



Volume 6, Issue 3, May 2011

## reSearch

A collection of research reviews on rehabilitation topics from NARIC and other information resources.

# Recreational Therapy, Exercise, & Leisure Activities for Individuals with Disabilities

In this edition of reSearch we explore the topic of recreational therapy, exercise, and leisure activities for individuals with disabilities. The benefits of physical activity have been well-documented and promoted through public health initiatives such as Healthy People 2010 and 2020. However, physical activity benefits without disabilities as well those without—if not more so. The benefits of physical activity include reducing the risk of dying from heart disease, high blood pressure, certain types of cancer, and diabetes; improving stamina and muscle strength; reducing the symptoms of depression and anxiety, improving mood, and promoting general feelings of well-being; and managing and/or preventing secondary conditions related to disability (CDC, 1999, <http://www.cdc.gov/nccdphp/sgf/disab.htm>). Categories of physical activity include "...occupational, leisure time or recreational, household, self-care, and transportation or commuting activities." (Rimmer et al., 2010, p. 250). Additionally, exercise can be considered a "sub category" of physical activity and is defined as "planned, structured, repetitive, and purposive in the sense that the improvement or maintenance of one or more components of physical fitness is the objective." (Rimmer et al., 2010, p. 250).

Despite the benefits of physical activity through recreational and leisure activities and exercise, research data from the CDC indicates that individuals with disabilities are less likely than those without disabilities to be physically active (CDC, 2007, p. 1437). In honor of National Physical Fitness and Sports Month May 2011 this edition of reSearch provides a "snapshot" of research on recreation therapy, exercise, and leisure activities and individuals with disabilities—particularly children with disabilities. This "snapshot" presents research related to recreation therapy, exercise, and leisure activities

and individuals with disabilities such as blindness and low-vision, developmental and intellectual disabilities, psychiatric disabilities, and physical disabilities. The combined search terms for this edition of reSearch included: recreation therapy, exercise, sports, physical education, and leisure.

A listing of over 100 additional descriptor terms between the NARIC, CIRRIE, ERIC, NCRTM, and the PubMed databases can be found at the end of this document. A search of the REHABDATA database resulted in 64 documents published between 1982 and 2010. The CIRRIE and ERIC database searches resulted in 6 documents between 1994 and 2010 and 45 documents from 1975 and 2010; respectively. The NCRTM database search resulted in five documents and audio-visual resources between 1974 and 1995. Finally, a search of the PubMed database resulted in 21 documents between 1980 and 2010. The complete citations are included in this research brief.

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## References

Rimmer, J.H., et al. (2010). **Exercise intervention research on persons with disabilities: What we know and where we need to go.** *American Journal of Physical Medicine & Rehabilitation*, 89(3), 249-263.

U.S. Department of Health and Human Services: Centers for Disease Control and Prevention (CDC). (1999). *A report of the Surgeon General. Physical activity and health: Persons with disabilities.* Retrieved from <http://www.cdc.gov/nccdphp/sgr/disab.htm>.

U.S. Department of Health and Human Services: Centers for Disease Control and Prevention (CDC). (2007). **Physical activity among adults with a disability—United States, 2005.** *Morbidity & Mortality Weekly Report (MMWR)*, 59(44), 1433-1438.

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### **NIDRR Funded Projects Related to Recreational Therapy, Exercise, & Leisure Activities for Individuals with Disabilities**

In addition to document searches, we searched our NIDRR Program Database to locate grantees/projects related to recreation therapy, exercise, and leisure activities and individuals with disabilities. The search resulted in two currently funded NIDRR project and six projects that have completed their research activities. Project information and their publications are offered as additional resources for our patrons.

#### **Rehabilitation Engineering Research Center on Recreational Technologies and Exercise Physiology Benefiting Persons with Disabilities (RERC RecTech)**

Project Number: H133E070029

Phone: 312/413-9651

Email: [jrimmer@uic.edu](mailto:jrimmer@uic.edu)

[www.rectech.org](http://www.rectech.org)

#### **Video Gaming Technology to Promote Health and Fitness among Adolescents with Disabilities**

Project Number: H133G080120

Phone: 312/413-1850

*The following projects have completed their research activities:*

#### **Accessible Watercraft Transfer Device**

Project Number: H133S070021

Phone: 612/724-7002

Email: [dianne@blueskydesigns.us](mailto:dianne@blueskydesigns.us)

[www.blueskydesigns.us](http://www.blueskydesigns.us)

#### **Development of an Intelligently Controlled Assistive Rehabilitation Elliptical (ICARE) Training System to Promote Walking and Fitness in Persons with Physical Limitations**

Project Number: H133G070209

Phone: 402/483-9669

Email: [jburnfield@madonna.org](mailto:jburnfield@madonna.org)

[www.madonna.org/research\\_institute/movement\\_neurosciences/about\\_us/index.html](http://www.madonna.org/research_institute/movement_neurosciences/about_us/index.html)

#### **Exercise and Recreation for Individuals with a Disability: Assessment and Intervention**

Project Number: H133A60032

Phone: 312/908-4292

Email: [jjones02@rehabchicago.org](mailto:jjones02@rehabchicago.org)

[richealthfit.org/resrched/nidrr.htm](http://richealthfit.org/resrched/nidrr.htm)

#### **Increasing Mobility and Maneuverability of Wheelchairs for Indoor, Transportation, and Recreational Activities**

Project Number: H133S090106

Phone: 813/600-3058

Email: [steve@rehabideas.com](mailto:steve@rehabideas.com)

#### **Trails Web Site with Universal Access Information**

Project Number: ED-98-CO-0046

Phone: 775/783-8822

Email: [trails@beneficialdesigns.com](mailto:trails@beneficialdesigns.com)

<http://www.trailexplorer.org/tew/home.cfm>

#### **Transition through Recreation and Integration for Life (Project TRAIL)**

Project Number: H133G20164

Phone: 404/542-5064



*Documents from NARIC's REHABDATA search listed are listed below:*

## 2010

Becher, J.G., Dallmeijer, A.J., Gorter, J.W., Smits, D.W., van Schie, P.E.M., & Zwier, J.N. (2010). **Physical activity in young children with cerebral palsy.** *Disability & Rehabilitation*, 32(18), 1501-1508.

NARIC Accession Number: J59338

ABSTRACT: Study compared the physical activity levels of 97 five- and seven-year-old children with cerebral palsy (CP) with those of 57 typically developing (TD) peers and the Dutch recommendation for physical activity. The level of physical activity (hours spent on sports and physical activity per week) and contextual factors were assessed with standardized questionnaires. Mean duration of self-reported physical activity for children with CP was 3.4 hours per week, which was significantly less than the 5.8 hours per week for TD peers. Ninety-three percent of the children with CP were insufficiently physically active according to the Dutch recommendation for physical activity. Multiple regression analyses showed that younger age and lower educational level of the mother were significantly associated with lower levels of physical activity for children with CP, while severity of CP was not associated with physical activity levels. Twenty-two percent of the parents reported that more facilities in sport and games are required for children with CP. The findings suggest that physical activity is low in young children with CP and needs to be promoted at an early stage.

## 2009

Lang, R., Machalicek, W., O'Reilly, M., Register, A., Rispoli, M., Shogren, K., & Sigafos, J. (2009). **Review of interventions to increase functional and symbolic play in children with autism.** *Education and Training in Developmental Disabilities ETDD (formerly Education and Training in Mental Retardation and Developmental Disabilities)*, 44(4), 481-492.

NARIC Accession Number: J58008

ABSTRACT: This systematic review of the literature

examined research that focused on teaching play to children with autism. The review updates older reviews by covering the last 10 years of research targeting functional and symbolic play in children with autism. It differs from other reviews concerning play by including all conceptual models and intervention environments, while also limiting inclusion to studies demonstrating experimental control. Additionally, this is the first review of play studies to report results in quantifiable terms. Fifteen studies met the inclusion criteria. The studies are grouped into two categories, functional play and symbolic play. Three components (modeling, prompting with contingent reinforcement, and child directed or "naturalistic" instruction) appear related to successful play interventions. The results of this review suggest that these components underlie the effectiveness of successful play intervention for children with autism.

Purpora, M. (2009). **Making the LEAPS to getting in shape: Five guidelines for finding a gym for individuals with disabilities.** *Exceptional Parent*, 39(6), 14-15.

NARIC Accession Number: J58656

ABSTRACT: Article presents a model that includes five basic guidelines for choosing a gym that can help individuals with disabilities get in shape by exercising. The LEAPS model considers: (1) lifestyle, (2) equipment, (3) accessibility, (4) price, and (5) staffing.

Rouse, P. (2009). **Inclusion in physical education: Fitness, motor, and social skills for students of all abilities.**

NARIC Accession Number: R09037

ABSTRACT: This guidebook presents strategies for including students with disabilities in general physical education. The book focuses focus on developing the physical, social skills, and fitness skills of all students with disabilities. Chapters offer teaching strategies and activities for including students with the following conditions: autism disorder; limited use of limbs, requiring wheelchair use; intellectual disabilities; cerebral palsy and other orthopedic impairments; and visual and hearing impairments.

## 2008

(2008). **The importance of play, part one: Giving all kids a "voice" on the playground.** *Exceptional Parent*, 38(6), 72-73.

NARIC Accession Number: J55954

ABSTRACT: The first installment of a 3-part series that focuses on the importance of play for children of all abilities, this article discusses the benefits of providing universally designed playgrounds for all children. These benefits include social and intellectual learning and physical benefits.

Grosse, S.J. (2008). **Sports competition: Integrated or segregated? Which is better for your child?** *Exceptional Parent*, 38(6), 28-29.

NARIC Accession Number: J55950

ABSTRACT: Article offers parents guidelines for selecting competitive sports opportunities for their child with special needs. Considerations concerning the parent, the child, and the sports program are discussed.

## 2007

Apel, L. (2007). **Hippotherapy and therapeutic riding highlight!** *Exceptional Parent*, 37(6), 28-34.

NARIC Accession Number: J52610

ABSTRACT: Article highlights several therapeutic riding and/or hippotherapy programs and centers from across the country. Hippotherapy is physical, occupational, or speech therapy that uses the movement of the horse as a treatment tool. The goal of hippotherapy is to improve neurological functioning in cognition, body movement, organization, and attention levels. Therapeutic riding is recreational horseback riding lessons adapted to individuals with disabilities. It is led by a professional horseback riding instructor in conjunction with volunteers. In therapeutic riding, the emphasis is on proper riding position and rein skill, not functional therapeutic goals.

Sutton, A.L. (Ed.). (2007). ***Fitness and exercise sourcebook*** (3<sup>rd</sup> ed.). Detroit: Omnigraphics, Inc. NARIC Accession Number: R08834

ABSTRACT: Handbook provides basic consumer health information about the physical and mental benefits of fitness and exercise. It explains the basic

components of physical fitness and recent fitness trends, including yoga, Pilates, and balance training. Chapters address issues related to fitness in children, adolescents, pregnant women, and elderly adults, as well as the physical activity needs of people with common health conditions such as asthma, high blood pressure, heart disease, and arthritis. The book includes tips for purchasing exercise equipment, injury prevention guidelines, motivational suggestions, a glossary of related terms and directory of additional resources.

## 2006

Adams, K., Cook, A., Harbottle, N., Schulmeister, J., & Wiberg, C. (2006). **Robot assisted play for children with disabilities.** *29<sup>th</sup> Annual RESNA Conference Proceedings 2006.*

NARIC Accession Number: O16707

ABSTRACT: The purpose of this study was to explore the feasibility of using the Lego Mindstorms Robots to facilitate play activities for children who have physical disabilities. Over a four week period, a single participant learned how to use two Lego Mindstorms robots in play activities. The participant was able to achieve planned control over the robots by using head-mounted switches and a switch-adapted remote control. He demonstrated quick learning with various types of interactive play activities. The Lego Mindstorms Robotic Invention System was found to be a valuable tool for observing how children with physical disabilities can learn through play interactions. This paper was presented at the 2006 annual conference of the Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) and is available on CD-ROM.

Martin, J.J. (2006). **Psychosocial aspects of youth disability sport.** *Adapted Physical Activity Quarterly*, 23(1), 65-77.

NARIC Accession Number: J50225

ABSTRACT: Social cognitive theory and the sport commitment model were used to describe the psychological and social aspects of involvement in sports for 112 children with disabilities. Social cognitive theory states that a variety of social, cognitive, and affective factors influence behavior. To predict sport commitment, four psychosocial variables were as-

sessed: sport enjoyment, perceived physical ability, parental encouragement, and peer relations (sport friendship quality). The young athletes with disabilities reported that their sports experience was positive. Descriptive results indicated high levels of sport commitment and enjoyment, perceived physical ability, sport friendship quality, and parental encouragement. Correlational analyses indicated moderate to strong relationships among sport commitment, sport enjoyment, and perceived physical ability. Sport commitment, parental encouragements, and sport friendship quality were only somewhat related. Regression analyses indicated that enjoyment was a significant predictor of sport commitment. Findings suggest that sport enjoyment, and to a lesser degree, perceptions of physical ability, play a valuable role in motivating youth with disabilities to remain involved in sports.

## 2005

Cammack, B., Weber, R.C. (2005). **Fishing: A lifetime leisure activity having no boundaries.** *PALAESTRA: Forum of Sport, Physical Education, & Recreation for Those with Disabilities*, 21(3), 20-25. NARIC Accession Number: J49649

ABSTRACT: Article discusses Fishing Has No Boundaries (FHNB), Incorporated, which is a non-profit national volunteer organization founded in Hayward, Wisconsin, in 1986. The organization was founded by a local professional fishing guide, Bobby Cammack, and was created to enrich the lives of people with disabilities by providing education and information about the recreational value and promotion of fishing. The organization is also dedicated to the development of accessible outdoor facilities and equipment, and is an advocate for inclusion in outdoor and leisure activities for people with disabilities. Interested parties are encouraged to visit [www.brainerdlakesfhn.org](http://www.brainerdlakesfhn.org) for further information.

McGinley, K. (2005). **Accessibility after class.** *PN/Paraplegia News*, 59(9), 31-35. NARIC Accession Number: J49653

ABSTRACT: Organizations are described that strive to create inclusive after-school environment rather than segregate children with disabilities from their able-bodied peers. These include: Boy Scouts of America, Girl Scouts, Camp Fire USA, Boys and

Girls Clubs of America, the YMCA, the National Center on Physical Activity and Disability, Kids on the Block Inc., and the Paralyzed Veterans of America.

Scott, N. (2005). **Special needs, special horses: A guide to the benefits of therapeutic riding.** Denton: University of North Texas Press.

NARIC Accession Number: R08795

ABSTRACT: Book offers information about the benefits of therapeutic horseback riding. The author describes the roles of riding instructors and therapists in typical riding sessions and presents case histories and profiles as examples. The ways in which equine activities are used in physical, occupational, speech, and psychological therapies are described. How participants respond to riding and the expected results are also explained.

## 2004

Besio, S. (2004). **Using assistive technologies to facilitate play by children with motor impairments: A methodological proposal.** *Technology & Disability*, 16(3), 119-130. NARIC Accession Number: J48437

ABSTRACT: Article describes a project conducted to improve the learning of children with motor impairment by developing assistive technologies that allow them to directly interact with their environment through play activities. The planning of the project as well as its results is discussed within the methodological framework of action-research.

Etzel-Wise, D., & Mears, B. (2004). **Adapted physical education and therapeutic recreation in schools.** *Intervention in School and Clinic*, 39(4), 223-232. NARIC Accession Number: J47921

ABSTRACT: Article discusses the distinction between adapted physical education and recreation. Under the Individuals with Disabilities Education Act, adapted physical education is a mandated service, whereas therapeutic recreation and traditional recreation are considered related services. Authors discuss recognition of the need for referral, methods of assessment, sample individualized education plan goals with short-term objectives and/or benchmarks, strategies for classroom teachers, and interventions and service delivery models typically used by physical

education teachers and recreational therapists.

Rouse, P. (2004). *Adapted games and activities: From tag to team building*. Champaign: Human Kinetics. NARIC Accession Number: R08604

ABSTRACT: Book presents more than 80 fun games and activities to enhance success while challenging children with cognitive disabilities to think and use their physical abilities. It includes tag, chase and dodge games; team building and cooperative activities, higher-organization games for children who need a greater challenge, and lead-up sport and leisure activities that help develop sport-specific skills and tactics. The emphasis is on cooperative play and having fun and not on competition. Each game offers variations to make it easier or more difficult as well as ways to adapt the game to special circumstances.

Sherrill, C. (2004). **A celebration of the history of adapted physical education.** *PALAESTRA: Forum of Sport, Physical Education, and Recreation for Those with Disabilities*, 20(1), 20-24, 45-47. NARIC Accession Number: J47636

ABSTRACT: Author uses the twentieth anniversary of two journals, Palaestra and the Adapted Physical Activity Quarterly, as an opportunity to review the history of the field of adapted physical education in the United States. Based on an extensive study of primary sources, the history of adapted physical activity and its numerous name changes are presented, beginning with the introduction of medical education gymnastics in the 1800s by immigrants from Sweden.

## 2003

Baglin, C.A., & Bender, M. (Eds.). (2003). *Implementing recreation and leisure opportunities for infants and toddlers with disabilities*. Champaign: Sagamore Publishing. NARIC Accession Number: R08444  
ABSTRACT: Booklet provides ideas for expanding opportunities for recreation and leisure activities for young children with disabilities. An overview of the early intervention system for infants and toddlers, as required by the Individuals with Disabilities Act (IDEA) is presented. Various settings for implementation of early intervention are discussed, including the home, preschool and nursery schools, child care, Head

Start, and the community. Appendices include ideas for summertime leisure activities, a list of information resources, and leisure activities for families and professionals.

Bizub, A.L., Davidson, L., & Joy, A. (2003). **It's like being in another world: Demonstrating the benefits of therapeutic horseback riding for individuals with psychiatric disability.** *Psychiatric Rehabilitation Journal*, 26(4), 377-384. NARIC Accession Number: J45521

ABSTRACT: Article describes the effects of a 10-week therapeutic horseback riding program on the recovery process of individuals with psychiatric illness. Participants learned basic riding skills, had the opportunity to bond with a horse, and engaged in a post-riding process group that used artistic and creative activities to promote individual expression and sharing. Follow-up discussions with the riders indicated positive psychosocial benefits, including an improved sense of self-efficacy and self-esteem.

Devas, M. (2003). **Support and access in sports and leisure provision.** *Disability & Society*, 18(2), 231-245. NARIC Accession Number: J45400

ABSTRACT: Article critiques two methods for enabling people with learning disabilities to engage in leisure activities: the support model and the access model. Author uses interviews with social workers and sports center personnel to show differences between the access worker and support worker roles, describe practical limitations of each role, and shows how, with the addition of a self-advocacy model, people with learning disabilities can pursue sports activities.

Kertoy, M.K., King, G., King, S., Law, M., Rosenbaum, P., & Young, N.L. (2003). **A conceptual model of the factors affecting the recreation and leisure participation of children with disabilities.** *Physical and Occupational Therapy in Pediatrics*, 23(1), 63-90.

NARIC Accession Number: J45328

ABSTRACT: Article presents a conceptual model of 11 environmental, family, and child factors that may influence participation in recreation and leisure activities by children with disabilities. The model is based on a review of 4 bodies of literature: (1) the participa-

tion of children or adults with disabilities, (2) the risk and resilience of children facing adversity, (3) the determinants of leisure and recreation activities, and (4) the factors influencing physical activity and exercise. From this review, 3 major environmental factors were identified: (1) supportive physical and institutional environments, (2) supportive relationships for the child, and (3) supportive relationships for the parents. Four family factors were indicated: (1) absence of financial and time constraints cause by having a child with a disability, (2) supportive family demographics, (3) supportive home environment, and (4) family preference for recreation. Also, 4 key child factors were included in the model: (1) children's own view of their competence; (2) their cognitive, physical, and communicative function; (3) their emotional, behavioral, and social function; and (4) their activity preferences.

## 2002

Bridges, D., Huettig, C., & Woodson, A. (2002). **Play for children with severe and profound disabilities.** *Palaestra*, 18(1), 30-37.

NARIC Accession Number: J44005

ABSTRACT: Article provides information on teaching social play skills to children with severe and profound disabilities. Reviews research literature on toys and teaching play skills for young children with disabilities and identifies barriers to play for preschoolers. Strategies for creating the preschool learning environment, play stages associated with typical social development, and the development of pretend or make believe play are discussed.

Brown, E., Foris, C., King, G., & Specht, J. (2002). **The importance of leisure in the lives of persons with congenital physical disabilities.** *American Journal of Occupational Therapy*, 56(4), 436-445.

NARIC Accession Number: J44049

ABSTRACT: Article reports findings from a study that describes the importance of leisure activities from the perspective of adults with congenital physical disabilities. Participants reported that involvement in leisure activity provides mental and physical health benefits, enjoyment, opportunities to develop and to increase self-esteem, and opportunities to build and enhance social relationships. Barriers and enablers to engagement in leisure activities are also discussed.

Lieberman, L.J. (2002). **Fitness for individuals who are visually impaired or deafblind.** *RE:view*, 34(1), 13-23.

NARIC Accession Number: J44101

ABSTRACT: Article suggests physical activities that people who are deafblind or visually impaired can engage in to improve their health-related fitness. Activities discussed includes running, bicycling, swimming, aerobics, and exercise training in health clubs or at home.

## 2001

(2001). **A compendium of adaptive sports.** *New Mobility*, 12(94), 24-28.

NARIC Accession Number: J43132

ABSTRACT: Directory of sources of information on sports for persons with physical disabilities. Information resources are listed for air gun target shooting, archery, basketball, billiards, boccia, bowling, fishing, flying and soaring, golf, handcycling, hockey, horse riding and racing, hunting, outdoor recreation, paintball, power soccer, road racing, rugby, sailing, scuba diving, sea kayaking, skiing, skydiving, softball, sporting clays, square dancing, swimming, table tennis, tennis, tack and field, volleyball, water skiing, and weightlifting.

Costall, A., Reddy, V., & Williams, E. (2001). **Taking a closer look at functional play in children with autism.** *Journal of Autism and Developmental Disorders*, 31(1), 67-77.

NARIC Accession Number: J42968

ABSTRACT: Article featuring a study of the functional play of 45 children, including 15 typically developing infants, 15 children with autism, and 15 children with Down syndrome, to identify the precise nature and extent of the problems that children with autism may experience with functional play. The activities observed are sub-typed into various categories under the headings of simple functional play (functional association, and functional use of a single object) and elaborated functional play (functional use of multiple objects, functional act supported by appropriate vocalization/gesture, and doll-directed functional acts). The functional play of the autism group is less elaborated, less varied, and less integrated than that of the controls. The implications of these findings

are explored in relation to current theoretical models of autism and in relation to the role of other people mediating the appropriate use of objects.

Oesterricher, J., & Wood, A. (2001). **Get physical.** *PN/Paraplegia News*, 55(2), 24-29.

NARIC Accession Number: J41942

ABSTRACT: Pair of articles on information resources related to exercise for persons with spinal cord injury (SCI). One article describes a web site set up by the National Center on Physical Activity and Disability that provides information on exercise for people with many disabilities ([www.uic.edu/orgs/ncpad](http://www.uic.edu/orgs/ncpad)). A second article describes books and videos dealing with specific sports and activities for wheelchair users, including basketball, bowling, dancing, exercise and physical fitness, fishing, golf, hand-cycling, horseback riding, racing, skiing, tennis, and other sports, including sports for children. A sidebar lists critical self care considerations for persons with SCI when exercising.

## 2000

Eikeseth, S., Eldevik, S., & Jahr, E. (2000). **Teaching children with autism to initiate and sustain cooperative play.** *Research in Developmental Disabilities*, 21(2), 151-169.

NARIC Accession Number: J39261

ABSTRACT: Study comparing effects of two intervention approaches aimed at promoting the acquisition, transfer, and maintenance of cooperative play in children with autism. Participants were six children with autism. In one approach, participants observed two models engaging in cooperative play, before taking the place of one of the models while the play episode was repeated. The second approach was identical to the first except that participants were required to verbally describe the modeled play episode before taking the place of one of the models. Results showed that the participants failed to acquire cooperative play until the verbal description was included in the training procedure. Cooperative behavior learned following training with verbal description was transferred and maintained.

## 1999

Geoghegan, J., & Rosen, E.L. (1999). **CHILD'S PLAY.** *Rehab Management*, 12(1), 38-41.

NARIC Accession Number: J36173

ABSTRACT: Article about therapeutic recreation for children. Describes the training of therapeutic recreation specialists, treatment/interventions used by therapeutic recreation specialists, and their role in pediatrics. Also describes the role of therapeutic recreation specialists on interdisciplinary treatment teams at Franciscan Children's Hospital and Rehabilitation Center, a pediatric facility in Boston. Also discusses requirements of accreditation organizations regarding therapeutic recreation.

Nash, S., & Wimpory, D.C. (1999). **Musical interaction therapy: Therapeutic play for children with autism.** *Child Language Teaching & Therapy*, 15(1), 17-28.

NARIC Accession Number: J36968

ABSTRACT: Article presents an overview of musical interaction therapy as a technique for motivating a child with autism and addressing the proposed fundamental deficit in social timing which inhibits the development of shared focus. The basis for this therapy is interactive play which parallels those parent-infant interactions which lead to the development of language in typical children. Through musical interaction, the child with autism can be exposed to enhanced and prolonged experiences with preverbal interaction play patterns supported by a musician. The carer and musician aim to construct an experience of give-and-take communication between the carer and the child. Three themes which run throughout this therapy at any stage of its active process are the "scaffolding" of interaction by the carer, the communicative "control" afforded to the child, and the musical "support" which sustains the contributions of the carer and the child. Formats used within, and strategies employed throughout, musical interaction therapy are described. A case study is provided as an example of the process of the therapy. A discussion considers the underlying theories of musical interaction therapy.

Williams, A.S. (1999). **Accessible exercise.** *Diabetes Self-Management*, 16(6), 26-36.

NARIC Accession Number: J38075

ABSTRACT: Article about exercise programs for persons with diabetes who are blind or visually impaired. Discusses the benefits of exercise, safety precautions, and commonly used adaptations for walking, swimming, water aerobics, exercise machines, dancing, exercise videos, and bicycle riding.

## 1998

Heyne, L.A. (1998). **Therapeutic recreation in the schools: Teaching students to play.** *TASH Newsletter*, 24(4), 10-12.

NARIC Accession Number: J34965

Project Number: H133B30072

ABSTRACT: Article about teaching children with disabilities how to participate in recreation activities. Discusses the classification of therapeutic recreation as a "related educational service" in public schools under the Individuals with Disabilities Education Act (IDEA), so that a student may receive therapeutic recreation services as part of his or her Individualized Education Plan (IEP). Four components of therapeutic recreation are listed: assessment of leisure functioning, leisure education, therapeutic recreation service, and recreation programs in schools and community agencies. Also discusses how students benefit from therapeutic recreation, and the role of Certified Therapeutic Recreation Specialists (CTRS) in schools.

## 1997

Harvey, S., Law, M., Pollock, N., Sahagian-Whalen, S., Stewart, D., & Toal, C. (1997). **The meaning of play for young people with physical disabilities.** *Canadian Journal of Occupational Therapy*, 64(1), 25-31.

NARIC Accession Number: J33228

ABSTRACT: Article reporting the results of a qualitative study of twenty adolescents with and without physical disabilities. The participants were interviewed about their perceptions and personal experiences of play or sports. Textual analysis of the data served to identify significant themes related to the nature of play, environmental barriers and supports, and personal influences on play. Clinical implications are discussed in relation to these themes.

Heyne, L.J., Schleien, S.J., & Rynders, J.E. (1997). **Promoting quality of life through recreation participation.** In Pueschel & Sustrova (Eds.), *Adolescents with Down syndrome: Toward a more fulfilling life* (pp. 317-340). Baltimore: Brookes Publishing Company.

NARIC Accession Number: J33539

Project Number: H133B30072

ABSTRACT: Chapter about participation in leisure activities, from a book on adolescents with Down syndrome (R07759). Discusses the benefits of recreational participation for adolescents with Down syndrome, as well as strategies for promoting such participation. Leisure activities discussed include sports, body building, and performing arts.

## 1996

Wiegel, M.E.K. (1996). **Pediatric therapeutic playstation.** In A. Langton (Ed.), *Proceedings of the RESNA 1996 Annual Conference: Exploring New Horizons* (pp. 105-107). Arlington, VA: RESNA Press.

NARIC Accession Number: O12753

ABSTRACT: Paper about the design of a playstation incorporating more than 25 different therapeutic activities identified as desirable by the physical and occupational therapists at a local children's hospital. The playstation contained a 12 foot swing, slides, parallel bars, a vertical ladder, and a tunnel and steps with a quiet area. These were disguised as a magical forest with a cave, a tree for climbing, a bridge, and two trees housing the swing. Since October 1995, the playstation has seen children with fine and gross memory, sensory, cognitive, and cause and effect issues. The speed of progress and overall success of therapy for these patients has been directly improved. This paper was presented at the 1996 annual conference of RESNA, the Rehabilitation Engineering and Assistive Technology Society of North America.

## 1995

Albright, C. (1995). **Swimming techniques for individuals with disabilities.** *PALAESTRA*, 11(2), 16-21.

NARIC Accession Number: J29523

ABSTRACT: Offers recommendations for instructors and coaches who are working with swimmers who have physical disabilities. While the suggestions are based upon work with individuals with spinal cord

injuries, the principles and approaches are appropriate for persons with other types of disabilities. The article addresses: 1) stretching techniques; 2) body positioning; 3) stroke mechanics; 4) starts, turns, and finishes; 5) strength training; 6) conditioning workouts; 7) psychological preparation; and 8) special precautions concerning water temperature, spasticity, pressure sores, and bladder and bowel capabilities. Selected techniques are illustrated with photographs.

#### 1994

Carmichael, K.D. (1994). **Play therapy and children with disabilities.** *Issues in Comprehensive Pediatric Nursing, 16*(3), 165-173.

NARIC Accession Number: J28366

ABSTRACT: Discusses the role of play therapy in helping children with developmental and physical disabilities develop a sense of strength and competence. The article addresses two approaches to play therapy: 1) the "I am" approach emphasizing emotional adjustment and the development of positive self esteem, personal competency, and self reliance, and 2) the "I can" approach emphasizing physical activity and the development of physical competence and feelings of control. The first part describes two methods of play therapy, nondirective and directive, that have been used to address the "I am" characteristics of personality development. The second part describes "I can" methods of play therapy for children with developmental and physical disabilities. The final section suggests accommodations for play therapy techniques and adaptations for toys.

Carmichael, K.D. (1994). **Play therapy for children with physical disabilities.** *Journal of Rehabilitation, 60*(3), 51-53.

NARIC Accession Number: J29041

ABSTRACT: Play therapy is important for children with physical disabilities because it helps them discover what they can do and who they are. The paper examines the emotional needs of children with disabilities (lack of self-confidence, feelings of inadequacy and rejection, and lack of self-acceptance). A discussion of person-centered play therapy explains the focus on the child's growth and development and ability to know what is best for him- or herself. Procedural accommodations and adaptations include interdis-

ciplinary team and family support. It is important to include the parents. The paper makes several recommendations for accommodations and adaptations of toys and games for children with disabilities.

Heyne, L.A., McAvoy, L.H., & Schleien, S.J. (1994). **Focus groups: Bringing people together in therapeutic recreation.** *PALAESTRA: Forum of Sport, Physical Education, and Recreation for Those with Disabilities, 10*(2).

NARIC Accession Number: J38035

Project Number: H133B30072

ABSTRACT: Article about the use of focus groups within therapeutic recreation settings to promote dialog between individuals with and without disabilities. Discusses focus groups in general, what makes them effective, and how the focus group process can be applied to therapeutic recreation. The authors then present a case study of the use of focus groups to promote friendships between elementary-age children with and without developmental disabilities.

#### 1993

Crouse, J., & Deavours, M.N. (1993). **Switch technology in therapeutic recreation programming: An idea whose time has come.** *PALAESTRA: Forum of Sport, Physical Education, and Recreation for Those with Disabilities, 9*(4), 41-44.

NARIC Accession Number: J27186

ABSTRACT: Discusses the use of switch technology in therapeutic recreation programming for children with severe disabilities. Topics include: (1) the role of play in children's growth and development; (2) the challenge for therapeutic recreation specialists in meeting the recreation needs of individuals with severe and multiple disabilities; (3) the benefits of using technology in recreation programming, including opportunities for independent participation, competition, expression and creativity, choice making, multi-sensory stimulation, inclusion, increasing self esteem, and preventing secondary disability; (4) guidelines for selecting an appropriate switch for activating battery powered toys and other devices; (5) programming to promote the participation of children with disabilities in integrated activities; and (6) sources of technology related expertise and supplies.

Duncan, C., Iannella, M.A., & Rider, R.A. (1993).

**Extracurricular fitness and leisure programming for individuals with disabilities.** *PALAESTRA*, 9(3), 48-53.

NARIC Accession Number: J25465

ABSTRACT: Describes a program implemented by Florida to provide fitness and leisure activities for individuals with disabilities. The majority of program participants are students who are often excluded from most extracurricular activities offered by their schools. Describes the goals of the Perfect Harmony program, program evaluation, and program activities. Activities include those that address motor therapy, physical fitness, and leisure; a table lists and categorizes the program activities. Describes public awareness activities.

Lust, C., & Powell, M. (1993). **Sensorimotor half-day camp.** *Occupational Therapy in Health Care*, 8(4), 79-92.

NARIC Accession Number: J25567

ABSTRACT: The article describes Powell's sensorimotor half-day camp for children with learning disabilities and/or attention deficit disorders. The camp provided opportunities to socialize, play, work in groups, participate in developmental and age appropriate sensorimotor activities, recreational activities, and activities of daily living. The first camp was attended by four children who had learning or developmental problems. The camp lasted from 9 a.m. to 12 noon for 5 days. The activity sequence included an introduction circle, warm-up exercises, sensorimotor activities or recreational play, daily living skills, oral motor exercises, snack preparation, daily living skills, hippotherapy and fine motor activities, and hydrotherapy and fine motor activities. Positive results of the camp were indicated by parents' observations of increased independence in age appropriate self-care skills, and by happier and more cooperative behavior.

## 1992

(1992). **Aquatic sports and recreation equipment.** *ABLEDATA Fact Sheet*, no. 15, DEC 1992.

NARIC Accession Number: R07190

Project Number: HN92026001

ABSTRACT: Fact sheet on aquatic sports and recreation equipment for people with disabilities. The first section describes a variety of adaptive aquatics de-

vices, including swimming aids and flotation devices, pool access equipment and other pool accessories, swim wear, amphibious wheelchairs, water skis, and boats and boating equipment. The second section provides a directory of companies selling these products. The third section provides contact information for aquatic sports and multi-sport organizations. The fourth section provides an annotated bibliography of books and articles about adapted aquatics and sports publications for athletes with disabilities.

Eichstaedt, C.B., & Lavay, B.W. (1992). **Physical activity for individuals with mental retardation infancy through adulthood.**

NARIC Accession Number: R06181

ABSTRACT: Presents information on physical activity programming for individuals of all ages with mental retardation (MR). There are 12 chapters in three parts. Part one, foundations and implications of MR, includes (1) overview of MR, (2) conditions related to MR, (3) assessment as the first step, and (4) behavior management. Part two, program development and implementation, includes (5) program development (administrative considerations), (6) mainstreaming program considerations, and (7) program implementation (physical fitness, fundamental motor skills, aquatics, and dance). Part three, physical activity for a life span, includes (8) physical activity for infants and toddlers, (9) physical activity for preschoolers, (10) physical activity for school age children and teenagers, (11) physical activity for adults (leisure and lifetime activities), and (12) Special Olympics International. There are four appendices: organizations for individuals with MR, sign language for use in physical activity programs, fitness norms for males and females ages 6 to 20 with MR, and the Kansas Adapted/Special Physical Education Test Manual.

## 1991

Johnstone, K.S., & Perrin, J.C.S. (1991). **Sports for the handicapped child.** *Physical Medicine & Rehabilitation: State of the Art Reviews*, 5(2), 331-350.

NARIC Accession Number: R05924

ABSTRACT: Article in a special issue on the rehabilitation management of children with physical disabilities (see AN #XR05918). Discusses the participation of handicapped children in sports. Specific

topics include: 1) the various types of individual and team sports, both recreational and competitive, in which handicapped children can participate; 2) classification systems for wheelchair sports competition; 3) the role of the physician and physical therapist; 4) conditioning and training; 5) resources for seeking out sporting opportunities; 6) wheelchairs and adaptive equipment for children; and 7) injuries and risks in sports for disabled youth. (See AN #XR05919-23 and XR05925-30 for abstracts of other articles in this issue.).

Missiuna, C., & Pollock, N. (1991). **Play deprivation in children with physical disabilities: The role of the occupational therapist in preventing secondary disability.** *American Journal of Occupational Therapy*, 45(10), 882-888.

NARIC Accession Number: J20939

ABSTRACT: Explores the role of the occupational therapist in preventing play deprivation and secondary disability among children with physical disabilities. The discussion is organized into the following topic areas: (1) characteristics and benefits of play for children; (2) primary and secondary forms of play deprivation among children with physical disabilities; (3) physical, social, personal, and environmental barriers that may limit the free play experiences of children with physical disabilities; (4) the role of the occupational therapist in overcoming these barriers and maximizing the free play opportunities of children with physical disabilities.

## 1990

Brasile, F.M. (1990). **Wheelchair sports: A new perspective on integration.** *Adapted Physical Activity Quarterly*, 7(1), 3-11.

NARIC Accession Number: J15244

ABSTRACT: Describes potential of new technique in integrating people with disabilities and people with no disabilities, with person with disabilities and disability-specific programs acting as integrating agent. One method of doing so is via incorporation of nondisabled people into wheelchair sports. These able-bodied people would participate in events in wheelchairs. This would promote better comprehension of true abilities of people with disabilities through active participation. It would also promote social integration

because everyone would be competing on equal basis. Describes continuum approach, segregated participation, social integration, and integrated participation. Lists research needs (e.g., impact of sports upon athlete, family, and society; effect of sport participation on self-concept; and society's perception and awareness of sport for individuals with disabilities). It is hypothesized that this integration will result in deeper commitment and more insight into plight of people with disabilities in regard to attitudinal and architectural barriers.

Brundige, T.L., Hautala, R.M., & Squires, S. (1990). **The Special Olympics developmental sports program for persons with severe and profound disabilities: An assessment of its effectiveness.** *Education and Training in Mental Retardation*, 25(4), 376-380.

NARIC Accession Number: J18956

ABSTRACT: Study evaluating the effectiveness of the locomotor training component of Level III of the Special Olympic Developmental Sports Skill Program for persons with severe and profound mental disabilities. Twelve subjects between the ages of 13 and 21 years participated. They were randomly assigned to a specific skill training group or a non-intervention (control) group. The control group later served as a second experimental group by participating in a general skills training program. The results showed only slight, non-significant differences between the pre- and post-program motor skills performances for all three groups. Only one test item, walking for fitness, showed a significant change following both specific and general training. Probable explanations for the findings are discussed.

Enselein, K., & Levin, J. (1990). **Fun for everyone: A guide to adapted leisure activities for children with disabilities.** Minneapolis: Ablenet.

NARIC Accession Number: R06010

ABSTRACT: Guide to adapted recreation/leisure activities for children with disabilities. Eight chapters cover the following topics: (1) beliefs and assumptions about the use of simple technology and simple adaptations; (2) goals in the recreation/leisure domain; (3) strategies for modifying independent and shared leisure activities to enhance participation by children with special needs; (4) strategies for help-

ing children with disabilities to select, enjoy, and be involved with their peers in leisure-time activities; (5) play activities and toys; (6) hobbies, crafts, music, and reading; (7) games; and (8) domestic leisure activities. Appendices contain leisure activities surveys, interest inventories, and instructions for taking leisure interest surveys. Includes lists of resources for toys and equipment for children with disabilities.

Heyne, L.A., McAvoy, L.H., Rynders, J.E., & Schleien, S.J. (1990). **Equity and excellence: Serving all children in community recreation.** *Journal of Physical Education, Recreation, & Dance*, 61(8), 45-48.

NARIC Accession Number: J20470

Project Number: H133B80048

ABSTRACT: Describes two programs designed to promote the participation of children with special needs in community recreation activities. One is an integrated art program called Kidspace. The program is located in a children's art gallery and studio that occupy one floor of an art museum. Projects were developed that emphasized the use of art as a leisure activity rather than as a strictly academic activity. These activities were designed to teach children that the elements of line, shape, color, and texture could be manipulated in various ways to create three-dimensional objects. The second program is sponsored by a Jewish Community Center. It is designed to integrate children and youth with special needs into a variety of social and recreational programs of their choice. These include swimming, gymnastics, theatre productions, summer day camp, after-school day care, woodworking, dance, and many others.

Walker, P. (1990). **Resources on integrated recreation/leisure opportunities for children and teens with developmental disabilities.** Syracuse University, New York.

NARIC Accession Number: O10076

ABSTRACT: Provides a discussion and information concerning integrated recreation/leisure opportunities for individuals with developmental disabilities and is directed to parents, people with disabilities, providers, administrators, and others interested in understanding or developing integrated recreation/leisure opportunities for children and teens with severe disabilities. Topics addressed include supports for children and

teens with severe disabilities in integrated recreation/leisure activities, our leisure identity, camping, supporting children in integrated recreation, the sense of belonging through integration in recreation and leisure time activities, and the Montgomery County Department of Recreation policy statement on mainstreaming. Also included is an annotated bibliography concerning integrated recreation for children/teens and a directory of agencies and organizations promoting innovative policy and practice.

## 1989

Bond, R.F. (1989). **Swimming for self-confidence and fun: Parenting your child with a disability.** *Exceptional parent*, 19(2), 38-44.

NARIC Accession Number: J11328

ABSTRACT: Suggested guidelines for a community-based swimming program for physically and mentally disabled children. Description of program emphasizing teaching both children and adults with a wide range of disabilities to achieve standard Red Cross levels of swimming proficiency. Highly recommended for youngsters with cerebral palsy and spina bifida. Author stresses competency in swimming adds significantly to child's self-confidence. Incentives for learning, class structure, and instructional techniques described. Necessary adaptation for various disabilities involve water temperature, and use of floats and goggles. Advice for parents who wish to find or start a swimming program for their child.

Driessen, P.K. (1989). **Leaving their wheels behind: Disabled scuba divers explore the mysteries of the sea.** *Independent Living*, 4(2), 55-59.

NARIC Accession Number: J13098

ABSTRACT: A feature article describing SCUBA diving for the wheelchair-bound. The author begins by noting that free-swimming diving apparatus were first perfected by the French in 1865, and that the sport of SCUBA (for self-contained underwater breathing apparatus) is now among this country's fastest growing. The body of this article focuses on disabled divers, such as Julie Mora, an extremely accomplished diver who dives because of the access she gets to parts of the world she'd otherwise only see on TV. Other diver stories are reviewed, all positive, and not all by athletically minded people. As is the

case for any diver, the important things about diving for the disabled are good training, good judgment, and good physical condition.

Frieden, L., & Kelley, J.D. (Eds.). (1989). ***Go for it! A book on sport and recreation for persons with disabilities.*** Orlando: Harcourt Brace Jovanovich Publisher.

NARIC Accession Number: R06053

ABSTRACT: Book introduces readers to opportunities available in sports and recreation for people with disabilities. It grew out of commitment by Queen Silvia of Sweden that all people with disabilities have the chance to enjoy benefits of sports. Book is directed mainly to people with physical and sensory disabilities and offers many activities unique to Americans. It is based on premise that being involved in sports and recreational activities is essential to health, fitness, and psychological well-being of all people, and those with disabilities need same opportunities to participate. Nine chapters are as follows: (1) team sports (e.g., beep baseball, wheelchair basketball, and seated volleyball); (2) individual sports (e.g., archery, bowling, and wheelchair tennis); (3) outdoor sports and recreation (e.g., adventure experiences, hiking, and cycling); (4) aquatics (swimming, rowing, sailing, scuba diving, and waterskiing); (5) track and field (e.g., marathons, wheelchair racing, and wheelchair slalom); (6) winter sports (alpine or downhill skiing, Nordic or cross-country skiing, and ice skating); (7) dance (dancing events, facilities, and variations); (8) regional games (mini-sport, pickle ball, parachute and circle rope play, and water games); and (9) fitness (e.g., flexibility, aerobic dance, and principles of training).

Haring, T.G., & Lovinger, L. (1989). **Promoting social interaction through teaching generalized play initiation responses to preschool children with autism.** *The Journal of the Association for Persons with Severe Handicaps (JASH)*, 14(1).

NARIC Accession Number: J11991

ABSTRACT: A report of findings from a study undertaken to test the effectiveness of "play initiation" training on subsequent social interaction among children handicapped with autism and their non-handicapped peers. Two experiments were conducted; in

the first an autistic preschool child was integrated into a regular preschool. Five non-handicapped students were selected to play with the autistic child for 3 to 13 minutes, after which "free play" was observed for 10 minutes in order to test the effect of the initiated play. Two handicapped students were used in the second experiment, which was essentially a replication of the first. Among the findings reported were that the handicapped children initiated more play as a result of the training (which including rewards for non-handicapped children for initiating playing with the handicapped child) and that their non-handicapped peers responded more favorably. Further research is urged on the generalizability of such training, among other topics.

Jones, J.A., & Paciorek, M.J. (1989). ***Sports and recreation for the disabled: A resource handbook.*** Indianapolis: Benchmark Press, Inc.

NARIC Accession Number: R05809

ABSTRACT: Presents information on sports and recreation for people with disabilities. Information is aimed at professionals who provide services to people with disabilities and for disabled individuals interested in leading active, exciting lifestyles. Book is structured to make it easy to retrieve information about activities and modifications in equipment. Detailed data are presented on all-terrain vehicles, archery, basketball, beep basketball, blowdarts, boating, boccia, bowling, cross country, cycling, fencing, field events, fishing, fitness programs, floor hockey, flying, football, goal ball, golf, gymnastics, horseback riding, hunting, ice skating, ice sledding, lawn bowling, martial arts, motor scooter, powerlifting, quad rugby, raquetball, road racing, roller skating, rugball, scuba diving, shooting, showdown, skiing, sky diving, slalom, sledge hockey, snowmobiling, soccer, softball, swimming, table tennis, team handball, tennis, track, volleyball, water skiing, weight training, wilderness experiences, and wrestling. The six appendices include listings of lightweight wheelchair manufacturers, sports organizations, national handicapped sports and recreation association chapters, and national wheelchair athletic association chapters.

1988

Cory, D., & Neustadt-Noy, N. (1988). **A new approach to recreational rehabilitation.** *Journal of Visual Impairment & Blindness*, 82(5), 195-197.

NARIC Accession Number: J08945

ABSTRACT: Examines the importance of recreation in rehabilitation programs for blind and visually impaired persons. Discusses the value of recreation for enhancing physical, psychological, intellectual, emotional, and social functioning. Describes a pilot model program which gives equal emphasis to functional rehabilitation and recreation activities. The program setting is a riverside hotel in a small village in West Germany. Participants receive instruction in orientation and mobility, communication skills, daily living skills, and the use of electronic devices. During leisure time, individuals and groups engage in supervised recreation activities such as bowling, hiking, arts and crafts, swimming, movement and dance, wine tastings, and field trips. Participants gain the satisfaction of being able to make independent decisions about using skills while enjoying leisure activities.

### 1987

Palumbo, A.J. (1987). ***The Sillyumpbus Program.***

NARIC Accession Number: O09072

ABSTRACT: Describes the Sillyumpbus Program, a program designed to provide recreation opportunities to special needs children. The Sillyumpbus is a mobile service facility created from a used school bus. The bus is equipped and decorated to serve as a traveling puppet theater, craft or play area, health information center, or other mobile facility for at risk and physically handicapped children and adults. The Sillyumpbus program has become a cooperative effort among several community and social agencies, and the Puppet Therapy Institute will assist any group or organization that wants to create their own Sillyumpbus facility. This report presents background information on the Sillyumpbus program and descriptions of: Sillyumpbus usages, financing, timing and manpower needed to convert a bus into a Sillyumpbus, sources of funds, and whom to contact for additional information. It includes a Sillyumpbus projected budget and a bibliography.

Simmons-Grab, D., & Slade, C. (1987). **Thera-**

**peutic swimming as a community based program.** *Cognitive Rehabilitation*, 5(2), 18-20.

NARIC Accession Number: J07539

ABSTRACT: Discusses the use of community-based Therapeutic Aquatic programs as a way for children and adults with special needs to participate in programs of rehabilitation, recreation, and instruction. Presents three case histories to illustrate the benefits of a community-based therapeutic swimming program. Advocates the development of such programs to enhance rehabilitation services.

### 1986

Musselwhite, C.R. (1986). ***Adaptive play for special needs children: Strategies to enhance communication and learning.***

NARIC Accession Number: R03149

ABSTRACT: Describes functions of adaptive play for disabled children and provides guidelines for selecting, adapting, and making play materials including adaptive switches and response-contingent devices. Discusses adaptive play strategies for communicative goals including tracking, scanning and decision-making, early social and communicative interaction, object interaction skills, symbolic play skills, early communication through speech and early augmentative communication. Suggests methods of developing support for adaptive play such as initiating a toy lending library, enlisting community support through bartering and promoting mainstreaming. Relates adaptive play to the arts and lifetime leisure skills. Includes an annotated bibliography, references, and lists of manufacturers and supportive organizations.

### 1985

Bernhardt, D.B., ed. (1985). ***Recreation for the disabled child.***

NARIC Accession Number: R00980

ABSTRACT: Discusses mainstreaming of individuals with physical or mental disabilities into recreational activities. Describes therapeutic aspects of recreation, exercise and training for individuals with spinal cord injury, amputation, cerebral palsy, chronic pulmonary diseases, cardiac disease, diabetes and blindness. Discusses handicapped skiing, running, team sports, competitive sports, body image and physical activity,

body image as psychosocial phenomenon, malleability of the body image and structuring a program. Includes book reviews and recreational equipment, programs, audiovisuals and publications. Has also been published as "Physical & Occupational Therapy in Pediatrics," 4(3), Fall 1984.

Compton, D.M. (1985). *Status of recreation participation of disabled persons in America.*

NARIC Accession Number: R04418

ABSTRACT: This article explores the involvement by handicapped persons in recreational and leisure activities. Recreation is defined as a time to refresh one's body or mind. Recreation often involves competition and sports. Leisure, on the other hand, is defined as pleasing one's self, and involves things a person can do by himself or with others at a slow, noncompetitive pace. Everyone needs recreation and leisure, but the disabled have traditionally been denied access to recreational or leisurely facilities. Today, with more mobility aids available, increasing numbers of handicapped people are actively participating in sports. Since leisure activities can be done alone or in groups, it is very adaptable to persons with disabilities. Leisure activities can include art, theater, sightseeing tours, and other, noncompetitive events. As increasing numbers of disabled take part in recreation and leisure, products to enhance their participation become more available. Thus, both the consumer and provider are benefited.

### 1983

British Sports Association for the Disabled Water Sports Division. (1983). *Water sports for the disabled.* Wakefield, England: E.P. Publishing.

NARIC Accession Number: R02531

ABSTRACT: Handbook on safe participation in water sports for disabled people. Discusses risk, medical and safety considerations, training needed for each sport and special equipment. The sports detailed include fishing, canoeing, rowing, sailing, coastal cruising, scuba, water skiing, power boating, model yachting and swimming. Also discusses water sports for mentally disabled people, hypothermia, clothing, life jackets and buoyancy aids, insurance, access and facilities, getting others to help and handling and maneuvering a disabled person. Includes photographs and drawings.

Jeffrey, D., & McConkey, R. (1983). *Making toys*

*for handicapped children: A guide for parents and teachers.*

NARIC Accession Number: R02827

ABSTRACT: Instruction guide to making toys for handicapped children. Part I discusses the role of toys in play, choosing toys and guidelines for toymaking. Describes boat, car, caterpillar tree, teddy bright-eyes, glove puppet, dominoes, handy clown, picture blocks, buzz board, mailbox, ring stacker, formboards, and jigsaws. Includes early pretend games, language games, number bus, picture puzzle cubes, and playgrounds. Includes photographs, drawings, lists of materials needed for construction, and index. Originally published as "Let's Make Toys" by Souvenir Press in 1981.

### 1982

Olsen, H.B. (1982). *Design and evaluation of an "adventure" playground for blind and partially sighted children.* *International Journal of Rehabilitation Research*, 5(3), 380-382.

NARIC Accession Number: J06418

ABSTRACT: Describes an experimental outdoor play environment (sensory area) for blind and partially sighted children. Discusses the objectives of the playground, including accommodation of children with all disabilities, development of the children's motor and mental capacities, and provision of different spaces, materials, forms, surface textures, and sensations. Discusses the results of using the playground and the method used to evaluate those results. Includes 10 references.

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### 2010

Groen, W., Hettinga, F.J., Valent, L., & van Drongelen, S., et al. (2010). **Hand-cycling: An active form of wheeled mobility, recreation, and sports.** *Physical Medicine & Rehabilitation Clinics of North America*, 21(1), 127-40.

ABSTRACT: By studying exercise and performance in hand-cycling in both activities of daily living and in Paralympic sport settings, new insights can be gained for rehabilitation practice, adapted physical activity, and sports. This review looks into the pros and cons of hand-cycling in both rehabilitation and optimal sports performance settings as suggested from the current-but still limited-scientific literature and experimentation. Despite the limited evidence-base and the diversity of study approaches and methodologies, this study suggests an important role for hand-cycling during and after rehabilitation, and in wheeled mobility recreation and sports. An approach that combines biomechanical, physiological, and psychosocial elements may lead to a better understanding of the benefits of hand-cycling and of the fundamentals of exercise in rehabilitation, activities of daily living, and sports.

### 2009

Pearman, D., & Walker, D.A. (2009). **Therapeutic recreation camps: An effective intervention for children and young people with chronic illness?** *Archives of Disease in Childhood*, 94(5), 401-406.

ABSTRACT: Since the 1930s, therapeutic recreation (TR) has been used in the UK to help young people cope with severe illness. This article surveys four systematic reviews and poses five questions that a pediatrician might ask: (1) How to select a TR experience and for which patient?; (2) Does TR augment brain injury rehabilitation?; (3) How do TR camps benefit children?; (4) Is TR cost-effective?; (5) What additional research is needed? Methodological

weaknesses in research impair the strength of conclusions. There is little research about matching of TR experiences to individuals, disease groups or age groups, or about the effect of TR camps in brain injury rehabilitation. TR interventions enhance self-esteem, disease knowledge, emotional well-being, adaptation to illness and symptom control. Educationalists suggest that self-esteem is helped most in mid to late adolescence. Where studied, TR camps are safe, which reassures parents. There have been few studies on cost-effectiveness. We conclude that young people benefit from TR. However, better-quality research would help select and further develop these experiences for young people with ill health.

### 2008

Creek, J. (2008). **Creative leisure opportunities.** *NeuroRehabilitation*, 23(4), 299-304.  
*No abstract is available.*



**Documents from the Education  
Resource Information Center  
(ERIC) search at [www.eric.ed.gov](http://www.eric.ed.gov)  
are listed below:**

### 2010

Ashby, C.M. (2010). **Students with disabilities: More information and guidance could improve opportunities in physical education and athletics. Report to congressional requesters. GAO-10-519.** Washington, D.C.: US Government Accountability Office.

ERIC #: ED510469

ERIC Full-Text: <http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED510469>

ABSTRACT: Research has established that physical activity and participation in athletics provides important health and social benefits for children. Certain federal laws help ensure that kindergarten-12th grade schools provide students with disabilities opportunities to participate in physical education (PE) and extra-curricular athletics equal to those of their peers. However, national associations have questioned whether

students with disabilities receive opportunities similar to their peers. Regarding students with disabilities, GAO was asked to examine (1) what is known about the PE opportunities that schools provide, and how do schools provide these; (2) what is known about the extracurricular athletic opportunities that schools provide, and how do schools provide these; and (3) how the Department of Education (Education) assists states and schools in these areas. GAO analyzed federal survey data; reviewed relevant federal laws and regulations; and interviewed state, district, and school officials in selected states, as well as parents and disability association officials. To improve the opportunities for students with disabilities in PE and athletics, GAO recommends that the Secretary of Education facilitate information sharing among states and schools on ways to provide opportunities and clarify schools' responsibilities under federal law. Education agreed with both of our recommendations. Appendices include: (1) Scope and Methodology; (2) Student Participation in Physical Education and Extracurricular Athletics in District and Schools We Visited; (3) National Data on Student Participation in Physical Education and Extracurricular Athletics; (4) Comments from the Department of Education; and (5) GAO Contact and Staff Acknowledgments.

Bitterman, A., Carlson, E., & Daley, T. (2010). *Access to educational and community activities for young children with disabilities: Selected findings from the Pre-Elementary Education Longitudinal Study (PEELS). NCSER 2011-3000*. National Center for Special Education Research.

ERIC #: ED512459

ERIC Full-Text: <http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED512459>

ABSTRACT: This report uses data from the Pre-Elementary Education Longitudinal Study (PEELS) to describe access for young children with disabilities in two specific domains: community activities, including extracurricular activities and family recreation, and kindergarten classroom experiences. While PEELS is a broad, descriptive study, the analyses presented in this report are designed to address four questions related to children's access to community and educational activities: (1) In what types of community activities are children with disabilities ages 5 through 7 engaged?; (2) How do specific attributes, such as

gender, disability, and household income, and potential barriers, such as access to adequate transportation and safety of neighborhoods, relate to involvement in those activities?; (3) What are the kindergarten experiences of young children with disabilities in terms of access to the general curriculum, enrollment in classes with peers without disabilities, instructional strategies, and full-day/part-day programs?; and (4) How do these kindergarten experiences vary by district size, district wealth, and metropolitan status? In PEELS, 69 percent of parents reported that their child attended a full-day program, and 31 percent of parents reported that their child attended a half-day program, regardless of whether the children were still receiving special education services in kindergarten. For those PEELS children still receiving special education services, 73 percent of teachers indicated that the regular education classroom was the child's main education setting and, on average, children who received special education services in regular education kindergarten had classes in which 82 percent of the children did not have disabilities. As a group, young children who received preschool special education services had different experiences based on the types of districts in which they were enrolled. In terms of district size, a larger proportion of children in very large districts had a regular education classroom as their main setting compared to children in smaller districts, and children in larger districts spent more hours per week in regular education classrooms than children in smaller districts. District wealth was also associated with children's kindergarten experiences. Children in low or very low-wealth districts spent a smaller percentage of time than children in high-wealth districts receiving instructional or therapy services outside their classroom. This report is organized in the following manner. The authors describe in chapter 2 the PEELS study design and methods used in this report. Chapter 3 presents information on access to community activities of young children with disabilities. Chapter 4 focuses on kindergarteners with disabilities and their access to classroom experiences. Appendices include: (1) Diagram of Selection of LEA Sample; (2) Weighting Procedures; (3) Results from PEELS Nonresponse Bias Study; (4) Standard Error Tables; (5) Standard Error Tables for Figures; (6) Analysis Variables Used Throughout Report; and (7) Final Augmented LEA Sample Size.

Chang, Y-Y., Lin, J-D., Lin, L-P., Lin, P-Y., Wu, J-L., & Wu, S-R. (2010). **Physical activity and its determinants among adolescents with intellectual disabilities.** *Research in Developmental Disabilities: A Multidisciplinary Journal*, 31(1), 263-269.

ERIC #: EJ863837

**ABSTRACT:** Physical inactivity is a global public health problem, and it has been linked to many of the most serious illnesses facing many industrialized nations. There is little evidence examining the physical activity profile and determinants for the vulnerable population such as people with intellectual disabilities (ID). The present paper aims to describe the regular physical activity prevalence and to examine its determinants among adolescents with intellectual disabilities in Taiwan. Participants were recruited from 3 special education schools in Taiwan, with the entire response participants composed of 351 primary caregivers of adolescents with ID (age 16-18 years). There were 29.9 percent ID individuals had regular physical activity habits, and the main physical activities were walking, sports, and jogging. There were only 8 percent individuals with ID met the national physical activity recommendation in Taiwan which suggests at least exercise 3 times per week and 30 min per time. In a stepwise logistic regression analysis of regular physical activity habit, we found that the factors of caregiver's educational level and preference toward physical activity were variables that can significantly predict ID individuals who had regular physical activity habit in their daily livings after controlling other factors. To maximize the positive effect of physical activity on people with ID, the present study suggests that it is needed to initiate appropriate techniques used for motivation to participate in physical activity for this population.

Emerson, E., & Robertson, J. (2010). **Participation in sports by people with intellectual disabilities in England: A brief report.** *Journal of Applied Research in Intellectual Disabilities*, 23(6), 616-622.  
ERIC #: EJ902205

**ABSTRACT:** Background: Participation in sports has been linked to a range of physical, social and mental health benefits. Little is known about the extent to which people with intellectual disabilities take part in sports. This study looks at participation in sports and factors associated with participation by people with

intellectual disabilities in England. Method: Data on participation in sports and measures of personal characteristics, living situation, social participation, and socioeconomic status associated with participation were analyzed based on a sample of 2,784 people with intellectual disabilities in England. Results: Overall, 41 percent of participants had taken part in sports in the past month, nearly all of whom had enjoyed it. Of those who did not take part, 34 percent said they would like to. Participation in sport was associated with some personal characteristics but not with support needs, and was also associated with indicators of socioeconomic status. Conclusions: Targeting interventions to increase participation in sports by people with intellectual disabilities may make a significant contribution to improving their health and well-being.

Nasuti, G., & Temple, V.A. (2010). **The risks and benefits of snow sports for people with disabilities: A review of the literature.** *International Journal of Rehabilitation Research*, 33(3), 193-198.

ERIC #: EJ902249

**ABSTRACT:** Snow sports are popular pastimes with therapeutic potential. The aim of this review is to evaluate the risk of injury and evidence of benefits of alpine skiing (including sit-skiing), Nordic skiing, and snowboarding for people with disabilities. Ten studies met the inclusion criteria from 357 citations. Research in this area is still in its infancy, but the risks of engaging in snow sports appear no greater than those of the general population, and there is some evidence that skiing can positively influence self-esteem, physical self-worth, standing balance, and gross motor function among individuals with a disability.

## 2009

Fine, L. (2009). **GAO probes access of students with disabilities to sports.** *Education Week*, 29(13), 22-24.

ERIC #: EJ868025

**ABSTRACT:** Although schools have made great strides educating students with disabilities in mainstreamed academic classrooms, some advocates and physical educators say sports programs and physical education classes are the final frontier for full inclusion in public schools. In the past few years, advocates for such students have been demanding greater

inclusion of students with disabilities in sports. The Government Accountability Office (GAO), the investigative arm of Congress, is conducting a report on the issue, and a state law in Maryland that creates more accountability for schools on how they provide athletic opportunities to those students could become a model for other states, or even federal legislation, advocates say. Federal law prohibits discrimination against students on the basis of disability, but a lack of guidelines, standards, and regulations on how schools should provide equal physical education and athletic opportunities leaves schools struggling to figure out how to make it happen. The GAO is assessing athletic opportunities for students with disabilities in physical education classes and extracurricular activities, and will determine the U.S. Department of Education's role in helping states and schools provide those opportunities. Its report is scheduled to be released in late June. Katherine Beh Neas, the vice president of government relations for Easter Seals, a Chicago-based advocacy group for people with disabilities and their families, hopes the report will give parents ammunition as they take on school officials about providing greater opportunities.

Harada, C.M., & Siperstein, G.N. (2009). **The sport experience of athletes with intellectual disabilities: A national survey of Special Olympics athletes and their families.** *Adapted Physical Activity Quarterly*, 26(1), 68-85.

ERIC #: EJ826635

ABSTRACT: The purpose of this study was to examine the sport experience for athletes with intellectual disabilities (ID) who participate in Special Olympics (SO). This study included a nationally representative sample of 1,307 families and 579 athletes in the U.S., focusing on sport involvement over the lifespan and motives for participating and for leaving SO. Athletes with ID are similar to athletes without disabilities in that sport is a significant life experience. They participate in sport for fun (54 percent) and social inter-action (21 percent). Like athletes without disabilities, SO athletes leave sport because of changes in interest (38 percent) but also because of program availability (33 percent). These findings suggest that we continue to document the involvement of people with ID in sports and work to expand the sport opportunities available.

Hurley, P., King, G., Law, M., & Petrenchik, T. (2009). **The enjoyment of formal and informal recreation and leisure activities: A comparison of school-aged children with and without physical disabilities.** *International Journal of Disability, Development & Education*, 56(2), 109-130.

ERIC #: EJ855737

ABSTRACT: Despite the fairly extensive literature on the developmental benefits of youth's participation in organized, out-of-school activities, little is known about the participation of school-aged children with physical disabilities in formal recreation and leisure activities, both in comparison with their participation in informal activities and with children who are typically developing. Enjoyment of formal and informal activities was examined for 427 children with physical disabilities and 354 children without disabilities, aged 6-14 years. It was predicted that children without disabilities would report significantly greater enjoyment of formal than informal activities, whereas this would not be the case for children with disabilities. This prediction was confirmed. Children with disabilities also participated in significantly fewer formal and informal activities, and participated in these activities less intensely than did children without disabilities. The mechanisms responsible for psychological engagement, enjoyment, and the developmental benefits of participation in activities are discussed, along with implications for research and clinical practice.

## 2008

Hughes, C., & McDonald, M.L. (2008). **The Special Olympics: Sporting or social event?** *Research and Practice for Persons with Severe Disabilities (RPSD)*, 33(3), 143-145.

ERIC #: EJ889363

ABSTRACT: Storey (2008), in his eloquent and timely critique of the Special Olympics and his call to close it down, focuses on the failure of the Special Olympics to achieve the goal of social integration and sustained social interaction among people with intellectual disabilities and their peers without a disability label. The authors wholeheartedly agree with Storey's condemnation of the perhaps unintended consequences of the Special Olympics, including: (1) fostering negative stereotypes of and infantilizing people with disabilities; (2) encouraging inappropri-

ate behavior such as hugging, pitying, and paternalism; and (3) fostering attitudes of “us” versus “them” and service provider versus service recipient--all of which serve to hinder rather than promote social integration. Storey also argues that by diverting large amounts of charitable and federal funding, the Special Olympics further promotes segregation by limiting funds for integrated recreation and creating a dual recreational system. The authors contend that to make existing sports and recreational options more accommodating and integrated, disability awareness and training must become commonplace and widespread. Just as recreational staff routinely receive training on how to identify and to respond to incidences of child abuse staff should also consistently be provided with information on types of disabilities, behavior management strategies, and adaptive recreational programming. Public awareness should be provided in sports and recreational settings to inform participants that people of varying abilities are using the facilities and must be treated equally and with respect. Procedures should be in place for providing accommodations and assistance as needed for both people with disabilities and others who are using the recreational facilities with them. It should become customary for programming directors and instructors not only to accept but also to advocate to the public for integrated athletics and recreational activities. Marketing materials for recreational programs should convey a clear message of affirmative action and acceptance of people of all races, gender, religion, sexual orientation, and skill level. Parents need to know that their children with disabilities will be welcomed in recreational programs and not feel that they have to “hide” their children’s disabilities to be accepted into a program. Actively promoting inclusion and accommodation serves the dual purpose of addressing the stigma often associated with a disability by the public as well as minimizing fear and feelings of intimidation that people with disabilities may have toward a recreational activity itself. Promoting inclusion creates a “can do” environment where everyone is invited to question her own perception of what it means to recreate.

Kivela, T., & Surakka, A. (2008). **Motivating visually impaired and deaf-blind people to perform regular physical exercises.** *British Journal of Visual Impairment*, 26(3), 255-268.

ERIC #: EJ805509

**ABSTRACT:** The aim of this study was to examine the different ways in which visually impaired and deaf-blind people can be motivated to perform regular physical exercises through the use of a physical training program. The program was designed for visually impaired and deaf-blind people with the aim of reducing their most common physical problems: those of balance, posture, coordination, tense neck and shoulder muscles, and loss of spinal rotation and reciprocal arm swing. Twenty-seven participants (23 visually impaired, 4 deaf-blind; mean age 54 years, range 31 to 75) participated in a 5-6 week physical training program (three 60-minute sessions per week) in four groups. Twenty-four participants completed the program, 12 of whom had a “physically active” lifestyle and 12 a “sedentary” lifestyle. After the intervention, the participants assessed the effect of it through a questionnaire. Drawing upon their responses, three different indicators were examined further: physical condition, mental state and balance. All except one of the 24 participants who completed the program reported that at least one of these indicators had improved.

Potter, C., Erzen, C. (2008). **A multisensory aquatic environment for individuals with intellectual/developmental disabilities.** *Exceptional Parent*, 38(10), 68-69.

ERIC #: EJ819618

**ABSTRACT:** This article presents the eighth of a 12-part series exploring the benefits of aquatic therapy and recreation for people with special needs. Here, the authors describe the process of development and installation of an aquatic multisensory environment and the many factors that one should consider for a successful result. There are many critical decisions to be made when creating a multisensory aquatic environment and the results can provide a unique experience that is fun and beneficial for participants.

Waters, L. (2008). **A water workout is fun! Give it a try!** *Exceptional Parent*, 38(6), 69-70.

ERIC #: EJ799882

**ABSTRACT:** When a family faces the particular challenge of a debilitating illness, disorder, or other disability that is affecting a child, life becomes complicated. Suddenly the need for medications and

therapies takes center stage, and things like summer swimming lessons and lazy days poolside can get lost in the shuffle. In this article, the author explores the benefits of aquatics therapy and recreation for people with special needs.

Wermer, M. (2008). **Dolphin therapy: The playful way to work toward the next step.** *Exceptional Parent*, 38(5), 70-72.

ERIC #: EJ795353

ABSTRACT: More than 400 children with a physical and/or mental challenge visit the Curacao Dolphin Therapy and Research Center (CDTC) for dolphin-assisted therapy every year. Dolphin therapy appears to be the right approach for many children. With the help of these special and very social animals, it is easier to make contact with the children. It motivates children to learn new things in a playful way. At CDTC, a team of professional therapists, in shorts and T-shirts, treat the children according to the principles of behavioral therapy and operant conditioning, which involves rewarding positive/wanted behavior. The children participate in a two-week program, with two hours of therapy each day. After hard work with their personal speech therapist, physical therapist, or psychologist, they enjoy swimming with their dolphin in the Caribbean seawater. The children discover that the prior exercises they participated in during speech therapy or the coordination skills they worked on in physical therapy suddenly have meaning, because they improved their ability to play and interact with the dolphins. The fun and relaxation that swimming with the dolphins offers them motivates the child to work towards the next step. The results are stunning, and parents are very enthusiastic about the program. This article is the fourth of a 12-part series which explores the benefits of aquatics therapy and recreation for people with special needs.

Young, B. (2008). **A collaborative effort allows people with disabilities to experience the joy of horseback riding.** *Exceptional Parent*, 38(6), 32-33.

ERIC #: EJ799874

ABSTRACT: This article presents a story about children with special needs whose exceptional parents had the courage and faith to look beyond their child's physical disability. Their vision granted them opportunities in a therapeutic riding program, which

previously would not have included individuals with such severe disabilities. Through their collaborative efforts, Sue Cook, President of Liberty Riders Therapeutic Riding Program, Inc., her daughter Sara, a NAHRA-certified (North American Riding for the Handicapped Association) instructor, Karen Orr, developer of the Independence Saddle, and individuals from the Woodland Developmental Center began making the dream of having exceptional individuals learn and practice mobility skills while riding a horse. Initially, the focus was to improve mobility skills; the achievement that resulted was beyond imagination. Using the combined philosophies of therapeutic horseback riding and the MOVE[R] (Mobility Opportunities Via Education) Program, 25 individuals demonstrated achievement in not only their mobility, but also communication and social skills. The students' success with the MOVE program and its collaboration with the Liberty Riders, Inc. therapeutic riding program has been a successful partnership.

## 2007

Block, M.E. (2007). ***A teacher's guide to including students with disabilities in general physical education*** (3<sup>rd</sup> ed.). Baltimore: Brookes Publishing Company.

ERIC #: ED497276

ABSTRACT: This book provides a comprehensive guide to making physical education inclusion work for students of all ages. In this new edition of the trusted bestseller, renowned expert Martin E. Block and a select group of highly respected contributors provide: (1) new information reflecting all the latest updates to IDEA, other disability-related legislation, and national physical education standards; (2) timely new chapters on addressing multicultural issues and including students in community recreation programs; (3) an expanded behavior chapter with information on positive behavior support; and (4) updated larger-size forms, with an improved, easier-to-use layout. Teachers will also get everything that made the popular previous editions so useful: a wide range of easily implemented, low-cost adaptations; realistic case studies that model problems and solutions; a helpful resource list; and practical guidance on key issues like safety, behavior problems, group games, and social acceptance. The cutting-edge infor-

mation makes this an ideal text for coursework, and more than 40 photocopiable forms make it a helpful companion for in service physical educators planning their classes. With this blueprint for successful inclusion, physical educators will create a welcoming environment, encourage positive social interactions, and promote a healthy, active lifestyle for all their students. The book contains fourteen chapters: (1) What Is Physical Education? (Martin E. Block, Steven Elliott, and Amanda D. Stewart Stanec); (2) What Is Inclusion?; (3) A Team Approach to Inclusion in Physical Education; (4) Planning for Inclusion in Physical Education; (5) Assessment to Facilitate Successful Inclusion; (6) Instructional Modifications; (7) Curricular Modifications; (8) Modifying Group Games and Team Sports; (9) Facilitating the Social Acceptance and Inclusion (Martin E. Block and Iva Obrusnikova); (10) Making Inclusive Physical Education Safe (Martin E. Block and Mel L. Horton); (11) Accommodating Students with Behavior Challenges (Martin E. Block, Ron French, and Lisa Silliman-French); (12) Including Students with Disabilities in General Aquatics Programs (Martin E. Block and Philip Conaster); (13) Including Students in General Community Recreation Programs; and (14) Multicultural Education and Diversity Issues (Ana Palla-Kane and Martin E. Block.) References, resources and an index are also included.

Block, M.E., Flint, W., & Klavina, A. (2007). **Including students with severe, multiple disabilities in general physical education.** *Journal of Physical Education, Recreation & Dance (JOPERD)*, 78(3), 29-32.

ERIC #: EJ794568

ABSTRACT: Many children with severe disabilities never have the opportunity to try general physical education (GPE) because their Individualized Education Program (IEP) team feels that they will not be successful, will not benefit, or will not be safe. However, there are ways to safely, successfully, and meaningfully include children with severe disabilities in GPE. A model can be designed to make sure the child will be able to work on his or her physical education goals and objectives while interacting with peers without disabilities in a way that will not disrupt the general program. The purpose of this article is to detail specific strategies that allow a student with

severe, multiple disabilities (SMD) to be included in GPE. These strategies revolve around three major themes: (1) identifying and selecting appropriate goals and objectives for the student with disabilities and then finding ways to help the student achieve these goals and objectives while in GPE; (2) making the GPE setting safe for the student with SMD; and (3) facilitating social interaction between students with and without SMD. Specific examples of simple modifications that allow the student with SMD to be safely and meaningfully involved in GPE will be presented throughout.

Kleinert, H.L., Miracle, S.A., & Sheppard-Jones, K. (2007). **Including students with moderate and severe disabilities in extracurricular and community recreation activities: Steps to success.** *TEACHING Exceptional Children*, 39(6), 33-38.

ERIC #: EJ896602

ABSTRACT: Recreation and leisure activities play a vital role in all people's lives, and educators have long recognized that such activities are an important instructional emphasis for students with moderate and severe disabilities. This article offers teachers practical strategies for including their students with disabilities in school extracurricular activities, as well as in community recreation activities. Recreation, leisure, and extracurricular involvement are essential for developing friendships, increasing the likelihood of community integration and post-school success, and improving the overall quality of life. Moreover, extracurricular involvement—through such activities as participating in science programs, using computers, practicing foreign languages, working on yearbooks, and participating in 4-H clubs can also give students with moderate and severe disabilities many opportunities to practice and extend their academic skills.

## 2005

Brickell, D. (2005). **Visual disability and horse riding.** *British Journal of Visual Impairment*, 23(1), 38-39.

ERIC #: EJ807551

ABSTRACT: It is now commonplace for horse riding to be included in the extra-curricular activities of students with physical disabilities. In this article an account is given of how visually impaired people

can derive physical, mental, and emotional benefits from this supervised activity. It is argued that the rider, in learning to exercise self-control and control of the horse, obtains sensory feedback that is of value for their own posture and mobility. Some riders go on to attain high levels of proficiency, taking part in competitive events. The physical challenges develop decision-making skills, and foster a sense of freedom and independence.

Caldwell, L.L. (2005). **Leisure and health: Why is leisure therapeutic?** *British Journal of Guidance and Counseling*, 33(1), 7-26.

ERIC #: EJ691021

ABSTRACT: The purpose of this article is to examine the empirical evidence and describe theoretical perspectives that address under what conditions and why leisure can be therapeutic and contribute to health and well-being. This review of the literature provides empirical evidence that leisure can contribute to physical, social, emotional and cognitive health through prevention, coping (adjustment, remediation, diversion), and transcendence. After examining this empirical evidence, the article addresses why leisure is therapeutic and concludes by presenting two concepts useful to practitioners who desire to provide leisure guidance to help people avoid risk and maximize the therapeutic possibilities of leisure.

## 2001

McKinney, A., Dustin, D., & Wolff, R. (2001). **The promise of dolphin-assisted therapy.** *Parks & Recreation*, 36(5), 46-50.

ERIC #: EJ627345

ABSTRACT: Describes how people with disabilities can benefit from working and playing in the water with dolphins, focusing on the many positive benefits of dolphin-assisted therapy and discussing several hypotheses about why dolphin-assisted therapy is so effective. The article describes two dolphin-assisted therapy programs and presents contact information for three programs.

Ross, J.E. (2001). **Water-based outdoor recreation and persons with disabilities.**

ERIC #: ED463940

ERIC Full-Text: <http://www.eric.ed.gov/>

[ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED463940](http://ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED463940)

ABSTRACT: People with disabilities have long been hindered from participating in outdoor recreation activities such as fishing and boating because of structural and social barriers. Within the past decade, significant progress has been made toward including people with disabilities in outdoor recreation programs and improving access to related facilities and lands. Important terminology, federal legislation, and leisure studies related to people with disabilities are summarized. Using appropriate terminology conveys a sense of inclusion for programs and facilities. People-first terminology is positive and humanizing because it focuses on the person rather than the disability. Understanding and meeting legal requirements for access to programs, facilities, and services by people with disabilities will further ensure an inclusive environment. Guidelines for outdoor education and outdoor recreation programs include training staff, having a certified therapeutic recreation specialist available as a consultant, collaborating with special educators, providing support staff, including persons with disabilities on the staff, and involving persons with disabilities in the design and implementation of programs. Finally, research on people with disabilities shows they have the same motivations and educational needs as others participating in outdoor recreation activities. By using assistive devices and some additional planning, boating, fishing, and stewardship education programs can become inclusive and provide benefits to all segments of the population. Exemplary programs are identified, and research recommendations are discussed.

## 2000

Arick, J., Brannan, S., & Fullerton, A. (2000). **The impact of camp programs on children with disabilities: Opportunities for independence.** Washington, D.C.: U.S. Dept. of Education, Office of Educational Research and Improvement, Educational Resources Information Center.

ERIC #: ED454029

ABSTRACT: A study examined the impact of specialized, residential camp programs on children and youth with disabilities. Case studies were used to describe the real-life context of program effects

and to explore various effects in situations where there may be no clear, single set of outcomes for all participants. Fifteen specialized residential summer camp programs were selected that had a successful history of serving campers with disabilities, accreditation by the American Camping Association, a comprehensive outdoor program, highly qualified camp staff, strong counselor training, and administrative support for the research. From each camp, five campers were selected that had severe mental retardation, mild mental retardation, any level of mental retardation, physical disabilities, and primary disability. After each subject's camp session, interviews were conducted with the camper's counselor and parents, for a total of 73 interviews. Subjects were ages 7 through 23 and had attended camp an average of three times. Nearly all subjects attended public schools. Six patterns of growth were identified in which subjects demonstrated greater initiative or self-directed independence. The patterns differed in skill domain: self-help and daily living tasks, self-reliance and decision making, leisure activities, social interactions, communication, and interest in helping others. Comments from parents and counselors are included for each pattern. Reasons for differential outcomes among campers, transfer of learning to home, and camp program elements that encourage growth are discussed.

### 1999

Corbin, C., Pangrazi, B., & Seaman, J.A. (Eds.). (1999). **Physical activity and fitness for persons with disabilities**. *Research Digest*, 3(5).

ERIC #: ED429951

ERIC Full-Text: <http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED429951>

ABSTRACT: Historically, the approach to physical activity for people with disabilities has been couched in medical rationale and focused on rehabilitation. This does not account for physical activity for the joy of it as in play, exercise to improve or maintain fitness, or activity required in employment. The new paradigm of healthy, active lifestyles for people with disabilities is one of inclusion and integration. Today, adapted physical education programs in the schools include games, sports, rhythms, and aquatics suited to the individual needs, capabilities, and limitations

of students with disabilities. This paper focuses on the benefits of physical activity and physical fitness for people with disabilities, the challenges to becoming physically active, and the effects of disabilities on health-related fitness components (cardiovascular fitness, muscular strength, flexibility, and body composition). The paper also discusses how communities can promote physical activity and fitness programs for people with disabilities. It examines the move to inclusive education for students with disabilities, and it considers issues related to sports for people with disabilities. A list of pertinent professional organizations is included.

### 1998

Sherrill, C. (1998). **Adapted physical activity, recreation, and sport: Crossdisciplinary and lifespan** (5<sup>th</sup> ed.). Dubuque: WCB/McGraw Hill.

ERIC #: ED411651

ABSTRACT: This textbook is designed for both undergraduate and graduate students who aspire to meet the individual needs of children with disabilities in physical education, recreation, sport, fitness, or rehabilitation settings. The goal is to prepare professionals to meet the personnel standards established by the National Consortium of Physical and Recreation for Individuals with Disabilities. Part 1, "Foundations," focuses first on adapted physical activity, individual differences, and home-school-community teamwork. It then addresses the topics of advocacy; philosophy, planning, and curriculum design; assessing, prescribing, and writing the Individualized Education Program; and teaching, evaluating and consulting. Part 2, "Assessment and Pedagogy for Specific Goals," discusses ten goals of adapted physical activity, including self-concept, inclusion and social competence, sensorimotor integration, motor performance, perceptual-motor learning, fitness, postures and appearance, play and game competence, adapted dance and dance therapy, and adapted aquatics. Part 3, "Individual Differences, with Emphasis on Sport," addresses the needs of infants, toddlers and early childhood, followed by chapters on different disabilities. Sport terminology from the worldwide Paralympic movement is used to designate disabilities and sport classifications are described. Appendices include definitions and relevant resources. (Each chapter includes references.)

1997

(1997). *Achieving a balance: Proceedings of the National Conference on Adapted Physical Activity (5th, Macomb, Illinois, April 3-5, 1997)*.

ERIC #: ED407794

ERIC Full-Text: <http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED407794>

ABSTRACT: This proceedings include the following papers: "Developing a District Building Based Team" (Kathy Heller and Michelle Till); "Wheelchair Rhythmic Sportive Gymnastics" (Gertrude Krombholz and Atja Gotzova-Kumpf); "Team Building in Inclusion Settings" (Robert Weber); "Inclusion: Identifying Student Needs" (Jeff Runge); "Overview of the Role of Aquatics for Persons with Different Abilities" (Lorraine Bloomquist); "Wheelchair Dance" (Gertrude Krombholz); "Achieving the "Ultra-Stretch"-A Method for Increasing Flexibility and Fitness for Everyone" (Christine Stopka); "Traditional Korean Play: Jegi-Chagi for Students with Physical Disabilities" (Yong-Ae Whang); "Why Choose Horseback Riding?" (Natalie Bieber); "Three Decades of Adapting Activities to Maximize Student Skill Development" (James Cowart); "Go for the Gold: Common Sense Strategies for Working with ADHD Children" (Michael Davey); "Let's Work Together: Team Building Pool Games" (Phillip Conatser); "The Fitness Clinic for Physically Disabled at San Diego State University: A Model for the Future" (Peter Aufesser); "Competitive Wheelchair Athletics" (Stefanie Opsal and Amy Crowley); "Appropriate Inclusion in Physical Education: From Perceptions to Practical Pointers" (Nathan Murata and Samuel Hodges); "Adapted Physical Education-Accommodation or Innovation?" (Laura Hunter); "A Practical Application of Aquatics for Persons with Disabilities" (Lorraine E. Bloomquist); "AAALF and the Alliance: Partners in Fitness Education" (Janet A. Seaman); "Raising a Child with Disabilities in the Family" (Catherine Crain and others); "Preparing Students with Disabilities for Spring Break '97" (Jayne Swercinski and Lisa Burren); "The Paralympic Movement: Yesterday, Today and Tomorrow" (Robert D. Steadward); "Olympic Access: Design for Athletes, Spectators, and Employees" (Kim Beasley); "Resis-

tive Exercise for Older Adults and Cardiac Patients: Practical Considerations" (Loran D. Erdmann); "Basic Skills and Inclusion of Various Ability Levels" (Robert Weber and Others); "Using Summer Camps to Provide a Developmental Sequence for Physical Activity" (Stefanie Opsal and Amy Crowley); "Moving to a Theme" (Carol A. Ryan); "Inclusion: Modifying Games and Sports Activities for Individuals with Disabilities" (Fred Schack); "Try-Umph-Promoting Sport, Fitness, and Recreation for Youth with Physical Disabilities" (Barbara Anthony); "Trouble or Triumph: Novel Falls Prevention Strategies for Older Adults with Disability" (Mark Alexander Hirsch); "Liability Concerns for Working with Individuals with Disabilities" (Peter Aufesser); "Pain Free Exercise Training for People with Peripheral Vascular Disease?" (Christine Stopka and others); "Integration in Wheelchair Athletics at University of Wisconsin-Whitewater" (Stefanie Opsal and others); "A Systematic Application of Activity-Based Intervention in Physical Education Programming for Preschoolers with Disabilities" (Ronald Ricardo Smith); and "Introducing Kids to Sports" (Paddy Rossbach). Some presentations contain references.

Dunn, J.M. (1997). *Special physical education: Adapted, individualized, developmental* (7<sup>th</sup> ed.). Madison: Brown and Benchmark Publishers.

ERIC #: ED397600

ABSTRACT: This text on physical education for children and adolescents with disabilities attempts to bring together current research findings and best educational practices from the fields of adapted physical education, special education, psychology, medicine, physical therapy, occupational therapy, and therapeutic recreation. The book is organized into four major sections. Section 1 includes chapters on historical background, developmental patterns, motor learning and perception, and understanding individuals with disabilities. Section 2 is on managing the learning environment, with chapters on: organization and administration of special physical education, teaching special physical education, evaluation, and assistive devices. Section 3 presents 12 chapters on the following conditions that result in enervated or impaired movement: (1) orthopedic disabilities, (2) cerebral palsy, (3) muscular weakness and other movement disorders, (4) sensory impairments, (5) cardiopathic

conditions, (6) respiratory disorders, (7) nutritional disturbances, (8) other conditions requiring special considerations in physical education, (9) mental retardation, (10) learning disabilities, (11) behavioral disorders, and (12) severe disabilities. Section 4 has chapters on the following specific activities and programs: activities and games for young children, rhythms and dance, individual lifetime activities, dual sports, team games, swimming, physical fitness, posture and body awareness, relaxation, and competitive sport for athletes with disabilities.

Kasser, S.L., et al. (1997). **Sport skills for students with disabilities: A collaborative effort.** *Journal of Physical Education, Recreation, & Dance*, 68(1), 50-53.

ERIC #: EJ540288

ABSTRACT: Provides justification for a cross-disciplinary approach to program delivery in physical education for students with physical and cognitive disabilities. Details the positive outcomes possible through a bidirectional relationship between physical education and physical therapy and presents guidelines for collaboration and for sport skill integration.

### 1996

Broach, E., & Dattilo, J. (1996). **Aquatic therapy: Making waves in therapeutic recreation.** *Parks and Recreation*, 31(7), 38-43.

ERIC #: EJ531677

ABSTRACT: Therapeutic recreation professionals often use aquatic therapy to improve physiological and psychological functioning, and they have reported improvements for people with many different types of disabilities. The paper discusses aquatic therapy methods, water as a therapeutic environment, professional training and development, and lifestyle benefits from aquatic therapy.

### 1995

Jankowski, L.W. (1995). **Teaching persons with disabilities to SCUBA diving.** Montreal, Canada: Quebec Underwater Federation/F.Q.A.S. (Federation Quebecoise des Activites Subaquatiques).

ERIC #: ED419350

ABSTRACT: This booklet is designed to sensitize

and inform the scuba diving instructor on appropriate attitudes and successful methods for teaching scuba diving to persons with physical disability. It addresses misconceptions about people with disabilities and the importance of effective two-way communication and mutual respect between instructors and persons with impairments. A list of appropriate language to use in describing a person with a disability is provided, along with definitions of impairments, disabilities, and handicaps. The different needs of people with spinal cord injuries, limb deficiencies, and cerebral palsy are then discussed. Tips are provided for transferring divers in wheelchairs to a swimming pool, the beach, or a dive boat. The need to modify the traditional format for scheduling scuba classes to accommodate certain participants with disabilities is also addressed, as well as the need for divers to exercise vigorously, regularly, and frequently in order to maintain their required level of physical fitness for diving.

### 1994

Demchak, M.A. (1994). **Helping individuals with severe disabilities find leisure activities.** *TEACHING Exceptional Children*, 27(1), 48-52.

ERIC #: EJ489503

ABSTRACT: Guidelines for selecting leisure activities for individuals with severe disabilities include integration with nondisabled peers, age appropriateness, choice/preference, adaptations and partial participation, and feasibility. A form is presented for systematically evaluating potential recreational activities to determine the level to which they meet the selection guidelines.

McKeag, D.B., & Peck, D.M. (1994). **Athletes with disabilities: Removing medical barriers.** *Physician and Sportsmedicine*, 22(4), 59-62.

ERIC #: EJ484315

ABSTRACT: Disability-related conditions such as bladder problems or pressure sores need not keep people from activity. Although active individuals with disabilities require some specialized management, they mainly need medical care for sports-related cuts, sprains, and strains. Physicians can help remove medical barriers to participation for active individuals with disabilities.

### 1993

Jones, D. (1993). **Therapeutic recreation and adult education.** *Adults Learning*, 4(10), 280-82.

ERIC #: EJ466407

ABSTRACT: Therapeutic recreation is a means of empowering individuals with disabilities through arts or sports. The field has developed differently in the United States and the United Kingdom; the former emphasizes professionalization and the latter the right to adult education.

Kiernan, W., & Moon, S. (1993). **Project REC: Integrated social and leisure recreation services for students with severe disabilities. Final Report.**

ERIC #: ED369201

ERIC Full-Text: <http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED369201>

ABSTRACT: This 3-year project attempted to: (1) provide direct support to students with severe disabilities in accessing recreation opportunities; (2) develop and present in-service training on integrated leisure opportunities in New England; and (3) disseminate information on ways to integrate school and community recreation activities. The project was implemented at three demonstration communities in New England. A total of 119 students with severe disabilities participated in 25 different integrated activities. In-service training was provided to 25 organizations. Presentations were given at six regional conferences and project findings published in newsletters, journals, and a textbook. The project focused on the role of the community leisure facilitator (CLF) who works with other professionals, volunteers, and families to meet the leisure/recreation needs of this population. Individual and community surveys are attached. Much of this report consists of the following appendices: descriptions of demonstration activities initiated or modified by the project; summaries of initial meetings/training with demonstration towns; summaries of in-service presentations; program and evaluation results of the New England Sports and Recreation Conference; newsletters featuring the project; information on the textbook featuring project demonstrations; data on the role and function of the CLF; data from a study on leisure preferences of

students without disabilities; the abstract of a new project proposal; and a guide to assistive technology resources and adaptations.

### 1992

Hamel, R. (1992). **Getting into the game: New opportunities for athletes with disabilities.** *Physician and Sportsmedicine*, 20(11), 121-22, 124, 126-29.

ERIC #: EJ461909

ABSTRACT: Innovations in equipment and changes in social attitudes are tearing down barriers to sports participation for individuals with disabilities. Many people still do not know about the array of opportunities available, and physicians are uniquely positioned to help them discover the sporting events and fitness options open to them.

### 1991

(1991). **Directory of national recreation organizations.** *Exceptional Parent*, 21(7), 44.

ERIC #: EJ442971

ABSTRACT: Thirty national recreation organizations serving individuals with disabilities are listed, along with addresses and telephone numbers. Sample recreational activities covered include Boy Scouts and Girls Scouts, various wheelchair sports, skiing, golfing, and horticultural therapy.

### 1990

Card, J.A., & Crawford, M.E. (Eds.). (1990). **Annual in therapeutic recreation** (Vol. 1). Reston: AAHPERD.

ERIC #: ED322092

ERIC Full-Text: <http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED322092>

ABSTRACT: This publication contains the following articles: (1) "A Pilot Study of the Relationship between Co-Dependency and Recreation Using Women with Histories of Domestic Violence" (Pamela E. Foti and Lori S. Gelvin); (2) "Discretionary Time Use and the Chronically Mentally Ill" (Thomas K. Skalko); (3) "Therapeutic Recreation and Family Therapy: A Needs Analysis of Perceived Needs of Wives of Stroke Patients" (Roy H. Olsson, Jr., Sharon G. Rosenthal,

Leonard O. Greninger, Martha J. Pituch and Eileen S. Metress); (4) "Identification of Competencies Needed in Gerontological Recreation Courses: An Application of the Delphi Technique" (Barbara A. Hawkins and David R. Austin); (5) "Baseline Gender Norms and Cohort Comparisons for Neulinger's 'What Am I Doing?' Instrument" (John T. Hultsman and David R. Black); (6) "Baseline Age Norms for Neulinger's 'What Am I Doing?' Instrument" (John T. Hultsman and David R. Black); (7) "Older Adults with Developmental Disabilities/Mental Retardation: A Research Agenda for An Emerging Sub-Population" (Ann M. Rancourt); (8) "An Emerging Challenge: Serving Older Adults with Mental Retardation" (Rosangela Boyd and Ann James); (9) "Leisure Interests and Perceptions of Group Home Residents" (Patricia Barrett Malik); (10) "The Relationship between Recreation Participation and Functional Skill Development in Young People with Mental Retardation" (Candace Ashton-Shaeffer and Douglas A. Kleiber); and (11) "Automating a Community Resource Directory: An 'Information Age' Tool for Discharge Planning" (Daniel D. Ferguson and Linda Hutchinson-Troyer).

## 1989

Brock, B.J. (1989). **Therapy on horseback: Psychomotor and psychological change in physically disabled adults.** *Excerpts from dissertation research; paper presented to the National Conference of the American Camping Association* (Seattle, WA, February 27-March 4, 1989).

ERIC #: ED313183

ERIC Full-Text: <http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED313183>

ABSTRACT: This paper describes a study of the effects of horseback riding on physically disabled adults. The first therapeutic riding centers were built during the late 1950s in Great Britain. Today, there are well over 350 accredited therapeutic riding centers in North America. Therapeutic riding is categorized into three areas: sport/recreation, medical, and education/psychology. While evidence of improved coordination, strength, and self-concept appears as a result of therapeutic horseback riding, scientific research and evidence of benefits is lacking. The current study used 15 physically disabled adults who were given tests

before and after an 8-week therapeutic horseback riding program. Another group of 24 physically disabled adults, half of whom took part in the riding program, were given posttests only. The most noted disabilities in this study were head trauma, visual impairment, arthritis, cerebral palsy, and epilepsy. Participants were tested in self-concept, and in strength and coordination. Strength and coordination were measured using an electronic Strength and Coordination Instrument (SCI Model #1). Results showed improvement in coordination for subjects who participated in the riding program. No significant differences were found in self-concept or strength scores. The paper contains 38 references.

Rynders, J., & Schleien, S. (eds.). (1989). **Integrated leisure and recreation.** *IMPACT*, 2(3).

ERIC #: ED329033

ERIC Full-Text: <http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED329033>

ABSTRACT: This "feature issue" focuses on integrated leisure and recreation for developmentally disabled persons and includes descriptions of innovative leisure/recreation programs which allow the realization of the concepts of normalization and least restrictive environment. Brief articles include the following titles and authors: "Challenging the Stereotypes" by John E. Rynders (social/leisure activities of 13 developmentally disabled preadolescents); "Integrated Community Recreation: A Search for Quality" by Kirsten M. Kuhnly (lists indicators of quality in integrated recreation programs); "Accessible to All: The St. Paul Jewish Community Center" by Linda Heyne; "Empowering the Community: The Vision and Goal of Two Local ARCs" by Mo Fahnestock and M. Tipton Ray; "An Experience with an Extra 'Kick'" by Caye Nelson (horseback riding); "An 'Electrifying Experience'" by Jenny Cameron (electronic games); "Integration on the Banks of the Mississippi River" by Cheryl L. Light and others (activities at a Minneapolis special school); "Linking Lives" by M. Tipton Ray and others (ways to facilitate interactions with care providers and friends); "Wilderness Inquiry: Integration through Adventure" by Greg Lais; "Bringing People Together in Outdoor Education" by Leo H. McAvoy and others; "Special Olympics Campaign Expands 'World of Winners'" by Sheila Dinn and

others; "Tony and Aaron: A Mother's Hopes for Her Sons" by Mary Ulrich; "Parents as Advocates" by Susan Hamre-Nietupski and others; "Meeting Your Child's Individual Needs in an Integrated Recreation Program" by Stuart J. Schleien and others. Eight suggested readings are listed as well as manufacturers of modified recreation equipment.

### 1987

Goetz, L., et al. (1987). *Recreation and leisure. Section IV.*

ERIC #: ED299791

Abstract: This report of a conference session dealing with recreation and leisure activities for people with deaf-blindness and other profound multiple disabilities contains three papers and a working group report. The title paper by Lori Goetz reviews "model indicators" for recreation and leisure educational programming with individuals who have severe and profound disabilities, reviews services currently available, and makes recommendations for future programming. In their response, titled "Importance of Communication Skills and Their Etiology in Planning of Recreation and Leisure Programs for Persons with Multiple/Profound Handicaps of Deafness and Blindness," Pamela Mathy-Laikko and Terrence Dolan comment on individual differences, integration of deaf-blind and non-compromised children and adults, the issue of choice-making, and the need for training and advocacy to improve recreation/leisure opportunities for handicapped individuals. Another response, by Barbara Ryan, provides a parent's viewpoint of the challenge of providing age-appropriate recreational activities for her handicapped daughter and the use of a hired companion to assist in meeting the challenge. Finally, the Working Group on Recreation and Leisure presents a report of its philosophy, program approach, program characteristics, issues, and recommendations.

### 1983

Chorost, S.B. (1988). *Leisure and recreation of exceptional children: Theory and practice. Child & Youth Services, 10(2)*, 151-81.

ERIC #: EJ383354

ABSTRACT: Discusses theoretical bases and practi-

cal applications of therapeutic leisure and recreation programs in assisting children with mild, moderate, severe, and profound handicaps to become more accepted by their normal peers. Examples show how such activities can be designed to create an environment to facilitate the educational treatment of handicapped children.

Crawford, M. (1983). *Competitive sports for the multi-handicapped: A model for development. Physical Educator, 40(2)*, 105-10.

ERIC #: EJ287530

ABSTRACT: Guidelines for competitive physical education and recreational therapy programs for multi-handicapped children are discussed. Program developers should consider psychological factors, such as conceptualization of competition, anxiety management, and students' motivation and sense of locus of control. Teachers and parents should be trained to act consistently as socializing agents.

Fine, A.H. (1983). *Therapeutic recreation: Recreation with purpose for exceptional children.*

ERIC #: ED244427

ABSTRACT: The paper examines the role of therapeutic recreation with disabled children. The underlying philosophy of the field is interpreted and its development from beginnings in World War II is reviewed. Three specific levels of services within a comprehensive model are delineated: therapy (to improve functional behavior through assessment, planning, implementation, and evaluation); leisure education (to provide opportunities for acquisition of skills, knowledge, and attitudes related to leisure involvement); and recreation participation (to provide opportunities for voluntary involvement in diversional activities). The author cites the need for other professionals to be aware of the contributions of therapeutic recreation.

Weiser, T.E. (1983). *Designing structured leisure programs for emotionally handicapped adolescents. Resources in Education, 18(10)*, 77.

ERIC #: ED229974

ABSTRACT: A therapeutic recreation program in the Montgomery County Public Schools, Maryland, for 24 emotionally handicapped students (grades 5 through 12) provides extended day services within

a public school setting. The program was designed to meet seven goals: providing structured activities beyond the regular school day, reinforcing the students' individualized education programs, increasing students' self esteem, providing opportunities for greater interaction with peers, increasing skill levels in an assortment of leisure activities; stimulating use of constructive leisure activity as an outlet for release of energy, and increasing an awareness of and participation in community recreation programs. The diverse recreation offerings match seasonal changes as well as individual needs and interests. The program incorporates continuous assessment, evaluation, and documentation of individual's leisure functioning, of program goals, and of interaction between staff and students. Individual assessment leads to placement in specific activity groups, which may be adapted forms of team or individual sports or games. Difficulties inherent in such an approach include lack of information about therapeutic recreation among educators and the public and the school system's inflexible hiring procedures.

### 1975

Burnette, W.L., & Geddes, D.M. (1975). *Physical education and recreation for impaired, disabled and handicapped individuals: Past, present, and future*.

ERIC #: ED119396

ERIC Full-Text: <http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED119396>

ABSTRACT: The report serves as a systematic collection, analysis, and synthesis of research data, empirical evidence, program information, and various resource materials in the fields of recreation/therapeutic recreation and physical education/adapted physical education for disabled individuals. The report consists of over 20 state-of-the-art reports, each of which includes the state of the art (including review of available literature), summaries of priority needs in research and demonstration and personnel preparation, and media needs (in some cases). Among the areas covered are physical education and recreation for blind, multiply handicapped, mentally retarded (mild to severe), epileptic, diabetic, and deaf mentally retarded individuals; the integration of handicapped individuals into regular recreation and physical

education programs; effects of physical activity on asthmatic children; community recreation for handicapped persons; creative arts for handicapped persons; status of research on play apparatus for handicapped children; and diagnostic-prescriptive teaching/programming. Also presented are summaries of related projects funded by the Bureau of Education for the Handicapped and State Departments of Education and related conferences and projects sponsored by other groups.

Nesbitt, J.A. (ed.). (1975). *Play, recreation, and leisure for people who are deaf-blind*. Recreation Education Program, University of Iowa.

ERIC #: ED133981

ERIC Full-Text: <http://www.eric.ed.gov/ERICWebPortal/contentdelivery/servlet/ERICServlet?accno=ED133981>

ABSTRACT: Based on position papers and proceedings of the National Institute on Program Development and Training in Recreation for Deaf-Blind Children, Youth, and Adults, the document presents approximately 50 brief articles for use by parents, teachers, rehabilitation personnel, and therapeutic recreation personnel. Sections cover the following topics (sample article topics in parentheses): perspectives on recreation (suggestions for activities and games); play, recreation, and leisure (arts and crafts, camping, and sports); leisure education (role of the school); special considerations in recreation (problems and issues); consumerism and advocacy for recreation (strategies for advocacy); evaluation in recreation (evaluation of motor skills); guidelines on recreation (recreation's contribution to rehabilitation and education); administration of recreation (coordinating development of services); and sources of information and assistance (regional centers, and information and research centers). Included is a listing of contributors with brief background sketches.

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*Documents from the  
National Clearinghouse  
of Rehabilitation Training  
Materials (NCRTM) search*

at [ncrtm.org](http://ncrtm.org) are listed below:

### 1995

Ponchillia, P.E. (1995). **AccesSports: A model for adapting mainstream sports activities for individuals with visual impairments.** *RE:view*, 26(1), 5-14. NCRTM #: 387.043

Full-text available at: <http://library.ncrtm.org/pdf/387.043.pdf>

ABSTRACT: This article tells how AccesSports Model will be a useful tool for physical educators, coaches, and teachers of visually impaired students. However, it is only one of the many tools that are needed to increase physical education and sports access.

### 1993

Ponchillia, S.V., & Powell, L.L. (1993). **An aerobic exercise class for college students with visual impairments.** *Journal of College Student Development*, 34, 71-72.

NCRTM #: 387.018

Full-text available at: <http://library.ncrtm.org/pdf/387.018.pdf>

ABSTRACT: The aerobic exercise class for college students with visual impairments can serve as a model for integrating students with disabilities into mainstream fitness activities and general physical education courses.

### 1982

Nesbitt, J.A. (1982). **Physical education and sport for handicapped persons: Availability and dissemination of documentation and research.** *In the proceedings of UNESCO International Symposium on Physical Education and Sports Programs for the Physically and Mentally Handicapped.* Iowa City, IA: November 22-27, 1982.

NCRTM #: 178.037

Full-text available at: <http://library.ncrtm.org/pdf/178.037.pdf>

ABSTRACT: Some of the topics presented at the UNESCO International Symposium included special physical education and special sports programs,

international technical assistance, some current international and transnational information services, characteristics of National Leisure Information Centers, and characteristics of Local Rehabilitation Information User Groups.

### 1981

Lee, Bernie (Producer). (1981). **Guides to mainstreaming** [Film strip]. *In Physical Education for the Handicapped Series in collaboration with John M. Dunn.* United States: Oswego Films, Inc.

NCRTM #: V159.007

Access video at: <http://library.ncrtm.org/popup.php?t=video&n=V159.007.wmv>

ABSTRACT: Techniques for the adaptations of physical education activities are demonstrated (part of a series on mainstreaming). Although the exercises could be conducted in classes held in regular schools, the students participating in the filming had similar disabilities and were in a self-contained classroom in the Holladay Center (part of the public schools of Portland, OR). Only students with disabilities are shown. The film stresses the creative role played by the teacher in matching the activities to the capabilities of students and in modifying regular sports contests and rules to permit disabled pupils to play, develop social skills, and achieve better fitness. This video has been digitized from a VHS tape.

### 1974

Gordon, H.K., & Nesbitt, J.A. (Eds.). (1974). **Program development in recreation service for the deaf-blind.** *Based on Papers and Proceedings of National Institute on Program Development and Training in Recreation for Deaf-Blind Children, Youth and Adults.* Iowa City, IA: April 29 through May 1, 1974.

Full-text available at: <http://library.ncrtm.org/pdf/178.038.pdf>

ABSTRACT: This publication is based on the Position Papers and Proceedings of the National Institute on Program Development and Training in Recreation for Deaf-Blind Youth, Children and Adults, USOE-BEH held in May 1974. Chapter titles: The Rationale, Perspectives, Overview, Program, Activities, Physical Activities, Assessment, Leisure Education, Special Considerations, Advocacy, Administration, and Epilogue.



*Documents from the National Library of Medicine PubMed search at [www.pubmed.com](http://www.pubmed.com) are listed below:*

## 2010

Colver, A. (2010). **Leisure activities for 6 to 12-year-old children with cerebral palsy.** *Developmental Medicine & Child Neurology*, 52(2), 115-6. PMID #: 19747205

*No abstract is available.*

García-Villamizar, D.A., & Dattilo, J. (2010). **Effects of a leisure program on quality of life and stress of individuals with ASD.** *Journal of Intellectual Disability Research*, 54(7), 611-9. PMID #: 20500784

PMID #: 20500784

ABSTRACT: BACKGROUND: Even though there is research demonstrating a positive relationship between leisure participation and the two constructs of quality of life and stress reduction, current conceptualization of leisure as a contributor to quality of life is limited. In addition, in spite of improvements in accurate diagnosis of autism spectrum disorder (ASD) at increasingly earlier ages and proliferation of interventions, research associated with leisure and quality of life for people with ASD is lacking. METHODS: Therefore, a study using a repeated measures design was used to measure effects of a 1-year group leisure program intended to facilitate interaction with media, engagement in exercise, playing games and doing crafts, attending events, and participating in other recreation activities on quality of life and stress of 37 participants (22 male, 15 female), ages 17-39 (M = 31.49) years at the beginning of the program) diagnosed with an ASD and a group of 34 adults with ASD as control group (waiting list) (19 male, 15 female), ages 24-38 (M = 30 at program initiation) years. RESULTS: There was a significant decrease in overall scores of stress levels for participants over the course of the study and there was a significant increase in the four factors of quality of life that were measured (satisfaction, independence, competence and social interaction) as well as the total score for quality of life from baseline to the end of the intervention 12 months later. In contrast, the control group demonstrated no significant improvements related to

stress or quality of life. Implications of these findings to leisure services and the quality of life of individuals with ASD are discussed. CONCLUSION: Findings support the contention that participation in recreation activities positively influenced the stress and quality of life of adults with ASD.

Houghton, K., Luke, A., Philpott, J. (2010). **Physical activity recommendations for children with specific chronic health conditions: Juvenile idiopathic arthritis, hemophilia, asthma and cystic fibrosis.** [Article in English, French]. *Paediatrics & Child Health*, 15(4), 213-25. PMID #: 21455465

PMID #: 21455465

ABSTRACT: As a group, children with a chronic disease or disability are less active than their healthy peers. There are many reasons for suboptimal physical activity, including biological, psychological and social factors. Furthermore, the lack of specific guidelines for 'safe' physical activity participation poses a barrier to increasing activity. Physical activity provides significant general health benefits and may improve disease outcomes. Each child with a chronic illness should be evaluated by an experienced physician for activity counseling and for identifying any contraindications to participation. The present statement reviews the benefits and risks of participation in sport and exercise for children with juvenile arthritis, hemophilia, asthma and cystic fibrosis. Guidelines for participation are included.

## 2009

Bloom, G.A., Reid, G., & Seymour, H. (2009). **Friendship in inclusive physical education.** *Adapted Physical Activity Quarterly*, 26(3), 201-19. PMID #: 19799094

PMID #: 19799094

ABSTRACT: Social interaction and development of friendships between children with and without a disability are often proposed as potential outcomes of inclusive education. Physical activity specialists assert that exercise and sport environments may be conducive to social and friendship outcomes. This study investigated friendship in inclusive physical education from the perspective of students with (n = 8) and without (n = 8) physical disabilities. All participants attended a reversely integrated school and were interviewed using a semi-structured, open-

ended format. An adapted version of Weiss, Smith, and Theeboom's (1996) interview guide exploring perceptions of peer relationships in the sport domain was used. Four conceptual categories emerged from the analysis: (1) development of friendship, (2) best friend, (3) preferred physical activities and outcomes, (4) and dealing with disability. The results demonstrated the key characteristics of best friends and the influential role they play.

Johnson, C.C. (2009). **The benefits of physical activity for youth with developmental disabilities: A systematic review.** *American Journal of Health Promotion, 23*(3), 157-67.

PMID #: 19149420

ABSTRACT: OBJECTIVE: Analyze evidence of the benefits of physical activity for youth with developmental disabilities. DATA SOURCES: Key word searches for "disability," "physical activity," "exercise," "fitness," and "sport" in major databases. A total of 3263 citations were found. STUDY INCLUSION/EXCLUSION CRITERIA: Systematic reviews and articles about studies quantitatively examining the effects of physical activity in youth with developmental disabilities ages 0 to 20 years were included. Only articles published in English in peer-reviewed journals were included. DATA EXTRACTION: A Measurement Tool to Assess Reviews criteria were used for systematic reviews; Grading of Recommendations, Assessment, Development, Evaluation criteria were used for observational studies; and Population, Intervention, Comparison, Outcome criteria were used for all studies. DATA SYNTHESIS: Data, shown in table format, were synthesized in relation to five research questions. RESULTS: Three systematic reviews and 14 studies were reviewed. Strong evidence indicated that children and adolescents with developmental disabilities derive health benefits from participation in group exercise programs, treadmill training, or therapeutic riding/hippotherapy. Lesser levels of evidence indicated that health benefits might be present for adapted skiing or aquatic programs. Documented benefits of physical activity include improvements in aerobic capacity, improved gross motor function, and high levels of participant/parent satisfaction. CONCLUSIONS: Evidence exists that physical activity is beneficial for youth with developmental disabilities. Further re-

search studies are needed that are of greater scientific rigor including larger sample sizes, control groups, and stringent, replicable methodology.

Lotan, M., Weiss, P.L., & Yalon-Chamovitz, S. (2009). **Improving physical fitness of individuals with intellectual and developmental disability through a Virtual Reality Intervention Program.** *Research in Developmental Disabilities, 30*(2), 229-39.

PMID #: 18479889

ABSTRACT: Individuals with intellectual and developmental disabilities (IDD) are in need of effective physical fitness training programs. The aim was to test the effectiveness of a Virtual Reality (VR)-based exercise program in improving the physical fitness of adults with IDD. A research group (N=30; mean age=52.3+/-5.8 years; moderate IDD level) was matched for age, IDD level and functional abilities with a control group (N=30, mean age=54.3+/-5.4 years). A 5-6 week fitness program consisting of two 30 min sessions per week included game-like exercises provided by the Sony PlayStation II EyeToy VR system. Changes in physical fitness were monitored by the Energy Expenditure Index (EEI), the modified 12 min walk/run and the Total Heart Beat Index (THBI). Significant (p greater than 0.05) improvements in physical fitness were demonstrated for the research group in comparison to the control group for the Modified Cooper test and the THBI but not for the EEI test. The EEI, Modified Cooper and THBI tests were found feasible to evaluate physical fitness levels and change of individuals with IDD under clinical conditions. VR technology intervention was suitable for adults with IDD and resulted in significant improvements in the physical fitness levels of the participants.

## 2008

Adomaitiene, R., Jankauskiene, K., Jurkstiene, V., Kevelaitis, E., Kriviciute, J., & Samsoniene, L. (2008). **Socialization of athletes with disabilities in adapted physical activity.** [Article in Lithuanian]. *Medicina (Kaunas), 44*(11), 877-84.

PMID #: 19124965

ABSTRACT: The aim of this study was to determine the impact of the impairment of the body functions

on the participation of people with disabilities in sports activities. **MATERIAL AND METHODS:** The study was carried out in the institutions mostly attended by people with severe physical disabilities. The participants took a modified Kenny test and answered the questions of a questionnaire. The study sample consisted of 35 persons with severe physical disabilities. **RESULTS:** The findings of this study showed that people with disabilities who were not engaged in sports were of much worse opinion about their health condition ( $P=0.02$ ) and they needed more help from family or friends ( $P=0.035$ ) compared to the disabled who were not engaged in sports, but in the group of people with disabilities who were engaged in sports, the correlations of those indicators were statistically significant ( $r=0.59$  and  $r=0.68$ , respectively). The main motivation of sports participation of people with disabilities (about 80 percent) was the need for communication and gaining independence. Health improvement was mentioned by less than half of people with disabilities (about 41 percent) engaged in sports. **CONCLUSIONS:** The syndrome of movement function impairment, duration of impairment, marital status, the age of persons with disabilities, and objectively determined impairment of biosocial self-service functions did not impact sports participation of people with disabilities. However, subjective sensation of pain and the need of medical aid, which did not match the objective functional impairments, could be the obstacle for people with disabilities to participate in sports.

Parush, S., & Rihtman, T. (2008). **Participation of children with cerebral palsy in leisure activities supports the current ICF health paradigm.** *Developmental Medicine & Child Neurology*, 50(10), 726. PMID #: 18834383

*No abstract is available.*

Rimmer, J.A., & Rowland, J.L. (2008). **Physical activity for youth with disabilities: A critical need in an underserved population.** *Developmental Neurorehabilitation*, 11(2), 141-8. PMID #: 18415819

**ABSTRACT:** The recommended amount of daily physical activity for youth is 60 minutes a day, most days of the week. Youth with disabilities are not achieving this target and are significantly less active and more obese than their non-disabled peers.

The combination of the health risks associated with physical inactivity and obesity presents a serious health concern in this population. While there is a small amount of research on interventions aimed at improving fitness among youth with disabilities, the majority of these studies were conducted in clinical settings where most or all of the common barriers to participation were eliminated (e.g. transportation, lack of knowledgeable staff, adaptation of programs and/or facilities to child's needs). One of the most important challenges for pediatric rehabilitation and healthcare professionals is finding ways to increase physical activity and fitness among youth with disabilities in community-based settings. The use of information technology to customize physical activity programs for youth with disabilities offers a promising approach to addressing this important health issue in the future.

## 2007

Block, M.E., & Obrusnikova, I. (2007). **Inclusion in physical education: A review of the literature from 1995-2005.** *Adapted Physical Activity Quarterly*, 24(2), 103-24.

PMID #: 17916912

**ABSTRACT:** The purpose of the review is to critically analyze English-written research articles pertaining to inclusion of students with disabilities in physical education published in professional journals both within and outside of the United States from 1995-2005. Each study included in this review had to meet seven a priori criteria. Findings of the 38 selected studies were divided into six focus areas: (1) support, (2) effects on peers without disabilities, (3) attitudes and intentions of children without disabilities, (4) social interactions, (5) ALT-PE of students with disabilities, and (6) training and attitudes of GPE teachers. Recommendations for future practice and research are embedded throughout the article.

## 2006

Hanna, S., Hurley, P., Kertoy, M., King, G., King, S., Law, M., Rosenbaum, P., & Young, N. (2006). **Patterns of participation in recreational and leisure activities among children with complex physical disabilities.** *Developmental Medicine & Child Neurology*, 48(5), 337-42.

PMID #: 16608540

**ABSTRACT:** Children with physical disabilities are at increased risk of limitations to participation in everyday activities. This study describes research examining the participation of children in day-to-day formal and informal activities (excluding mandated academic schooling). Using the Children's Assessment of Participation and Enjoyment (CAPE) measure, data on participation patterns were collected from 427 children (229 males, 198 females; mean age 10 years [SD 2 years 4 months]; range 6-14 years) with physical limitations and from their families. The primary types of physical disability in the sample included cerebral palsy, spina bifida, acquired brain injury, and musculoskeletal limitations. Findings indicate a broad range of diversity and intensity of participation, with proportionately greater involvement in informal rather than formal activities. Significant differences in participation and enjoyment were found between males and females and for children more than 12 years of age. Children's participation was less diverse in families reporting lower income, single-parent status, and lower respondent parent education. These findings provide a foundation for an improved understanding of the participation of children with physical disabilities, which can assist families and service providers in planning activities that fit with their child's preferences and ensure active participation.

Henderson, C.M., Lotan, M., & Merrick, J. (2006). **Physical activity for adolescents with intellectual disability.** *Minerva Pediatrica*, 58(3), 219-26.

PMID #: 16832327

**ABSTRACT:** Numerous studies have described an association between participation in physical activity and an enhanced sense of well-being. These findings have been documented in both genders across the lifespan. Connections between exercise and positive physical, psychological, emotional and educational outcomes have also been found. New findings indicate that there is an ongoing and increasing tendency for sedentary lifestyles across age groups and gender in many countries. In addition, there are many factors that work together to contribute to a sedentary lifestyle in individuals with intellectual and developmental disability (ID/DD). These findings are concerning, and indicate that people with ID/DD are at relatively high risk for the development of multiple negative conse-

quences of physical inactivity. This review presents current literature that addresses the question of physical activity in adolescents with ID/DD. In addition, this review presents the connection between higher levels of physical fitness and better health outcomes in youths with ID/DD. Strategies to promote physical activity in the adolescent population with ID/DD are presented. The available evidence base strongly supports the high need for the establishment of community based, easily accessible physical activity programs for children and adolescents with ID/DD.

## 2004

Larson, J., Schwend, R.M., & Wind, W.M. (2004). **Sports for the physically challenged child.** *Journal of the American Academy of Orthopaedic Surgeons*, 12(2), 126-37.

PMID #: 15089086

**ABSTRACT:** Participation in sports is important for the physical and emotional health of the physically challenged child. Sports can improve strength, endurance, and cardiopulmonary fitness while providing companionship, a sense of achievement, and heightened self-esteem. With interest in such participation increasing, it is necessary for the physicians, therapists, and families of children with special needs to understand the pre-participation evaluation, athletic options, specialized equipment, and sport-specific risks. Recommendations that provide guidelines for safe, effective participation in sports are currently available for common congenital and developmental disabilities such as Down syndrome, cerebral palsy, myelodysplasia, hemophilia, congenital amputations, and arthritic disorders.

## 2002

Greydanus, D.E., & Patel, D.R. (2002). **The pediatric athlete with disabilities.** *Pediatric Clinics of North America*, 49(4), 803-27.

PMID #: 12296534

**ABSTRACT:** There have been increased opportunities and sports participation by athletes with disabilities during the past decades. Research on pediatric athletes with disabilities remains limited. Appropriate classification of athletes on the basis of their functional abilities is the key to fair participation.

Pre-participation evaluation of these athletes is based on similar principles as for able-bodied athletes. The prevalence, nature, evaluation, differential diagnosis, and treatment principles for injuries are similar for athletes with disability and for those without. There are few disability-specific medical and orthopedic issues to be considered in working with these athletes. Sport participation recommendations are based on the specific disability and demands of the sport. The vast majority of athletes with disabilities can participate safely in a number of sports if appropriately matched; such participation should be encouraged and facilitated at all levels because of well-recognized psychological and medical benefits. Significant progress has been made in increasing sports participation opportunities for persons with disabilities; this is especially true for adults and, to a lesser extent, for children and adolescents. Many barriers remain, however: inadequate facilities, exclusion of children with disabilities, medical professional overprotection, a lack of trained personnel and volunteers to work with children with disabilities, lack of public knowledge about disabilities, and lack of financial support for sport and physical education in schools.

Long, L.N. (2002). **Benefits of recreation therapy services.** *Journal of Rehabilitation Research & Development*, 39(5), ix-x.

PMID #: 17642019

*No abstract is available.*

## 2001

Jobling, A. (2001). **Life be in it: Lifestyle choices for active leisure.** *Down's Syndrome, Research & Practice*, 6(3), 117-22.

PMID #: 11501213

ABSTRACT: For members of the community, participation in leisure, sports and recreation is an important lifestyle choice. Individuals with Down syndrome live in our community and they, too, are equally entitled to active lifestyle choices. Children, adolescents and adults with Down syndrome have a wide range of interests and, although reported trends indicate that their engagement in recreational activity is often sedentary and solitary in nature, other factors apart from the syndrome may account for this. Using a perception of difference perspective, this paper

will examine certain aspects of their motor development, health and interactions with others which could be viewed as restrictive factors to their ability to participate in active leisure opportunities in the community. Program examples from Australia will be used to illustrate how a perception of difference which facilitates ability rather than disability across community based activities can enable a range of active leisure choices.

## 1993

Cameron, M.J., & Cappello, M.J. (1993). **"We'll cross that hurdle when we get to it": Teaching athletic performance within adaptive physical education.** *Behavior Modification*, 17(2), 136-47.

PMID #: 8471009

ABSTRACT: Persons with developmental and physical disabilities who are enrolled in educational programs often participate in adaptive physical education classes. Primarily, these classes are designed to provide individuals with the opportunity to develop their physical abilities. However, they can also serve as a training ground for the Special Olympics. Teaching the motor skills that are prerequisite to participation in many adaptive physical education and Special Olympics activities can be a formidable objective. This study demonstrates how a person with developmental disabilities was taught, by way of stimulus control shaping, the necessary motor skills to enable him to participate in the hurdling event at the Special Olympics.

## 1981

Alexander, L.S., Bernard, B., Creswell, J., Erickson, V., Ivey, J., & Johnston, B. (1981). **Exercise for children with physical disabilities.** *Issues in Comprehensive Pediatric Nursing*, 5(2), 99-107.

PMID: 6459310

*No abstract is available.*

Edwards, P. (1981). **Physical activity and persons with disabilities.** *Canadian Journal of Public Health*, 72(3), 170-1.

PMID #: 6456807

*No abstract is available.*

Hoffman, M.B. (1981). **Recreation therapy: A prescriptive approach.** *Therapeutic Recreation Journal*, 15(3), 16-21.

PMID#: 10252558

No abstract is available.

## 1980

Clark, M.W. (1980). **Competitive sports for the disabled.** *American Journal of Sports Medicine*, 8(5), 366-9.

PMID #: 6448008

ABSTRACT: A full life experience for people with and without physical disabilities usually includes some form of recreation or sport. Competition adds to enjoyment of sport for many people and can improve morale. This paper reviews some of the competitive opportunities available for people with a physical disability. These include competition within existing "able-bodied" organizations with or without adaptive devices and competition in separate organizations for those with disabilities. The latter include the National Wheelchair Basketball Association and the National Wheelchair Athletic Association.



## Quick Looks

### Online Resources Related to Recreational Therapy, Exercise, & Leisure Activities for Individuals with Disabilities

The National Center on Physical Activity and Disability (NCPAD) is NARIC's go to source for information concerning physical activity and disability. The mission of NCPAD is to promote substantial health benefits that can be gained from participating in regular physical activity. The slogan of NCPAD is *Exercise is for EVERY Body*, and every person can gain some health benefit from being more physically active. Their website provides information and re-

sources that enable people with disabilities to become as physically active as they choose to be. These resources include guidelines to consider before starting any kind of exercise program, fact sheets on many popular activities, games, recreational pursuits, and sports that have been adapted to allow people with disabilities to participate as fully and be as active as they wish.

When visiting the NCPAD website users can search by disability and/or condition. Users can search types of physical activity by subcategories such as lifetime sports, competitive sports, exercise and fitness, and fun and leisure. Whether an avid sports enthusiast, an individual looking to be more active through exercise, or someone just looking for fun recreational and leisure activities NCPAD has the right resource. Information specialists are available 8:00 a.m. until 5:00 p.m. (CST) Monday through Friday toll free at 800/900-8086, by email, and/or via "Ask Live" live chat service. Below are a few NCPAD resources available in our Ready Reference:

NCPAD Program Database: [www.ncpad.org/programs](http://www.ncpad.org/programs)

NCPAD Parks Database: [www.ncpad.org/parks](http://www.ncpad.org/parks)

NCPAD Personal Trainers Database:

[www.ncpad.org/trainers](http://www.ncpad.org/trainers)

NCPAD Factsheets on Exercise and Fitness:

[www.ncpad.org/exercise](http://www.ncpad.org/exercise)

Visit NCPAD online at [www.ncpad.com](http://www.ncpad.com). NCPAD is also on Facebook at [www.facebook.com/ncpad](http://www.facebook.com/ncpad), Twitter at [twitter.com/#!/ncpad](http://twitter.com/#!/ncpad), and the NCPAD Blog: Endless CapABILITIES at [blog.ncpad.org](http://blog.ncpad.org).

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### Access to Recreation, Inc.

The Access to Recreation catalog is full of adaptive exercise (aerobic and weight training), rehabilitation, travel, and recreation equipment for fishing, hunting, golf, swimming, bowling, etc. Catalogs are free.

Phone: 800/634-4351, 805/498-7535

Email: [customerservice@accesstr.com](mailto:customerservice@accesstr.com)

[www.accessTR.com](http://www.accessTR.com)

### Adapted Physical Activity Quarterly

The Adapted Physical Activity Quarterly (APAQ) is an international multidisciplinary journal addressing the physical activity needs of adults and children with mental and physical disabilities.

Phone: 800/747-4457, 217/351-5076

Email: [info@hkusa.com](mailto:info@hkusa.com)

[www.humankinetics.com/APAQ](http://www.humankinetics.com/APAQ)

### **American Alliance for Health, Physical Education, Recreation, & Dance (AAHPERD)**

AAHPERD supports those involved in physical education, leisure, fitness, dance, health promotion, and education and all specialties related to achieving a healthy lifestyle. The alliance includes the American Association for Active Lifestyle and Fitness, the American Association for Health Education, the American Association for Leisure and Recreation, the National Association for Girls and Women in Sport, the National Association for Sport and Physical Education, and the National Dance Association.

Phone: 800/213-7193, 703/476-3400

Email: [info@aahperd.org](mailto:info@aahperd.org)

[www.aahperd.org](http://www.aahperd.org)

### **American Therapeutic Recreation Association (ATRA)**

Phone: 601/450-2872

Email: [national@atra-online.com](mailto:national@atra-online.com)

[www.atra-online.com](http://www.atra-online.com)

### **Canadian Association for Disabled Skiing (CADS)**

The Canadian Association for Disabled Skiing is a national volunteer based organization assisting individuals with a disability to lead richer and fuller lives through active participation in recreational and competitive snow skiing and snowboarding.

Phone: 613/842-5223

[www.disabledskiing.ca](http://www.disabledskiing.ca)

### **Disabled Sports USA**

Disabled Sports USA (formerly National Handicapped Sports) goal is to ensure that people of all ages with physical disabilities have access to sports, recreation, and physical education programs from early childhood through college to top sports' levels.

Phone: 301/217-0960

Email: [programs@dsusa.org](mailto:programs@dsusa.org)

[www.dsusa.org](http://www.dsusa.org)

### **Handicapped Scuba Association (HAS) International**

Phone: 949/498-4540

Email: [hsa@hsascuba.com](mailto:hsa@hsascuba.com)

[www.hsascuba.com](http://www.hsascuba.com)

### **Inclusive Fitness Coalition (IFC)**

The Inclusive Fitness Coalition was formed to address policy, environmental, and societal issues associated with the lack of inclusion and access to physical activity among people with disabilities.

Phone: 312/996-5486

Email: [jmadril@uic.edu](mailto:jmadril@uic.edu)

[incfit.org](http://incfit.org)

### **International Wheelchair Aviators (IWA)**

The International Wheelchair Aviators (IWA) was founded in 1970 as a fraternal organization of pilots who have disabilities. The group has grown to over 250 members whose purpose is helping people with disabilities learn to fly. IWA provides information on licensing requirements, flying schools, and assistive technology.

Phone: 951/529-2644

Email: [IWAviators@aol.com](mailto:IWAviators@aol.com)

[www.wheelchairaviators.org](http://www.wheelchairaviators.org)

### **PALAESTRAS: Forum of Sport, Physical Education, and Recreation for Those with Disabilities**

Feature articles focus on the activities of various disability sport organizations, including special events and national/international championships, photo essays, historical features, personality studies, and all aspects of human anatomy, kinesiology, psychology, and sociology that can be applied to the development of practical physical education, training, and skill techniques for the recreational, as well as the competitive individual.

Phone: 309/833-1902

Email: [challpub@macomb.com](mailto:challpub@macomb.com)

[www.palaestra.com](http://www.palaestra.com)

### **Professional Association of Therapeutic Horsemanship International (PATH Intl.)**

PATH International is a federally-registered 501(c3) nonprofit, formed in 1969 as the North American Riding for the Handicapped Association to promote equine-assisted activities and therapies for individuals with special needs. With over 3,500 certified instructors and 800 member centers around the globe, more than 6,500 PATH Intl. members help more than 42,000 children and adults with physical, mental and emotional challenges find strength and independence through the power of the horse each year.

[www.pathintl.org](http://www.pathintl.org)

### **Recreation Resource Guide for Individuals with Spinal Cord Injury**

Available from the RTC in Secondary Complications in Spinal Cord Injury

Phone: 205/934-3330

Email: [lindsey@sun.rehab.uab.edu](mailto:lindsey@sun.rehab.uab.edu)

### **Special Olympics International**

Special Olympics International provides year-round sports training and athletic competition in a variety of Olympic-type sports for individuals with developmental disabilities giving them continuing opportunities to develop physical fitness, demonstrate courage, experience joy and participate in a sharing of gifts, skills and friendship with their families, other Special Olympics athletes and the community.

Phone: 800/700-8585, 202/628-3630

Email: [info@specialolympics.org](mailto:info@specialolympics.org)

[www.specialolympics.org](http://www.specialolympics.org)

### **Sport Information Resource Center (SIRC)**

The Sport Information Resource Centre (SIRC) is a not-for-profit amateur sport organization with the mandate to provide information and serve the educational needs of organizations and individuals involved in, or responsible for the development of, sport and fitness in Canada and around the world.

Phone: 800/665-6413

[www.sirc.ca](http://www.sirc.ca)

### **Sports 'n Spokes**

Sports 'n Spokes is a bimonthly publication produced by the Paralyzed Veterans of America reporting on on competitive sports and recreation for wheelchair users.

Phone: 888/888-2201, 602/224-0500

Email: [suzi@pnnews.com](mailto:suzi@pnnews.com)

[www.pvomagazines.com/sns](http://www.pvomagazines.com/sns)

### **United States Adaptive Recreation Center (USARC)**

The United States Adaptive Recreation Center was founded in 1983 (as California Handicapped Skiers) to ensure that access to skiing is available to people with all types of disabilities. The USARC believes people are empowered when they undertake and succeed at challenging outdoor recreation.

Phone: 909/584-0269

Email: [mail@usarc.org](mailto:mail@usarc.org)

[www.usarc.org](http://www.usarc.org)

### **United States Association of Blind Athletes (USABA)**

The United States Association of Blind Athletes (USABA) promotes athletics among people who are legally blind. USABA is a Disabled Sports Organization member of the U.S. Olympic Committee, the International Blind Sports Association, and International Paralympic Committee. The organization has 40 chapters and 3,000 members participating in the following nine sports: Alpine skiing, Nordic skiing, athletics, goalball, judo, powerlifting, swimming, tandem cycling, and wrestling.

Phone: 719/630-0422

Email: [media@usaba.org](mailto:media@usaba.org)

[www.usaba.org](http://www.usaba.org)

### **USA Deaf Sports Federation (USADSF)**

The USA Deaf Sports Federation (formerly the American Athletic Association of the Deaf), founded in 1945, is the oldest sports organization for people with disabilities in the United States. The organization provides year-round sports and recreation opportunities to people who are deaf. USADSF is affiliated with the United States Olympic Committee and the Comite International des Sports des Sourdes.

Phone: 605/367-5760

Email: [HomeOffice@usdeafsports.org](mailto:HomeOffice@usdeafsports.org)

[www.usdeafsports.org](http://www.usdeafsports.org)

### **United States Quad Rugby Association**

USQR provides opportunities, support, and structure for competitive wheelchair rugby to people with disabilities. We are here to help people get involved in the fastest growing wheelchair sport in the world.

[www.quadrugby.com](http://www.quadrugby.com)

### **Wheelchair Sports, U.S.A.**

Founded in 1956 as the National Wheelchair Athletic Association, Wheelchair Sports, U.S.A. provides competitive and recreational sporting opportunities on local, regional, national, and international levels for individuals with permanent lower-limb disabilities. Recognized by the U.S. Olympic Committee, the organization hosts many sports programs for people with disabilities, including youth programs.

Phone: 719/574-1150

Email: [wsusa@aol.com](mailto:wsusa@aol.com)

[www.wsusa.org](http://www.wsusa.org)

## ***Search Terms for Recreational Therapy, Exercise, & Leisure Activities for Individuals with Disabilities***

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| <ul style="list-style-type: none"> <li>📖 Abstracts</li> <li>📖 Academic Accommodations (Disabilities)</li> <li>📖 Accessibility</li> <li>📖 Activities of Daily Living</li> <li>📖 Adapted Physical Education</li> <li>📖 Adolescents</li> <li>📖 Adults</li> <li>📖 Advocacy</li> <li>📖 Alternative Medicine</li> <li>📖 Animals</li> <li>📖 Aquatic Sports</li> <li>📖 Arts/Art Therapy</li> <li>📖 Assistive Devices/Technology</li> <li>📖 Athletes/Athletics</li> <li>📖 Attitudes</li> <li>📖 Autism</li> <li>📖 Barriers</li> <li>📖 Behavior Change/Modification/Patterns Problems</li> <li>📖 Blind</li> <li>📖 Camping</li> <li>📖 Case Studies</li> <li>📖 Cerebral Palsy</li> <li>📖 Child Development</li> <li>📖 Children</li> <li>📖 Children with Disabilities</li> <li>📖 Chronic Illness</li> <li>📖 Community/Health Services/Programs Recreation Programs/Resources</li> <li>📖 Competition/Competitive Behavior</li> <li>📖 Computers/Applications</li> <li>📖 Conference Proceedings</li> <li>📖 Curriculum/Design/Development</li> <li>📖 Daily Living Skills</li> <li>📖 Dance</li> <li>📖 Day Programs</li> <li>📖 Deaf Blind</li> <li>📖 Decision Making</li> <li>📖 Delivery Systems</li> <li>📖 Demographics</li> <li>📖 Demonstration Programs</li> <li>📖 Developmental Disabilities</li> <li>📖 Devices</li> <li>📖 Disabilities/Evaluation</li> <li>📖 Do-It-Yourself Devices</li> </ul> | <ul style="list-style-type: none"> <li>📖 Down Syndrome</li> <li>📖 Educational Games/Legislation/Resources</li> <li>📖 Empowerment</li> <li>📖 Epilepsy</li> <li>📖 Equipment</li> <li>📖 Exceptional Child Education/Services</li> <li>📖 Exercise</li> <li>📖 Extracurricular Activities</li> <li>📖 Family</li> <li>📖 Federal Legislation/Programs</li> <li>📖 Games</li> <li>📖 Group Homes</li> <li>📖 Guidelines</li> <li>📖 Gymnastics</li> <li>📖 Handbooks</li> <li>📖 Health/Activities/Behavior/Programs/Promotion Services/Status</li> <li>📖 Hearing Impairments</li> <li>📖 Horseback Riding</li> <li>📖 IDEA</li> <li>📖 Inclusion/Schools</li> <li>📖 Individual Development</li> <li>📖 Individualized Education Programs (IEPs)</li> <li>📖 Information Dissemination/Needs/Resources</li> <li>📖 Information Resources</li> <li>📖 Injuries</li> <li>📖 Instructional Methods</li> <li>📖 Intellectual Disabilities</li> <li>📖 Interaction</li> <li>📖 Interdisciplinary Approach</li> <li>📖 Interests</li> <li>📖 International Rehabilitation</li> <li>📖 Interpersonal Relationships</li> <li>📖 Intervention</li> <li>📖 Language</li> <li>📖 Learning</li> <li>📖 Learning Disabilities</li> <li>📖 Leisure/Activities/Education/Time</li> <li>📖 Mainstreaming</li> <li>📖 Mental Disorders/Health</li> <li>📖 Mobility/Impairments</li> <li>📖 Models</li> <li>📖 Motivation</li> </ul> |
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  - 📖 Young Children
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