

# M. VIRGINIA WILMERDING, Ph.D.

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## **Education**

Ph.D. Exercise Science 1998  
University of New Mexico  
Albuquerque, N.M.  
Split minor: Biology and Statistics  
Dissertation:  
Electromyographical Comparison of the Developpe Devant at Barre and Centre

M.S. Adapted Physical Education 1986  
University of New Mexico  
Albuquerque, N.M.  
\* SUMMA CUM LAUDE

Bachelor of Education 1976  
University of London  
London, England  
\*Honours

Undergraduate studies in Physical Education 1971-1973  
University of Bridgeport  
Bridgeport, Connecticut

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## **Professional Employment**

**1994 - present**  
**Adjunct faculty**  
**College of Education**  
**Division of Physical Performance and Development**

### **Courses Taught:**

Kinesiology  
Designs for Fitness  
(exercise prescription, body composition, strength and flexibility analysis)  
Exercise Physiology  
Research Design (graduate)  
Motor Development

Adapted Physical Education  
Physical Disabilities & Causes  
Tests and Measurements  
Therapeutic Physical Education  
Worksite Wellness Programs  
Fitness Concepts (graduate)  
Body Composition (graduate)

**Curriculum Development:**

Helped to develop various minors in program (coaching, curriculum and instruction, exercise physiology, physical education endorsements), mission statement, goal and action plans

**Student Advisement:**

Master's committee: 9 students  
Doctoral comprehensive and dissertation committee: 9 students

**1983 - present**

**Lecturer/Adjunct Professor  
University of New Mexico  
College of Fine Arts  
Department of Theatre and Dance**

**Courses taught:**

Kinesiology for Dancers (course # 313)  
Ballet (course # 149, 249, 349)  
Modern dance (course # 310)  
Jazz (course # 130, 230, 330)  
Dance Pedagogy (course # 466, 467)

**Curriculum Development:**

Developed Advanced Kinesiology (course # 314)  
Developed M.A. Program in Kinesiology for Dancers  
Wrote Dance Program Handbook  
Developed Dance Pedagogy (course # 466, 467) into a full year's course of study  
Theory/lecture in 466 and teaching practicum in 467  
Co-wrote curriculum for Flamenco Emphasis for B.F.A and B.A.

**Student Advisement:**

Master's committee: 5 students  
Mentor for 2 McNair Scholars and 1 Research Opportunity Scholar

**1993- 1998, 2000 - 2005**

## **Employee Health Promotion Program**

Supervisor, Fitness Program

Coordinate and oversee teaching of all exercise classes

Hire and supervise fitness instructors

Research and writing articles, one-on-one teaching

Editorial board and writer: EHPP newsletter

Physiological assessments

-Body Composition (hydrostatic weighing, skinfolds, bioelectrical impedance),

-Health screening

-Residual Lung Volume and Pulmonary Function tests

-VO<sub>2</sub> kinetics (indirect calorimetry)

-Resting metabolic rate

-Electrocardiograms

**1997- 2000**

**Lecturer**

**Santa Fe Community College**

**Courses taught:**

Ballet (course # 142)

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## **Professional Membership and Service**

International Association for Dance Medicine & Science

**President 2005-2007**

Research Committee

Program Committee

Newsletter Editor

American Ballet Theatre

Medical Advisory Board

Performing Artists Medical Association

Board of Directors 2002-2004

Research Committee

Coordinator of Dance for 2002 and 2003 Annual International Conference

National Dance Association

(American Alliance of Health, Physical Education, Recreation, and Dance)

Vice-President Elect of Dance Science & Somatics 2002-2005

Editor - Science

Journal of Dance Medicine & Science

(Official publication of International Association of Dance Medicine & Science)

1999 - present

American College of Sports Medicine  
USA Gymnastics

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## Awards and Certifications

Adjunct Teacher of the Year  
University of New Mexico, 2005-6

President's Award  
National Dance Association, 2004 and 2005

Citation for Meritorious Achievement of New Mexico Dance Educators  
National Dance Education Organization, 2003

Gymnastics Choreographer of the Year Award  
United States Elite Coaches Association  
1990 and 1991

Gymnastics National Team Coach  
World Championships 1991  
Indianapolis, Indiana  
Silver Medal - TEAM USA

New Mexico State Teacher's License  
Physical Education, Adapted Physical Education 1985-1992

American College of Sports Medicine  
Health Fitness Instructor

American Red Cross  
Standard First Aid

American Heart Association  
Heartsaver

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## Publications

Farrar-Baker A, Wilmerding V: Prevalence of Lateral Bias in the Teaching of Beginning and Advanced Ballet. *Journal of Dance Medicine & Science*, Volume 10(3-4):81-84, 2006.

Mermier CM, Schnieder SM, Gurney AB, **Wilmerding-Pett MV**, Weingart HM.  
Preliminary Results: Effect of Whole-Body Cooling in Patients with Myasthenia Gravis.  
*Medicine and Science in Sports and Exercise*, Volume 38 (1):13-20, 2006.

**Wilmerding MV**, McKinnon MM, Mermier CM. Body Composition in Dancers: A Review. *Journal of Dance Medicine & Science*, Volume 9(1):17-22, 2005.

**Wilmerding MV**, Sanchez E. The ins and outs of turning out. *Dance UK News*, Issue 56, Spring 2005.

Gibson AL, Heyward VH, Mermier CM, Janot JM, **Wilmerding MV**. Comparison of DXA, Siri's 2-C, and Lohmans' Db-Mineral Models for Estimating the Body Fat of Physically Active Adults. *International Journal of Sport Nutrition and Exercise Metabolism*, Volume 14, No. 6, December, 2004.

**Wilmerding MV**. Why do you do it? Combating cigarette smoking among dancers. *Dance UK News*, Issue 54, Autumn 2004.

**Wilmerding MV**, Gurney B, Torres V. The Effect of Positive Heel Inclination on Posture in Young Children Training in Flamenco Dance. *Journal of Dance Medicine & Science* 7(3): 85-90, 2003.

**Wilmerding MV**, Gibson AL, Mermier CM, Bivins KA. Body Composition Analysis in Dancers: Methods and Recommendations. *Journal of Dance Medicine & Science* 7(1): 4-31, 2003.

Robson B, Book A, **Wilmerding MV**. Psychological stresses experienced by dance teachers: How can I be a role model when I never had one? *Medical Problems of Performing Artists* 17(4):173-177, 2002.

**Wilmerding MV**, Robson B, Book A. Cigarette Smoking in the Adolescent Dance Population. *Medical Problems of Performing Artists* 17(3): 116-120, 2002.

Bernardi L, Passino C, **Wilmerding V**, Dallam GM, Parker DL, Robergs RA, Appenzeller O. Breathing patterns and cardiovascular autonomic modulation during hypoxia induced by simulated altitude. *Journal of Hypertension* 19(5): 947-58, 2001.

**Wilmerding MV**, Heyward, VH, King M, Fiedler KJ, Stidley C, Evans B. Electromyographical Comparison of the Developpe Devant at Barre and Centre. *Journal of Dance Medicine & Science* 5(3): September 2001.

Pedersen ME, **Wilmerding MV**, Kuhn BT, Encinias-Sandoval, E. Energy Requirements of the American Professional Flamenco Dancer. *Medical Problems of Performing Artists* 16(2): 47-52, 2001.

Grossman G, **Wilmerding MV**. The Effect of Conditioning on Functional Range of Motion of the Dancer's Hip. *Journal of Dance Medicine & Science* 4(4): 117-121, 2000.

Grossman G, **Wilmerding MV**. Dance physical therapy for the leg and foot: plantar fasciitis and Achilles tendinopathy. *Journal of Dance Medicine & Science* 4(2): 66-71, June 2000.

Pedersen ME, **Wilmerding MV**. Measures of Plantar Flexion and Dorsiflexion Strength in Flamenco Dancers. *Medical Problems of Performing Artists* 14(3): 107-112, September 1999.

Salter-Pedersen ME, **Wilmerding MV**. Injury Profile of Student and Professional Flamenco Dancers. *Journal of Dance Medicine & Science* 2(3): 108-114, August 1998.

Kravitz L, Heyward VH, Stolarczyk LM, **Wilmerding MV**. Does Step Exercise with Handweights Enhance Training Effects? *Journal of Strength and Conditioning Research* 11(3): 194-199, 1997.

Stolarczyk, LM, Heyward VH, Goodman JA, Kessler KL, Kocina PS, **Wilmerding MV**. Predictive Accuracy of Bioimpedance Equations in Estimating Fat-free Mass of Hispanic Women. *Medicine and Science in Sports and Exercise* 27(10): 1450-1456, October 1995.

Kravitz L, **Wilmerding MV**, Stolarczyk LM, Heyward VH. Physiological Profile of Step Aerobics Instructors. *Journal of Strength and Conditioning Research* 8(4): 255-258, November 1994.

Kravitz L, **Wilmerding MV**. Anatomy of a Study: Physiological Characteristics of Step Aerobics Instructors *Idea Today* 11(9): 34-40, October 1993.

**Wilmerding MV**. Teaching Dance to Gymnasts. *Technique* 12(2): February 1992.

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## Abstracts

Bentzur K, Mermier C, **Wilmerding MV**, Gibson, AL, McKinnon, MM. Body Fat Values of Collegiate Athletes: An Update, *Medicine and Science in Sports and Exercise*, Volume 38:5 Supplement, May 2006.

Gibson AL, Heyward VH, Mermier CM, Janot JM, Faria E, **Wilmerding MV**. Laboratory Method Comparisons for Estimating Relative Body Fatness of Physically Active and Ethnically Diverse Women. *Medicine and Science in Sports and Exercise*, p S72-S73, Vol 36(5), Abstract 496, May, 2004.

Gibson AL, Janot J, Chavez J, Mermier CM, **Wilmerding MV**, Heyward VH. Comparative Accuracy of Six Bioelectrical Impedance Analysis Equations in Predicting FFM of Physically Active Women. *Medicine and Science in Sports and Exercise*, S146 Vol 35(5), Abstract 813, May, 2003.

Gibson A, Heyward V, Janot J, Chaves J, Schiller J, **Wilmerding V**, Mermier C: #990 Comparison of Tanita © and Omron © bioimpedance estimates of relative body fatness for physically active women. {abstract} *Medicine & Science in Sports & Exercise* 34(5):Supplement, 2002.

Janot J, Gibson A, Faria E, Mermier C, **Wilmerding V**, Heyward V: #87 - Body composition assessment of physically active adults: hydrodensitometry vs. air

displacement plethysmography (Bod Pod ©). {abstract} *Medicine & Science in Sports & Exercise* 33(5):S16, 2001.

Gibson A, Janot JM, **Wilmerding V**, Mermier C, Heyward V: Body composition assessment of physically active adults: hydrodensitometry vs. dual energy x-ray absorptiometry. {abstract} *Medicine & Science in Sports & Exercise* 33(5):S174, 2001.

#666 - Comparison of Hydrodensitometry and Dual-Energy X-Ray Absorptiometry for Estimating Body Fat of Hispanic Women. **MV Wilmerding**, V Heyward, L Stolarczyk, J Goodman, D Grant, P Kocina, K Kessler, *Medicine and Science in Sports and Exercise*, Supplement to Vol 27:#5, May 1995, pS117.

#671 - Comparison of Two-Component and Multi-Component Models in Estimating Body Composition of Hispanic Women. V Heyward, L Stolarczyk, J Goodman, D Grant, P Kocina, K Kessler, **MV Wilmerding**, *Medicine and Science in Sports and Exercise*, Supplement to Vol 27:#5, May 1995, p.S118.

#1012 - Effects of Step Training With and Without Handweights on Physiological and Lipid Profiles of Women. L Kravitz, V. Heyward, L Stolarczyk, **MV Wilmerding**, *Medicine and Science in Sports and Exercise*, Supplement to Vol 27:#5, May 1995, p.S179.

#1038 - Fat Free Body Composition of Hispanic Women: Comparison to Other Ethnic Groups. L Stolarczyk, V Heyward, J Goodman, D Grant, P Kocina, K Kessler, **MV Wilmerding**, *Medicine and Science in Sports and Exercise*, Supplement to Vol 27:#5, May 1995, p.S184.

#1134 - Comparison of Distal and Proximal Electrodes in Estimating Fat Free Mass Using Bio-impedance Analysis (BIA), L Stolarczyk, V Heyward, **MV Wilmerding**, *Medicine and Science in Sports and Exercise*, Supplement to Vol 26:#5, May 1994, p.S202.

Physiological Profile of Step Aerobics Instructors. L Kravitz, **MV Wilmerding**, *Research Quarterly for Exercise and Sport*, Supplement to Vol 65:#1, March, 1994, p. A-37.

Predictive Accuracy of Skinfold (SKF) and Near Infrared Interactance (NIR) Equations in Estimating Body Density (Db) of Hispanic Women". V. Heyward, L. Stolarczyk, **MV Wilmerding**; American College of Sports Medicine: Regional Southwest Conference, San Diego, California, November 18-19, 1994.

Predictive Accuracy of Bioelectrical Impedance (BIA) in Estimating Fat Free Mass (FFM) of Hispanic Women. V Heyward, L Stolarczyk, **MV Wilmerding**; American College of Sports Medicine: Regional Southwest Conference, San Diego, California, November 18-19, 1994.

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## Lectures and Presentations

### International:

Korean Dance Medicine Association  
Seoul, South Korea  
Keynote Speaker  
September, 2008

17<sup>th</sup> Annual Meeting of the International Association of Dance Medicine & Science  
West Palm Beach, Florida  
Creatine Phosphate Recovery Kinetics in Dancers, Runners and Sedentary Controls  
Canberra, ACT, Australia, October 2007

25<sup>th</sup> Annual Performing Artists Medical Association Symposium  
Aspen, Colorado, June 2007  
Body Composition Measurement in Dancers: A workshop

16<sup>th</sup> Annual Meeting of the International Association of Dance Medicine & Science  
West Palm Beach, Florida  
The science of qualitative and quantitative research with dancers.  
Practical application of theories of lateral bias in the ballet class.

24<sup>th</sup> Annual Performing Artists Medical Association Symposium  
Aspen, Colorado, June 2006  
Panelist: Teaching Dance to Young Children: A Physiological Perspective

14<sup>th</sup> Annual Meeting of the International Association of Dance Medicine & Science  
San Francisco, October 2004  
Lateral Bias in Ballet Class

13<sup>th</sup> Annual Meeting of the International Association of Dance Medicine & Science  
London, England, October 2003  
Research Forum: What Can and Cannot be Known by Doing Research in Dance  
Assumptions and Prediction Error in Body Composition Field Techniques

21<sup>st</sup> Annual Performing Artists Medical Association Symposium  
Aspen, Colorado, June 2002  
Co-Chair

12<sup>th</sup> Annual Meeting of the International Association of Dance Medicine & Science  
New York City, NY, October 2002  
The Effect of Positive Heel Inclination in Young Children Training in Flamenco Dance

20<sup>th</sup> Annual Performing Artists Medical Association Symposium  
Aspen, Colorado, June 2002  
Co-Chair



## How to do Research in Performing Arts Medicine

11<sup>th</sup> Annual Meeting of the International Association of Dance Medicine & Science  
Alcala de Henares, Spain , October 2001

- 1) Research Forum: Reliability and Validity
- 2) Training Issues Associated with Cross Training Ethnic Forms
- 3) Comparison of Two Body Composition Assessment Methods and Prediction Equations for Adult Female Dancers
- 4) Cigarette Smoking in the Adolescent Dance Population

10<sup>th</sup> Annual Meeting of the International Association of Dance Medicine & Science  
Miami, Florida, October 2000

- 1) Rearfoot Alignment and Injury in the Student Flamenco Dancer
- 2) Research Forum: Types of Research

18<sup>th</sup> Annual Performing Artists Medical Association Symposium  
Aspen, Colorado, June 2000

Energy Requirements of the American Professional Flamenco Dancer  
Panelist for : Current Issues in Dance Science

9<sup>th</sup> Annual Meeting of the International Association of Dance Medicine & Science  
Tring, Hertfordshire, England, October 1999

Electromyographical Comparison of the Developpe Devant at Barre and Centre

17<sup>th</sup> Annual Performing Artists Medical Association Symposium  
Aspen, Colorado, June 1999

Kinesiological Considerations in the Training of American Flamenco Dancers

8<sup>th</sup> Annual Meeting of the International Association of Dance Medicine & Science  
Hartford, Connecticut, October 1998

- 1) Plantar and Dorsiflexion Strength Differences in Ballet and Flamenco Dancers
- 2) The Relationship Between Iliopsoas Conditioning and Hip Extension Height in Dancers

16<sup>th</sup> Annual Performing Artists Medical Association Symposium  
Aspen, Colorado, June 1998

Measures of Plantar Flexion and Dorsiflexion in Flamenco Dancers

Invited Lecturer in Kinesiology

- 1) Instituto Sonorese de Cultura, Hermosillo, MEXICO April 1997
- 2) Instituto Nacional de Bellas Artes, Mexico City, MEXICO December, 1996

### **National:**

10<sup>th</sup> Annual Meeting of the National Dance Educators Organization  
Baltimore, Maryland

June, 2008

Taking Results of Research into the Classroom

National Dance Institute  
Santa Fe, New Mexico  
February, 2005, March 2006  
Topic: Injury prevention in Dance

National Dance Education Organization Conference  
Albuquerque, NM, October 2003  
Master Class: Stretch & Strength  
Forum: Incorporating Dance Science in the MFA Curriculum  
Creating a Dance Science Master's Degree from thin air  
(or available University resources)  
Training Workshop in Action Research

35<sup>th</sup> Annual Winter Pediatric Musculoskeletal Seminar  
Albuquerque, NM, December 2003  
Disabilities in Performing Arts: The Adolescent Dancer

4<sup>th</sup> Dance Science & Somatics Conference  
Cleveland, Ohio, February 1997  
Physical Characteristics and Injury Profile of Student and Professional Flamenco  
Dancers

United States Gymnastics Federation National Congress  
Anaheim, California, August 1992  
Teaching Dance to Gymnasts

**Regional:**

United States Gymnastics Federation Region III Symposium  
Albuquerque, N.M., October 1984

Training Methods for Dance in Gymnastics  
Association of Women's Sports Administrators Conference  
Albuquerque, N.M., March 1993  
Eating Disorders in Female College Athletes

**Other Professional Teaching Experience**

Dance Theatre of the Southwest  
Albuquerque, N.M.  
Modern dance and jazz 1992-present

Xtreme Gymnastics  
Phoenix, Arizona  
Choreograph beam & floor routines  
Including TOPS team members 1996- present

Los Lunas Hospital and Training School  
Los Lunas, N.M.  
Adapted Physical Education 1988

Desert Devil Gymnastics  
Phoenix, Arizona  
Choreographed floor and beam routines  
Junior and senior national team members  
1989 and 1991 World Team members 1985-1995

Manhattan Country School  
New York City, New York  
Physical Education, grades K-6 1979-1981

Pent Valley Secondary School  
Folkestone, Kent, ENGLAND  
Physical Education and English, grades 7-12 1976

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## **Professional Training in Dance**

### SCHOOLS:

North Carolina School of the Arts  
Durham, North Carolina  
Studies in modern dance, ballet, choreography. 1978

Southern Methodist University  
Dallas, Texas  
Studies in modern dance, jazz, ballet and dance pedagogy.  
Scholarship recipient. 1977-1978

London School of Contemporary Dance  
London, England  
Studies in modern dance, ballet, choreography, improvisation. 1976-1977

Martha Graham School  
Cunningham Foundation  
Joffrey School  
Harkness Foundation  
New York City, New York

### INSTRUCTORS:

#### *Modern:*

Tim Wengerd, Stuart Hodes, Hanya Holm, Jennifer Muller, Dan Wagoner, Matthew Diamond, Merce Cunningham, Louis Falco, Gus Solomons, Jr., Bill Evans

#### *Ballet:*

David Howard, Zena Rommett, Jocelyn Lorenz, Haines Owens, Melissa Hayden

*Jazz:*

Lynn Simonson, Patrice Soriero

*Flamenco:*

Eva Encinias

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### **Professional Dance Experience: New York**

Solomons Company/Dance Artistic Director: Gus Solomons, Jr.  
1979-1982

Musawwir Dance Company Artistic Director: Toby Towson  
1980-1982

Richard Walker and Dancers Artistic Director: Richard Walker  
1978-1980

Louis Falco Dance Company Artistic Director: Louis Falco  
1979

Pilobolus Dance Theatre Artistic Director: Moses Pendleton  
Television work for CBS cable  
1981

### **Professional Dance Experience: New Mexico**

New Mexico Ballet Artistic Director: Patricia Dickinson  
1997- present

Ballet Theatre of the Southwest Artistic Director: Patricia Dickinson  
1992-1997

Bill Evans Dance Company Artistic Director: Bill Evans  
1991- 2005

Tim Wengerd and Company Artistic Director: Tim Wengerd  
1988

New Mexico Danceworks Artistic Director: Gerrie Glover  
1985-1987

Contemporary Dance Alliance  
1985

New Mexico Ballet Artistic Director: Suzanne Johnston  
1983

References:

Vivian Heyward, Ph.D.  
Emeritus Professor  
Department of Physical Performance and Development  
University of New Mexico  
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Albuquerque, NM 87104  
Email: vheyward@unm.edu  
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David S. Weiss, M.D.  
NYU-HJD Department of Orthopaedic Surgery  
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