Thomas K. Cureton, Jr.: Pioneer Researcher, Proselytizer, and Proponent for Physical Fitness

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Introduction

Thomas K. Cureton, Jr. (1901–1992), was 91 when he died in Urbana, Illinois. He was recruited to the University of Illinois in Urbana-Champaign by Dean Seward C. Staley in 1941 after teaching at Springfield College in Springfield, Massachusetts since 1929. Cureton established the Physical Fitness Research Laboratory in the Department of Physical Education for Men in 1944. Actively engaged in teaching, research, publishing, clinics, traveling, mentoring graduate students, exercising, and providing service to a variety of professional associations, most notably the Young Men’s Christian Association (YMCA), the American Association for Health, Physical Education, and Recreation (AAHPER), and the American College of Sports Medicine (ACSM), until his retirement in 1969 and thereafter as professor emeritus through the 1980s, T. K. Cureton, Jr., was the recognized leader and steward of America’s fitness movement for a half century.

America had other health promoters who preached the gospel of exercise and health during the twentieth century like Bernaar Macfadden, Paul Bragg, Charles Atlas, and Jack LaLanne, but none of these highly popular promoters of physical culture possessed the academic credentials to positively impact the scientific community the way Cureton did. Although Cureton and these other health reformers had much in common—all were weak and sickly in their youth; they turned to exercise and good nutrition to improve their lives; all used themselves as living examples of the healthy lifestyle they were espousing; they took pride in outperforming men forty years younger; they were prodigious and inspirational writers, publishers, and speakers; all were physically active long after retirement age; and their exceptionally long life spans were testimonies to the “laws of health” which they taught and obeyed—Cureton emerged as the only fitness enthusiast who produced the research to substantiate his beliefs regarding the positive influence of physical activity on health.

Like the other physical culturists of the first half of the twentieth century, Cureton was called a “quack” and a “charlatan” by some physiologists and physicians who did not agree with his early findings, especially those relating to exercise and the heart. As Cureton remembered, the typical attitude of skeptical physicians was, “That wild man will kill a few middle-aged people and then he won’t be around to do it again.” But, in Cureton’s relentless bulldog style, he produced study after study demonstrating that his statements were indeed correct. By 1954, when Cureton was featured in the CBS television program, “The Search for Health and Fitness,” and certainly by 1966 when he was directly involved in the publication of a special report published by Time-Life Books on The Healthy Life: How Diet and Exercise Affect Your Heart and Vigor, he had silenced most of his critics. In fact, in the latter publication, which was made available to millions of Americans through book clubs and mass marketing, Cureton was pictured during his daily run through a cemetery near the University of Illinois campus. The caption for the photograph read: “As part of his own fitness program, Dr. Thomas K. Cureton, Jr., jogs near the University of Illinois. His workout takes him through a cemetery where some of his colleagues who once called him a ‘health nut’ now rest.”

Cureton was deeply committed to physical education and made innumerable contributions to that profession. Influenced early by William G. Anderson and Robert J. H. Kiphuth at Yale and James H. McCurdy, George B. Affleck, Leonard A. Larson, and Peter V. Karpovich at Springfield College, Cureton was a doctoral student of Jesse Feiring Williams at Columbia University. In the tradition of Charles H. McCloy at the University of Iowa, Cureton argued for more emphasis on the “physical” in physical education. And, even though he organized and directed the most notable exercise physiology research laboratory in physical education after the demise of the Harvard Fatigue Laboratory (1927–1947), Cureton still believed “the true laboratories in physical education are the pools, playfields, gymnasiums, and camps.” He never lost sight of his roots and he took pride in his “hands-on”

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approach to exercise and fitness in YMCAs, schools, colleges, factories, swimming pools, and gymnasiums throughout the world. Cureton was first and foremost a teacher and was very proud of his profession. With the general goal of improving the health of humanity, he saw physical education as the medium through which his goal could be realized.7

An impassioned speaker about fitness and health, Cureton gave thousands of lectures; performed at a like number of demonstrations and clinics; and was quoted in hundreds of journals, popular magazines, and newspapers. He was always frank and forthright, telling his listeners and readers that “you need exercise because your life is in danger” and that fitness leads to “more life in your days and more days in your life.” Cureton also tried to convince his audiences that “it is possible for anyone to undo damage that may have been done through neglect” and that everyone was capable of regaining “the sort of physical condition that makes life fully worth living.”8 But, while Cureton was always optimistic in his hope to lead the public to fitness and health, he never hesitated to make an honest prescription. His usual procedure was to explain that “the first thing you have to do is face the fact that there are no short cuts. It will take three months of hard work—possibly the hardest work of your life—before you see sufficient changes.” In addition, Cureton lectured relentlessly that “nobody ever graduates from the school of physical conditioning. Either you continue working or you go downhill.”9

Throughout his life and since his death, Thomas K. Cureton, Jr., has been given a variety of titles by those who knew him and by those who have chronicled his illustrious career. In all, however, “fitness” has been the commonality. Some of these titles were “The Grand Old Man of Fitness”; “Granddaddy of the Fitness Boom”; “Father of Physical Fitness in the World”; “Pioneer in Physical Fitness”; “Physical Fitness Missionary”; “Leader of the Fitness Revolution”; “Charismatic Visionary of Physical Fitness”; and “Founder of the Current Fitness Boom.”10

It is especially fitting and timely for the Research Quarterly for Exercise and Sport to include an article on Thomas K. Cureton, Jr., and his career as an advocate of the critical role physical fitness and exercise play in the acquisition and maintenance of good health. With the recent appearance of Promoting Health/Preventing Disease: Year 2000 Objectives for the Nation, where the health benefits of exercise are so clearly explained, and on the eve of the publication of the Surgeon General’s Report on Physical Activity and Health, it is important to pay tribute to an individual who devoted his life to that very cause.11 In addition, Cureton had a long and distinguished record of publishing in the Research Quarterly. His first article appeared in 1930 and his last in 1968. In all, Cureton authored or coauthored forty articles published in the Research Quarterly or its Supplements.12 Because of his exceptional publishing production for the Research Quarterly from 1930 through 1949, Cureton was ranked as the leading author based on author point score, persistency index, and volume of writing. A meaningful accomplishment in its own right, Cureton’s ranking is even more meaningful when he ranked higher than such notables as Charles H. McClay, George B. Affleck, W. W. Tuttle, Frederick W. Cozens, Peter V. Karpovich, Leonard A. Larson, and Franklin M. Henry.13

Early Life and Education

Thomas Kirk Cureton married Annie Jeffreys in Fernandino, Florida in 1900. They had one son, Thomas Kirk Cureton, Jr., born 4 August 1901, and three daughters, Mable (1906), Corinne (1908), and Annie (1910). Cureton’s middle name, Kirk, came from his great-grandmother, Nancy Kirk, who married Jeremiah Cureton in the late 1700s. His great-grandfather, Thomas Kirk Cureton, was born in 1803, and his grandfather, John Samuel Cureton, was born in 1843. Cureton’s father, Thomas Kirk Cureton, was born in South Carolina in 1872 and was a banker. Although he died in 1930 in his late fifties, Cureton’s mother died at the age of ninety-six in 1973.14

Cureton was born in 1901 in the home of his grandmother Jeffreys and spent his youth in St. Augustine and Jacksonville, Florida. He played and swam in the ocean, liked hunting and fishing, and was a farmer, and played baseball, and by the age of twelve had become an expert swimmer, especially good at swimming long distances. Because Cureton suffered from asthma and was physically undeveloped, his father bought him a membership to the Jacksonville YMCA. Here, young Cureton was introduced to dumbbells, Indian clubs, swimming, gymnastics, and tests of physical efficiency. He also joined the Boy Scouts and earned eighteen merit badges while participating in numerous hiking, camping, bicycling, and swimming activities.15

In 1913, Cureton’s family moved from Jacksonville to Orlando, Florida and two years later moved to Waycross, Georgia where his father was president of a bank. In 1916, they moved to Atlanta where Cureton attended high school and worked as a bank teller during World War I. He continued his association with the YMCA during this time, participated in high school swimming and track, and graduated from Technical High School in 1919. Cureton’s father tried to persuade him to stay in the banking business, but the physically active recent high school graduate explained, “It would just drive me mad to stay in a bank all day long.” Instead, Cureton enrolled in the Georgia School of Technology in the fall of 1920.16

Cureton spent two years at Georgia Tech and worked off and on as an apprentice engineer and draftsman and, for a short time, doing electrical wiring and
drafting. He ran cross-country and broke the Georgia state record for the six-mile race as a freshman. However, swimming was his primary collegiate sport. In the summer of 1920 at the Southern Amateur Athletic Union (AAU) meet in Birmingham, Alabama, Cureton won the 100-yard backstroke, placed second in the 440-yard freestyle, third in the breaststroke, and third in the mile. He was also a member of the Atlanta Athletic Club’s 440-yard freestyle relay team, which became South champions. The following year, at the Southern AAU meet in Orange Park, Florida, Cureton placed second in the backstroke and swam on the winning Atlanta Athletic Club relay team. In 1923, he was placed on the second team for the Frank Sullivan All-American swimming selections. Cureton was also very active in the Reserve Officer Training Corps (ROTC) at Georgia Tech.

In the fall of 1922, Cureton transferred to Yale University’s Sheffield Scientific School where he majored in electrical engineering with an emphasis in communications. He continued his participation in ROTC, cross-country, and swimming and earned two varsity letters in swimming in 1924 and 1925. It was during this time that Cureton began to get interested in physical education. First through William G. Anderson, who sponsored him in Sigma Delta Psi, a national athletic honorary society, and later through H. S. Anderson, who did physiological work with the Yale crew which had won the 1924 Olympic gold medal, and Robert J. H. Kiphuth, director of the Yale gymnasium and swimming coach, Cureton grew excited about exercise and training. Consequently, he took most of his electives in anatomy, physiology, hygiene, and biology. He graduated from Yale in 1925, earning a Bachelor of Science degree in electrical engineering.

Cureton was hired as director of physical education and athletics at Suffield Academy in Suffield, Connecticut shortly after graduation. He also married Isabelle Jeffcott of New Haven on 26 June 1925 and had one daughter, Elizabeth, born in 1929. While working at Suffield, he began to take classes in physical education during the summers at Springfield College. While working toward an undergraduate degree in physical education, Cureton took classes from James H. McCurdy, George B. Affleck, and Peter V. Karpovich. On 1 August 1929 he completed a Bachelor of Physical Education (B.P.E.) degree and was appointed to an Instructor’s position on the Springfield College faculty. During that time, Cureton worked on a master’s degree. He was awarded a Master of Physical Education (M.P.E.) degree in 1930 after the completion of a thesis on “Objective Tests in Swimming.” Because of his previous ROTC training, Cureton was appointed Captain in the Signal Corps of the U.S. Army Reserves. He held that position from 1929 until his resignation in 1934.

While on the faculty at Springfield College during the early 1930s, Cureton continued his graduate education at Columbia University. By taking classes in the summer, dur-
Cureton was appointed Director of the Physical Sciences Curriculum and Director of Graduate Studies at Springfield College in 1937. The following year he was promoted to Professor. During his time at Suffield Academy and Springfield College, Cureton worked extensively at summer camps for boys and began a lifelong association with the YMCA. During the summers of 1923-26, he directed the aquatics program and trained waterfront personnel at the Cobb Camps in Denmark, Maine. From 1923 through 1936, he taught in the American Red Cross Aquatic Institutes of New England and served as Field Representative in Life Saving and First Aid. As a result of this work, he developed a camp aquatic manual for the Red Cross, A Water Program for Camps, published in 1929. In the summers of 1934 and 1935, Cureton supervised the waterfront activities and the posture and body building programs at Camp Tate for Boys in Jasper, Georgia. Because of Cureton's involvement, Camp Tate featured medical examinations, physical tests and measurements, individualized prescriptions for exercise, and detailed records of progress for each camper. He also offered daily lessons in body mechanics and follow-up corrective work for those who needed it.

In the fall of 1941, Cureton began a new position as Associate Professor in the Physical Education Department for Men at the University of Illinois in Urbana-Champaign. Seward C. Staley, Dean of the College of Physical Education at Illinois, was impressed by the work of Cureton and his committee of Springfield College faculty who published a special monograph devoted to “Physical Fitness” in 1941 in the Research Quarterly. Staley believed physical fitness could be the focus of graduate education in physical education and convinced Cureton to come to Illinois to develop courses devoted to fitness and to start a laboratory for the scientific study of exercise. That Cureton was the right selection for such a position was probably never in doubt, especially if Staley had read George B. Affleck's recommendation for Cureton for a research position in Boston with the First Naval District. In June 1941, Affleck wrote of Cureton:

By natural endowment, by his educational preparation and by his experience he is unusually well qualified to participate in and direct research in the field of health, physical education and general fitness. His abilities are much above average. His industry is decidedly unusual. His purposes are very strong. He has the power to inspire those who work with him. His enthusiasm for work in this field is almost unbounded. Personally, I do not know of anyone better qualified than he as an investigator and director of research in this all-important field of human endeavor.

During his first year at Illinois, Cureton started a “physical fitness clinic” for students who were deficient in various aspects of physical fitness. Located in the Men's Old Gym, this clinic lasted three years. A graduate degree program in physical education was approved at the University of Illinois in 1942 and Cureton began teaching two graduate courses—“Scientific Foundations of Physical Fitness” and “Tests and Measurements and Research in Physical Fitness.” At this same time, largely because of the efforts of Charles H. McGly, AAHPER established a research section. Also, because of World War II, AAHPER emphasized fitness. Accordingly, AAHPER's national convention themes were “National Fitness Through Health, Physical Education and Recreation” (1942); “Victory Through Fitness” (1943); and “Fitness for Today and Tomorrow” (1944). In 1944, the Board of Trustees at the University of Illinois approved the establishment of the Physical Fitness Research Laboratory, directed by Cureton. From the start, Cureton's objectives for the laboratory were (1) to increase knowledge concerning the work productivity of the human body through physical fitness tests for endurance, flexibility, agility, strength, power, and balance; (2) to develop normative standards for each test; (3) to diagnose physical condition based upon the tests; (4) to prescribe and provide leadership for conditioning exercises for youth and adults; (5) to provide learning experiences and opportunities for graduate students to develop their research projects; and (6) to make the laboratory a teaching-research facility. As the laboratory progressed, it became a center for contract research and a popular visitation site for athletes, coaches, scientists, and governmental officials from throughout the world.

In 1946, Dean Seward Staley started a series of annual meetings for directors of graduate studies in midwestern universities in an effort to upgrade graduate education in physical education. Once the Doctor of Phi-
philosophy degree in physical education was approved by the University of Illinois in 1948, Cureton, Staley, and the other outstanding faculty members there began attracting a large number of very capable graduate students and began to make their mark on the profession of physical education. By 1950, sixteen institutions reported having research laboratories within physical education departments and Cureton’s was certainly one of the most dominant. With an overwhelming emphasis on the physiology of exercise and research in fitness, the faculty and graduate students at these few institutions began to improve the scientific and educational reputation of physical education.27

During his tenure at the University of Illinois, and especially through his directorship of the Physical Fitness Research Laboratory, Cureton organized the Experimental Sports-Fitness Summer Day School. He tested and studied athletes of all levels, worked on fitness projects with adults and children, gave fitness clinics throughout the world, worked with the United States government on numerous fitness projects, devoted much of his time to various YMCA projects, and published literally hundreds of articles and monographs on physical fitness. Another important use of his time at Illinois was the advising and mentoring of graduate students. During his twenty-eight years of active service at the University of Illinois, Cureton directed almost eighty Ph.D. dissertations, served on the committees of approximately twenty-five more doctoral students, and sponsored several hundred M.S. degree theses. Indeed, at the symposium on “Exercise and Fitness” organized by his many graduate students to honor him upon his retirement in 1969, Cureton remarked that “when students and professors pull together, it is amazing what they can accomplish.”28

Research and Publishing

Some of Cureton’s early research pertained to his own ancestry and the derivation of his family name. He was very curious about the Curetons and how they got to America. Consequently, he searched as many different records as he could and investigated his lineage abroad. He became an expert in genealogical research, corresponded with other genealogists, and gave lectures at genealogical society meetings. Early in his career at the University of Illinois, he presented a program entitled “Adventures of Tracing Your Ancestors” at the library. Cureton was always proud to show friends his photograph standing on the corner of Cureton Street in London, England. In fact, he did so much research in England that the Society of Genealogists of Britain recognized him as an “overseas member.” He was a serious genealogist throughout most of his life and once remarked that the work and energy he put into genealogy research over a forty-year period dwarfed every other thing he had done.29

Although there were a few exceptions, Cureton’s research and publishing from 1929 until 1940 pertained to swimming, applied physics, measurement and testing, and body mechanics. Because of his involvement with boy’s camps and YMCA aquatic programs on a national level, many of his books and workbooks were published by the YMCA’s Association Press in New York. His articles appeared in Beach and Pool, Recreation, Swimming Pool World, Scholastic Coach, and the Journal of Health and Physical Education, published by the YMCA. Cureton’s first article, which appeared in the Research Quarterly in 1930, was on the “Relationship of Respiration to Speed Efficiency in Swimming.” Later that year, he published a second article in the Research Quarterly entitled “Mechanics and Kinesiology of the Crawl Flutter Kick.” His first book was A Water Program for Camps (1929). Other books and workbooks published in the 1930s were Recreational Swimming Activities (1930); The Teaching of Elementary Swimming and Diving (1931); Physics Applied to Health and Physical Education (1933); How to Teach Swimming and Diving (1934); The Teaching and Practice of Intermediate Aquatics (1935); National Y.M.C.A. Progressive Aquatic Tests (Beginning and Intermediate Level) (1938); and Standards for Testing Beginning Swimmers (1939). During the 1930s, Cureton also published a series of articles in Scholastic Coach on the mechanics of various track and field events and continued to publish additional articles in the Research Quarterly on topics such as validity of spinal measurements, efficiency of the foot, reliability of postural measurements, endurance in speed swimming, and cinematographic analysis. Later, he published Warfare Aquatics (1943) and Fun in the Water: Aquatic Stunts, Contests, Games and Exhibitions for Recreation (1949).30

Cureton had begun to shift his research and publishing efforts in the direction of physical fitness by the mid-1930s while still at Springfield College. By 1938, he was involved in all aspects of fitness research. His research was deeply affected by several other faculty members at Springfield College who were doing work in this area. James H. McCurdy had published his Physiology of Exercise in 1924; a second edition was issued in 1928. Peter V. Karpovich published his book, Physiology of Muscular Activity, in 1933. McCurdy and Leonard Larson co-authored “The Reliability and Objectivity of Blood Pressure Measurements” and “Measurements of Organic Efficiency for the Prediction of Physical Condition” in 1935. That same year, Cureton and a colleague published “The Center of Gravity of the Human Body in the Anterior-Posterior Plane and Its Relation to Posture, Physical Fitness, and Athletic Ability.”31

Cureton attended the Olympic Games in Berlin in 1936 and sensed that another world war was inevitable. Upon his return, he discussed his feelings with Spring-
field College President Lawrence Doggett. Cureton’s remembrance of his conversation was that he told Doggett:

We are quite underdeveloped in the physical fitness area, even though we were playing a lot of ball games and things of that kind; but to unify the scientific approach to physical fitness, we decided then and there that it meant going into physical fitness and determining the relative value of certain programs to actually change the physiology and anatomy... And I thought that this was a great underdeveloped area which, if we went into, could have an effect on the national fitness level and national health.32

Shortly thereafter, President Doggett appointed Cureton chairman of a Springfield College committee charged with preparing a monograph on the scientific aspects of physical fitness. Cureton formed a committee that met every week for two years. The culmination of the committee’s labors was “Physical Fitness,” published in May 1941 as a Supplement to the Research Quarterly dedicated to James H. McCurdy. Cureton authored five articles (chapters), coauthored another with Leonard Larson, and included other articles by Peter Karpovich and Leonard Larson. In his first article on body build, Cureton noted that he was assisted by Paul Hunsicker (graduate assistant) and that eleven other graduate students “assisted in the organization.” This monograph received instant attention by physical educators, physiologists, and physicians and was considered a milestone in the literature on physical fitness.33

During the war years, both AAHPER and the American Medical Association (AMA) stressed the importance of physical fitness and identified it as a worthy goal for all Americans. Once it became known that thousands of young men who were drafted or enlisted to fight for their country had failed their physical examinations, a renewed and more strenuous emphasis was placed on fitness and health.34 Accordingly, Cureton, McCloy, Leonard, and others devised a variety of test batteries and classification schemes for fitness and motor ability. These were used in schools and colleges as well as by the military. Cureton also offered physical fitness and aquatics institutes at YMCA’s throughout the United States during World War II. His emphasis was on physical fitness in a time of national emergency, and he conducted several ‘fitness for victory’ clinics.35 In 1942, Cureton published his Physical Fitness Workbook. It was the first such workbook for men in American colleges and included the various fitness tests he developed and administered as well as the norms he established. The following year, Cureton published an article on “The Unfitness of Young Men in Motor Fitness” in the Journal of the American Medical Association (JAMA), compiled a large “Physical Fitness Bibliography” (which was published in Booklist as well as in the Research Quarterly), and authored a series of articles on “The Physiology of Fitness” for Scholastic Coach.36

With the establishment of the Physical Fitness Research Laboratory in 1944, Cureton devoted even more of his time to physical fitness research. He coauthored a monograph on the Endurance of Young Men: Analyses of Endurance Exercise and Methods of Evaluating Motor Fitness for the Society of Research in Child Development in 1945, and he continued to offer physical fitness clinics (demonstrations and lectures) throughout the United States, mostly at YMCA’s. He lectured on the principle of adult fitness, administered a battery of tests (his most popular was the “18-Item Motor Test”), demonstrated progressive calisthenics for middle-aged adults and had them join him in the gymnasium and swimming pool, and conducted personal interviews and made suggestions for individual improvements.37 His publications on fitness continued in the Journal of Health and Physical Education, Hygiene, and the Archives of Physical Medicine. In 1947, he published what many believe was his most important book, Physical Fitness Appraisal and Guidance. It emphasized new cardiovascular parameters for exercise, presented the possibility of the indirectly recorded pulse pressure and its derivatives as a fitness test (“heartometer” pulse), and discussed the duration of effort on an all-out treadmill run until exhaustion was reached.38 Shortly after this landmark book in the field of physical education appeared, Cureton and his first group of doctoral students began to coauthor articles that were published in the Research Quarterly as well as in the American Journal of Physiology.39 By the late 1940s, his findings on physical fitness were becoming well known through popular magazines, newspapers, radio, and movie newsreels.40

Cureton’s work at the University of Illinois was enhanced in 1950 by the founding of his “Experimental Sports-Fitness Summer Day School,” an 8-week, 24 hours a week program of training and testing for boys aged eight to fourteen years. Faculty and graduate students participated as counselors, administered tests, and provided guidance for improvement. Data collected in this setting led to the completion of thirty-six master’s theses by 1960.41 Cureton and others coauthored Measurement and Evaluation Materials in Health, Physical Education and Recreation (1950), an AAHPER publication which featured several test items that he and the others had developed. The most popular were “Cureton’s Muscular Endurance Test”; “Cureton’s Test of Swimming Endurance” “The Illinois 14-Item Motor Fitness Test”; “Cureton’s All-Out Treadmill Run Test”; “Cureton-Illinois Motor Fitness Test”; and “Cureton’s Flexibility Test.”

Cureton also continued testing Olympic athletes during the 1940s and 1950s. This led to the publication
of numerous articles in a variety of athletic magazines and scholarly journals. Most notable was his book on *Physical Fitness of Champion Athletes*, published in 1951. The following year, in an article in the *Research Quarterly*, he published research which suggested that blood pressures in hypertensive individuals could be lowered by physical conditioning.

Much of the thrust of Cureton's fitness clinics was directed to middle-aged Americans during the early 1960s. His statement "middle age begins at 26" caught the public's attention, and his work began to appear in major city newspapers and national magazines. *People Today* published "Cureton Cares Middle Age," *Popular Mechanics* printed "How to Keep Fit at 50," and "The Amazing Dr. Cureton and His Miraculous Health Formula" appeared in *Cosmopolitan*. More significant, however, was the article on "Vigorous Middle Age," published in *Time* in 1951. The broad circulation of his writings brought forth almost 200 letters from doctors, dentists, company executives, and athletes inquiring about the "Cureton Workout," the "Cureton Cure," and his "physical build-up course." By the mid-1950s, Cureton had been featured on the CBS television program, "The Search for Health and Fitness" and had coauthored an article on "Exercise to Keep Fit" for *Sports Illustrated*. He also was interviewed for major articles in the *New York World Telegram* and the *Chicago Daily News*. Some of his earlier research on athletes and the results of his continual testing of Olympic athletes was used in the article on the "Relationship of Physical Fitness to Athletic Performance and Sports," which he published in *JAMA* in 1956.

Several different aspects of cardiovascular fitness were the center of Cureton's research and publishing efforts during the 1960s. He also continued his physical fitness work with middle-aged adults, and, as he became older, his ability to perform his own exercise routines in the gymnasium and swimming pool became even more impressive. Cureton's theme of "middle age begins at 26" was extended to include "and at 40 we become lively fossils." He emphasized the need to combat degenerative diseases of the heart and circulatory system through increased exercise and started his "Run for Your Life" program in 1961 at the Huff Gymnasium on the University of Illinois campus. Cureton spread the concept to the Cleveland and Cincinnati YMCA's, and running for health was featured in *Family Weekly*, the *Chicago Tribune*, the *Boston Globe*, and the *Los Angeles Times*. As mentioned earlier, he also played a prominent role in the *Time-Life* book on *The Healthy Life: How Diet and Exercise Affect Your Heart and Vigor* (1966). Certainly, Cureton must be given some credit for the jogging craze which began to sweep the country in the late 1960s and early 1970s.

During the early and mid-1960s, Cureton and several of his doctoral students published important articles on cardiovascular fitness. Cureton and Francis Hayden published "A P-Technique Factor Analysis of Cardiovascular Variables" in 1963; the following year he combined with Leroy Sterling to publish "Factor Analysis of Cardiovascular Variables." Early studies related to reducing fat, cholesterol, triglycerides, and phospholipids by exercise also emanated from Cureton's laboratory. The U.S. Public Health Service established a joint study with the Heart Disease Control Unit in Washington, D.C. and sent John Holloszy to work at Cureton's Physical Fitness Research Laboratory for two years. Subsequently, Holloszy and Cureton combined with doctoral students James Skinner and Alan Barry to publish three major articles in a special issue of the *American Journal of Cardiology* devoted to a "Symposium on Work and the Heart." As the decade of the 1960s progressed, Cureton and his graduate students did some of the first work in physical education using multichannel recordings of brachial and carotid pulse waves, the electrocardiogram, and the ballistocardiogram. Examples of this research were Cureton and Eric Bannister's article on "A Comparative Study of the Brachial Pulse Wave and Its Time Derivatives Among Athletic, Normal and Pathological Subjects" and "Orthogonal Factors of Cardiac Intervals and Their Response to Stress," coauthored by Cureton and B. Don Franks.

Throughout his career, despite his deep involvement in the academic and professional society environment, Cureton never overlooked the general population and was always looking for direct applications for his research. He wrote *Physical Fitness and Dynamic Health* (1965) for the general public and included in it "Cureton's Continuous Rhythmic Exercise Program." Used in numerous YMCAs and adult education centers, this was a system of progressive rhythmic endurance exercises that increased in intensity through "low, middle, and high gears" spread over a six- to eight-month period. The book also included a comprehensive system of exercises designed to develop particular parts of the body. Similarly, he published the *Physiological Effects of Exercise Programs on Adults* (1969) and the *Physical Fitness Workbook for Adults* (1970). In the earlier book, he compared jogging, swimming, and weight training and discussed the physiological effects of various types of exercise. The latter book included an orientation to adult fitness, information concerning how to organize physical fitness clinics, adult fitness score tables, and a record book for recording personal ratings on tests and performances.

Organizations and Involvement

Cureton's early work with swimming and his faculty appointment at Springfield College brought him into close affiliation with the YMCA and the American Red Cross. He served as a member of the National Physical
Education Committee of the YMCA, and for many years he was chairman of that organization’s National Aquatic Committee. He also wrote swimming manuals and sport camp guidelines for the YMCA and offered fitness clinics at YMCAs throughout the United States. His work with the Red Cross related mostly to teaching and certifying lifeguards.  

Cureton worked with AAHPER on many different projects throughout his career. Beginning in the 1930s, he served as chairman of the Therapeutic Section of the Eastern District of AAHPER. He served as chairman of the AAHPER National Aquatic Committee from 1938 through 1947. Cureton was secretary of the Research Council from 1945 through 1950, chairman of the Test and Measurement Section in 1947, and chairman of the Research Section in 1948. During the early 1950s, he served as chairman of the Bibliography Committee of the Research Council. In the 1960s, Cureton was a member of the Research Council and the Research Quarterly Committee.

Cureton became directly involved with the American Corrective Therapy Association upon its inception in 1946 and remained involved as a member of the Advisory Council and a Contributing Editor to its Journal of the Association for Physical and Mental Rehabilitation through 1974. In 1967, its publication name changed to The American Corrective Therapy Journal. Also in the late 1940s, he became actively involved with the United States Olympic Committee (USOC). Avery Brundage, an alumnus of the University of Illinois and President of the USOC, appointed Cureton and six others to the Medical and Nursing Subcommittee. The committee eventually evolved into the Organization for Research on Olympic Athletes.

When several physicians, physical educators, and physiologists were attempting to begin the American College of Sports Medicine (ACSM) in the early 1950s, Cureton became actively involved. Upon the official founding in 1954, he was listed as one of the fifty-four Charter Members. He served on a variety of ACSM committees, including program, membership, and publications, and also made significant contributions as a member of ACSM’s very active and influential Physical Fitness Committee during the late 1950s. Cureton served as a member of ACSM’s Board of Directors in 1963-64.

Cureton was also involved with various aspects of the United States Federal Government for almost thirty years. He participated in fitness training and testing efforts during World War II, helped design obstacle courses for the different branches of the military service, and actively worked in swimming instruction and lifesaving classes. During the 1950s, he worked at the U.S. Navy’s Underwater Swimmer School and began his long service with the President’s Council on Youth Fitness. He served as a consultant for most of the Presidential appointments who directed the President’s Council on Physical Fitness, helped write some of the fitness manuals, and conducted clinics throughout the United States during the 1960s. Later in the 1960s, Cureton worked with the Federal Bureau of Investigation (FBI) to design physical fitness programs for the new FBI Academy trainees.

Contributions and Impact

Although Cureton made a variety of significant contributions to the YMCA, the President’s Council on Physical Fitness, and several other important organizations, it is his impact upon the physical fitness movement and graduate study in physical education that will be emphasized here. In addition, the number, quality, and stature of Cureton’s graduate students and their relationship with physical fitness and physical education graduate programs will also be discussed.

Physical fitness was beginning to become a national objective for some educators and government officials when Cureton left Springfield College for the University of Illinois. America’s entry into World War II had thrust a concern for physical fitness into the foreground. There followed a large number of conferences, clinics, and writings on the subject, but the majority of this was not grounded in any clinical studies. By including physical fitness in Illinois’s graduate, research, and service programs, Cureton was able to generate and direct serious academic attention to the topic at one of America’s major research institutions. He did much to establish a research base for debating and implementing physical fitness programs and testing. During these early years, he was also fighting the common belief that people who participated in endurance training or exercised after a heart attack would more than likely drop dead. He also had to overcome traditional views relating to strength training and muscleboundness. His pioneering efforts in the area of fitness camps for both youth and adults had significant ramifications for national health.

A prolific author and speaker with a personal passion for physical fitness, Cureton tended to see the physiology of exercise and physical fitness as one in the same. Accordingly, the University of Illinois and a few other major universities that were sponsoring physical fitness research positively impacted the growth of that field. More than any other single person after Charles McClay, Cureton kept physical fitness alive in physical education and argued for the importance of the “physical” in physical education. Finally, the several hundred contributions of Cureton and his master’s and doctoral students to the literature provided a solid base for the scientific aspects of the modern day exercise prescription.

As Deobold B. Van Dalen and Bruce L. Bennett state in a World History of Physical Education, “the period
1930 to 1950 was significant for the development of graduate curriculums in physical education." During that time, more than eighty colleges had a master’s degree program and about thirty-four offered a doctorate. Central to this national development was Dean Seward C. Staley and Thomas K. Cureton, Jr., at the University of Illinois. Staley organized midwestern universities in 1946 to discuss problems in graduate physical education. Additional meetings led to the National Conference of Graduate Study in Health Education, Physical Education, and Recreation at Pere Marquette State Park in Illinois in 1950. Particularly apparent in graduate education in physical education was an overwhelming lack of research and no central body of knowledge. Accordingly, Staley and Cureton, among others studying this problem on the national level, turned to physical fitness. Laboratories like Cureton’s Physical Fitness Research Laboratory provided centers for research and at the same time went a long way toward generating a scientific body of knowledge relating to exercise and health. Cureton and the University of Illinois were on the forefront of this move within physical education departments, and their graduate program, as well as Cureton’s laboratory, became models for others to emulate. Physical fitness research gradually became more scientific as it did, physical education began to become more recognized by established disciplines like medicine and physiology. In turn, faculty and graduate students in physical education departments found it somewhat easier to study, interact, and publish in other disciplines related to exercise science and health.60

Cureton’s lifelong crusade to make America fit, his popularity and publication record, his reputation in physical education and sports medicine, and his affiliation with the Physical Fitness Research Laboratory at the University of Illinois, where a master's or doctoral degree could be earned in physical education, attracted a group of motivated and capable students interested in studying physical fitness. At Illinois, they found a working and studying atmosphere conducive to high-level research. This occurred because Cureton mentored students, and more advanced students mentored other students. Also helpful was the fact that other departments on campus (especially physiology) tended to accept the graduate students working with Cureton. Consequently, many of Cureton’s former students assumed responsible leadership positions in departments of physical education and carried forth a knowledge of the importance of physiological mechanisms for the implementation of fitness programs and testing their results.

For example, many of those who received their Ph.D.’s under Cureton went on to have dynamic careers in physical education, physiology, and sports medicine and have provided exemplary leadership in several professional societies. The list of Cureton’s students is a "who’s who" among those who have been in positions to advance the modern physical fitness movement and those who have contributed to the study of various parameters of physical fitness. At least thirteen of his students have been elected Fellows in physical education’s most prestigious group, The American Academy of Kinesiology and Physical Education: James Bosco, B. Don Franks, William Haskell, William Heusner, Alfreed Hubbard, Paul Hunsicker, Benjamin Massey, Henry Montoye, Lawrence Oscial, Michael Pollock, James Skinner, Wayne Van Huss, and Sharon Plowman. Five became President of ACSM: Montoye, Charles Tipton, Skinner, Pollock, and Haskell. Other former students made highly significant contributions. Paul Hunsicker became one of the nation’s leaders in physical fitness at the University of Michigan; James Councilman became a successful swimming coach at Indiana University; William Orban originated the Canadian Air Force fitness program; and Lawrence Golding directed the Human Performance Laboratory at the University of Nevada. In addition, the following Cureton graduate students took jobs at major universities and actively contributed to research in physical fitness: Alan Barry, David Cundiff, Cedric Dempsey, Paul Fardy, Leroy Getchell, Ernest Michael, Sandor Molnar, Bruce Noble, Plowman, Paul Ribisl, Rene Rochelle, and J. Grove Wolf. There are many others, but these few names will provide some idea of the magnitude and importance of Cureton’s contributions as an advisor and mentor for graduate students.61

In discussing Cureton and his career with some of his former graduate students, it was interesting to hear some of the one-word descriptors that they used to characterize their mentor: "charismatic," "committed," "dedicated," "dynamic," "magnetic," "evangelist," "stimulating," "dynamo," "motivator," and "enthusiastic." Some mentioned the fact that Cureton was "a walking and talking example of the health benefits of regular exercise" who was the "perfect role model." Michael Pollock (University of Florida) described Cureton as "a master of the art of prescribing exercise" and remembered how he took his graduate students into the gymnasium where "he liked to make them suffer." Charles Tipton (University of Arizona) suggested that "fitness survived because of him," and James Skinner (Arizona State University) discussed the fact that Cureton’s research was "very much applied and practical." Skinner also believed his greatest contribution was "the people he brought to Illinois and the energy he brought to them." Don Franks (President’s Council on Physical Fitness and Sports) remembered Cureton’s "missionary zeal" and believed his major strength was that he was "so committed to fitness and believed in it so much, that he was a good role model." Similarly, William Haskell (Stanford University) noted that for Cureton "the topic of physical fitness was never considered lightly, he was committed to the idea that it was crucial to the welfare of man." As a doctoral student in the 1960s, Haskell liked the fact that Cureton "had worked with, trained, or personally knew nearly everyone involved in physical fitness research or promotion.62
Honors and Awards Received

As might be expected of a pioneering scholar, Thomas K. Cureton, Jr., received numerous commendations and accolades during his long and illustrious career in physical and health education. For his early work with the American Red Cross, Cureton received a Certificate of Appreciation and a ten-year service medal in 1937 and, a decade later, the Honorary Medallion for twenty years of service. In 1943, Cureton was awarded the Roberts-Gulick Award for outstanding contributions to YMCA physical education by the Physical Directors Society of the YMCA. In 1967, the YMCA Physical Directors presented him a silver platter for twenty-five years of service as chairman of the YMCA's National Aquatics Committee. From AAHPER, he received the Honor Award in 1944 for his leadership in wartime aquatics and fitness work. He was elected an Honorary Fellow and Life Member of AAHPER in 1947 and received the Luther Halsey Gulick Award, AAHPER's highest award, in 1975. The American Academy of Physical Education presented Cureton a Citation in 1948 for his leadership in establishing the Physical Fitness Research Laboratory; in 1977, it recognized his accomplishments with the Clark W. Hetherington Award. For his contributions to health and health education, he was elected a Fellow of the American Public Health Association in 1954 and of the American Association of School Health the following year. In 1966, Britain's Royal Society of Health designated Cureton a Fellow. He was a Charter Member of ACSM. In 1969, ACSM bestowed their Honor Award on Cureton. This read, in part: "a prolific writer, an outstanding teacher and respected scientist; through interaction with multi-disciplines advocated that everyone's physical image could be improved by health and fitness. His sincerity, dedication, energy and zest for living will long be remembered." In 1995, ACSM instituted the Cureton Tutorial Lecture, held each year at the time of the annual meeting to honor his many contributions to exercise science.63

Cureton also received many awards for his contributions to physical fitness. In 1964, he received a medal from the Illinois Junior Chamber of Commerce as the outstanding physical fitness leader in the State of Illinois; the following year, President Lyndon B. Johnson and the U.S. Junior Chamber of Commerce honored him as "one of the top three physical fitness leaders in the United States." In 1968, he received a plaque from the Physical Fitness Council of the State of California for "the inspiration he has given to Californians through his world-wide leadership in physical fitness clinics, and by his personal regimen of fitness." As a result of his many years of involvement with swimming, Cureton was honored in 1968 as Charter Founding Member of the International Swimming Hall of Fame in Fort Lauderdale, Florida. Finally, in typical Cureton fashion, at the age of 72, he won five gold medals at the first National Masters Swimming Championships in Chicago in 1973. In all, Cureton held fourteen World and National Masters Swimming records.64

Notes


9. Ibid., 36-37, 41.


12. “Vitaee—Thomas K. Cureton, Jr.,” (I thank Kirk Cureton, at the University of Georgia, Athens, for updating his father’s vitae and for sending a copy to me.)


15. For much of Cureton’s biographical material, I relied on Walter Cryer’s well-documented dissertation, “Thomas Kirk Cureton, Jr: A Historical Overview of His Professional Life and Contributions,” (Unpublished Ed.D. Dissertation, Brigham Young University 1975), 23-37. Cryer was a former student of Cureton’s and earned both his B.S. degree (1952) and M.S. degree (1959) at the University of Illinois. He earned varsity letters at Illinois in swimming (1950 and 1952) and in gymnastics (1950, 1951, and 1952) and went on to be a professor of physical education and the swimming coach at Brigham Young University, Provo, Utah. (I thank Kirk Cureton, Cureton’s son, for loaning his personal copy of Cryer’s dissertation for my use. It was signed and presented to Kirk’s family by his father on Thanksgiving Day, 1975.)


17. Ibid., 28–29.


19. Cureton’s philosophy of athletics, as written in 1936, was: “Athletics afford an outlet for physical energy, which, in the growing youth, needs outlet, guidance, and control. If it is not thus used, it may find outlet in dissipation. The primary object of sport is not to turn out winning teams, although a certain number of victories are necessary for good morale and school spirit. The true object is to turn out men of good health, men of courage, men of self-reliance, men of self-respect, men who think on their feet and act upon their thoughts, and men who have learned the value of combined effort and the subordination of the individual interest to that group.” Quoted in Cryer, “Thomas Kirk Cureton, Jr.,” 56.

20. Ibid., 60-62.


22. Ibid., 69-72.

23. Quoted in ibid., 70.


32. Cureton quoted in Cryer, "Thomas Kirk Cureton, Jr.,...", 68.


37. Cryer, "Thomas Kirk Cureton, Jr.,...", 103-104.

38. Ibid., 157-158.


41. Ibid., 78-83.

42. Ibid., 192.

43. Ibid., 86-96.


46. Ibid., 107.


54. Ibid., 62, 239-241.

55. Ibid., 239-241.


59. Ibid., 244-247.

60. Van Dalen and Bennett, A World History of Physical Education, 496; Kroll, Perspectives in Physical Education, 84-86; Jack E. Hewitt, "The Graduate Major In Physical Education," Research Quarterly 13 (1942): 252-256 (I thank Roberta Park for this reference); and Richard J. Donnelly, "Laboratory Research in Physical Education," Research Quarterly 31 (1960): 232-234. See especially the broad definition of "physical fitness research" as described by Donnelly.


64. Ibid.

Author's Notes

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