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Taken together, these pieces identify opportunities for collaboration with regard to the ways in which services are structured organizationally at a national level, which federal agencies are relevant for setting policy and funding, and how those system components relate (or fail to relate) to the vision rehabilitation system. Also relevant is the structure of third-party payment for services, especially if there may be special inclusionary or exclusionary aspects for people with vision loss.

Many other important systems could have been included here that deliver health services as part of their mission (the schools and the prison system, for example) or deliver health to a population subgroup (such as military veterans), or deliver services defined by health conditions (for example, dental health). Regrettably, the authors we contacted to write those pieces were unavailable within the time frame of this special supplement. Again, perhaps informed readers with something to say about themes and topics not addressed here will be moved to contribute to future issues of the journal.

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## **Building Inclusive Physical Activity Communities for People with Vision Loss**

*James H. Rimmer*

Physical activity is universally recommended for the maintenance of good health. Unfortunately, for people with disabilities, including those with vision loss, options for exercise may be limited by the built environment, as well as by inaccessibility of programs, equipment, and services offered in community recreation facilities (Rimmer, Riley, Wang, Rauworth, & Jurkowski, 2004).

Indoor and outdoor structures have a major effect on participation in physical activity among people with vision loss (North Carolina

Office on Disability and Health, 2001; Rimmer, Riley, Wang, & Rauworth, 2004). Structures such as gyms, fitness centers, outdoor trails, parks, and swimming pools often have poor signage, lack detail on how to use the equipment or participate in a program, or provide poorly delineated access routes to and from the facility or program. These issues can have a major effect on whether or not a person with vision loss chooses to be physically active. A brief overview of the major areas that should be addressed in order to improve access to various physical activity venues follows.

### **PHYSICAL (BUILT) ENVIRONMENT**

One of the primary approaches being undertaken today in land development is the creation of more healthful, "livable" communities, which offer, for example, increased access to walking and cycling paths (Brownson, Baker, Housemann, Brennan, & Bacak, 2003). For people with vision loss, creating communities that are fully accessible requires greater attention to the safety of the outdoor environment. Walking paths should be well lit; curb cuts should have visible or high-color contrast and palpable (for a white cane user) warning textures (for example, truncated domes) to alert the individual that he or is approaching a street or an intersection; travel paths should be free of temporary obstructions (for example, snow, garden materials, bicycles); new construction should avoid placing objects (fire hydrants or bike racks, for example) in travel paths; and stop lights should include audible signals that provide an adequate period of time for individuals with vision loss to cross the street. On paths or trails, benches should be located along the trail at points suitable for someone needing frequent rest periods. Paths and trails should also be clear of natural debris (for example, fallen branches) and should include adequate signage so that individuals can determine their exact location.

Indoor environments of many fitness and recreation facilities also need to become more accessible than they currently are for people

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with vision loss. Adequate signage on doors and travel routes can assist the individual in getting around the facility. Keeping travel paths free of exercise equipment and other obstacles will prevent falls and related injuries. Detectable warning textures should be placed around swimming pools and other areas that may present danger. When equipment is rearranged, people with vision loss should be notified prior to their entering the facility. Any suspended items such as plants, television sets, and signs that are located in or near travel routes should be placed at a high enough level to avoid individuals making contact with the object.

### **EXERCISE EQUIPMENT**

One of the major barriers to access for people with vision loss is inaccessible exercise equipment. Most equipment manufacturers do not consider in their design specifications ways to make equipment accessible to people who are unable to read standard font sizes or see the display console. Cardiovascular exercise equipment (for example, stationary bikes, treadmills, elliptical trainers, and steppers) could be modified to include raised lettering templates, braille, or voice-activated consoles to allow those with vision loss to operate the machinery. Exercise machines that have consoles that display data such as workload, time, speed, and calories expended should provide good color-contrast lettering and the lettering itself should be large enough to allow people with low vision to read the display output. Braille should be placed on strength machines so that users can identify the specific amount of weight that they would like to lift.

### **GROUP EXERCISE CLASSES**

Fitness and recreation classes such as aerobic dance, yoga, and tai chi are often taught by instructors who have minimal knowledge of how to adapt their program for someone with vision loss. Spoken directions regarding the types of exercises or movements the class

is being asked to perform tend to be terse or vague, with instructors relying on visual modeling for teaching various movements. To address the needs of a participant with vision loss, instructors need to be more explicit in describing certain activities. When an action or exercise is difficult to explain, the instructor should use physical guidance; having the participant place a hand on the limb that the instructor is using to perform a new movement can provide the tactile input necessary for the individual to understand how the action should be performed. It may also be helpful to pair the person with vision loss with another member of the class, so that assistance is available when necessary in performing certain exercise routines. Providing clear instructions, minimizing extraneous verbalizations, and reducing background noise are other ways to make the class more accommodating for individuals with vision loss. Finally, making sure that equipment stays in a fixed position, rather than being moved around regularly, will help prevent the individual with vision loss from bumping into objects and reduce the potential for injury.

### **COMMERCIAL AND PRINT MEDIA**

Of the current media images associated with health and fitness, very few depict people with vision loss and other disabilities (Rimmer, 2005). Brochures and other print materials produced by private and public fitness facilities should include information on the types of services and programs that are available for people with vision loss. Alternate formats, such as large print, should always be provided, and braille and audiocassettes should be available upon request.

### **BUILDING INCLUSIVE PHYSICAL ACTIVITY COMMUNITIES**

Physical activity can have substantial benefits for the health of people with vision loss and can allow them to maintain a more independent and enjoyable life. It is critical that public health professionals and federal officials

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support efforts to facilitate access to indoor and outdoor fitness and recreation areas so that those with vision loss can have the opportunity to enjoy and benefit from recreational activity, just as the rest of the population does.

Organizations working to increase physical activity among the general population should be encouraged to focus on and feature resources that provide services for people with vision loss. One positive example is the National Center on Physical Activity and Disability (<[www.ncpad.org](http://www.ncpad.org)>; 800-900-8086), a federally funded information center that provides information on many useful physical activities for people with vision loss and other types of disabilities.

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## Emergency Preparedness

*Matthew Sapolin*

When disasters strike, people with disabilities are not left out of the destruction and turmoil that follow. In recent years, people with disabilities have become increasingly active in the dialogue surrounding emergency preparedness and have called on the government to confront the issue of disaster planning for people with disabilities. As a result, government and disaster response organizations have taken several steps that can help to improve options for people with disabilities during emergencies, and to increase preparedness activities and overall communication. Although states and localities have established offices of emergency management, this article will briefly touch on some of the federal initiatives and programs that have emerged to address special needs populations. These programs are fairly new and were introduced by the top-ranking federal leadership.

Under an executive order signed by President George W. Bush on July 22, 2004, the Department of Homeland Security was charged with aggressively exploring the matter of addressing the emergency response needs of disabled populations, and established an interagency council for that purpose. This action expanded on the president's "New Freedom Initiative," a series of policies designed to advance the interests of people with disabilities by directing the federal government to address the safety and security needs of this population.

At the first meeting of the Interagency Coordinating Council on Emergency Preparedness and Individuals with Disabilities, held at the Department of Homeland Security, senior federal government officials reported on significant new policy initiatives that aim