

# ADVOCATE

National Consortium for Physical Education and Recreation for Individuals with Disabilities

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NCPERID

Winter 2006

## Advocacy in Adapted Physical Activity and Recreation

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## A Consortium on the Move!

### President's Message

For the past two and one-half years, the National Consortium for Physical Education and Recreation for Individuals with Disabilities (NCPERID) has been working behind the scenes to improve the programs and services of the Consortium. For instance, we now have a five-year management plan which focuses upon three distinct goals. These goals are: (1) Professional Preparation (including the Adapted Physical Education National Standards examination), (2) Advocacy and Legislative Affairs, and (3) Grant Writing and Research. This means that leadership of the Consortium will direct

their energies in promoting preparation of adapted physical educators at all levels of education, address advocacy issues of professionals, parents, self-advocates, and others, as well as promote proposed legislation that will impact the lives of people with disabilities, and assist Consortium members with grant writing strategies and research endeavors.

Our new Board of Directors is energetic and has already begun developing a practical-oriented conference for summer 2006 as well as work on developing a new web page (see the NCPERID Website at <http://www.uwlax.edu/sah/>)

[ncperid/](http://ncperid/). We are instituting a membership drive and expect to bring back many previous Consortium members as well as attracting new members. Put the Consortium web page on your "Favorites" list and visit us often. You'll see many positive changes and your suggestions for continuous improvement are welcomed.

*Bob Arnhold  
President*

## Advocacy Listserv

A listserv has been created for physical educators, recreators and others interested in being notified about important legislative activity relative to physical activity for individuals with disabilities. Those becoming

members of the list need not be a member of AAHPERD or NCPERID to participate in advocacy or to receive messages from the list.

It is hoped, however, that all who choose to join the

list will commit to taking action when that is called for.

Just type in the link below and begin your new subscription! It's quick and easy:

<http://www.topica.com/sysmsg/?cid=1.eNNbbGNGb.ffiENneNb&p=ConfSub011>

# ADAPTED PHYSICAL EDUCATION NATIONAL STANDARDS UPDATE

## Becoming a CAPE

Becoming a Certified Adapted Physical Educator (CAPE) can be a reality at three different levels: (a) recently graduated qualified physical education teacher, (b) professional physical educator (10 or more years experience), and (c) academics. There are different requirements for each level. For more information on becoming a CAPE check out the APENS website.

## How to Become Certified!

The APENS national certification offers two distinct ways to demonstrate knowledge competency across the 15 national standards that represent what an APE teacher must know to do their job. Depending on your qualifications, job description, and years of experience you can earn the CAPE certification through an Exam or NON-Exam option. Visit our web site at [www.cortland.edu/APENS](http://www.cortland.edu/APENS) or contact our office at 1-888-APENS-EXAM to determine which application you will need to earn the CAPE certificate.

## Recertification Never Got Easier!

If you are a current CAPE and are in need of re-certification materials visit the "How a CAPE Can Become Recertified" link on our home page. All the materials and criteria you need to maintain your CAPE certificate are listed. If you have questions, please do not hesitate to contact our office as we will gladly walk you through the application. Keep our national voice strong! Recertify today!

## Updated Web Site!

Announcing our updated web site: <http://www.cortland.edu/APENS> - please visit our updated site for the latest information and applications. The new site has a complete listing of the APENS standards (to include a brief about the newly revised APENS standards!) along with new information on how to secure a study guide and manuscript on "How to make CAPE work for you"! For example, visit <http://www.johnpassarini.com> for a great article on John Passarini, CAPE and last years national winner of the Disney Land Award! This award is very prestigious and we wish to congratulate John on his great work! John is also the APENS State Coordinator for Massachusetts and has been a great advocate and role model for all Adapted Physical Educators!

## Care to Share!

We love to hear all the good work CAPE's are doing around the country! Please update our office and send any relevant information so that we can share it with others. Keep up the great work John! If you are an APENS State Coordinator or a CAPE and have information to share concerning you or other CAPES in your state, please "care to share" to keep our network growing!

## Alaska Recognizes CAPE!

Exciting news! Alaska has recently accepted the CAPE certification allowing Adapted Physical Educators in Alaska to earn a salary increase of \$2,000 for those who demonstrate an advanced competency in this specialty area. Many thanks to Alaska's APENS state coordinator, Pam Skogstadt, for her diligent advocacy at the State Department of Education! Alaska's APE teachers are thankful to have such a great advocate for APE in their state!

## State Coordinators and CAPE UPDATE:

If you are a current CAPE and a member of the NCPERID, APENS is looking for **STATE COORDINATORS!** If you are interested, your role will be to share our vision by helping to put "**A CAPE IN EVERY DISTRICT IN THE COUNTRY!**" There are over 14,000 public school districts that serve the approximate 5.2 million children with disabilities in the United States. APENS is concerned that for so many of those children, qualified Adapted Physical Educators are not available or possible for the district to hire. Therefore, general Physical Educators are often left to manage with little or no experience or training. In addition, the majority of states do not offer a certification in Adapted Physical Education or require certification to teach Adapted Physical Education. The 15 APENS Standards detailing the comprehensive knowledge Adapted Physical Educators need to know is available for Adapted Physical Education and general Physical Education teachers to review, study, and ultimately demonstrate by sitting for the APENS exam. If a district is unable to hire or find a qualified Adapted Physical Educator, they should at least provide the opportunity for an existing general Physical Educator to learn the 15 Standards and demonstrate that knowledge by applying for national certification. In addition we are developing Adapted Physical Education "STATE MAPS". These are one page comprehensive "fact sheets" about Adapted Physical Education that we can share at local and state conferences, with parents, advocates, and administrators.

Look to the link on our web site for "State Maps" and see what your state is up to regarding Adapted Physical Education!

# APENS UPDATE (continued)

## Join the National Movement!

Join the movement be a part of a **national unified voice** for all Adapted Physical Educators by taking the APENS National Certification Exam. The APENS are the conceptual framework (comprised of 15 standards) used to define the professional knowledge content and skills for Adapted Physical Educators. The national certification exam, sanctioned by the National Consortium for Physical Education and Recreation for Individuals with Disabilities (NCPERID), is composed of 100 multiple choice items designed to measure a teacher's knowledge base according to the APENS. A comprehensive website exists for the APENS Project (<http://www.cortland.edu/APENS>). Applications for the exam can be downloaded from the website or can be obtained by contacting Dr. Timothy D. Davis, E253 Park Center, SUNY Cortland, Cortland, NY 13045. Phone: (607) 753-4969. Email: [APENS@cortland.edu](mailto:APENS@cortland.edu) or [Davist@cortland.edu](mailto:Davist@cortland.edu).

**National Exam Dates:** Please contact us for more information regarding national test dates.

### Current Exam Schedule for 2005-06

AAHPERD – Salt Lake City, UT – Saturday, April 29, 2006, 9am- 12noon. Walk-ins Welcome!

Nation Wide – June 3, 2006, Saturday 9:00 a.m. Application Deadline Sunday, April 30, 2006.

## NCPERID Website Up and Running

The **National Consortium for Physical Education and Recreation for Individuals with Disabilities** (NCPERID) is pleased to inform you that its new web site is posted. Please note that some pages on the web site are still under construction as we gather information from former officers and members who have various archived files.

The site is being managed Garth Tymeson, NCPERID President-Elect (University of Wisconsin-La Crosse) and Rick Mikat, a faculty colleague of Garth's at UW-L. This site is designed for you and others who are interested in advancing adapted physical activity and therapeutic recreation. Please send Garth Tymeson ([tymeson.gart@uwlax.edu](mailto:tymeson.gart@uwlax.edu)) links to add or other suggestions that may improve the site for professionals, parents, and others.

*Check it out at:*

[www.uwlax.edu/sah/ncperid](http://www.uwlax.edu/sah/ncperid)

Please also note that the website provides information on the following different topic areas: conference, membership, officers, awards, and other links. The page also provides information about the mission of the NCPERID as well as the link that the Consortium has with APENS. For more information about the Summer Conference in 2006 click the conferences menu on the homepage and view dates, location, call for proposals, and other information about the annual meeting. This conference is being carefully planned to provide timely and meaningful professional development for you.

Current members are encouraged to contact other colleagues in adapted physical activity and therapeutic recreation and encourage them to become members in our Consortium. This is especially important for higher education faculty who have entered the profession in the past 10-15 years.

## Steve Hannigan-Downs Remembered

This is a note of sad news. Steve Hannigan-Downs, Ph.D., a former faculty member at CSU-Chico and Oregon State University died on September 1, 2005 in a motor vehicle accident in northern California. Steve was returning to Chico after cycling along the California coast. He was alone in the van and other driver was not injured. Steve served the professional of adapted physical activity in a variety of service and leadership roles. Those leadership roles included chair of the Adapted Physical Activity Council of AAHPERD from 2002-2004; Member-at-Large of the National Consortium for Physical Education and Recreation for Individuals with Disabilities from 2002-2004, State Council of Adapted Physical Activity in Northern California appt. 2003-2006, and editor of the International Federation of Adapted Physical Activity Newsletter.

Steve completed his PhD at Oregon State in 1997 in Department of Exercise and Sport Science in the

Movement Studies in Disability program. Prior to that he received his MS at California State University-Hayward in 1993 and a BS from the same university in 1985. He joined the faculty at OSU between 1998-2002, in general helping to provide instruction, leadership, and program assistance with the Movement Studies in Disability program. Since that time, he was an assistant professor at CSU-Chico in the Department of Kinesiology in their Adapted Physical Activity Program. This fall he was to embark on a new career direction working in conjunction with Enloe Hospital in Chico on research projects investigating the effects of hyperbaric therapy and neurological rehabilitation.

Steve was a people person. He loved to assist people in need and was very dedicated to serving persons with disabilities in the community. As an example, he was a long-standing leader of Special Olympics in California. He continued that involvement during his years in Ore-

gon as well. Recently, Kim Hannigan-Downs shared one of Steve's office treasures, a framed Special Olympics shirt, with adorning pins from the various games where he volunteered. I will treasure it.

Steve's children Logan and Seth live with their mom Kim Hannigan-Downs, Ph.D. who is on the faculty at Oregon State University in Nutrition and Exercise Sciences. Our thoughts and prayers go to all of Steve's friends and family.

*Written by Dr. Jeff McCubbin,  
Oregon State University*

*We have lost a dear  
friend, and  
a great professional*

## What's Happening on the Hill

### A new piece of legislation

The Christopher Reeves Paralysis Act (S. 828) is to expand and coordinate activities with respect to research on paralysis. Implementation of the Act involves 1) paralysis rehabilitation research and care, and 2) improving the quality of life for persons with paralysis. The purpose of this Act is to expand and coordinate activities on paralysis research and related grants that will be made for planning, establishing, and providing support for a consortia in paralysis research. The nature of the research may be: (a) Basic and clinical paralysis research, (b) Advanced treatments and development of therapies in paralysis research, (c) Focus on forms of paralysis that result from central nervous system trauma, (d) Facilitation and enhancement of dissemination of scientific findings, (e) Replication of findings for scientific and translational purposes. Outcomes of the research activity include the following: (a) Improve functional mobility, (b) Promote behavioral adaptations for functional; loss, (c) Assess the efficacy and outcomes of medical rehabilitation, (d) Develop assistive technology to improve function and independence, (e) Understand whole body system responses to disability functional limitation, (f) Replicate findings of network workers. This Bill is accessible via: Senate Version (S. 828): [http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=109\\_cong\\_bills&docid=f:s828is.txt.pdf](http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=109_cong_bills&docid=f:s828is.txt.pdf)

# Poster Sessions from Previous Conferences

This issue of the ADVOCATE is highlighting the poster sessions that have been at the NCPERID summer conferences in 2004 and 2005. It has been the intent of the NCPERID board members to disseminate the knowledge of these posters onto the members of the NCPERID and the method chosen for that purpose has been to include the abstracts in the issue of the Advocate that is published the fall following the summer conference. This has not occurred the last two years. Thus the abstracts are included in this issue. Congratulations to all of the authors and presenters of these posters.

## Summer Conference 2004

### Sports Medical Concerns for Athletes with Disabilities

Christine Stopka, Professor, University of Florida, Gainesville, Florida

Two to three million athletes with disabilities from the United States alone participate in recreational and organized sports. These individuals tend to experience similar types of injuries as their non-disabled counterparts. Muscle strains, ligament sprains, contusions, abrasions, and lacerations are most common along with overuse syndromes such as carpal tunnel and shoulder impingement.

However, due to their various disabilities, these athletes also face unique and serious health risks. Some of these risks include temperature regulation problems, blood pressure problems and autonomic dysreflexia, slow healing time and the on-going threat of decubitus ulcers, bowel and bladder problems, risk for drug interaction, diabetic complications, seizures, contractures, obesity, osteoporosis, and joint instabilities. But most injuries can be prevented with proper training techniques; the use of appropriate protective clothing, padding, and equipment; proper acclimatization strategies; efficient biomechanics; good nutrition, adequate hydration; and effective communication and referral procedures.

When injuries do occur, evaluate thoroughly and expediently. Obtain a good HIPS (**h**istory, **i**nspect and **p**alpate for deformities, perform careful **s**tress testing) if possible. **When in doubt...refer it out** to proper medical authorities. Rest, ice, compression, elevation (RICE) and proper immobilization (with non-steroidal anti-inflammatory drugs, if prescribed by a physician), are essential in the early treatment phase. Rehabilitation consists of "prehab," and early, middle, late, and sport specific "rehab" phases. Goals include strength, flexibility, endurance and coordination to enable a complete, pain free and efficient return to sports participation. Even nagging overuse syndromes can be effectively managed with well designed rehabilitation programs.

In summary, athletes with disabilities experience similar types of injuries as their non-disabled counterparts. In addition, depending upon the athlete's specific medical condition, athletes with disabilities can present with many special health risks. An understanding of these risks and conditions is essential for their prevention. When injuries do occur, a working knowledge of the proper evaluation, treatment and rehabilitation procedures is critical to facilitate a safe, efficient, complete, and pain free return to sports participation.

### Reflections from Inclusive Teaching: Examining Freshman Preservice Physical Educator's Emotional States During Learning

*Marybeth Miller, St. Bonaventure University & Kim Muschaweck, Beacon Light Behavioral Health System*

Reflective log writing was used to study the emotional states of learning to teach and the causes for the emotions felt, by 24 first-year physical education teacher education (PETE) majors during an 8-week on-campus inclusive field experience belonging to an early childhood motor development course. Using a structured reflective log, freshman completed weekly log writing to reflect upon their teaching experience including their emotional states. Four emotional states (uneasy, excited, happy, discouraged) were rated according to three levels of intensity (low, moderate, high) and supported by statements of emotional causes. Quantitative data analysis yields frequencies and percentages by level of intensity for each state of emotion across eight weeks. Results indicate that 50% of the PETE cohort rated the emotional states of uneasy and discouraged at low intensity levels while 60% rated the emotional states of excited and happy at high intensity levels. Systematic analysis of the causes of emotional states indicates an emergence of four synthesized themes: expectations, acceptance, adequacy, and communication. Overall, freshman PETE candidates found this early childhood inclusive field experience to be highly positive and important to teacher preparation. Structured log writing can be essential to reflective practice, connecting and collecting information.

## Benefits of “Volunteering” as Part of Coursework

*Filitsa Leriou & Deborah J. Buswell -- Texas State University-San Marcos*

Although “volunteering” experiences are part of many pedagogy courses it is important to examine specific benefits of these programs. The purpose of the study was to examine benefits students gain by completing fieldwork hours for classes in a volunteer setting (i.e., volunteering for a Special Olympic event and also getting class credit for the time spent volunteering). One hundred thirty-four students were surveyed at Texas State University-San Marcos enrolled in introductory courses in either adapted physical education or therapeutic recreation, or a practices in therapeutic recreation course. In each class part of the component for grading is completion of fieldwork “volunteer” hours with individuals with disabilities. At the end of the semester each student was asked to complete a survey that included questions targeted at assessing attitudes towards interactions with persons with disabilities, and personal benefits gained such as self-esteem, new skills and knowledge. Descriptive statistics were performed on the survey questions and qualitative analysis was used to examine narrative comments for open-ended questions. Fifty-seven percent of the participants were male and forty-three percent were female. The average age of the participants was 22 years 6 months. Students completed an average of 13 hours and 50 minutes in fieldwork/volunteer experiences in such settings as local public schools, horseback riding programs, Special Olympic events, and various disability sport programs. The results indicated that college students participating in “volunteer” experiences felt a sense of personal satisfaction and gratification (92-99%), believed that they made a difference in the lives of individuals with disabilities (83-89%), and increased their level of self-esteem and confidence (68-73%). Eighty-four percent of the students surveyed said that they would participate in similar activities in the future and included narrative comments such as the following: “Before this lab I was worried that working with children who had disabilities would be hard and emotionally draining, but it was easy and made me happy. I grew [attached] to the children and plan on going back to visit them.” The overall results indicated that “volunteering” experiences, as part of pedagogy courses are beneficial to students. Future research is needed to examine additional aspects such as understanding the perspective of persons with disabilities and increasing knowledge of content areas as well as differences related to gender, age, and previous experiences in working/volunteering with individuals with disabilities.

## Adaptive Equipment for Wilderness Expeditions

*Erickson, E. & Buswell, D.J., Texas State University-San Marcos; & Passo, M., Wilderness Inquiry*

While outdoor recreation activities and adventure sports are on the increase in American society, it is more important than ever that all individuals have knowledge of how they may access their surrounding natural areas. Recent literature has discussed how to make natural areas such as state and national parks accessible and in compliance with Americans with Disabilities Act (Lais & Passo, 2000; Sheldon, 1997). Many articles have described programs designed specifically for individuals with disabilities to gain access to the outdoors (Belson, 2001; Blyth, 1999; McAvoy & Estes, 2001; McAvoy & Lais, 2003). First person narrative reports have been published, such as Amanda Boxtel’s expedition to Antarctica (2002) or the chronicle of Angela Madsen and Scott Brown’s Catalina Crossing, a “32-mile rowing event from Marina Del Ray, California, to Catalina Island” (Madsen, 2003, p. 18). However, limited information has been provided relative to equipment individuals with disabilities may use to access the outdoors. The majority of the literature does not describe the tools necessary, but serves more as a narrative on programs and personal experiences. In this poster, the authors show and describe equipment such as adaptive seats for canoeing, transfer equipment to move from a wheelchair to a canoe or other boat, specially designed paddles and attachment devices to allow individuals with limited strength, mobility, or flexibility to paddle independently, adaptations to allow an individual using a wheelchair to access outdoor areas, and devices to assist in daily living needs in wilderness settings, used by one organization, Wilderness Inquiry, that help people with disabilities access wilderness settings in the most independent fashion possible

## Reflections from Inclusive Teaching: Examining Freshman Preservice Physical Educator's Emotional States During Learning

*Marybeth Miller, Ph.D, St. Bonaventure University ,  
Kim Muschaweck, Ph.D Beacon Light Behavioral Health System*

Reflective log writing was used to study the emotional states of learning to teach and the causes for the emotions felt, by 24 first-year physical education teacher education (PETE) majors during an 8-week on-campus inclusive field experience belonging to an early childhood motor development course. Using a structured reflective log, freshman completed weekly log writing to reflect upon their teaching experience including their emotional states. Four emotional states (uneasy, excited, happy, discouraged) were rated according to three levels of intensity (low, moderate, high) and supported by statements of emotional causes. Quantitative data analysis yields frequencies and percentages by level of intensity for each state of emotion across eight weeks. Results indicate that 50% of the PETE cohort rated the emotional states of uneasy and discouraged at low intensity levels while 60% rated the emotional states of excited and happy at high intensity levels. Systematic analysis of the causes of emotional states indicates an emergence of four synthesized themes: expectations, acceptance, adequacy, and communication. Overall, freshman PETE candidates found this early childhood inclusive field experience to be highly positive and important to teacher preparation. Structured log writing can be essential to reflective practice, connecting and collecting information.

## 2006 Summer Conference

**Place:** AAHPERD Headquarters, Reston, VA

Sunday, July 9  
Through  
Tuesday, July 11

### Tentative Schedule:

Sunday:

*Board meeting, Poster Sessions, and Guest Speakers*

Monday:

*Past President's Breakfast, Poster Sessions, Awards Luncheon, Meetings and Guest Speakers*

Tuesday:

*Poster sessions, Meetings and Guest Speakers, and New Board Meeting.*

**Submit Poster proposals by April 15, 2006.**

**EMAIL submissions only.**

Address:

Dr. Christine Stopka, Box 118210; Room 5A Florida Gym  
University of Florida, Gainesville, Florida, 32611

Phone: 352-392-0583; ext 1259, FAX: 352-392-1909, [cstopka@hnp.ufl.edu](mailto:cstopka@hnp.ufl.edu)

Proposal length: 150-300 words

Topics may be centered on research, advocacy, professional development, and other areas.

Research Proposals should follow this outline:

Title; Authors; Introduction/Purpose; Methodology; Results/Discussion; Summary/Conclusion

## Summer Conference 2005 Poster Session Abstracts

### **The Effects of Passive Standing on Health-Related Areas for Individuals with Spinal Cord Injuries.**

Ronald Davis, Leonard Kaminsky, Eric Dugan, and Nathan Waddicor, Ball State University;

#### **Introduction**

It is well documented that persons with spinal cord injuries (SCI) are susceptible to osteoporosis and an increase risk of lower limb fractures (Lazo, Shirazi, Sam, Giobbie-Hurder, Balconiere, and Muppidi (2001); de Bruin, Dietz, Dambacher, and Stussi (2000); Giangregorio and Blimkie (2002)). Several intervention strategies have been identified to address the issue of bone mineral density (BMD) loss, (i.e functional electrical stimulation (FES) cycle ergometry). No literature could be identified related to passive standing on BMD for those with SCI. Therefore, the purpose of the study to determine the effects of prolonged passive standing on health-related areas of individuals with SCI to include changes in BMD.

#### **Purpose**

The purpose of the study is to assess the effects of prolonged passive standing on bone mineral density (BMD) and other health-related factors in individuals with spinal cord injuries.

#### **Methods & Procedures**

A pre/post control group design was used to determine the affects of standing on bone mineral density (BMD). Eight subjects were assigned to a control non-standing, (n=4, NS) or experimental standing, (n=4, S) group. The subjects were pre/post measured for BMD using dual-energy x-ray absorptiometry (DEXA) machine. The S group used the Easy Stand 5000 and stood three times per week for 40 minutes per session (Eng, et al, 2001) across 10 weeks.

#### **Results/Conclusion**

No within or between group differences for BMD were reported for the legs, trunk, ribs, pelvis, spine, femoral neck, wards triangle, trochanter, and femoral shaft for the S or NS groups. However, observational pre-post changes were recorded for body composition and lean muscle mass for the S group. T-scores indicated the NS group was categorized as osteopenia and osteoporotic before and after the project.

### **Shortage Differences of Adapted Physical Education Teachers Estimated Using Market-Based and Prevalence-Based Models**

Jiabei Zhang, Western Michigan University

#### **Introduction**

The shortages of adapted physical education teachers in public schools analyzed using a market-based model or a prevalence-based model should be theoretically similar to each other.

#### **Purpose**

The purpose of this study was to analyze shortage differences of adapted physical education teachers estimated using these two types of models.

#### **Methodology**

The market-based formula used was  $P = (N / F) \times 100$  and the prevalence-base formula was  $P = ([S / R] - F) \times 100$ , where  $P$  refers to (P)ercent of shortage of adapted physical education teachers,  $N$  is (N)ot fully certified adapted physical education teachers,  $F$  is (F)ully certified adapted physical education teachers,  $S$  is (S)tudents requiring adapted physical education service, and  $R$  is (R)atio of an adapted physical education teacher and students. The data of  $N$ ,  $F$ ,  $S$ , and  $R$  for each of the 50 states and District of Columbia are available in the 24<sup>th</sup> Annual Report to Congress (USDE, 2002) and a national job survey (Kelly & Gansneder, 1998). The  $P$ s estimated using both formulae for each state or District of Columbia were computed first. The averaged  $P$  across all  $P$ s estimated using each formula was then determined.

#### **Results/Conclusion**

Results of this study revealed that the averaged  $P$  estimated using market-based formula was 5% and the averaged  $P$  estimated using prevalence-based formula was 82%, indicating that a  $P$  of estimated difference of 77% (82% - 5%) exists between using prevalence-based and market-based models. This estimated shortage difference of 77% may result from (a) that the number of positions funded for adapted physical education teachers across the nation is too small to meet need for adapted physical education service by all students requiring adapted physical education service and (b) that many students with disabilities requiring adapted physical education service are included in regular physical education placements.

## Summer Conference 2005 Poster Session Abstracts

### Low Intensity Exercise Therapy for Women with Peripheral Arterial Disease ... Is it Beneficial and can it be Performed in Community Based Clinics and Fitness Centers?

Coleen Martinez, Christine Stopka, Oscar Martinez, University of Florida

#### Introduction/Purpose:

Exercise therapy for intermittent claudication (leg pain) due to peripheral arterial disease was studied; it consisted of low intensity continuous treadmill walking at speeds below the participants' pain threshold. Until now, the exercise therapy programs have been conducted at maximum pain tolerance, and exclusively at research centers. The purpose of this study was to see if this lower intensity method of exercise therapy, conducted at a physical therapy clinic and/or a fitness center, resulted in significant gains in total distance, total time, and average velocity in an average of 8 weeks.

#### Methods

10 women participants with an average age of 73 years, attended therapy twice a week for an average of 8 weeks. The therapy consisted of continuous walking on a treadmill at speeds below the participants' walking pain threshold. Walking time ranged from 30 to 50 minutes but no longer than 50 minutes. Measurements recorded were blood pressure, heart rate, total time, total distance, and average velocity. Before and after walking, the participants stretched with the contraction enhancing, "hold-relax" method of PNF and performed balance and strengthening exercises.

#### Results/Discussion

Low intensity pain free treadmill walking exercise therapy increased the total distance walked by 116% ( $P < 0.001$ ), total time walked by 50% ( $P < 0.01$ ), and velocity by 32% ( $P < 0.01$ ) in an average of 8 weeks. Improvements were observed for all variables. The program improved walking ability in a short period of time (average of eight weeks). These results were comparable to data observed at research facilities over a 3 month period. These data support the need to repeat these procedures with larger numbers in more physical therapy and/or fitness center settings.

#### Conclusion:

Low intensity pain free treadmill walking appears to be an effective therapy for improving the walking ability of participants with peripheral vascular disease.

### The Effects of a Six Week, Low Intensity, Walking Program on Elderly Individuals with Peripheral Arterial Disease

Sharon Barak, Christine Stopka, John Todorovich, Ronald Siders, Coleen Martinez, University of Florida.

#### Introduction/Purpose

Peripheral arterial disease (PAD) affects 20% of the elderly. It results in functional impairment and its painful symptoms worsen with a sedentary lifestyle. If untreated, life and limb are threatened. Exercise therapy has been used as a noninvasive treatment for improving the functional capacity of these patients, but nearly all exercise programs have been high intensity training sessions at maximal pain tolerance, thus resulting in poor program adherence. The purpose of this study is to investigate the effects of **low intensity, pain free** exercise training.

#### Methodology

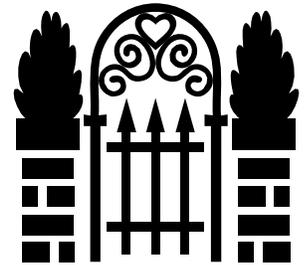
Participants (mean age  $73.5 \pm 11$ ;  $n=12$ ) with PVD, 5 males, 7 females, underwent 2 sessions per week for 6 weeks and were instructed to walk as fast as possible without pain; if pain occurred, the treadmill speed was decreased until pain subsided. Walking distance (WDI), walking duration (WDU), and mean walking rate (MWR) were measured pre and post study; and at 2 week intervals. Also, estimated oxygen consumption (EOC), metabolic equivalent (MET), estimated total energy expenditure (ETEE), and energy expenditure rate (REE) were calculated. The data were analyzed using a repeated measures ANOVA (alpha level, 0.05).

#### Results/Discussion

Mean WDI, WDU, and MWR (104%, 55%, 41%, respectively) improved significantly, at pre and post-testing, and across the 2 week intervals. Comparing weeks 1 & 2 to weeks 3 & 4, WDI increased significantly by 25%, WDU by 15%, and MWR by 11%. Comparing weeks 3 & 4, to weeks 5 & 6, WDI increased significantly by 13%, WDU by 8%, and MWR by 6%. Also, mean improvement of EOC, MET, ETEE, and REE (20%, 20%, 80%, 20%, respectively) was found.

#### Summary/Conclusion

These findings suggest that a relatively brief program of sub-maximal, pain-free training is effective in improving the functional capacity of those with PAD.



## NCPERID Board Members (2005—2006)

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*Keep up the good  
work!!!*

## ADVOCATE

**Dr. Cindy Piletic, Editor**  
**School of Physical Education, Sport**  
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**HP 223P**  
**Ball State University**  
**Muncie, IN 47306**  
**Email: [ckpiletic@bsu.edu](mailto:ckpiletic@bsu.edu)**  
**765-285-5172**