



C.H. McCloy
Lecture

**Advancements
in
Fitness and Activity
Research:
50 Years of
Events and Innovation**

Chuck Corbin
Arizona State University

History Quotes

Szasz, F.M. Quotes About History,
<http://hnn.us/articles/1328.html>
accessed 2/16/2011.

South Carolina State Historic Preservation
Officers, Quotations on the Importance of History
and Historic Preservation,
<http://www.ncshpo.org/current/quotes.htm> accessed
2/16/2011

Historians, it is said,
fall into one of three
categories:
Those who lie.
Those who are mistaken.
Those who do not know.
Anonymous

Setting the Stage*

*Disclaimer, not all inclusive

To look back upon
history is inevitably to
distort it.
Norman Pearson

**Late 1800s-early
1900s**

- Medical Doctors (Gulick, Sargent)
- Hygiene/health emphasis
- "Scientific Spirit" (Homans)
Park, 1989



History is often not what actually happened, but what is recorded as such.

Henry L. Stimson

Pre-1950



D.B. Dill,
courtesy B. Bennett

- Harvard Fatigue Lab
- Measurement Focus (McCloy, Brace, Rogers)
- Springfield doctorate (Clarke)
- 1932 York Bar Bells (Hoffman)
- Fitness for War (WWII)

1950s

- 1950-1953 Korean War
- 1950s Body Building
- 1953 Morris Epidemiology Studies



- 1954 4-minute mile (Bannister)



1950s

- Television
- Post War Sports (College/Pro)
- 1954 ACSM Founded
- Cardiac Rehab
 - Joseph Wolffe
 - Paul Dudley White
 - Herman Hellerstein



Thompson, P. D. (2004). Historical Concepts of the Athlete's Heart. *MSSP*, 36, 3, 363-370.

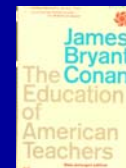
1950s

- 1955 Report That Shocked the President
- 1956 President's Council created
- 1957 Sputnik



1950s

- 1958 Youth Fitness Test
- 1950s Big 10 Body of Knowledge Project
- 1959 Karvonen (Training Threshold)
- 1959 Conant and PE Graduate Education



Fitness Celebrities

- Jack LaLanne
- Bonnie Prudden
- Charles Atlas
- Paul Dudley White



1950s Summary

- Fitness testing begins
- Public focus on fitness
- Increased college enrollments
- More PE doctorates
- Stage set for specialization
- Stage set for science emphasis
- Stage set for performance emphasis
- Stage set for importance of exercise
- Stage set for change in PE

History never
looks like
history when
you are living
through it.
John W. Gardner

Personal History 1950s

- 1957-1960 Undergraduate
- McCloy Tests & Measurements Book
- Collected Youth Fitness Data
- Product of generalism
- "Wanna be" coach and athlete



Early 1960s

- PE Teaching 1960-61
- Illinois Masters 1961-62



- New Mexico Ph.D 1962-65
- Psychology 24 hour minor

Early 1960s

- Election of John F. Kennedy (60)



- Assassination of President Kennedy (1963)

1960s

- Civil Rights Movement
- Counter Culture Movement



- 1962 Royal Canadian Exercises
- 1960+ Conceptual PE
- 1964 Henry Article (JOHPER)
- 1964+ Institutional Review Boards
- 1966 President's Fitness Award
- 1967 NASPSA

Exercise Books

- Hypokinetic Disease (1961)
- Structure and Measurement of PF (1964)
- Problem Solving Approach to PE (1966)
- Aerobics (1968)
- Concepts and Experiments in PE (1968)



Performance Science

- Doc Counsilman
- Chinese Bandits (Deitzel)
- Tom Cureton (Champion Athletes)

1970s Women's Rights

- Title IX (1972)
- Sports for Girls and Women



Patsy Mink



1970s

- Merging of Departments
- Specialized Core Courses
- 1977 Research Consortium



- Specialized Texts



1970s

- 1977 Fitnessgram Report Card
- Department Name Changes
- 1978 ACSM Positions CV Fitness & BC
- 1978 Harvard Alumnus Study
- 1979 Distance Running for Women ACSM
 - Chris Wells
 - Barb Drinkwater Women's Sports Int.
 - Sharon Plowman

1980s

- 1980+ Fitness Majors
- 1980+ Corporate/Commercial Fitness
- 1980 Health Related Fitness Test
- 1984 Women's Olympic Marathon
Joan Benoit Samuelson



Explosion of Fitness Texts

Texts Published by Decade, 1900-2008

1900-1909 1
1910-1919 1
1920-1929 5
1930-1939 9
1940-1949 27
1950-1959 19
1960-1969 42
1970-1979 82
1980-1989 218
1990-1999 327
2000-2008 261a
As of April 25, 2008

Courtesy: Corbin and Cardinal, *Quest*, 2008.

1980s

- Heredity Research (Bouchard)
- 1988 Fitnessgram Assessment



- 1989 Blair/Cooper Studies

1990s

- Shift to Activity Focus
- Activity and Health
- Activity as a dependent variable
- 1990+ School Based Clinical Trials
- 1990+ ACSM Guidelines
- 1990 AHA/ACSM Guidelines
- 1994 Teen Guidelines
- 1996 Surgeon General's Report
- 1998 Guidelines for Children



2000+

- Obesity Concern
- High Stakes Testing
- Healthy Lifestyle Promotion
- Return to Health Focus of Founders

Innovations

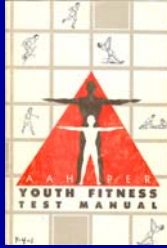
- Copiers
- Open Library Stacks
- Word Processors
- Internet

RESULTS OF INNOVATIONS

- Time Saved
- Improved access to information

Youth Fitness Test

1958, 1965, 1975, 1985
Started by Research Section



1958	1965	1975	1986 PCPFS
Pull Up			Pull Up
Modified Pull-Up	Flexed Arm Hang		
Sit-Up		Bent Knee	Curl-Ups
Twist			
Shuttle Run			Shuttle Run
Standing Broad Jump			V-Sit Reach
50-Yard Dash			
Softball Throw		dropped	
600 Yard Run-Walk			Mile Run

Research Section Papers

Patterns of Diet and Activity of Obese and Non-Obese Elementary School Children. Las Vegas, 1967.

Standards of Subcutaneous Fat for Children. Chicago, 1968.



Fat Children = Fat Adults

THE AMERICAN JOURNAL OF CLINICAL NUTRITION
Vol. 22, No. 7, July, 1968, pp. 828-842
Printed in U.S.A.

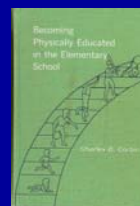
Standards of Subcutaneous Fat Applied to Percentile Norms for Elementary School Children'

CHARLES B. CORBIN, PH.D.

Child Heart Myth Dispelled

1969

1973



**Kids Can Do Exercise
Research Quarterly 1972
Human Subjects Concern**

RELATIONSHIPS BETWEEN PHYSICAL WORKING CAPACITY AND RUNNING PERFORMANCES OF YOUNG BOYS

Charles B. Corbin

238 *The Research Quarterly*, Vol. 43, No. 2

Conclusions

Based on the results of this study the following conclusions seem warranted:

1. Age is a better indicator of PWC than either running time or heart rates during runs of 200, 400, 600, and 800 yards.
2. Neither age, performance time, nor heart rates during runs are predictive of PWC for third through sixth grade boys. However, age may serve as a method of classifying boys on PWC.

Establishing Norms was "soup de jour."

HEALTH-RELATED AND MOTOR FITNESS NORMS FOR JUNIOR AND SENIOR HIGH SCHOOL ATHLETES

Peter Y. Loretto, Charles B. Corbin
 Neil A. Smith, Paul Stangor, Richard Emerson, Paul Stangor
 Susan Orsatti, and Lark Nelson-Gil


Physical Fitness Norms for College Freshmen

WILLIAM B. ZUTI AND CHARLES B. CORBIN

Physical Fitness Norms for Adults

by Larry Noble and Charles B. Corbin

1977

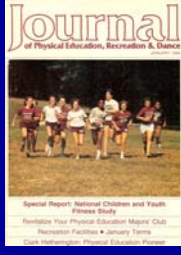


**The Research Consortium, 1977-2010:
Contributions, Milestones, and Trends**

BRADLEY J. CARDINAL GAYLE CLAMAN

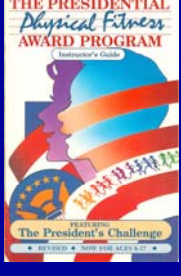
By promoting the research necessary to guide sound practices, the Research Consortium has benefited all HPERD professionals.

**Health Fitness NCYFS
Pate et al. 1985
Health Fitness Norms**



Special Report: National Children and Youth Fitness Study
 Revitalize Your Physical Education Major! Out
 Non-traditional Facilities • January Terms
 Clark Hetherington: Physical Education Professor

Challenge 1986



THE PRESIDENTIAL Physical Fitness AWARD PROGRAM
 Participant's Guide

PREPARING The President's Challenge

• BURNED • MORE FOR YOUR CALORIES

Fitness Awards: Do They Accomplish Their Intended Objectives?

Charles B. Corbin
 Peter Y. Loretto
 Paul Stangor
 Richard Emerson

Youth Physical Fitness Awards

Charles B. Corbin, James R. Whitehead,
 and Peter Y. Loretto

Research Papers

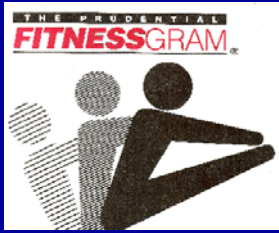
Effects of Fitness Test Type, Teacher, and Gender on Exercise Intrinsic Motivation and Physical Self-Worth

James R. Whitehead, Charles B. Corbin

Physical Fitness Testing: The Effects Of Rewards And Feedback On Intrinsic Motivation

Tsai-Hsiung, Wilson J. Rutherford, Charles B. Corbin

1988



**Fitnessgram
Physical Best**

Simons-Morton, B.G., O'Hara, N.M., Simons-Morton, D.G. and Parcel, G.S. (1987) 'Children and Fitness: A Public Health Perspective. Research Quarterly, 58 (4).

RESEARCH QUARTERLY
FOR EXERCISE AND SPORT
1987, Vol. 58, No. 4, pp. 508-514

**Youth Fitness, Exercise and Health:
There is Much to be Done**

CHARLES B. CORBIN
Arizona State University

Age a major factor in test performance.

Research Quarterly
For Exercise and Sport
1990, Vol. 61, No. 4, pp. 410-414

Age as a Factor Relating to Physical Fitness Test Performance

ROBERT P. PANGRAZI AND CHARLES B. CORBIN
Arizona State University

**Sallis and
McKenzie
Physical Education
and Public Health
1991**

**No Less Fitness Across Decades
Most Children Meet Health Standards**

Research Quarterly for Exercise and Sport
© 1991 by The American Alliance for Health,
Physical Education, Recreation and Dance
Vol. 62, No. 2, pp. 95-109

RQ21 Review

Are American Children and Youth Fit?

Charles B. Corbin and Robert P. Pangrazi

We analyzed data from the National School Population Fitness Survey (Rajic et al., 1986) and data collected by the authors of the original study to assess the fitness of American children and youth based on the results of additional analysis. We then compared the numbers of children and youth meeting non-empirical standards to numbers meeting recently adopted criterion-referenced health (CRH) standards for individual sex items in the FITNESSGRAM (Estabrook for American Females, 1987) and CLASSIFIED Physical Best (CLASSIFIED, 1988) and histories. The number of children and youth meeting CRH standards for multiple items in a test battery was also determined. Finally, data were analyzed to determine if changes in fitness have occurred among American children and youth over recent decades. Our results suggest that, with the exception of measures of arm and shoulder girdle strength/endurance, more children and youth meet criterion-referenced health standards than non-empirical standards (SDS, percentiles) and the majority of American children and youth meet CRH standards for individual sex items. However, the majority of American children and youth cannot meet the CRH standards for a battery of items for either of the two batteries studied. A second look at data to decide consequences of fitness produced evidence that questions the idea that youth are less fit now than in previous years.

**No Less Fitness Across Decades
Most Children Meet Health Standards
Questions About Awards**

Age	1975-1986				Age	1987-1988			
	Full	Arm	Mid	Sho		Full	Arm	Mid	Sho
10	85.1	81.4	82.1	82.8	85.1	81.4	82.1	82.8	
11	82.2	78.4	79.9	80.4	82.2	78.4	79.9	80.4	
12	80.1	76.2	77.8	78.3	80.1	76.2	77.8	78.3	
13	78.5	74.8	76.4	76.9	78.5	74.8	76.4	76.9	
14	76.9	73.2	74.8	75.3	76.9	73.2	74.8	75.3	
15	75.3	71.6	73.2	73.7	75.3	71.6	73.2	73.7	
16	73.7	69.9	71.5	72.0	73.7	69.9	71.5	72.0	
17	72.1	68.3	69.9	70.4	72.1	68.3	69.9	70.4	
18	70.5	66.7	68.3	68.8	70.5	66.7	68.3	68.8	
19	68.9	65.1	66.7	67.2	68.9	65.1	66.7	67.2	
20	67.3	63.5	65.1	65.6	67.3	63.5	65.1	65.6	
21	65.7	61.9	63.5	64.0	65.7	61.9	63.5	64.0	
22	64.1	60.3	61.9	62.4	64.1	60.3	61.9	62.4	
23	62.5	58.7	60.3	60.8	62.5	58.7	60.3	60.8	
24	60.9	57.1	58.7	59.2	60.9	57.1	58.7	59.2	
25	59.3	55.5	57.1	57.6	59.3	55.5	57.1	57.6	
26	57.7	53.9	55.5	56.0	57.7	53.9	55.5	56.0	
27	56.1	52.3	53.9	54.4	56.1	52.3	53.9	54.4	
28	54.5	50.7	52.3	52.8	54.5	50.7	52.3	52.8	
29	52.9	49.1	50.7	51.2	52.9	49.1	50.7	51.2	
30	51.3	47.5	49.1	49.6	51.3	47.5	49.1	49.6	
31	49.7	45.9	47.5	48.0	49.7	45.9	47.5	48.0	
32	48.1	44.3	45.9	46.4	48.1	44.3	45.9	46.4	
33	46.5	42.7	44.3	44.8	46.5	42.7	44.3	44.8	
34	44.9	41.1	42.7	43.2	44.9	41.1	42.7	43.2	
35	43.3	39.5	41.1	41.6	43.3	39.5	41.1	41.6	
36	41.7	37.9	39.5	40.0	41.7	37.9	39.5	40.0	
37	40.1	36.3	37.9	38.4	40.1	36.3	37.9	38.4	
38	38.5	34.7	36.3	36.8	38.5	34.7	36.3	36.8	
39	36.9	33.1	34.7	35.2	36.9	33.1	34.7	35.2	
40	35.3	31.5	33.1	33.6	35.3	31.5	33.1	33.6	
41	33.7	29.9	31.5	32.0	33.7	29.9	31.5	32.0	
42	32.1	28.3	29.9	30.4	32.1	28.3	29.9	30.4	
43	30.5	26.7	28.3	28.8	30.5	26.7	28.3	28.8	
44	28.9	25.1	26.7	27.2	28.9	25.1	26.7	27.2	
45	27.3	23.5	25.1	25.6	27.3	23.5	25.1	25.6	
46	25.7	21.9	23.5	24.0	25.7	21.9	23.5	24.0	
47	24.1	20.3	21.9	22.4	24.1	20.3	21.9	22.4	
48	22.5	18.7	20.3	20.8	22.5	18.7	20.3	20.8	
49	20.9	17.1	18.7	19.2	20.9	17.1	18.7	19.2	
50	19.3	15.5	17.1	17.6	19.3	15.5	17.1	17.6	

Age	Pull-ages				
	Standard	1989	1985	1975	1965
10	1	55	70	85	72.8
11	1	80	70	70	80.5
12	1	70	70	65	71.8
13	2	80	60	65	64.8
14	3	80	70	65	70.5
15	3	80	60	60	64.5
16	5	80	65	70	71.5
17	5	80	70	70	76.2

Age	Fitness Awa (boys)				
	Standard	1989	1985	1975	1965
10	8	N/A	50	50	52.7
11	8	N/A	50	50	48.1
12	8	N/A	40	35	41.1
13	12	N/A	50	50	56.1
14	12	N/A	50	45	56.1
15	12	N/A	50	45	56.1
16	12	N/A	50	45	56.1
17	12	N/A	50	45	56.1
18	12	N/A	50	45	56.1
19	12	N/A	50	45	56.1
20	12	N/A	50	45	56.1

Note: N/A = Not available.

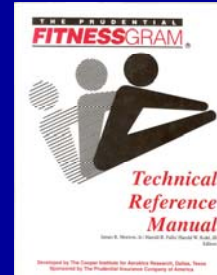
Research Quarterly for Exercise and Sport
 © 1984 by the American Alliance for Health,
 Physical Education, Recreation and Dance
 Vol. 65, No. 2, pp. 110-119

Validation of Criterion-Referenced Standards for Tests of Arm and Shoulder Girdle Strength and Endurance

William J. Rutherford and Charles B. Corbin

The purpose of this study was to establish criterion-referenced standards for selected tests of arm and shoulder girdle strength and endurance for college females. Several popular tests of arm and shoulder girdle strength and endurance were administered to equal numbers of trained and untrained college females (N = 92) to generate data for the analysis. The contrasting groups method (Beck, 1976; Safrit & Wood, 1990) yielded the following criterion cutoff scores that classified college females as trained or untrained on the basis of regular upper arm and shoulder girdle resistance training: pull-ups = 3 repetitions (reps), 90° push-ups = 16 reps, flexed arm hang = 5 s, seated chest press = 24.5 kg, seated biceps curl = 16.4 kg, seated lat pull (Astrucius dorsi pull-down) = 38.2 kg, absolute strength index = 86.4 kg, and relative strength index = 6 kg per kg of body weight. Cross-validation of the standards on an independent sample of college females (N = 112) suggested stability of the cutoff scores for pull-ups, flexed arm hang, and relative strength.

Technical Reference Manual 1994



1994

Physical Exercise Science, 1994, 6, 315-329
 © 1994 Human Kinetics Publishers, Inc.

Relationship Between Habitual Physical Activity and Aerobic Fitness in Adolescents

James R. Morrow, Jr., and Patty S. Freedson

This review summarizes the research relating physical activity to aerobic fitness among adolescents. A brief description of commonly used physical activity and aerobic fitness measures is presented, followed by an interpretation of the literature that suggests a small to moderate relationship between physical activity and aerobic fitness in this population (typical correlation of .16-.17). Dose-response data are lacking, which makes it difficult to offer definitive conclusions concerning the amount of physical activity necessary to elicit change in aerobic capacity. Nevertheless, recommendations about the type, amount, and quality of physical activity for adolescents are presented. Recommendations are based on a summary of the research data on daily physical activity and aerobic fitness in adolescents. Further research is needed to investigate the association between habitual physical activity and aerobic fitness in adolescents where the a priori goal is to identify a threshold of daily physical activity necessary for an aerobic benefit associated with enhanced health.

Guest Editorial

Physical Exercise Science, 1995, 7, 367-391
 © 1995 Human Kinetics Publishers, Inc.

A Response to "The Horse Is Dead; Let's Dismount"

Charles B. Corbin, Robert P. Pangrazi, and Gregory J. Welk

Research Quarterly for Exercise and Sport
 © 2008 by the American Alliance for Health,
 Physical Education, Recreation and Dance
 Vol. 71, No. 2, pp. 129-134

Validation of Criterion-Referenced Standards for the Mile Run and Progressive Aerobic Cardiovascular Endurance Tests

Donna M. Chun, Charles B. Corbin, and Robert P. Pangrazi

The purpose of this study was to validate criterion-referenced standards for cardiovascular endurance tests using the criterion-group validation model. Adolescent boys and girls assigned to either untrained or trained groups were administered the mile run and Progressive Aerobic Cardiovascular Endurance Run (PACER) tests. Selection of optimal criterion standards was based on finding a cutoff score that minimized the probability of misclassification errors and maximized the probability of making correct decisions based on participation in physical activity. The results of this study suggest that recent changes in FITNESSGRAM standards are appropriate, especially for the PACER test. While modifications of standards have corrected somewhat for disparities in passing rates between the mile run and the PACER, especially for girls, further study of standards is necessary.

Activity for Children Conventional Wisdom

- Youth guidelines = adult guidelines
- Fitness awards beat activity awards
- Kids are inactive
- Activity = fitness for kids
- Kids compensate for school activity

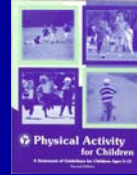
Research Quarterly for Exercise and Sport
© 2000 by the American Alliance for Health,
Physical Education, Recreation and Dance
Vol. 68, No. 3, pp. 202-209

The Validity of the Tritrac-R3D Activity Monitor for the Assessment of Physical Activity in Children

Gregory J. Weik and Charles B. Corbin

The purpose of this study was to evaluate the validity of the Tritrac-R3D Activity Monitor, a new instrument designed to improve assessments of physical activity. Comparisons were made with a heart rate monitor and with a Caltrac Activity Monitor. Thirty-five children (ages 9-11 years) were monitored on 3 different school days with all 3 instruments. The Tritrac was moderately correlated with the heart rate monitor ($r = .58$) and highly correlated with the Caltrac monitor ($r = .88$). By taking advantage of the minute-by-minute timing capability of the Tritrac and the heart rate monitors, it was discovered that the correlations between these instruments were highest during free play situations (lunch/ recess, recess, after school) and were lower when activity was more limited (class time or structured physical education). The ability of the Tritrac to assess activity on a minute-by-minute basis may greatly enhance its overall utility.

Physical Activity Guidelines Teens 1994 Children 1998



Research Quarterly for Exercise and Sport
© 2000 by the American Alliance for Health,
Physical Education, Recreation and Dance
Vol. 71, No. 2, pp. 95-10

Measurement Issues in the Assessment of Physical Activity in Children

Gregory J. Weik, Charles B. Corbin and Darraan Dale

Pediatric Exercise Science, 2004, 16, 44-53
© 2004 Human Kinetics Publishers, Inc.

Free-Living Pedometer Step Counts of High School Students

Bridgette E. Wilde, Charles B. Corbin,
and Guy C. Le Masurier

Journal of Physical Activity and Health, 2005, 2, 159-168
© 2005 Human Kinetics Publishers, Inc.

Pedometer-Determined Physical Activity Levels of Youth

Guy C. Le Masurier, Aaron Beighle, Charles B. Corbin,
Paul W. Darst, Charles Morgan, Robert P. Pangrazi,
Bridgette Wilde, and Susan D. Vincent

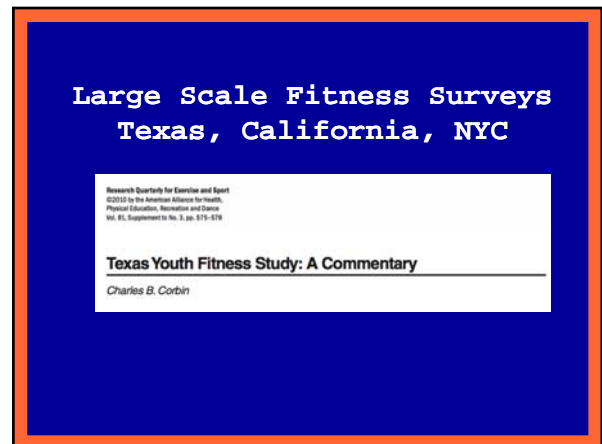
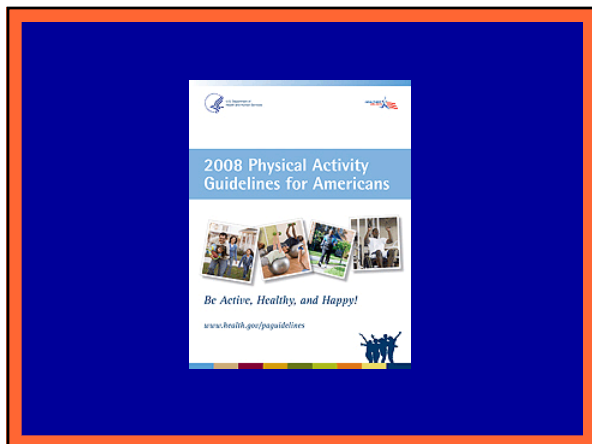
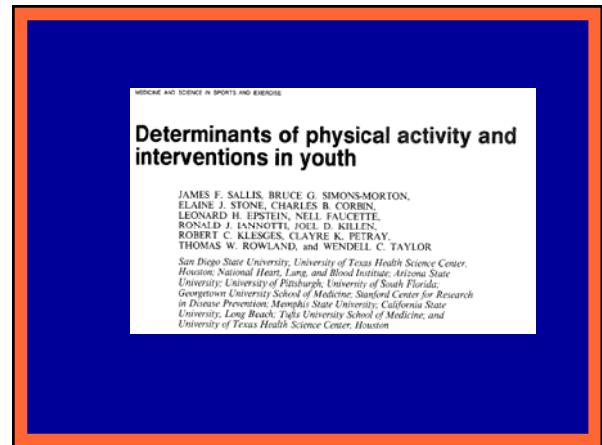
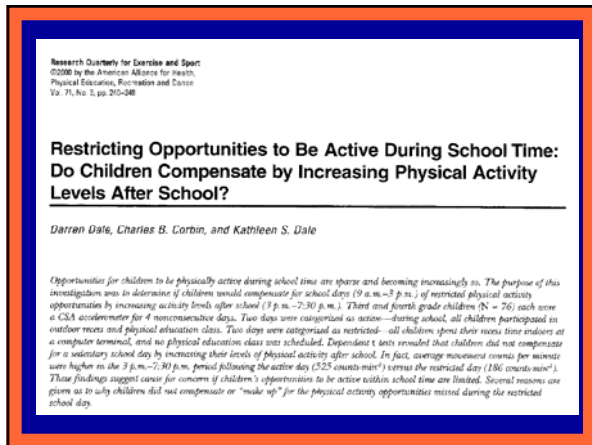
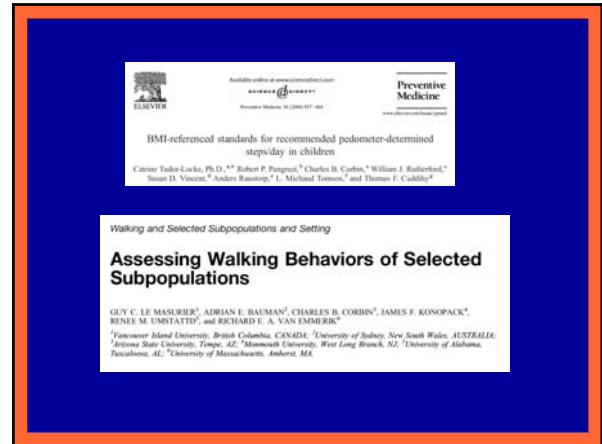
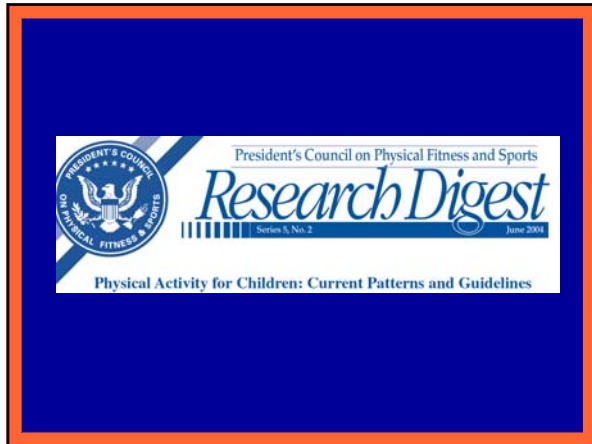
Epidemiology

Research Quarterly for Exercise and Sport
© 2006 by the American Alliance for Health,
Physical Education, Recreation and Dance
Vol. 77, No. 1, pp. 14-22

Steps Counts Among Middle School Students Vary With Aerobic Fitness Level

Guy C. Le Masurier and Charles B. Corbin

The purpose of this study was to examine if steps/day taken by middle school students varied based on aerobic fitness classification. Middle school students ($N = 223$; 112 girls, 111 boys) were assigned to three aerobic fitness categories (HIGH, MOD, LOW) based on results of the FITNESSGRAM P3.2.1 test. Four subtypes of pedometer monitoring determined activity levels (steps/day). Boys accumulated significantly more steps/day than girls, 11,589 \pm 3,270 and 10,232 \pm 2,917 steps/day, respectively, $F(1, 219) = 16.0$, $p < .001$, $\eta^2 = .055$. There were no differences in steps/day between grades. HIGH fit participants accumulated significantly more steps/day, $F(2, 217) = 12.2$, $p < .001$, $\eta^2 = .101$, than moderately fit and low fit participants ($n = 1,991$ and $n = 2,897$ steps/day, respectively). Middle school students who participated in sports in addition to physical education (PE) accumulated significantly more steps/day ($n = 980$ steps/day) than those participating in PE only, $F(1, 219) = 10.0$, $p < .01$, $\eta^2 = .044$. Although the relationship between physical activity and aerobic fitness was moderate (0.35; $p < .01$), these data demonstrated significant differences in accumulated steps/day among youth of varying aerobic fitness levels. Whether improved fitness levels were the result of additional activity or the cause of it remains to be determined. Regardless, the fittest middle school students were also the most active and accumulated a significant amount of steps/day through organized extracurricular physical activities.



New Wisdom

- Children not fragile, but not adults
- Youth unfitness is exaggerated
- Physical fitness = health fitness
- Activity does not predict fitness
- Norm-based awards lacking for most
- Young children most active
- Boys more active than girls
- Both benefit from activity
- Kids need kids guidelines
- Focus on activity
- In school activity helps (PE+)
- Fitness/Activity = achievement

New Wisdom Body Composition

- Body fatness is issue, but not new
- Body composition should be screened
- Body composition assessment is sensitive, so is all fitness testing
- Children's standards established??

Conceptual Physical Education Conventional Wisdom

- Physical education will always be required at college level.
- Textbooks should not be used except in majors classes.
- Physical education for non-majors should be skills based.
- Conceptual physical education does not work.

Janet Wessell 1959



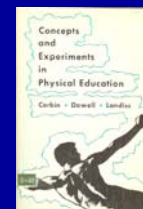
The beginning

Janet Wessell
Movement
Fundamentals 1957.
Fitness for Modern
Teenagers 1963

Wayne Van Huss
Physical Activity
for Modern Living
1960

Johnson et al.
al.1966

Corbin, et
1968



Corbin.
**Lecture-Laboratory
 Physical Education:
 Program Organization
 and Evaluation.**
NCPEAM Proceedings.
 73:139-142, 1969.

1974, 1979, 1980,
 1981.

Conceptual Publications

1974 *Physical Educator* *Physician and
 Sports Medicine*
 1978

*The Physical Education
 Proficiency Test: Who Takes it?
 Who Passes it?*
Charles B. Corbin

*Long-Term Effects of
 A Conceptual Physical Education Program*
SCOTT SLAVA
 St. John, Kansas
 DAVID R. LAURIE
 Kansas State University
 CHARLES B. CORBIN
 Arizona State University

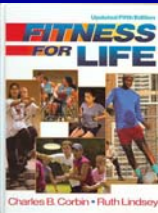
**Exercise
 for a Lifetime:
 An Educational
 Effort**

Charles B. Corbin, PhD
 David R. Laurie, EdD

High School Conceptual PE

THE CONCEPTUAL APPROACH TO TEACHING PHYSICAL FITNESS
By Charles B. Corbin and Ruth Lindsay

1979 1980 Florida Mandate
 11 states require course



7 require curriculum

Jahn, et al. RC AAHPERD
 2010

Project Active Teen

Research Articles

*Can Conceptual Physical Education Promote
 Physically Active Lifestyles?*
Darren Dale, Charles B. Corbin, and Thomas F. Dudley

*Physical Activity Participation of High School Graduates
 Following Exposure to Conceptual or Traditional Physical
 Education*
Darren Dale and Charles B. Corbin

Conceptual Publications

peer reviewed article

*Professor and Teacher Ratings of Objectives
 for the Texas Foundations of Personal Fitness Course*

by Jennifer Ann Hilking and Charles B. Corbin
 Department of Exercise and Wellness, Arizona State University-East

Review Articles

Health-Based Physical Education
G. L. Masurier (Mesa, USA) & C. B. Corbin (Mesa, USA)

Conceptual Publications

JOURNAL OF AMERICAN COLLEGE HEALTH, VOL. 58, NO. 2

**The Progression and Characteristics of
 Conceptually Based Fitness/Wellness Courses at
 American Universities and Colleges**

Pamela Hodges Kulinna, PhD; William W. Worfield, MPE; Sean Jonoitis, MPE;
 Mary Dean, MPE; Charles Corbin, PhD

Conceptual Publications

Quest, 2008, 60, 467-487
© 2008 Human Kinetics, Inc.

Conceptual Physical Education: The Anatomy of an Innovation

Charles B. Corbin and Bradley J. Cardinal

Conceptual Physical Education New Wisdom

- Required College PE survives in small schools.
- Most college requirements are conceptual.
- Virtually all colleges have CPE
- Textbooks are typically used.
- Conceptual physical education has research support.
- CPE becoming prevalent in K-12
- CPE has changed view of activity, fitness, and wellness.
- PHYSICAL EDUCATION NAME PURGED

Girls in Physical Activity Conventional Wisdom

- Girls are fragile
- Girls don't like activity and sports.
- Girls don't like competition.
- Girls should not compete with boys.
- Girls lack confidence in activity.
- Girls are inactive.

Response to Title IX

ATTITUDES TOWARD PHYSICAL ACTIVITY OF CHAMPION WOMEN BASKETBALL PLAYERS (*)

CHARLES B. CORBIN (*) U.S.A.

The purpose of the study was to assess the attitudes toward physical activity of championship athletes and nonathletic college women. The Eastern State J.V. title was administered to 75 athletes participating in the National A.A.U. National Championship and 212 college freshmen women randomly selected from required physical education classes at Eastern State University. Results of statistical analysis indicate that women basketball players had significantly higher attitude scores on the attitude subscale than on any of the other five subscales. Athletes scored higher on confidence and activity subscales than did the nonathletes while the nonathletes had significantly higher scores on the activity subscale than did the athletes.

**Attitudes Towards
Physical Activity
of Champion Women
Track & Field Athletes***

By
Dr. Charles B. Corbin
Professor of Physical Education
Kansas State University

Theory Based Research Thank You Dan Landers

JOURNAL OF SPORT PSYCHOLOGY LEVEL

Sex-typing of Physical Activities and Success Predictions of Children Before and After Cross-sex Competition

Charles B. Corbin
Kansas State University

Charles Nix
Attamont, Kansas Public Schools

1979, V. 5, No. 1 Personality and Social Psychology Bulletin 91

The Effect of Competitive and Cooperative Instructional Sets on Children's Generosity

Mark A. Barnett¹, Karen A. Matthews, and Charles B. Corbin
Kansas State University

Lennie, Factors in Female Lack of Confidence

EFFECTS ON SUCCESS-FAILURE AND OPINIONS PERCEIVED ABILITY ON PREDICTIONS OF PERFORMANCE BY MALES IN CROSS-SEX COMPETITION*

CHARLES B. CORBIN
Kansas State University

The Effects of Performance Feedback on Female Self-Confidence

Steven J. Perreault and Charles B. Corbin
Arizona State University

Self-confidence and Motor Performance of Preadolescent Boys and Girls Studied in Different Feedback Situations

Charles B. Corbin, Michael J. Stewart, and William O. Blair
Kansas State University

Feedback Dependence Among Low Confidence Preadolescents: Hope and Guilt

MICHAEL J. STEWART
University of Nebraska-Omaha
and
CHARLES B. CORBIN
Kansas State University

Social Learning Theory

Research Quarterly
 1987, Vol. 58, No. 4, 497-508

Sex Differences in Performance Estimates: Female Lack of Confidence vs. Male Boastfulness

CHARLES B. CORBIN and DANIEL M. LANDERS
 Arizona State University
 DEBORAH L. FELTZ
 Michigan State University
 KATHLEEN SEXTON
 Texas Children's Hospital

Vicarious Success Experience as a Factor Influencing Self-Confidence, Attitudes, and Physical Activity of Adult Women

Charles B. Corbin
 Arizona State University
 David R. Laurie
 Kansas State University
 Candice Grager
 Mesilla, NM
 Betty Smithey
 Orangeburg, SC

Computer/Tech Equipment

JOURNAL OF SPORT PSYCHOLOGY, 1986, 8, 70-74

A Computer Based Multiple Choice Stimulus-Response Apparatus

Charles F. Cicciarella
 United States Sports Academy, Mobile AL
 Charles B. Corbin
 Arizona State University

Girls in Physical Activity New Wisdom

- Girls are not fragile
- Girls like activity and sports.
- Girls like competition.
- Cross-sex competition need not threaten males.
- Confidence can be developed.
- Girls are less active than boys.
- Girls needs and interest must be considered.

Self-Perceptions

Eating Disorders Among Female Athletes

Jorunn Sundgot Borgen, MS
 Charles B. Corbin, PhD

Female Physical Estimation and Attraction to Physical Activity

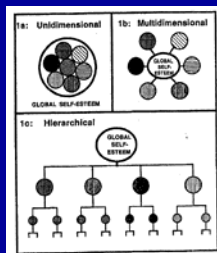
Kenneth B. Fox and Charles B. Corbin
 Arizona State University
 William H. Coady
 Missouri Western State College

Social Physique Anxiety in Postmenopausal Women

Lynda B. Ransdell, PhD
 Christine L. Wells, PhD
 Melinda M. Manore, PhD
 Pamela D. Swan, PhD
 Charles B. Corbin, PhD

Physical Self-Perceptions (PSPP)

The Physical Self-Perception Profile:
 Development and Preliminary Validation
 Kenneth B. Fox
 Northern Illinois University
 Charles B. Corbin
 Arizona State University



MEASUREMENT IN PHYSICAL EDUCATION AND EXERCISE SCIENCE, 17(1), 163-171
 Copyright © 1987, Lawrence Erlbaum Associates, Inc.

The Validity and Reliability of Two Different Versions of the Children and Youth Physical Self-Perception Profile

Gregory J. Welk
 Cooper Institute for Aerobics Research
 Dallas, TX
 Charles B. Corbin
 Department of Exercise Science and Physical Education
 Arizona State University
 Marsha Nann Dowell and Hollie Harris
 Department of Health and Physical Education
 Arkansas Tech University

Physical Self-Perceptions of High School Athletes

Gregory J. Welk, Charles B. Corbin, and Lisa A. Lewis

The Physical Self-Perception Profile (PSPP) measures perceptions of sport competence, physical conditioning, strength, and body attractiveness. Originally validated with college students, the profile has subsequently been adapted for use with younger children (11 and older) and older adults (21 and over) with teenage or athletic populations. The purpose of this study was to evaluate the factor validity of the children's version of the Physical Self-Perception Profile (PSPP) for high school athletes (N = 242). The PSPP was given to athletes (both boys and girls) from a variety of competitive sports. The internal reliability of the athletes was good (Cronbach's alpha = .71 to .81), with the exception of the Body Image for the males (alpha = .46). A four-factor structure was evident, though some loading seemed low for the Body Image. Results indicated that average athletes have strong physical self-perceptions compared to other populations, particularly regarding self-perceptions and confidence.

Self-Esteem Profiles: A Comparison of
Children Above and Below National
Criteria for Body Fatness

William B. Corbin, Charles B. Corbin, Robert P. Pangrazi, Gene Peterson and Debra Pangrazi

A Short Instrument for Assessing Intrinsic
Motivation for Physical Activity

by Thomas F. Cuddihy, Charles B. Corbin and Darren Dale

Self-Perceptions

- Relate to activity status
- Relate to wellness/well-being
- Vary among populations
- Can be developed

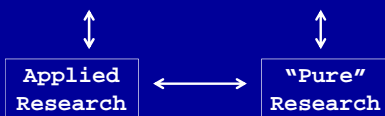
If you don't
know where
you've come
from, you
don't know
where you are.

James Burke

Integrating

Integration

- Books
- Professional
Articles



Movements Interact Example

- Conceptual Physical Education
 - FITT
 - Threshold of Training
 - Target Zones
 - Fitness Testing
- Fitness Testing
- Exercise Prescription (ACSM)
- Activity Guidelines

Journal of Physical Activity & Health, 2006, 3(Suppl. 2), S8-S20
© 2006 Human Kinetics, Inc.

The History of FITNESSGRAM®

Sharon A. Plowman, Charles L. Sterling, Charles B. Corbin,
Marlu D. Meredith, Gregory J. Welk, and James R. Morrow, Jr.

Initially designed by Charles L. Sterling as a physical fitness "report card" FITNESSGRAM®/ACTIVITYGRAM® is now an educational assessment and reporting software program. Based on physiologic/epidemiological, behavioral, and pedagogical research, FITNESSGRAM is committed to health-related physical fitness, criterion-referenced standards, emphasis on physical activity including behavioral based recommendations, and the latest in technology. The crux of these major concepts is described in this history of FITNESSGRAM.

Key Words: health related physical fitness, physical activity assessment, criterion-referenced fitness standards

- Scientific footing
- Some tests still not documented
- What would C. H. McCloy think?

Journal of Physical Activity & Health, 2006, 3(Suppl. 2), S90-S100
© 2006 Human Kinetics, Inc.

Appropriate and Inappropriate Uses of FITNESSGRAM®: A Commentary

Michael P. Ernst, Charles B. Corbin, Aaron Beighle,
and Robert P. Pangrazi

- Some questionable uses.
- Award questions.

Toward an Understanding of Appropriate Physical Activity Levels for Youth

Charles B. Corbin, Robert P. Pangrazi, ARIZONA STATE UNIVERSITY
Greg J. Welk, COOPER INSTITUTE FOR AEROBICS RESEARCH

ORIGINALLY PUBLISHED AS SERIES 1, NUMBER 8, OF THE ICFPS RESEARCH DIGEST.

- We have come a long way!

Importance of Physical Education Renaissance Field of 21st Century Park

Coming Back to Roots

Any time gone by was better.
Jorge Manrique

Thanks

- Professors/Teachers/Coaches
Carol Charles Armond Seidler
- Colleagues
Bob Pangrazi Dan Landers Hans van der Mars
Dave Laurie John Burt George Sage
Don Franks Chris Wells Pam Kulinna
- Former Students
- Publishers
Scott Wikgren Merrill Hill
Rainer Martens Tex Lockhart
Ruth Abernathy Chris Johnson
- Co-Authors
Ruth Lindsey Greg Welk
Karen Welk Will Corbin
Guy Le Masurier Dolly Lambdin
Meg Greiner David Corbin

Illinois Connection

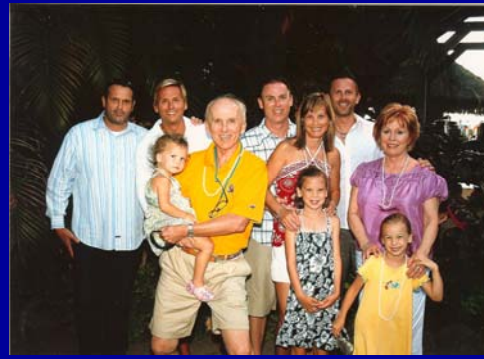
- Bill Hottinger (saved the rookie)
- Mike Pollock
- Bill Haskell
- Jim Skinner
- Dick Berger
- Bruce Noble
- Bill Adams
- Brad Rothermel
- Joe DiGennaro
- Ray Welsh
- Don Franks
- Sharon Plowman
- Kirk Cureton
- Greg Welk
- Weimo Zhu
- Rainer Martens
- Dan Landers
- Armond Seidler
- Bill Bynum



Fitnessgram Connection

Marilyn Meredith	Charles Sterling
Steve Blair	Greg Welk
Russ Pate	Scott Going
Sharon Plowman	Jody Prochaska
Kirk Cureton	Weimo Zhu
Tim Lohman	Dolly Lambdin
Jim Morrow	Matt Mahar
Harold Falls	Georgi Roberts
Bob Pangrazi	
Jim Sallis	

Fitnessgram Advisors



Thank You

Questions