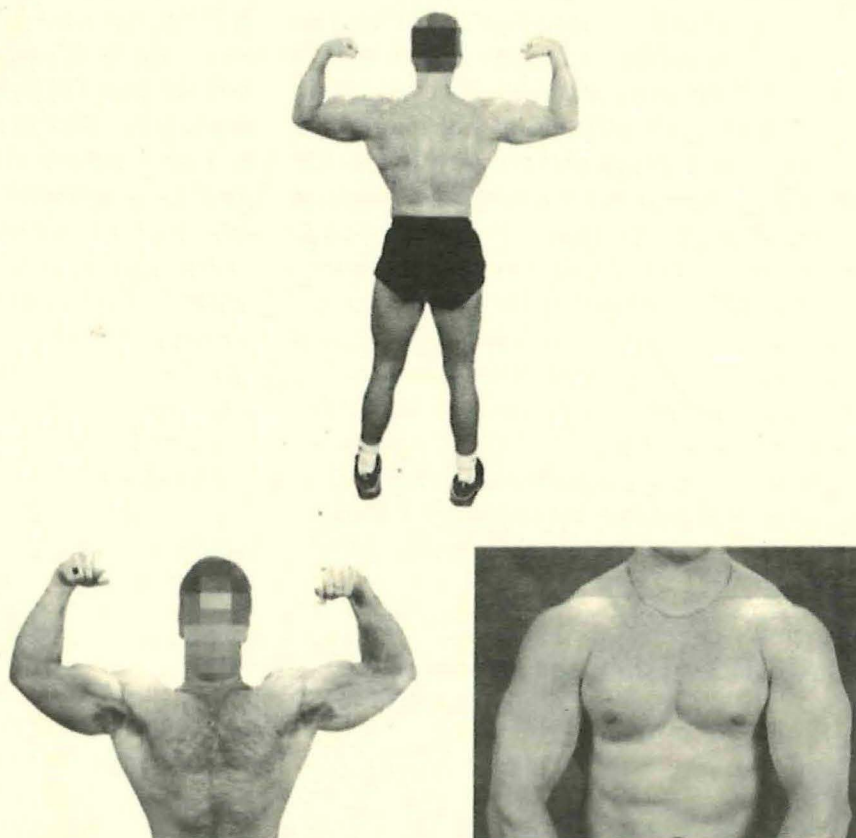
While these images of Dave Goodin and John Hansen are fresh in your minds, I wanted to show you another page from *The Adonis Complex*. Pope and his colleagues included these

pictures to alert readers to the fact that anabolic steroids stimulate muscle growth in the upper body, particularly in the shoulder

area. According to Pope, all three of these men "display a disproportionate amount of muscularity in the shoulders and upper arms," and he argues that the existence of such muscle mass is a "subtle example" of steroid use that an "untrained observer might not recognize."³⁰ I've been lifting weights since 1973, and my husband, Terry, who's known to most of you, was a national champion in lifting and has lifted weights now for more than fifty years. We attend the Arnold Sports Festival each year and know nearly everyone in the world of weights from Lou Ferrigno to Arnold Schwarzenegger to Joe Weider himself, and we've furthermore been involved in the drug-free lifting movement for nearly three decades. Neither of us—or the several bodybuilding friends to whom I showed these pictures—saw any definite evidence of steroid use in these photos. To us, these look more like athletic young men who have been doing heavy benches and heavy lat and deltoid work. It may certainly be that they've used steroids and that this use

38

THE ADONIS COMPLEX



This set of illustrations on page 38 of *The Adonis Complex* is captioned: "Clues that Your Son or Boyfriend May be Taking Steroids." According to Pope, all three of these men "display a disproportionate amount of muscularity in the shoulders and upper arms," and he argues that the existence of such muscle mass is a "subtle example" of steroid use that an "untrained observer might not recognize."

has allowed them to attain their current development more quickly, but it is my opinion that what they've created is well within the normal "steroid-free" range. My guess is that there are any number of football players at Penn State, or Ohio State, or at any other big Division I program like the University of Texas—who have been training with weights since their early teens—young men who would have as much or more muscular development in their upper bodies as these men, and that they had built that muscle without touching a prohibited substance. These three upper body shots do not suggest to me that any of them have violated what Harrison Pope calls "Mother Nature's longstanding limits," and it concerns me when he baldly states, "by comparing the pictures, you may learn to recognize possible steroid use even in men with an FFMI of less than 25."³¹ To me, this is clearly an example of profiling, and I think it's potentially dangerous.

Let's turn now to Pope's decision to use the Mr.

Americas for his second group of "subjects." To calculate the FFMI ratings of these pre-steroid men, he and his colleagues used the published heights and weights in various muscle magazines, and then Pope personally made a determination of body fat by studying muscle magazine photos taken around the time they won the Mr. America contest. He then made a subjective judgment about the men's body composition.³² Pope was only able to find photos for 18 of the 20 Mr. Americas in this period, and in the article published in *The Clinical Journal of Sports Medicine* a chart is included showing each man's FFMI score.³³ (You'll note below the arrow I've placed beside Steve Reeves' name and the fact that on this chart his FFMI is listed at 23. In Pope's book, *The Adonis Complex*, Reeves is listed with a FFMI of 25.7, yet Pope never explains the discrepancy.) I was surprised to find when I read the article in *The Clinical*

Journal of Sports Medicine that the heights, weights and body fat numbers assigned to the Mr. Americas were not also listed in this peer-reviewed article; only the chart with the final FFMI appears. So, I contacted Dr. Pope to ask if he still had a record of the body fat estimates he'd used when he'd rated the Mr. Americas, and in an email response he told me he'd never published the specific body fat estimates and that "it would be tough to find them now, because I did them back in 1994." He added, however, that he remembered "that the estimates ranged from about 6% to a maximum of about 16%."³⁴ The 16% figure completely floored me because no one—even in the early days of the sport—would have won the Mr. America contest with a body fat reading in that range, and so I decided to do my own calculations.

Since I also had access to the heights and weights of these men at the time that they won the Mr.

America contest, I asked my UT colleague, Dr. Marlene Dixon, to help me set up the formula, and I asked Terry to assist with the process of estimating body fat. Please understand that Terry and I—just like Pope—used our subjective judgment to estimate the body fat percentage of these men. However, we feel comfortable that we're at least as qualified to make such judgments as Pope was since we have also done body composition testing on several hundred subjects in various research projects over the years, and because Terry and I keep up pretty closely with the world of bodybuilding by subscribing to dozens of bodybuilding magazines and because we attend the various shows. In any case, when I ran our numbers through Pope's formula, we got a somewhat different set of results. We included all 22 men in our estimate—and the *average* FFMI for the 22 men known as Mr. America in the pre-steroid era according to *our* calculations was 26.44. Fifteen men out of that 22—nearly 70%—had FFMI's above 26, which on Pope's scale would mean that they should be considered potential steroid

TABLE 2. Estimated normalized FFMI's of Mr. America Winners, 1939–1959

Year	Name	Normal FFMI
1939	Goodrich	24.3
1939	Essmaker	22.6
1940	Grimek	24.0
1941	Grimek	26.9
1942	Leeight	25.5
1943	Bacon	23.9
1944	Stanko	27.3
1945	Ross	26.1
1946	Stephan	25.9
1947	Reeves	23.0 ←
1948	Eiferman	27.7
1949	Delinger	28.0
1950	Farbotnik	26.5
1951	Hilligenn	26.0
1952	Park	NA
1953	Pearl	25.8
1954	Dubois	25.4
1955	Klisanin	23.5
1956	Schaeffer	NA
1957	Lacy	25.2
1958	Sansone	26.8
1959	Johnson	24.6
Mean ± SD		25.4 ± 1.5

Clin J Sport Med, Vol. 5, No. 4, 1995

users. I should clarify that in the 1995 article in *The Clinical Journal of Sports Medicine* Pope uses the lower figure of 25 as the line of demarcation beyond which someone should be suspected of being a steroid user. If we use this original number, eighteen of the pre-steroid era Mr. Americas would be considered suspect—that's 82%. If we omit the two men Pope didn't include because he couldn't find photographs, our average for the remaining 20 Mr. Americas is 26.54, a number that's just slightly higher than the average for the entire group.

One of the most interesting aspects of all this is why Pope didn't pick the two-time Mr. America John Grimek as his example of the maximum muscular development possible without steroids. Grimek was more admired as a bodybuilder than was Reeves, whose competitive career was actually relatively short-lived because he moved to Europe and became famous for playing Hercules in a series of sword and sandal film epics. Within the bodybuilding community, and I believe John Fair will agree with me on this, Grimek's was the iconic body—not the taller and more slender Reeves.³⁵ Grimek had been competing in weightlifting for more than ten years when he decided to enter the first official AAU Mr. America contest in 1940. Because he also competed in the weightlifting contest that same evening, Grimek was down in weight, weighing only 193 pounds. The next year, however, he didn't lift and entered only the Mr. America contest. That night he weighed 221 pounds, yet

he was just as lean and far more muscular than the year before. Grimek so dominated the competition in 1941 that the officials decided to pass a rule that from that time forward a man could only win the Mr. America title once. At 5'8" and 221 pounds we estimated Grimek's FFMI at 31.99, a score that's well above Pope's cut-off point. So, why isn't that the number above which we should be concerned?

Year	Mr. America	Height (M)	Weight (K)	Body Fat (%)	Normalized FFMI
1939	Bert Goodrich	1.79	88.5	0.11	24.64356609
1939	Roland Essmaker	1.8	82	0.1	22.77777778
1940	John Grimek	1.73	87.5	0.07	27.61634812
1941	John Grimek	1.73	100.5	0.07	31.99170313
1942	Frank Leight	1.8	94.8	0.09	26.62592593
1943	Jules Bacon	1.7	76.2	0.07	25.13110727
1944	Steve Stanko	1.82	101.25	0.09	27.69393407
1945	Clancy Ross	1.75	87.09	0.09	26.18317143
1946	Alan Stephan	1.8	93	0.09	26.12037037
1947	Steve Reeves	1.85	87	0.08	23.08141344
1948	George Eiferman	1.7	88	0.09	28.31934256
1949	Jack Delinger	1.68	88	0.09	29.10501587
1950	John Farbotnik	1.75	88	0.1	26.16622449
1951	Roy Hilligenn	1.68	81	0.07	27.42205102
1952	Jim Park	1.77	84	0.08	24.85024121
1953	Bill Pearl	1.77	91.17	0.08	26.95576645
1954	Dick Dubois	1.85	98	0.08	26.03831629
1955	Steve Klisanin	1.77	83.9	0.09	24.55307246
1956	Ray Schaeffer	1.78	95.25	0.08	27.77949274
1957	Ron Lacy	1.73	84	0.09	26.06744572
1958	Tom Sansone	1.8	96.25	0.08	27.33024691
1959	Harry Johnson	1.75	84.5	0.09	25.41357143
				Average	26.44391385



In 1941, when this photo was taken, the 32-year-old Grimek had packed 221 pounds of muscle onto his 5'8" frame. By our calculations, that gives Grimek an FFMI rating of 31.99, making him a much more realistic standard for a person's ability to build muscle without the use of steroids.

What Pope apparently didn't understand when he decided to use the Mr. Americas was that bodybuilding was in its very early stages in the United States when the first Mr. America-type contests were held in 1939. Almost no one trained specifically for physique before World War II, since bodybuilding contests—when they

were held at all—were generally held after weightlifting meets, almost as an afterthought. Many times the men who competed in these early shows just stripped down after they finished lifting and had their physiques judged.³⁶ Because it wasn't considered as important as the weightlifting that preceded it, most early bodybuilders did not cut back as dramatically on their food as modern bodybuilders do before a contest, and they primarily focused their training on the needs of weightlifting—not bodybuilding. In fact, when you look at photos of some of these early Mr. Americas, one of the first things people notice is how small and relatively flat the pectoral muscles were on these early champions. The reason for this is because the bench press was not nearly as important an exercise then since it played no role in competitive weightlifting. Nor did many of them use lat machines or leg curl or leg extension machines, or even incline benches because these pieces of equipment were somewhat rare until the 1950s. Furthermore, the idea of organizing your training into some sort of program and varying the volume and intensity of the workouts was poorly understood. Also rare until well into the 1950s were such standard bodybuilding training methods as the set system, supersets, cheating principles, and many of the other systems and principles we now know help produce greater muscle mass when included in an organized routine.³⁷ Given their limited equipment and primitive theoretical understanding of how resistance training works most effectively, these early pioneers built what muscle they could. However, to suggest that their bodies should be regarded as an ideal or as a "steroid-free maximum" in our era—now that health clubs are filled with equipment that can isolate nearly every skeletal muscle in our body, now that we understand how periodization theory works, and now that nutrition is central to the Iron Game—is at best misleading, and possibly even disingenuous.

Before moving on, I'd like to make one other point. After the "Grimek Rule" was passed and men were not permitted to win the Mr. America title more than once, the amateur Mr. America contest became for most men either the end of the competitive road or an early stepping stone on the way to a pro career—not that there was all that much pro bodybuilding then. Because of the Grimek Rule many of the early winners were young men—whose bodies had not had time to fully mature. Steve Reeves, for example, was only 21 when he won the Mr. America title, and he weighed just 192 pounds. He was more than 20 pounds heavier when he won the professional Mr. Universe title several years lat-

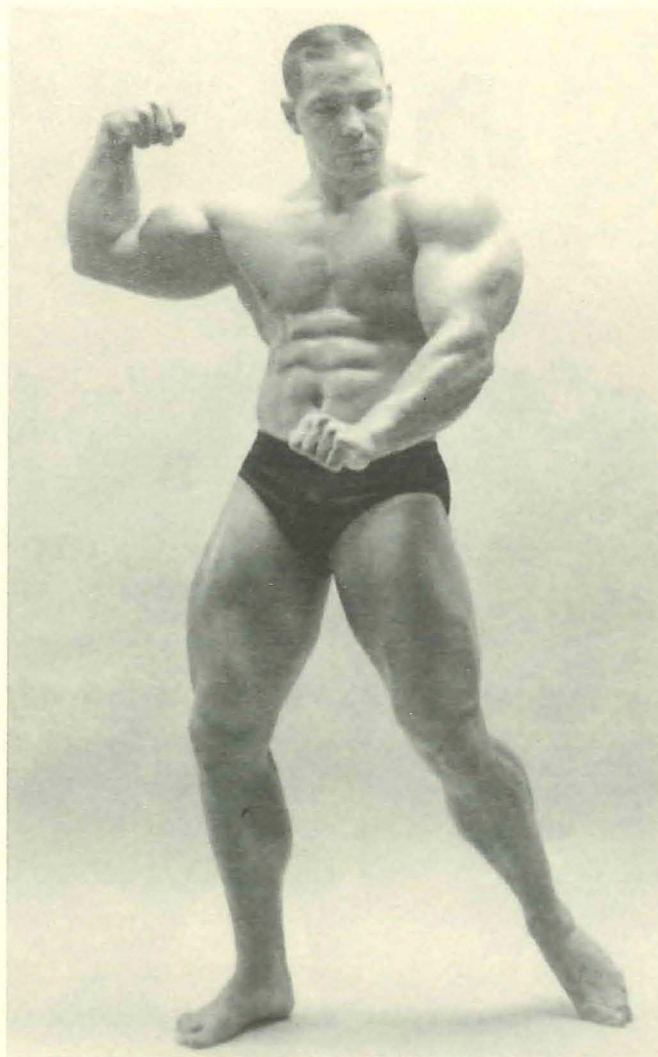


Bert Goodrich, winner of the 1939 Mr. America contest, and Alan Stephan, Mr. America of 1946, had excellent physiques for their day. Note, however, how the pectoral muscles of both men, and John Grimek on the previous page, are not nearly as thick and well-developed as those of modern bodybuilders. The primary reason for this is that heavy bench presses were not a regular part of most bodybuilders' training routines in the 1940s.

er, and at that weight his FFMI would have been well over 26. At the top of page 18 you can see a great illustration of the benefits of training over time. On the left is Bill Pearl at age 23 in a photo taken at the time he won the Mr. America contest in 1953. Three years later, in 1956, his muscles are much larger and he's physically more mature. Why should the early score be used by Pope as the standard—when Pearl's transformation in the pre-Dianabol years of the 1950s clearly demonstrates that with more years of training greater muscle size is possible?

If Pope had had a better understanding of the history of lifting, there *were* men he could have used to help him find a more accurate measure of how much

muscle mass is possible without using anabolic drugs. Had he only looked to the wrestlers and professional strongmen who graced the circuses and variety theaters of North America and Europe at the turn of the twentieth century, he would have had a much more physically impressive group of athletes to compare to his 157 subjects. There isn't time today to show you all the men I think are more likely candidates to be considered the "most muscular men" of the pre-steroid era, but just for a moment let's consider the nine men shown on pages 19 and 20—all of whom had concluded their careers before the steroid era dawned in 1958. The average FFMI for these nine early pioneers (according to our calculations) is 29.06, well above Pope's numbers of 25 and 26. It is



These two pictures of Bill Pearl provide graphic evidence of the difference a few years of training in the pre-steroid era could make in the development of a man's physique. In the photo on the left, taken in 1953, Bill Pearl weighed 193 pounds at 5' 9.5", which would give him a FFMI score of 26.95 according to our calculations. The photo on the right was taken in 1956 prior to an exhibition in the Hawaiian Islands. He weighed 222 at this time, which would give him a FFMI reading of 29.8.

also worth noting that Sandow and Barry Bonds have almost exactly the same FFMI, yet Sandow died in 1925.

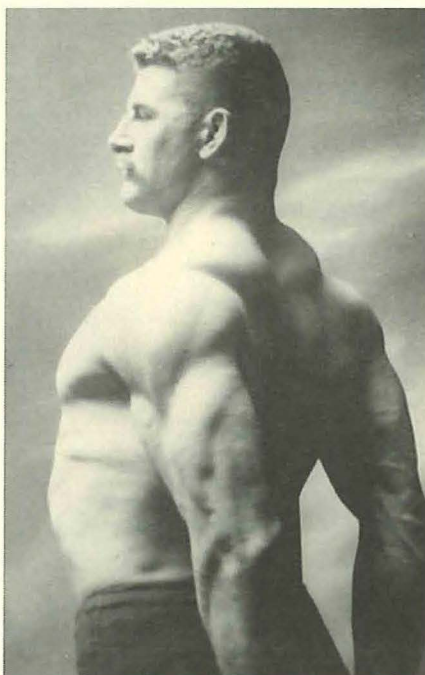
Some of you may wonder why we should bother with all this . . . am I, perhaps, just nit-picking? I don't think so . . . I think we've come into a new era for sport—and we need to consider whether this is also a new era for sport history. There was a time when sport was sport, and resistance training and other methods of physical culture occupied only the fringes of sport practice—and the fringes of our academic discipline. Our colleague Jack Berryman told me once that in 1986, when I won the NASSH graduate student award for my essay on Bernarr Macfadden, that the committee had debated for some time on whether a paper dealing with

issues of body culture and exercise should be allowed in contention for the sport history prize.³⁸ I'm very glad that it was allowed . . . as the winning of that prize introduced me to this warm and generous community of scholars whom I consider my primary academic family. However, 22 years later, I continue to believe that we must study physical culture as well as sport. As sport historians we must pay attention to training, to nutrition, and to innovations in technology and sport medicine that are dramatically altering the landscape—and the bodies—of modern sport.

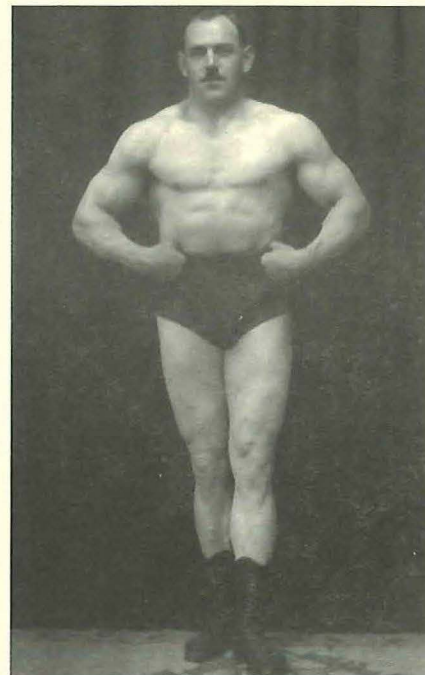
What saddens me most about the whole Pope/FFMI affair is that until now no one has raised questions about the historical basis of his theory—even



Louis Uni, "Apollon", 6' 2.25",
260 lbs., FFMI 30.4



Gustav Fristensky, 6',
230 lbs., FFMI 28.1



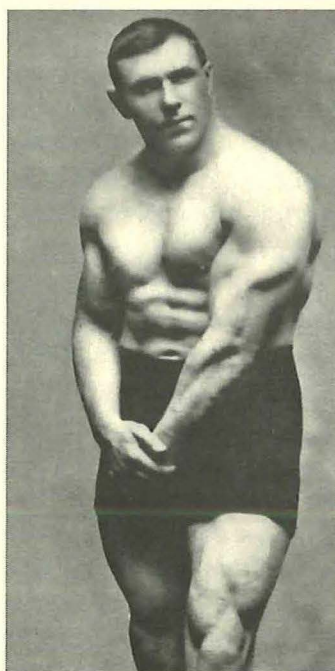
Hermann Goerner, 6',
260 lbs., FFMI 31.2

Pre-Steroid Era Strongmen Who Should Be Suspected of Drug Use According to Pope's Fat Free Mass Index

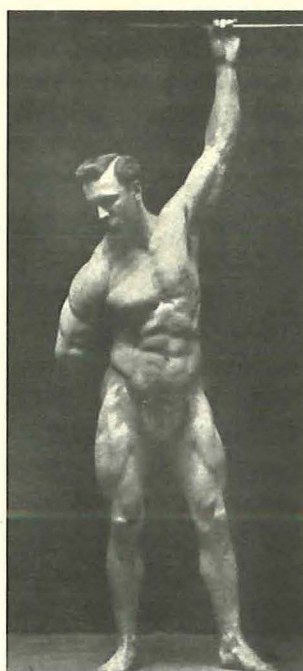
John Lemm, 5'8",
216 lbs., FFMI 28.9



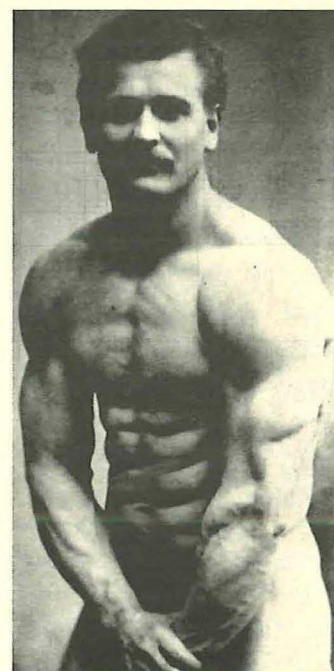
George Hackenschmidt
5'9", 220 lbs., FFMI 29.5

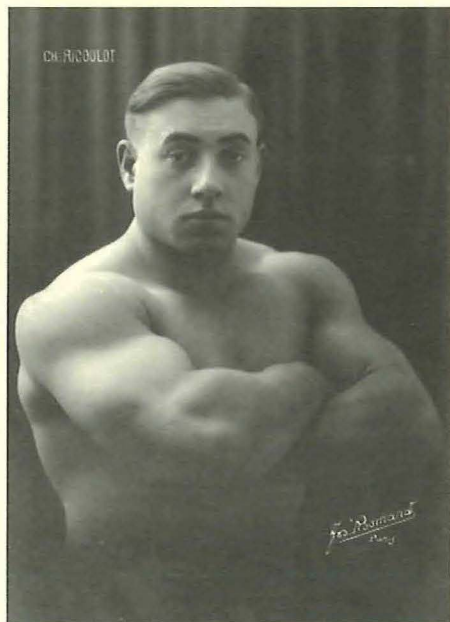


Bobby Pandour, 5'6",
175 lbs., FFMI 27.6

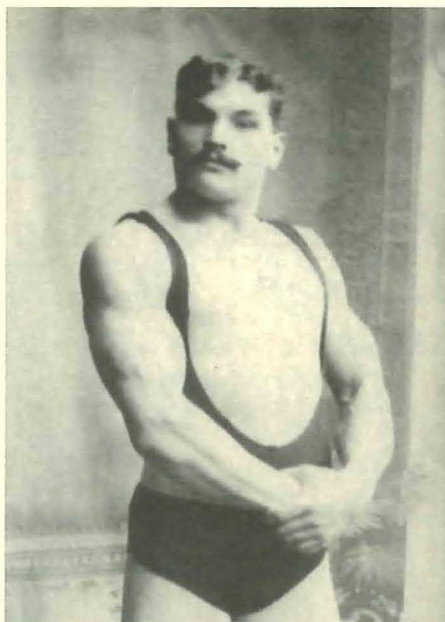


Eugen Sandow, 5'8",
206 lbs., FFMI 28.3





Charles Rigoulot, 5'8",
230 lbs., FFMI 30.1



Arthur Saxon, 5'9.5",
210 lbs., FFMI 27.5

though that first paper was written thirteen years ago. Even some of the bodybuilding writers—who should definitely know more about what is humanly possible—are now citing Pope's formula.³⁹ This scares me. We have enough problems in the world of sport without profiling and falsely identifying people as steroid users who have never used drugs.

So what about Barry Bonds—what should we believe? Well—there's no question that Bonds has become much heavier and far more muscular since he's been training with weights. But when I look at the transformation he made and then consider Bill Pearl, or other individuals I know, who have also transformed themselves through heavy training (and without drugs), I'm not convinced simply by the visual evidence that Bonds is a user of performance-enhancing drugs. In my opinion, his physical development barely *suggests*; it certainly doesn't *prove*. After looking at the bodies of the early twentieth century strongmen which I showed on pages 19 and 20, I'd have to say that Bonds' 28 on the FFMI (which may itself be an exaggeration since the body fat percentage came from Greg Andrews) means nothing.

From my vantage point, Pope and his colleagues have either ignored the fact—or been unaware—that there is a great training revolution going on in the United States. To their credit, Fainaru-Wada and Williams don't base their indictment of Bonds *only* on Pope's for-

mula. However, coaches, principals, parents, and others are encouraged by Pope in *The Adonis Complex* to use this formula as a diagnostic and a forensic tool. Without a better understanding of what is possible with weight training alone, the prospect of misdiagnosis and its attendant damage to reputations and relationships is both likely and alarming. Granted, there are now approximately 350 NFL players weighing over 300 pounds, and granted that we now see more home runs hit than we did in Babe Ruth's or even Roger Maris' era.⁴⁰ However, weight training for football now begins in junior high school, if not before, and baseball players who used to fear that weight training would lessen their flexibility

and make them muscle-bound are now weighing well over 200 pounds, hiring personal trainers, and bragging about their bench presses. While anabolic drugs are a contributing factor to the larger size and greater power of *some* athletes, historians must help the public understand that we are in the midst of a paradigm shift in the training of athletes. We have entered an era in which, for the first time in history, athletes are employing scientifically-organized strength training throughout their entire sporting careers. Many of today's star players began training as children and have continued to train year-round. A better understanding of this shift could be useful to those trying to keep young men away from steroids. Such an understanding would certainly be better than a formula which, in the wrong hands, could ruin the life of someone labeled as a steroid user who had never touched a performance-enhancing drug.

As a powerlifter back in the 1970s I made a decision not to use anabolic steroids, and I never wavered from that decision. However, because there was no testing in powerlifting in the late seventies, many people assumed when I began setting records in women's powerlifting that I *had* to be a steroid user. That assumption was incorrect. However, even though I knew I'd never used steroids, and my family and friends knew I wasn't a user, it still hurt to have people suggest otherwise. Over the past several decades, as drug use has become increasingly ubiquitous, I've watched this same brand of cynicism spread throughout the world of

sports. It's impossible any more for most Americans to watch the Olympics, or an event like the Tour de France, or an NFL Football game, or a Major League Baseball game, and not have at least one moment when they wonder about the drug status of the people participating in the sport. I'm not saying that this happens in all parts of the world, but the sporting public's heightened awareness regarding drug matters makes us especially sensitized to doping issues and increasingly unwilling to believe that there are still record-setting athletes who make the correct ethical choices. As historians we owe it to the future—as well as to the past—to begin paying greater attention to this new sporting paradigm.

Notes:

The author would like to thank Dr. Terry Todd, Dr. Thomas M. Hunt, and Dr. Marlene Dixon, all of the University of Texas, for their assistance and comments on this lecture.

1. Mark Fainaru-Wada and Lance Williams, *Game of Shadows: Barry Bonds, Balco, and the Steroids Scandal that Rocked Professional Sports* (New York: Gotham Books, 2006), 274-275; Elena M. Kouri, Harrison G. Pope, David L. Katz, and Paul Oliva, "Fat-Free Mass Index in Users and Nonusers of Anabolic-Androgenic Steroids," *The Clinical Journal of Sports Medicine* 5(4) (1995): 223-228.
2. Fainaru-Wada and Williams, *Game of Shadows*, 275. See also: Kouri, Pope, Katz and Oliva, "Fat Free Mass Index," 225. Interestingly, in this 1993 article, Steve Reeves' normalized FFMI is listed at 23 in the chart on page 226 of the article. There is no discussion of when and how that number became a 25.7 as it is listed in: Harrison G. Pope, Katherine A. Phillips and Roberto Olivardia, *The Adonis Complex: How to Identify, Treat and Prevent Body Obsession in Men and Boys* (New York: Touchstone/Simon and Schuster, 2000), 38.
3. Pope, Phillips and Olivardia, *Adonis Complex*, 35.
4. Fainaru-Wada and Williams, *Game of Shadows*, 275.
5. See for example, Mark Fainaru-Wada and Lance Williams, "The Documentation: The Authors' Extensive Research Produced Compelling Evidence of Bonds' Use of Performance Enhancers," *Sports Illustrated* viewed at: <http://sportsillustrated.cnn.com/2006/magazine/03/06/growth.doc0313/> on 14 May 2008. See also: "Bonds Testified that Substances Didn't Work," *ESPN.com*, 4 December 2004, at: <http://sports.espn.go.com/mlb/news/story?id=1937594> on 14 May 2008. See also: "Barry Bonds Steroids Timeline," *ESPN.com*, 7 December 2007, viewed at: <http://sports.espn.go.com/mlb/news/story?id=3113127> on 14 May 2008; and John Kuenster, "Barry Bonds Owns a Tarnished Crown," *Baseball Digest*, 66(8) (November 2007): 51.
6. For examples of the FFMI being discussed by various media see: Brian Walton, "Men's Fitness Expert Lou Schuler Weighs in on Bodybuilding and Steroids and Their Implications," *Scout.com*, 18 February 2005, viewed at: <http://stlcardinals.scout.com/2/353285.html> on 31 March 2008; David Handelsman, M.D., "Book Review: *The Adonis Complex*, The Secret Crisis of Male Body Obsession," *New England Journal of Medicine* 344(2) (11 January 2001): 146-147; Stephen S. Hall, "The Troubled Life of Boys: The Bully in the Mirror," *New York Times*, 22 August 1999, at <http://query.nytimes.com/gst/fullpage.html?res=9A02E2D91E39F931A1575BC0A96F958260> viewed on 28 March 2008; and Filiault, Shaun M. "Measuring up in the Bedroom: Muscle, Thinness, and Men's Sex Lives," *International Journal of Men's Health*, 22 June 2007, viewed at: <http://www.highbeam.com/doc/1G1-168548208.html> on 12 May 2008.
7. Kouri, Pope, Katz and Oliva, "Fat-Free Mass Index," 223. Later in the article Kouri et. al. write: "Because steroids are controlled substances in the United States and may sometimes induce violent criminal behavior, it is increasingly important in certain circumstances to identify and expose individuals who deny their steroid use. Admittedly, one cannot definitively diagnose steroid use simply on the basis of the FFMI, much as one cannot make a definitive diagnosis of alcohol intoxication in a man displaying ataxia and dysarthria upon getting out of his automobile. In the latter case, however, the individual may be required for forensic reasons to produce a breath or urine sample. Perhaps we could ultimately follow an analogous procedure in forensic situations with individuals displaying an abnormally elevated FFMI" (pp. 227-228).
8. The automatic FFMI calculator can be found at: <http://www.bodybuilding.com/fun/likeness10.html>, viewed on 4 April 2008. It is included in an article by Jeremy Likeness entitled "Ten Fat Mistakes." One of the problems with this idea is that it is not unlike using lie detectors to test for drug use, an idea that was tried, and rejected, by several sports federations in the 1980s and early 1990s.
9. See for example: Peter H. McCusker, *From Dweeb to Adonis: The Complete Guide to Manly Excellence* (Bloomington, IN: First Books Library, 2003); Arnold Andersen, Leigh Cohn, and Tom Holbrook, *Making Weight: Healing Men's Conflicts with Food, Weight and Shape* (Carlsbad, CA: Gurze Books, 2000); and James Claiborn, *The BDD Workbook: Overcome Body Dysmorphic Disorder and End Body Image Obsessions* (Oakland, CA: New Harbinger Publications, 2002).
10. Hall, "The Troubled Life of Boys."
11. Kouri, Pope, Katz and Oliva, "Fat-Free Mass Index," 223.
12. One measure of the impact of Pope's book is its "Google Number," or the number of "links" to other web pages on the Internet that show up when "Adonis Complex" is entered as a search term. On 14 May 2008, a Google search for the term "Adonis Complex" turned up 68,500 references. Evidence that these ideas are beginning to circulate within the bodybuilding community can be found in the interview done with Lou Schuler, the fitness author and former editor for both *Men's Fitness* and *Men's Health* magazines. In an interview with Brian Walton, Schuler was asked how someone could identify a steroid user, "That's a very good question," he responded. "And there's actually an answer. A Harvard psychiatrist named Harrison Pope worked out a formula called the 'fat-free mass index,' or FFMI. He measured hundreds of bodybuilders, both natural and juicers, and figured out exactly how much muscle someone could build without adding fat. Beyond a certain point, you can't add more mass

without also gaining fat ... Humans can build practically unlimited bulk without steroids, but most people would be surprised how little they can build without also being fat. Dr. Pope says that a bodybuilder from the 1940s, Steve Reeves, pretty much hit the ceiling. Steve Reeves was a big guy—6'1", 213 pounds, with 17 ½" arms, but only a 31" waist. And that was the best physique ever built without steroids, according to Dr. Pope. But virtually every bodybuilder and pro wrestler today surpasses that, by a long shot. Lots of other pro athletes do, too." Interview dated 18 February 2005. Viewed at: <http://stlcardinals.scout.com/2/353285.html>. See also: Jeremy Likeness, "Ten Fat Mistakes," viewed at: <http://www.bodybuilding.com/fun/likeness10.html>, on 4 April 2008.

13. "Feds Crack Down on Andro Sales," *AP/CBS News*, at <http://www.cbsnews.com/stories/2004/03/11/health/main605300.shtml>, viewed on 4 April 2008.

14. Pope, *Adonis Complex*, 38.

15. Harrison G. Pope, David L. Katz, and J.I. Hudson, "Anorexia Nervosa and 'Reverse Anorexia' Among 108 Male Bodybuilders," *Comparative Psychiatry*, 34(1993): 406-409; Harrison G. Pope, Amanda Gruber, Precilla Choi, Roberto Olivardia and Katherine A. Phillips, "Muscle Dysmorphia: An Underrecognized Form of Body Dysmorphic Disorder," *Psychomatics* 38(1997): 548-557; Pope, *Adonis Complex*, 37-38.

16. Pope, Phillips and Olivardia, *Adonis Complex*, xiii.

17. Pope discusses the connection between muscle dysmorphia and anabolic steroid use in a number of publications. The best overview is in "Chapter Five: Anabolic Steroids, Dangerous Fuel for the Adonis Complex," *Adonis Complex*, 102-126. See also: Harrison Pope and David L. Katz, "Psychiatric and Medical Effects of Anabolic-Androgenic Steroids: A Controlled Study of 160 Athletes," *Archives of General Psychiatry* 51(1994): 375-382.

18. Pope, *Adonis Complex*, xiv & xv. The fitness movement of the last twenty years or so, Pope and his colleagues argue, has brought us, "compulsive exercising, soaring rates of anabolic steroid use, exploding sales of nutritional supplements, proliferating cosmetic treatments for men, and the birth of dozens of magazines and other publications devoted to male 'fitness' and 'health.'"

19. Harrison G. Pope, Roberto Olivardia, Amanda Gruber and John Borowiecki, "Evolving Ideals of Male Body Image as Seen Through Action Toys," *International Journal of Eating Disorders* 26(1): 65-72; Roberto Olivardia, Harrison Pope, John Borowiecki and Geoffrey Cohane, "Biceps and Body Image: The Relationship Between Muscularity and Self-Esteem, Depression and Eating Disorder Symptoms," *Psychology of Men and Masculinity* 5(2): 112-120; R.A. Leit, Harrison Pope, and J. Gray, "Cultural Expectations of Muscularity in Men: The Evolution of Playgirl Centerfolds," *International Journal of Eating Disorders*, cited in Pope, *Adonis Complex*, 40-42.

20. Pope, *Adonis Complex*, 40-42; and Pope, Olivardia, Gruber & Borowiecki, "Evolving Ideals of Male Body Image," 65-72.

21. Stephen S. Hall, "The Troubled Life of Boys: The Bully in the Mirror," *New York Times*, 22 August 1999. Viewed on 28 March 2008 at: <http://query.nytimes.com/gst/fullpage.html?res=9A02E2D91E39F931A1575BC0A96F958260>.

22. "Ronnie Coleman Wins 7th Mr. Olympia," *FitnessSource1*, at http://www.fitnesssource1.com/olympia_2004/olympia2004.html on

15 May 2008. At the 2004 Mr. Olympia, which he won, Coleman weighed in at 296 pounds.

23. Dianabol, the first anabolic steroid, began to be manufactured in 1958 and then quickly spread into the athletic community.

24. To certify that the subjects had never used anabolic drugs, Pope and his colleagues relied on interviews with the subjects and a follow-up urine test. Fifty-two of the steroid users (67%) had used steroids within the previous year. Kouri, Pope, Katz, and Oliva, "Fat Free Mass Index," 223-224.

25. Jan Todd and Terry Todd, "Chapter Three: Reflections on the Parallel Federation Solution to the Problem of Drug Use in Sport," in Thomas Murray, ed. *The Use of Performance-Enhancing Technologies in Sports: Ethical, Conceptual, and Scientific Issues* (Washington: John Hopkins University Press, forthcoming in 2008).

26. Kouri, Pope, Katz, and Oliva, "Fat-Free Mass Index," 224.

27. Pope, *Adonis Complex*, 37.

28. John Hansen, *Natural Bodybuilding* (Champaign, IL: Human Kinetics, 2005).

29. Information on Dave Goodin can be found at www.texasshredder.com, viewed 12 May 2008.

30. Pope, *Adonis Complex*, 36 & 37.

31. *Ibid.*, 38.

32. There is a branch of physical anthropometry that works with body composition measures from photography that is used at times in forensic situations. Neither Pope or the Todds employed this method.

33. Pope was not able to obtain photographs of Jim Park, Mr. America 1952, or Ray Schaeffer, Mr. America 1956. Some photographs used by Pope for this project were supplied by Terry Todd.

34. Harrison Pope to Jan Todd, email communique, 30 March 2008.

35. John Fair is a member of the North American Society for Sport History and attended the lecture in Lake Placid. In his book, *Muscle-town USA: Bob Hoffman and the Manly Culture of York Barbell* (University Park, PA: Penn State Press, 1999), Fair writes: "It was Grimek's classic physique that brought visibility and financial success to York . . . in his heyday, he became almost a cult figure. Grimek's was the image that sold magazines and fired the blood of the young men of America." p. 63.

36. John Fair, "Mr. America: Idealism or Racism: Color Consciousness and the AAU Mr. America Contests, 1939-1982," *Iron Game History: The Journal of Physical Culture*, 8(1) (June/July 2003): 10.

37. The evolution of bodybuilding training is discussed in detail in: Joe Weider, with Terry Todd and Jan Todd, "Chapter 4, The Weider System," *Bodybuilding As I've Seen It* (Austin, TX: University of Texas Press, Forthcoming).

38. Dr. Jack Berryman teaches in the Medical School at the University of Washington and served as President of NASSH from 1989 to 1991.

39. Lou Schuler interview dated 18 February 2005. Viewed at: <http://stlcardinals.scout.com/2/353285.html>. See also: Jeremy Likeness, "Ten Fat Mistakes," at: <http://www.bodybuilding.com/fun/likeness10.html> on 4 April 2008.

40. Ron Kroichick, "One Size No Longer Fits," *The Sporting News*, 223(27) (5 July 1999) 12-16; "Sizing Up The Sluggers: My How They've Grown," *The Sporting News* 231(22) (23 May 2007): 27; and, E. J. Mundell, "Supersized in the NFL," at: <http://news.healingwell.com/index.php?p=news1&id=524269> viewed on 10 May 2008.

The Amazing Transformation of Bruce Randall

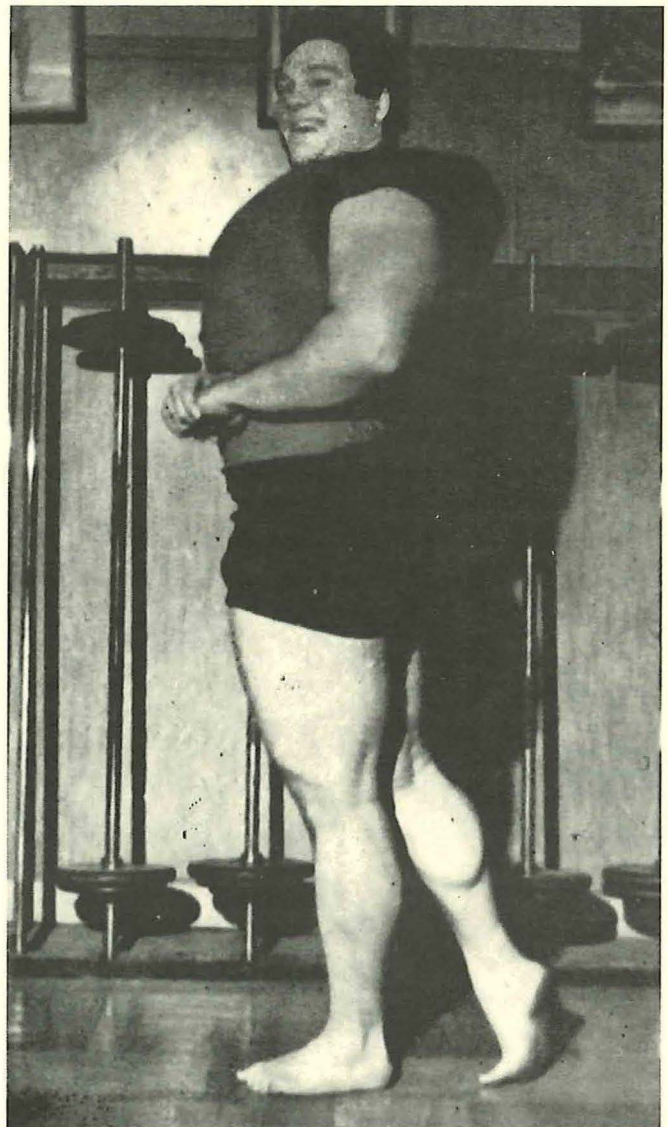
Randy Roach

Reprinted from *Muscle, Smoke & Mirrors* (Bloomington, IN: Author House Publishing, 2008): 562 pp.

*Editors' Note: The following article is taken from a book published two months ago by Randy Roach. Called **Muscle, Smoke & Mirrors**, this fascinating work is the result of six years of research and writing. A full 562 pages in length, it is also the first of two volumes. Both volumes deal with the history of the relationship between bodybuilding/strength training and nutrition. Roach has been an active participant in the Iron Game for three decades, and for the past 20 years he has operated a private training facility. A Canadian living in Ontario, Roach has a background as a senior programmer in the fields of museum work and environmental engineering. The book may be ordered online at: www.musclesmokeandmirrors.com.*

In 1966, an 18-year-old Terry Strand responded enthusiastically to a *Chicago Sun Times* advertisement announcing the appearance of a former Mr. Universe at a downtown Montgomery Ward department store. Strand recalled very few people showing up to see and listen to the physique star promote Billard barbells, a company the musclemen represented. What impressed the young Strand was not just the amazing physique of the 1959 Mr. Universe, Bruce Randall, but the very demeanour and sincere nature of the athlete. Strand reflected:

Bruce was much less interested in hawking Wards' products than in evangelizing the passersby as to the glory of a fit and toned body. As an eighteen-year-old already with a bad case of iron fever, I listened enthralled to his impassioned pitch for health via the barbell lifestyle. I squeezed in a question now and then, asking him about protein, reps, sets . . . just the usual inquiries.



This photo of Bruce Randall was taken in the summer of 1955, when he weighed 387 pounds at a height of 6'2" and his chest was measured at 61". Later that summer he reached his top weight, 401 pounds, at which time he radically changed both his exercise routine and his diet. Thirty-two weeks later he had lost 218 pounds.

He could have blown me off, seeing that I was a ragamuffin kid with no lucre for the till. Instead he ended up volunteering his personal home address in case I needed some further illumination.¹

A year later, Strand met up again with Randall at a Chicago Teenage Youth event where both were participating. Strand was fulfilling a commitment to the YMCA, which awarded him a scholarship for being one of the top five outstanding teenage athletes in the region. Bruce Randall was still as impressive in character as Strand remembered him from the year before:

He was as always more of a Jack Lalanne educator than a Joe Weider marketer . . . He was never given a lot of coverage because he head-



Randall, weighing about 350 pounds, was very strong, particularly in the deadlift. He claimed to have done 770 pounds, well ahead of the best deadlift done up until that time. As can be seen in the photo, he also had unusually well-shaped thighs and calves, which were two of the reasons he was successful as a bodybuilder several years later.

ed up the Billard Barbell Company for Diversified Products of Canada. So he was looked upon as a competitor by the Hoffman and Weider equipment companies.²

What was so special about this [future] 1959 bodybuilding champion that even Peary Rader would dedicate both his editorial and a feature article to him in the May 1957 issue of *Iron Man*? Rader set the tone in his editorial titled, "A Lesson from Bruce Randall's Story":

VERY few, if any, men have come along in the Iron Game who created such a sensation as Bruce Randall. We had followed this young man's rapid rise to fame during the past year or so through friends who knew him and watched his progress. His remarkable gains in bodyweight and power were truly unbelievable. When he reached a little over 300 lbs. none of us ever thought he would go on to over 400 lbs. How much farther could he have gone? He feels he could have reached at least 500 lbs., and no doubt he could have. He feels that at 500 lbs. bodyweight he could have dead lifted 1,000 lbs. After seeing his remarkable accomplishments we would not want to doubt his ability to lift so much.³

Rader's lesson in this story was firmly on faith and determination in one's God-given abilities to do what he or she sets their mind to. Randall not only willed himself to bring his bodyweight up methodically to over 400 lbs. (181.8 kg) for strength purposes, but to then make such a dramatic transformation that he was able to capture the 1959 Mr. Universe crown. In the same May 1957 issue of *Iron Man*, Rader shared the "Amazing Story of Bruce Randall."⁴

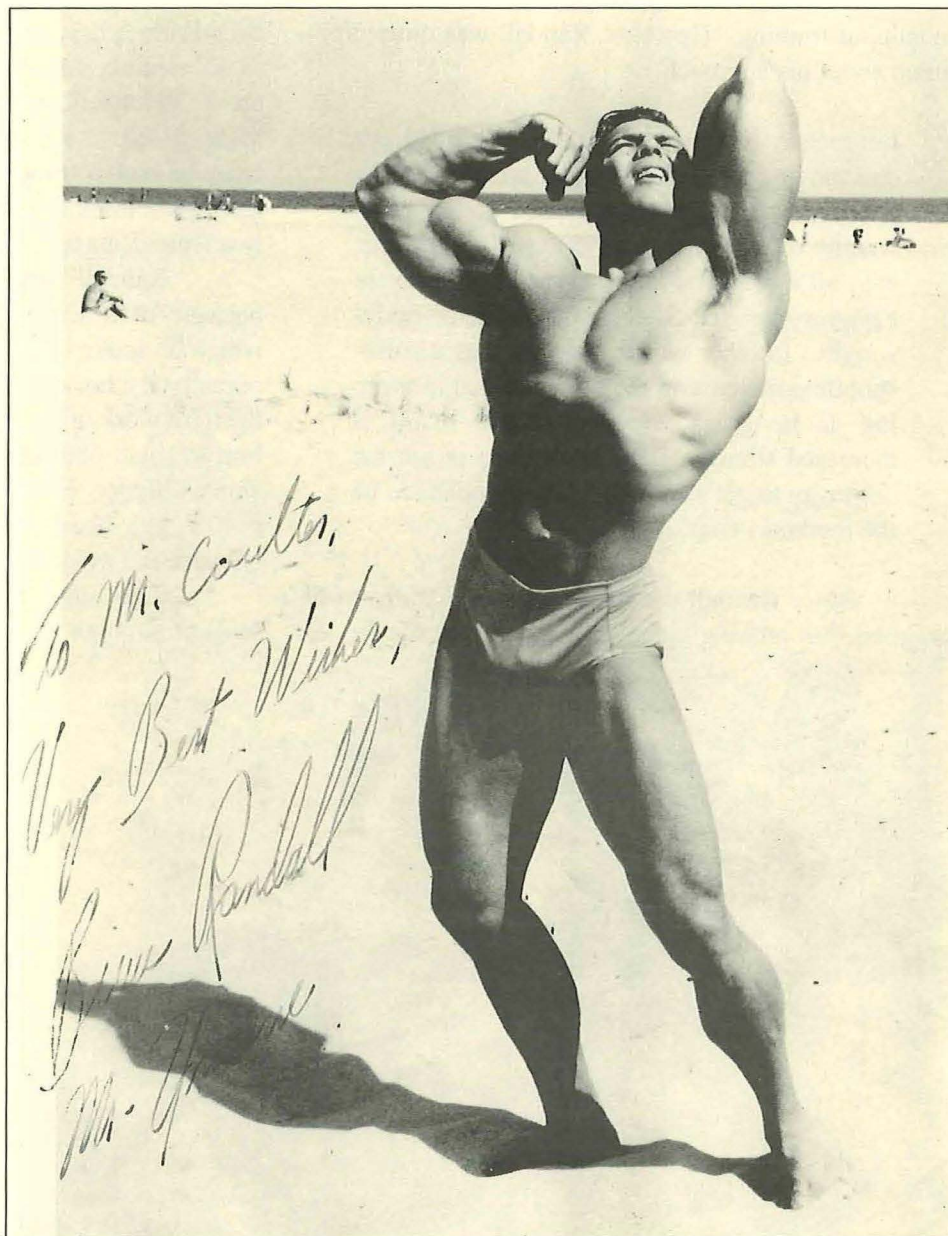
Randall believed his appreciation for the value of proper diet was obtained during a summer job on a merchant vessel. It was during his stint at sea that he attributed the fresh air, hard work, and good eating for taking his bodyweight from 164 lbs. (74.55 kg) to 192 lbs. (87.27 kg) in 58 days. Back to school and playing football and putting the shot, his weight dropped back to 185 lbs. (84.09 kg), where it remained until he graduated.

After entering the Marine Corps and finishing

boot camp, he was stationed at the Norfolk Naval Base. It was at this point where Randall stated he was six months past his 21st year in January of 1953 when he was introduced to the finest weight training facility in the Navy, run by Chief Petty Officer Walter Metzler. Randall was still playing around with his shot put and weighed 203 lbs. (92.27 kg) but he wanted to get up to 225 lbs. (102.3 kg) in order to play football for the base.

Randall stated his initiating strategy for getting bigger and stronger:

In order to increase my food intake, each time I sat down to a meal I would take an extra chop, glass of milk, slice of bread, etc. before leaving the table. By doing this at every meal, (and I made it a point never to miss a meal), my stomach seemed to stretch in order to accommodate the increase in food. Also my digestion, assimilation and other body functions stepped up to take care of the increase. (Now I do not necessarily recommend this method for those who wish to gain weight. I merely relate this to illustrate how I gained so rapidly.)⁵



This photo, from the Todd-McLean Collection, was given to Ottley Coulter by Randall in the late 1950s, when he weighed approximately 225 pounds. It demonstrates the body Randall had when he won the coveted NABBA Mr. Universe title in 1959. The remarkable physical transformation he was able to make in just a few years, before the arrival of anabolic steroids, is unprecedented in the annals of physical culture. Even today—with anabolic steroids, human Growth Hormone, food supplements, and an improved understanding of nutrition and training techniques—no one has come close to doing what Randall did.

Randall shot from 203 lbs. (92.27 kg) up to 225 lbs. (102.3 kg) in six weeks. By spring, he was up to 265 lbs. (120.5 kg). At that point, Metzler convinced him to drop football and focus on the weight training. Peary Rader liked and respected Randall's attitude and disposi-

tion, but was a bit perplexed over his choice of training routines. It was well known that Rader and others were adamant about heavy leg work anchoring a big eating/strength program, but strangely enough, Randall chose to work nothing but arms for those first initial

months of training. However, Randall was quite diplomatic about his approach:

Let me say here and now that I do not believe one can just get fat and become strong. Things such as what foods were used to gain the weight, routines used in training, living habits, etc., all have to be done properly in order to become stronger through increases in body-weight. In other words if one makes a corresponding increase in the weights used in training as he gains weight the end result is increased strength. This of course is not the only way to get stronger. It just happens to be the method I employed.⁶

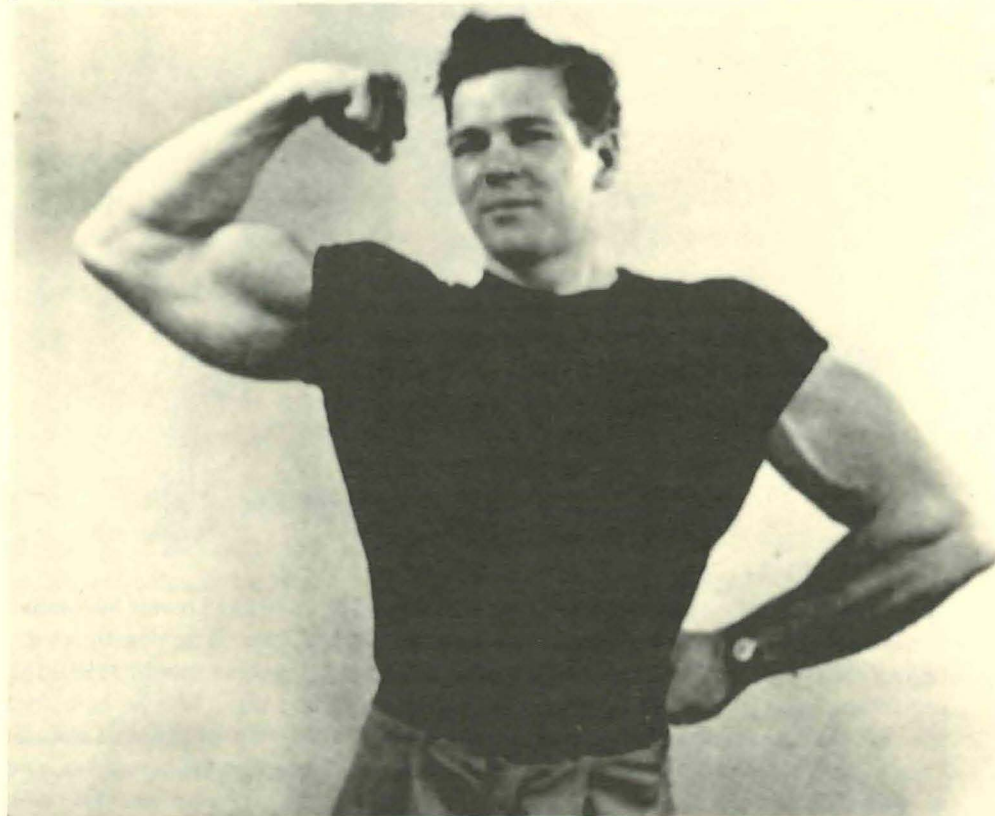
Bruce Randall did make some alterations to his program, but nothing elaborate and still no squats. He

added some chest work and the "good morning" exercise to his routine. On the latter movement, he would build up to an unbelievable weight of 685 lbs. (311.4 kg). Most people were afraid of doing the good morning exercise with an empty barbell or even a broomstick, let alone dare think of a weight of that enormity. It was truly a Herculean feat of strength.

Randall originally shied away from the squat because of a serious injury three years previously in which he broke his leg in seven places. He would periodically test his strength in this movement and attributed the hard work in the good morning exercise for allowing him to squat 680 lbs. (309.1 kg). Not bad for an occasional attempt. He actually once took a shot at a 750 lbs. (340.9 kg) good morning, but had to drop the bar because the weights shifted on him.

The only thing rivaling Randall's incredible feats of strength was the quantity of food he consumed.

It was his belief that in order to increase his strength, he would have to increase his size, and this meant a significant increase in food. He structured his diet around four meals starting at 6:30 a.m., 11:30 a.m., 4:30 p.m., and finally 9:30 p.m. The only food he would allow between meals was milk. On average, he consumed eight to ten quarts (7.26 to 9.08 L) a day along with 12 to 18 eggs. As mentioned, this was average! He stated it was not uncommon for him to drink two quarts (1.82 L) of milk for breakfast, along with 28 fried eggs and a loaf and a half of bread. He once consumed 19 quarts (17.25 L) of milk in one day, and 171 eggs in total over seven consecutive breakfasts! That's almost five gallons, or close to 15,000 calories and over 600 grams of protein in milk alone. He was known to virtually fill an entire cafeteria



In this photo, Randall weighs 187 pounds, which is almost as low as he went before upping his food intake and altering his weight-loss training program. He added almost 40 pounds before he won the Mr. Universe contest. The training programs and the diet he used to trim down were at least as radical as the techniques he used to gain from 203 pounds to 342 pounds in just over 14 months. For example, during his weight-loss period he once trained for 81 hours in one week, and in the first 15 days of 1956 he did at least 5,000 sit-ups every day. He realized that these procedures were potentially dangerous, and did not recommend them.

tray with rice and pork and consume it all at a single sitting. *[Editors' note: On one occasion, this resulted in a trip to the hospital. What happened is that by the time Randall got to the mess hall most of the food that he liked was gone—except for rice. So he ate a cafeteria tray full of rice which, not having been thoroughly cooked, swelled so much once Randall had eaten it that he had to have his stomach pumped.]*

Randall was discharged from the Marines on March 11, 1954 and tipped the scales at 342 lbs. (155.5 kg). This was a gain of 139 lbs. (63.18 kg) in just over 14 months. He continued to bring his weight up to 380 lbs. (172.7 kg), when he made the following lifts:

- Press:** 2 repetitions with 365 lbs. (165.9 kg),
1 rep with 375 lbs. (170.5 kg);
- Squat:** 680 lbs. (309.1 kg);
- Good morning exercise:** with legs bent, back parallel to floor, 685 lbs. (311.4 kg);
- Deadlift:** 730 lbs. (331.8 kg) 2 repetitions,
770 lbs. (350.0 kg) 1 rep;
- Curl:** 228 lbs. (103.6 kg);
- Dumbbell bench press:** with pair of 220 lbs. (100 kg) dumbbells, 2 repetitions;
- Supine press:** with 482 lbs. (219.1 kg) after 3 seconds pause at chest;
- Decline dumbbell press:** with pair of 220 lbs. (100 kg) dumbbells, 1 repetition;
- 45 degree incline clean and press:** 380 lbs. (172.7 kg), twice, 410 lbs. (186.4 kg) once;
[Ed. Note: This was probably a continental clean of some kind and not a power clean.]
- Support weight at chest for 1/4 squats:**
1320 lbs. (600 kg);
- 1/4 squats:** with weight well in excess of 2100 lbs. (909.55 kg).⁷

These lifts were rivaling those of the phenomenal 1956 Olympic heavyweight weightlifting gold medalist, Paul Anderson. Randall stated that he brought his weight up to a final 401 lbs. (182.3 kg), but was finding it difficult to focus strictly on his training. *[Ed. Note: Not to mention the expense of his diet.]* To this giant athlete, his quest for strength through sheer size was driven by the power of a willful mind resembling that of The Mighty Atom:

I am a firm believer in the power of the mind when it comes to lifting (or anything else for

that matter). It is only with the constant urging of the mind upon the body to do more and more that one attains the pinnacle. As much as one uses his body in this sport I believe he uses his mind more. Strength, I believe, depends upon one's mental attitude. How many times I have seen a man say, 'I can't lift this,' and consequently he can not. Conversely many men can lift a weight because they think they can. And they do! It all boils down to this. Without the proper frame of mind nothing is possible and with the proper frame of mind nothing is impossible.⁸

What Goes Up Must Come Down!

His "never say never" attitude was about to be put to the test. It was August of 1955 when he hit 401 lbs. (182.3 kg) and decided he wanted to "look at life from the other side of the weight picture." Upon his decision to reduce his weight dramatically, he was met by some negative feedback, including some from authorities in the industry. Undaunted, Randall viewed the challenge methodically as he stated:

Take a sculptor about to create a statue. He takes a big, ungainly piece of rock and with his hammer and chisel he chips away at the rock until he creates the desired effect. Well, I was that big ungainly hulk of rock and the dumbbells and barbells were my hammer and chisel. I also had something on my side that the sculptor does not have, Diet.⁹

Randall's strategy was basically to reverse all engines. Just as he gradually increased his calories by incrementally adding food to each meal, he did the opposite by slowly reducing the size of each meal until he settled into the following regimen:

Breakfast

2 soft boiled eggs
Plain pint (0.45 L) of skim milk
Glass of orange juice
Apple

Lunch

Salad, dates, nuts

Supper

Round steak
Two vegetables

Quart (0.91 L) skim milk with
additional powdered milk
Gelatine
Coffee occasionally¹⁰

He adopted a system formatted similarly to one Vince Gironda used the next year, but Randall would be much more radical in his exercise regimen. He eliminated the starch and much of the fat from his diet and went very light on the lunch. His eating plan was primarily lean protein and some fruits and vegetables. Once again, Randall matched the dramatic reduction in calories with an equally phenomenal increase in his training. Repetitions jumped from three to five up to 12 to 15. His sets went from three to five and his repertoire of exercises went from six to 20. He claimed his sessions lasted from six to seven hours. He stated that he once trained 27 hours in two days, and 81 hours in one week.

In his New Year's resolution for 1956, he vowed to do 5,000 sit-ups daily for 15 days straight. He feels the 75,000 sit-ups helped him reduce his waist to 33 inches (83.82 cm). Randall also incorporated a lot of running into his routine and by March 20, 1956, he weighed in at 183 lbs. (83.18 kg). This was an amazing drop of 218 lbs. (99.09 kg) in 32 weeks. Below are Bruce Randall's measurements at his various weights. He stated the measurements listed at 401 lbs. (182.3 kg) were actually taken at a lower weight.¹¹

January 3, 1953 203 lbs. (92.27 kg)	August 2, 1955 401 lbs. (182.3 kg)	March 20, 1956 183 lbs. (83.18 kg)
Arm: 16 1/4" (41.28 cm)	23 1/8" (58.75 cm)	17 1/4" (43.81 cm)
Chest: 45" (114.3 cm)	61 3/4" (156.84 cm)	49" (124.46 cm)
Waist: 31" (78.74 cm)	58 1/2" (148.59 cm)	29" (73.66 cm)
Thigh: 23" (58.42 cm)	35 1/4" (89.54 cm)	24" (60.96 cm)
Calf: 16" (40.64 cm)	22 1/8" (56.21 cm)	17" (43.18 cm)

Randall went on to compete in the Mr. America that year and placed thirteenth. His weight had gone from 183 lbs. (83.18 kg) to 219 lbs. (99.55 kg) for that event. What was amazing is that it was noted in *Iron Man* that after all the weight manipulations, there were no stretch marks or loose skin visible on his body at the America show. At six feet two inches tall (187.96 cm), 183 lbs. (83.18 kg) was not an appropriate weight for him and most likely represented a very emaciated,

chronically over-trained state. He probably had little difficulty bringing his competition weight up to 219 lbs. (99.55 kg). According to the November, 1957 issue of *Muscle Power*, he placed sixth a year later at 195 lbs. (88.64 kg), 24 lbs. (10.9 kg) lighter than the year before.¹² Randall's off-season weight seemed to have settled between 230 lbs. (104.5 kg) and 240 lbs. (109.1 kg). He competed and won the 1959 NABBA Mr. Universe title at a body weight of 222 lbs. (100.9 kg).

Randall said it was unlikely that he'd bring his weight to such a size again, but would not totally rule the possibility out. His food bill was often over \$100 a week and that wasn't cheap back in the mid-1950s. He did state, however, that if he did choose to do so, he felt he could reach 500 lbs. (227.3 kg) in 18 months.¹³ Bruce Randall finished his revelations to Peary Rader in that May 1957 article with the following advice, "In conclusion I should like to say that I have found these two rules enormously helpful in any undertaking I have attempted. 1. Ask and ye shall receive. 2. The Lord helps those who help themselves."¹⁴

It may have been the muscles of Bruce Randall that first drew the young Chicago native, Terry Strand, to go with such enthusiasm to see the 1950s physique star. However, it was Randall's nature that left so powerful an impression on Strand that 40 years later, Strand had exhausted all Iron Game avenues in order to ascertain the remaining legacy of the idol of his youth. Surely, many would be curious as to just what else the amazing drive of Bruce Randall brought him through the subsequent decades of his life.

Notes:

1. Interview with Terry Strand, 2006.
2. Ibid.
3. Peary Rader, "Editorial: A Lesson From Bruce Randall's Story," *Iron Man* (April/May 1957): 7.
4. Peary Rader "The Amazing Story of Bruce Randall," *Iron Man* (April/May 1957): 12-17, 42, 47-51.
5. Ibid., 12.
6. Ibid., 13-14.
7. Ibid., 15-16.
8. Ibid., 16.
9. Ibid.
10. Ibid., 42.
11. Ibid.
12. Charles Coster, "Ron Lacy Gains Double Victory at Daytona," *Muscle Power* (November 1957): 25.
13. Rader, "Amazing Story of Bruce Randall," 48.
14. Ibid., 42.

WHY I LOVED AL THOMAS

JAN TODD
THE UNIVERSITY OF TEXAS

In the front of nearly every doctoral dissertation there is a page or two on which the author acknowledges the support he or she received while in graduate school. It's normal to thank your faculty supervisor and the members of your dissertation committee, and most doctoral students then go on to thank spouses, partners, family members, academic colleagues, and other friends. I acknowledged the love and support of a number of friends and family members in my own dissertation when I finished it, but the longest "thank you" was for Al Thomas, who passed away on 17 April 2008 at age 77. Here's what I wrote back in 1995:

Finally, but certainly not least importantly, I would like to acknowledge an intellectual and emotional debt to retired English professor, Dr. Al Thomas of Kutztown University. From the early 1970s through the mid-1980s, Dr. Thomas wrote for *Iron Man*, the most respected weight training magazine of that era. In each of his approximately eighty *Iron Man* articles, Thomas dealt with some aspect of the conjunction of strength, femininity, and culturally approved womanhood. Some articles featured women athletes who chose to defy the social conventions of the seventies by pursuing muscularity and strength, while some articles were philosophical essays in which Thomas attempted to examine and eradicate our society's aversion to strong, muscular women.

I was a neophyte to lifting who was having a hard time reconciling an internal conflict about the issue of strength and womanhood, and Thomas' articles proved to be invaluable. They allowed me to see over the wall of a narrow, somewhat sheltered garden into a rich, limitless meadow of possibility. Thomas was uncompromising; he accepted no barriers to womanhood. As Dio Lewis had done in the 1860s, Thomas challenged modern women to become the physical and intellectual equals of men. Most American women in the 1970s came to feminism through reading Gloria Steinem and Betty Friedan, but I came to feminism through reading and talking to Al Thomas. By daring to practice what Thomas preached, I discovered untapped reservoirs of physical strength and a growing antipathy for those aspects of our culture which have, in countless ways, denied women access to this important part of themselves. His articles freed me to give full expression to my gift of physical power and helped me understand the political nature of that power. These insights enabled me to make history as an athlete and to want to write history as a professional.¹

In July of 1973, Al launched what I consider to be the most significant series of articles ever published

in a fitness magazine. That was also the summer during which I began dating a large, young professor at Mercer University—Terry Todd—and tagging along with him to the gym. We got married later that fall, and so my introduction to Al's articles about women and training occurred somewhere during the early months of our courtship and marriage. Terry was also an *Iron Man* contributor and subscriber, and after we married I began reading Al's articles and training more regularly, and more seriously, than I had while we were only dating. During the Christmas holidays in 1973, we traveled to Austin and took some workouts at a wonderful old gym called The Texas Athletic Club. In the gym one day I met a young woman who'd recently lifted as a 114-pounder in a men's powerlifting contest so that she and some of her male gym-mates could win the team trophy at the contest. Meeting her piqued my curiosity about the possible limits of my own strength, and so after talking it over with Terry I decided to start training for strength and not just general fitness and toning. Having a husband with his background was an advantage to me, of course. However, even with the strong technical and emotional support he provided, I was still not sure that I *should* lift heavy weights. Terry said it was completely up to me. I knew I *could* lift them, as I saw my strength growing in response to my training, but I remained conflicted about whether it was appropriate. After all, I was a woman, and until I met Terry no one had ever suggested to me that women had as much right to strength as men did.

In any event, the reason I believe Al's articles were so important was because they provided adventuresome women in the brave new world of the Post Title IX era with a new set of role models and a radically different paradigm for "appropriate" womanhood.³ Al's first article in the series, entitled "Weight Trained Women," was illustrated with a picture of the famous 1950s-era lifter Grena Trumbo. Standing in her striped swimsuit and high heels she looked very powerful, and I was fascinated to read in the caption that Trumbo had reportedly done a partial squat with 650 pounds, a full squat with 266 pounds, and had benched 160 pounds. Alongside the piece, Peary Rader announced that *Iron Man* would begin running regular articles on weight training for women, but noted that the women featured in the articles would have to be "genuine weight trainers and-or lifters or we are not interested." Continuing,

Rader wrote, "This is not a beauty department," but a series "for women who practice heavy athletics."⁴ Over the next several years Al Thomas (sometimes writing under his middle name, Karl) had an article in nearly every issue. He profiled a number of prominent women athletes but, more importantly, he also wrote a number of well-reasoned, truly philosophical essays in which he argued for a woman's right to strength and muscularity. These early essays—"Why Prejudice Against Strong Women?"; "The Weight Trained Woman: Some Thoughts on the Woman Mesomorph"; "In Defense of the Woman Mesomorph"; and "The Arm vs. The Vine"—not only provided me with answers to the niggling concerns I had from time to time about my own femininity and growing strength but actually inspired me, as an act of nascent liberation, to see just how far I could push the limits of my strength.⁵

Although Terry had known Al for a decade, I first met him in the summer of 1975 at the Men's Senior National Powerlifting Championships in York, Pennsylvania. However, I didn't really have a chance to sit down and talk to Al at length until the first official national women's powerlifting meet (called the All American Women's Open) was held in Nashua, New Hampshire in 1977. There, Terry, Al, and I talked a lot and found that we shared more than just our passion for lifting. All three of us had degrees in English and loved books, and that enriched our friendship and the enjoyment we found in each other's company through the years. From then on—either at lifting meets of one sort or another or at the annual meetings of the Association of Oldtime Barbell and Strongmen—we saw Al regularly, and whenever we met we just picked up our conversation as if we'd been apart for a few hours rather than a few months or even a year. We also had many long conversations with Al on the phone, and through those talks Terry and I came to have even more admiration for this joyous, brilliant man who loved all aspects of the Iron Game.

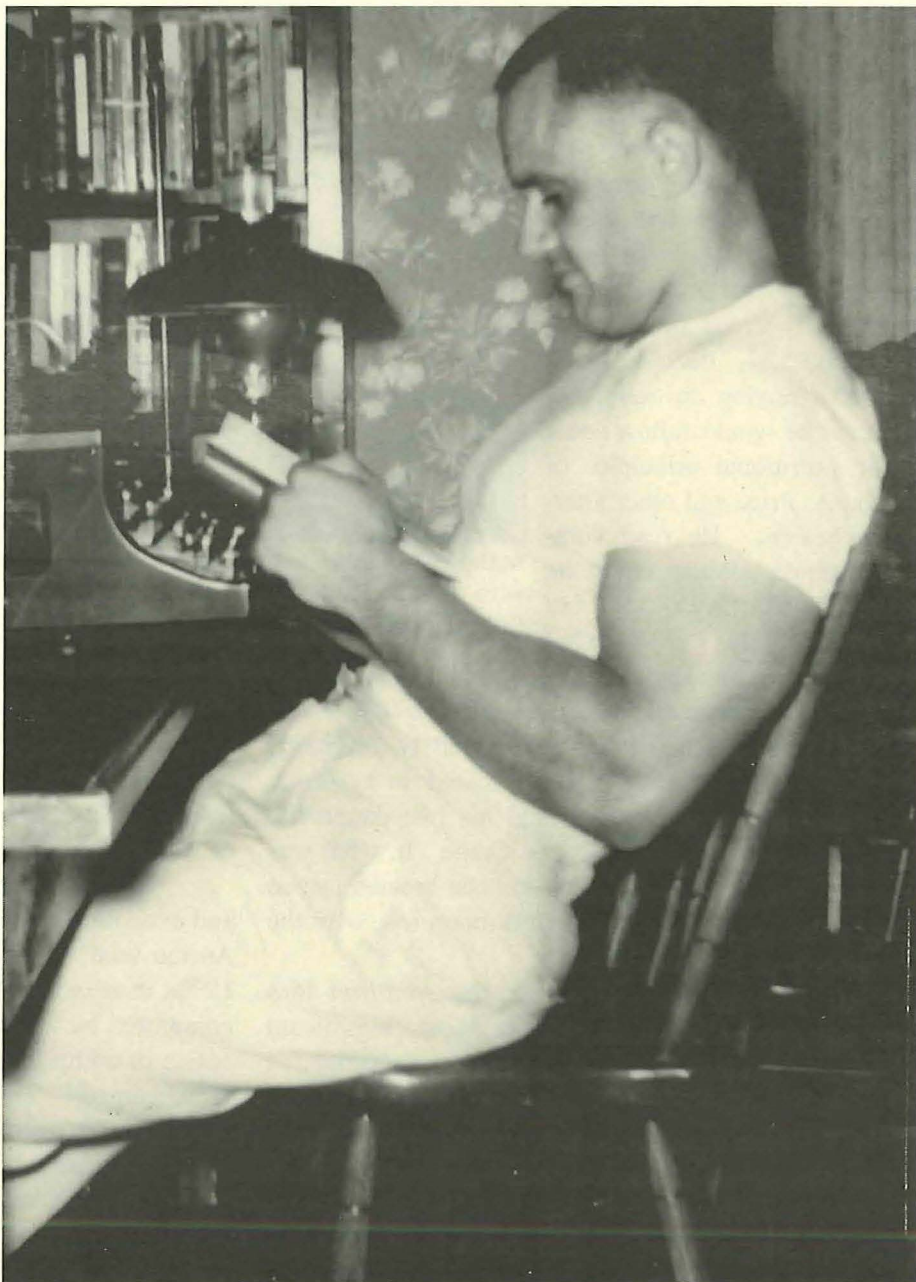
Al was born in Reading, Pennsylvania, on 7 November 1930 to the Reverend Alfred J. and Adella Krupp Thomas. As a child he lived in Baltimore until age 13 and then moved to Lockhaven, Pennsylvania, where he graduated from Lockhaven High School a year earlier than normal because he'd been able to skip a grade. Following high school Al joined the service, like most young men in that era, and enlisted in the Navy,

where his writing and editing skills landed him a posting as editor-in-chief of the Navy's newspaper. After finishing his stint in the service, Al entered Albright College in Reading, Pennsylvania, where he majored in English. He then went to Penn State, took a Ph.D. in English literature, and embarked on his career as a college instructor. He taught first at Lycoming College in Williamsport, Pennsylvania, then moved to the University of Wisconsin at Madison, where he met his wife, Zenta Laimdota, and married her in 1958 having, as he told us, "fallen in love with her calves and then with the rest of her." The next year he took a position in the English Department at the main campus of Penn State in State College where, according to Zenta, he designed and implemented the first weight training program for the Penn State football team. In 1960 they moved to Reading, where he joined the faculty in the English Department at Kutztown State College, which was later renamed Kutztown University. Al taught English at Kutztown for the next 31 years (during which time he never missed a single class), and also helped organize the Kutztown Collegiate Powerlifting Team.

In 1991, Al decided to retire from teaching and move to his beach house in Ocean City, New Jersey. Terry and I visited him there several times and it was abundantly clear that he loved living along the Atlantic Ocean. We walked the boardwalk with him, swam in the chilly Atlantic, and, of course, talked and talked about our many shared interests in books and the field of physical culture.

From the mid-80s on, when we would see Al at the AOBS banquets we'd always share stories about the game or books or

the great old-time boxers, but after he moved to Ocean City we found ourselves talking more and more about nutrition and alternative medical therapies. This was so because Al had just been diagnosed with prostate cancer and had decided to fight it with nutrition and non-traditional therapeutics. He knew that I had had a close call with cancer myself in the late 1980s, and he seemed to



According to his family, this photo shows the quintessential Al Thomas with his books, big biceps, and beloved Smith Corona typewriter. Unlike most modern writers, Big Al never made the leap to computers.

draw strength from my apparent recovery. Back then, to look at Al or hear him talk it was impossible to tell he was sick in any way. And for the next fifteen years or so after his diagnosis, neither Terry nor I could see any change in Al at all. He continued going to the gym and training hard; his physique remained thick, muscular, and strong; his ruddy complexion glowed; he was full of his usual energy and enthusiasm; and no one would have known that he was being gradually overtaken by cancer. When he received the original diagnosis, Al decided that instead of relying on traditional medicine he would follow some of the nutritional principles of Weston A. Price and other alternative healers. He read voraciously on the subject, and to the end of his life he believed that those principles were what

allowed him to live so much longer—and so much more fully—than mainstream medicine had predicted. But after fighting his cancer for approximately seventeen years he died at home in Ocean City, cared for by Zenta, his beloved wife of 50 years, and his two daughters, Amanda Buxbaum and Zenta Lee Crane. In what was probably a coincidence, he took his last breaths just as the sun sank from sight and the full moon rose over the water just beyond his window.

Earlier in this piece I stated that Al's *Iron Man* articles on women constituted the most "significant series of articles ever published in a fitness magazine." I know that some will take issue with the claim, but I can't think of any other series of articles published in a "muscle magazine" that have had such a broad, cultural impact—in this country and abroad. Although I realize that Al was riding a pop culture wave, I do not believe that the growth which occurred in women's powerlifting, weightlifting, and bodybuilding during the 1970s and 1980s would have been as rapid had Al Thomas not been championing women's lifting and development in *Iron*



At the 1984 Collegiate Nationals, Al Thomas posed with Jan Todd, who was there coaching the University of Texas powerlifting team.

Man. He was our Sojourner Truth, our Mahatma Gandhi, our Booker T. Washington, our Nelson Mandela—an outspoken advocate of feminine equality who truly opened the doors of the weight room for my generation of women. Charles Gaines and George Butler would have had no plot line to explore in *Pumping Iron II—The Women* had Al not opened the debate about what it means for a woman to have noticeable muscle.

Near the end of his life, Al wrote a lengthy essay in which he talked about his advocacy of women's lifting and why he felt called to champion the muscular female. In the essay, Al argued that women have never had a heroic female ideal and that this lack has led to the definition of women as weaker, and therefore subordinate to men in terms of power and human

potential.⁶ As he explained it in another part of the essay: "I write what I write with an eye to creating the only consciousness-informing ideal that the female sex has not possessed since time out of mind . . . What might that ideal be? The ideal of an heroic female form. For better or worse, that's what my writing boils down to."⁷

The one area in which Al came to have second, and even third, thoughts was the area of anabolic drugs. As the seed of his grand idea blossomed in the early 1970s in *Iron Man* and continued to spread, he was so enraptured by what he had wrought that he was slow to notice or admit the worm within the apple of amplified female muscle. The warning signs were there but, as he said later, he overlooked them while he gloried at the sight of so many stronger and muscularly larger women. As the role of steroids and related substances began to be clear, however, he also came to wonder—as he watched the explosion and transformation of women's bodybuilding—if the appropriate response to the transformation was to simply say that because the playing field was so uneven women had more right than men to take male

hormones. But as time passed and the transformation continued—finally producing specimens with a combination of muscle mass and muscular definition beyond that displayed by male bodybuilders of the pre-steroid era—he realized that that was no answer.

Al Thomas was one of the brightest men I've ever been around, and in the end he fully understood that there was a dark side to his call for liberation—that part of his legacy was a classic case of what sociologists call the “law of unintended consequences.” However, because of the devastating effects his encroaching illness had on him physically and emotionally, he was never able to address the issue with his usual densely-worded essays. Even so, in one of his last efforts—written when his hands had become too stiff and curled to type—he briefly discussed it. In those comments he left no doubt that he still favored what he called the “grandly designed female form.” However, he argued forcefully that bodybuilding drugs led to the “glute-striation, quad cross-hatching, and dehydration with its effects both on skin and vascularity—not to mention the ‘skull face’ as a barometer of the competitor’s achieved-degree of ‘contest readiness’ and ‘conditioning’: the *more* prominent the competitor’s skull bones, the more deeply-shrunken her eyes, the . . . ‘better conditioned’ she is.” His final words on the subject were these, “Grandly designed circumferentiality . . . is available to virtually any gifted woman who loves training-as-training and is willing to train harder and over a greater number of years than her steroid-enhanced sister. The goal of [such] training regimens is the acquisition of a voluptuousness of womanly muscular development which will blossom and prosper as the decades progress, rather than decline into atrophy as the steroid-user’s declines when she sees fit to desist from further steroid enhancement.”⁸

In 1995, I was asked to introduce Al when he was honored by the Association of Oldtime Barbell and Strongmen for his journalistic contributions to the field of weight training. I spoke that night about the role he’d played in my lifting career, as I’ve just done here, but then went on to say, “Unlike earlier magazine articles which generally just praised the benefits of weight training as a means to a slender figure, Thomas’ articles explored the boundaries—real and imagined—of femininity and strength.”⁹ Al helped me to understand what a life of strength could mean for a woman—and my entire life has been enhanced because I embraced that

ideal. Al also came to understand that there were, indeed, boundaries that should not be crossed. He understood that there was something deeply ironic and wrongheaded when a woman had to take a male hormone in order to become “more” of a woman. That’s why I loved Al Thomas.

Notes:

1. 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. diss., University of Texas, 1995), viii-ix. Dio Lewis was a mid-nineteenth century exercise expert and social reformer who championed women’s rights.
2. Title IX, the federal legislation mandating equal athletic opportunities for women in educational institutions receiving federal support, passed in 1972.
3. Dr. Al Thomas, “Weight Trained Women,” *Iron Man*, 32(5) (July 1973): 34, 89-90, 92.
4. Peary Rader, “Notice,” *Iron Man* 32(5) (July 1973): 34.
5. Karl Thomas, “Why Prejudice Against Strong Women,” *Iron Man*, 32(6) (September 1973): 44-45, 73-74; Karl Thomas, “The Weight-Trained Woman: Some Thoughts on the Female Mesomorph,” *Iron Man*, 33(3) (March 1974): 42, 58; Al Thomas, “In Defense of the Woman Mesomorph: Part One—The Leg vs. The ‘Gam,’” *Iron Man*, 35(4) (May 1976): 34-35, 60; Al Thomas, “The Arm vs. The Vine,” *Iron Man*, 36(3) (March 1977): 48-49, 69, 73.
6. Al Thomas, “Why I’ve Written: One: The Creation of an Heroic Female Form as Idea; Two: Its Culture Vehicle: The Physique Exhibition (A New, Humane, Artistically Pleasing Presentation Mode); An End Game Consideration of Thirty-five Years Behind a Smith Corona,” unpublished typescript, Al Thomas Files, Stark Center for Physical Culture and Sports, The University of Texas at Austin, pp. 1-2.
7. *Ibid.*, 1.
8. *Ibid.*, 20-21.
9. Jan Todd, “Honoring Al Thomas,” *Iron Game History: The Journal of Physical Culture* 4(2) (October 1995): 1.

*Editors’ Note: On the boardwalk in Ocean City, New Jersey, near the Ferris wheel, a park bench now bears a plaque honoring Dr. Al Thomas’ memory. The Thomas family has also established a website in his honor at: www.dralthomas.com which contains a bibliography of his articles in *Iron Man*, *Iron Game History*, and other publications.*



The IRON Grapvine

Dear IGH,

I was interested in your comment on page 35 of the recent IGH regarding Goerner's 727 one-hand deadlift. I hadn't thought about it before, but I agree that surely it must have been some sort of a partial lift performed in a straddle position. Somewhat similarly, the 562 that Frank Ciavattone did a few years ago was almost certainly not a "full" deadlift, as a photo on the internet shows the bar barely reaching his knees. I suspect that is as far as it went. I'm sure that Iceland's "Benny" Magnusson could make a huge one-hand deadlift, but not many mortals will succeed in making a full one-hand deadlift with a weight far in excess of 500. I never did the lift when I was in my prime, so my best was only 345, made at the Zercher Meet when I was 47. I toyed with the idea of attempting 400 when I was in my mid-forties, but never tried it. When I did the lift, I always stood all the way up, with the bar stopping not far from my groin. Presumably I could have done 420 or so in that manner when I was in my prime.

Tom Ryan

Atlanta, Georgia

Most strength historians have become increasingly skeptical about Goerner's legendary one-hand deadlift, and it seems more and more clear that neither Goerner nor anyone else has ever done a full-range, one-hand deadlift with anything close to 727 pounds. A straddle- or partial-deadlift with such a weight would be phenomenal enough. Another confounding factor is that the standards for various sorts of deadlifts vary from era to era, country to country, and even federation to federation. When we saw Frank Ciavattone perform at one of the Association of Oldtime Barbell and Strongmen meetings some years ago he didn't do a full-range movement.



Dear IGH,

Just a note to tell the two of you how grateful I am for the magnificent work you are doing in preserving our iron game history.

Having weight-trained on a regular basis since 1955, I have always been inspired by the amazing story of the great Bruce Randall! I believe he made the greatest recorded transformation of the body—through a combination of weight training, diet, and sheer willpower—of anyone else in any endeavor. Would it be possible for you guys to publish an article on Bruce Randall (if you have not already done so)? In this day of apparent rampant BB "drug freaks," Randall's seemingly unbelievable natural BB accomplishments have been long ignored and forgotten! Do you know if Bruce Randall is still living?

By the way, Jan, I guess you have probably made the greatest recorded transformation in the female body through weight training, diet, etc. Furthermore, your and Terry's magnificent book *Lift Your Way to Youthful Fitness* is a true classic! In my efforts to encourage others to take up natural weight training over the years, I have probably purchased some 15 copies and given them to various individuals. Thanks again for all you do!

Hugo (Richard) Schmidt
Via Email

*Bruce Randall is alive, and we hope to produce in the future a comprehensive account of his remarkable life. For the time being, we hope Mr. Schmidt and other readers will enjoy the short article on page 23 about Randall in this issue. The article is excerpted from Randy Roach's new book, **Muscles, Smoke & Mirrors**, and it deals with Randall's extreme diets and training routines. [Copies can be purchased at: www.musclesmokeandmirrors.com.] Randall's uniqueness extends far beyond his unparalleled weight gain/loss, and we were privileged to have spent many long hours in conversation with him. Mr. Schmidt's mention of Jan no doubt refers to the fact that over a period of three years she purposely and gradually increased her bodyweight from 160 pounds to 230 pounds as she tried to increase her strength, break powerlifting records, and stay ahead of the women in the sport who had begun to take anabolic steroids. When she decided to retire, she dropped over 80 pounds in 18 months and, at a bodyweight of 146 pounds, established a world record in the deadlift with 474.5 pounds—the first drug-tested record in the history of women's powerlifting.*



The following letter was sent to us in regard to our article in IGH about the 2008 Arnold Strongman Classic and about a recent article in Flex that listed the Flex staff's choices of the top ten (eleven) strongest men in history. Flex tried to take into consideration the era in which the lifts were done, possible steroid use, and the many ways to demonstrate strength. The top ten men, according to Flex, in order, were: 1) Zydrunas Savickas, 2) Mark Henry, 3) Bill Kazmaier, 4) Vasyl Virastyuk, 5) Louis Cyr, 5) (tie with Cyr) Louis "Apollon" Uni, 6) Brian Siders, 7) Andy Bolton, 8) Leonid Taranenko, 9) Paul Anderson, and 10) Ronnie Coleman (who was probably included because of his potential and because Flex is a bodybuilding magazine). Such lists are always subjective, of course, and we don't agree with all of the placings. Even so, such lists often produce interesting arguments similar to the Ruth vs. Aaron, Dempsey vs. Marciano, and Bird vs. Johnson arguments in other sports. John Coffee has earned the right to a place at the head table of judges on the subject. He has devoted his entire adult life to the operation of a heavy-duty gym and to the coaching and sponsorship of scores of lifters (primarily women weightlifters, who owe an enormous debt of gratitude to John for giving them so much of his time and treasure), and travelling the globe to attend the big meets. We also invite your response to the Flex listings and/or to John's comments.

Dear IGH:

Concerning the ranking of the top ten "most powerful men to ever walk the earth" article in the most recent issue of Flex magazine, the first observation that must be made is that it's really impossible to say with any degree of clarity just who the strongest man in the world may be. There are so many ways to measure strength. I personally favor what can be lifted for one rep on a standard Olympic barbell. Also, do we take into consideration whether or not a man ever used steroids? Were his powerlifts made wearing a supersuit? Were they done officially or unofficially? And even if his lifts were official did he perhaps get some help or a "gift" from the officials? One or two inches in depth can make a big difference in the squat . . . or, was a deadlift hitched, etc.

All that said, I can't disagree too much with the first three placings. I know both Bill Kazmaier and Mark Henry personally and have seen them both lift on many occasions. Even though I wasn't too familiar with Zydrunas Savickas, after talking with some of the boys here at Coffee's Gym and doing a little research I'm con-

vinced that Savickas can legitimately be called the strongest man.

I can't really agree with most of the rest of the placings, however. During most of my association with the Iron Game, which dates from 1956 when I was ten years old, Paul Anderson was generally accepted as the world's strongest man. He had excelled in so many various feats of strength in so many diverse fields—Olympic lifting, powerlifting, and strongman feats—that even though his world Olympic lifting records were exceeded in the early 1960s he [for a time] still had to be considered the strongest man.

Both Apollon and Louis Cyr may have been tremendously strong natural men in their era but as far as I can tell neither man ever had access to an Olympic-type barbell and probably never trained consistently enough on pulling, pressing, or squatting-type movements to be really considered for this list. Had they lived a little later and trained, they may have been number one and two on the list, but we'll never know. And who knows what giants of strength and potential may have lived in the Scottish Highlands or in the Carpathian Mountains five hundred to a thousand years ago? Here again, we'll never know.

Although Brian Siders, Andy Bolton and Leonid Taranenko (who I've seen lift and know slightly) are all at the very top of their fields, none has excelled in the variety and diversity of strength sports to quite put them in the same boat with Paul Anderson. There were several very strong men who were completely left off the list and who certainly deserve to be considered when discussing the strongest men in history. Powerlifter Don Reinhoudt is one. Also Shane Hamman—perhaps the only drug-free man to snatch and clean and jerk well in excess of 400 and 500 pounds—who also did a 1000 pound squat early in his career before he switched to Olympic lifting. The names Ken Patera, Serge Redding, Vasily Alexeyev, Antonio Krastev, and the Iranian super-heavy Hossein Rezazadah also come to mind.

I'm sure that I've left many deserving men off the list. If humanity survives another thousand years and men continue to lift weights with barbells and perform feats of strength with other heavy objects, who can imagine what fantastic feats may be performed by super homo-sapiens using genetic engineering, new drugs, and new training methods? I'm not sure I'll regret not being around to see it.

John Coffee
Marietta, Georgia

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