

## Activity at Home for Children and Youth Who Are Deafblind

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**P**hysical activity is an important part of any child's life. Just like other children, those who are deafblind need physical activity for recreation, improving fitness, and building relationships with others. In a recent study, parents reported that their children and youth who are deafblind often have a great deal of free time but have limited recreational opportunities at home (Lieberman & MacVicar, 2003). However, with careful preparation and consideration of each child's unique needs, healthy, productive, and rewarding physical activity experiences can take place in the home. The suggestions in this article are intended for children who range in age from pre-school to high school and who are deafblind with additional disabilities.

### Before the Fun Starts: Considerations for Activities at Home

Prior to engaging in home physical activities, it is important to consider each child's specific requirements and abilities. Parents or guardians must match physical activities and necessary supports to the unique needs of their children. For instance, when it is not safe to leave a child alone to play, a support person, sibling, or peer who knows the child well must be responsible for supervising the child and helping him or her to participate in an activity. Anyone who interacts with the child must understand his or her mode of communication, safety issues, and ability to tolerate activities. It is also important to ensure that activities are modified to meet the child's unique needs.

To determine how best to modify an activity, consider the functional abilities of the child and the objective of the activity. For example, if a child wants to swing but has limited grip strength, tie supportive loops of Velcro and elastic or ribbon to the chains of a swing to enable the child to hold on independently. It takes time and consideration to ensure that each activity is appropriate for a child and is properly modified and safe. Adaptations to positioning, equipment, and communication strategies may be necessary. For example, Julie's fam-



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ily received a side-by-side recumbent bicycle from their local Lions Club. The seat and handle bars needed to be adjusted for her size and comfort. After Julie and a friend rode the bike for a few minutes, her parents stopped the activity to check on Julie's comfort and safety and make adjustments so she could continue to enjoy the experience.

Before beginning a home physical fitness routine, be sure to consult a physician. After that, the next steps are to set up a movement area, establish activity routines, and involve family members and friends.

### **Set up a movement area.**

It is not necessary for a movement area to take up a large amount of space. Although it is nice to have an entire room dedicated to improving personal physical fitness, that is a luxury for most people. A corner of a room or yard is sufficient. Keep the area free of hazardous obstacles that could cause injury, such as items that might be tripped over or bumped into. Keep the walls clear so that children can use them to move independently. To promote independence, give children ample time to explore and become familiar with everything in the area, including physical fitness equipment.

### **Establish activity routines.**

Set up activity routines that are familiar and have predictable outcomes. When changing a routine, discuss it with the child to make sure he or she understands the changes. It is essential to communicate in order to understand a child's needs and desires and to set clear expectations.

### **Involve family members and friends.**

Children and youth who are deafblind often experience isolation (Kroksmark & Nordell, 2001; Petroff, 1999) and need opportunities for socialization (Haring & Romer, 1995; Smith, 2002). Experiencing physical activities with siblings, parents, neighbors, and friends can be enjoyable and memorable and promote and strengthen bonds.

It is important to educate anyone interacting with a child about his or her communication methods and any specific needs and safety precautions. For example, Jeannie loves to roll down a wedge mat in her basement. It is important for people playing with her to know that because she has certain medical needs she must do log rolls (on her side) rather than forward or backward rolls. Brian loves to play tactile twister with his family. He likes to be the spinner and make calls as well as to participate in the game. Responding

to a child's needs and wishes promotes self-determination and full enjoyment and understanding of an activity.

## **Preferred Activities**

In a study by Lieberman and MacVicar (2003), parents identified some of their children's favorite activities. This section reviews a number of these activities that can be enjoyed at home.

**Swinging.** Swings can be set up indoors or outdoors. If outdoors, ensure a clear and identifiable path to the swing-set from the house. You may want to set up a guide-wire from the house to the swing. A swing can also be set up in a garage or basement. Attach eyehooks for a swing to a wooden ceiling beam or tie the swing around a metal ceiling beam. Put mats under the swing for safety, and keep objects away from the swinging area.

**Rocking.** Many children enjoy rocking in a rocking chair or while sitting on a therapy ball, sofa, or chair. For example, a child can lie across a peanut-shaped therapy ball on his or her stomach with some weight on the hands while rocking forward and backward. This activity can be enjoyed inside or outside on a mat or in the grass.

**Walking.** Walking is a great activity both indoors and outdoors. A child can walk while trailing a wall, with friends or family members as sighted guides, or by using a guide-wire. A guide-wire is a rope or wire pulled tightly across an area such as a driveway, garage, basement, family room, or backyard. For information about how to set up a guide-wire and techniques for guided running and walking, see the Camp Abilities web site (<http://www.campabilities.org>). Children with sufficient vision may be able to walk independently around a yard, nearby track, or neighborhood. Walking and running can be measured using talking pedometers that can be purchased online or at any sporting goods store. A "Walk-Run for Fitness" kit will be available through the American Printing House for the Blind in the near future (<http://www.aph.org>).

**Climbing.** Climbing promotes balance, strength, spatial awareness, and self-confidence. Ladders, monkey bars, cargo nets, steps, and ramps are fun to go up, down, through, around, and inside.

**Bicycling.** Bicycling increases fitness and provides opportunities for socialization. Anyone who has some functional use of his or her legs can ride either a standard stationary or recumbent bike. A

recumbent bike may be helpful for children with balance problems. Many stationary bikes display the distance pedaled and the amount of time ridden. Most sporting goods stores sell them for \$500 to \$1,000, and they can also be found in health clubs and at schools. Bicycle stands can turn an ordinary ten-speed bike into a stationary bike.

“Spinning” is a popular sport offered in many health clubs, and learning how to ride a stationary bike at home can open up spinning as a future fitness activity option for a child.

## Fitness Activities

It is well established that youth who are visually impaired are less physically active than their peers (Kozub & Oh, 2004) and less physically fit (Lieberman & McHugh, 2001). Any person who wants to begin improving their fitness level must build skills and increase fitness gradually. It is important to start out slowly and set realistic goals. Following are some enjoyable movement activities that promote physical fitness. Most are done using simple equipment.

**Rebounders.** A rebounder or mini-trampoline can be used for running in place, jumping, or bouncing. Carefully supervise the child at the beginning. Make sure there are mats surrounding the rebounder and something for the child to hold on to, such as a handrail or wall, to ensure stability and balance. This activity can also be enjoyed by jumping on an air mattress or a twin mattress, with the same precautions.

**Jump ropes.** Children can step over a rope held 1 to 2 feet off the ground, jump over a rope held by a peer or sibling, or jump using a handheld rope. Even children who cannot walk or stand can play by rolling over a jump rope or rolling in a wheelchair over a rope. This gives children who want to participate in the same activities as their siblings and friends a sense of accomplishment and belonging.

Children can jump rope to music, drums, or their own rhythm. They can jump a specific number of times or for a set amount of time. It is important to clearly mark a jumping area on the floor with tape or cones. A child with very limited or no vision will benefit from a change in surface around the boundary of the jumping area, like carpet squares, or from a rope taped to the floor as a tactile boundary.

**Scooter boards.** Children can push themselves on a scooter board while sitting, kneeling, or lying on the stomach. They can also pull themselves along a rope pulled tight close to the ground or be

pulled by a family member or peer while holding on to a hula hoop, rope, or towel. As with other activities, it is essential to establish clear boundaries and use safe riding techniques and speeds. Once children have mastered movement on the scooter, they can create obstacle courses with objects to go through, under, around, and even over.

**Dynabands.** Dynabands are large wide stretchy bands that can be used for stretching, strengthening, balancing, and gaining spatial awareness. They come in colors that indicate different levels of tension. For Dynaband activities, consult a physical therapist or physical education teacher.

**Hand weights.** Hand weights can be used to increase strength. Small hand weights (3 to 10 pounds) can be purchased from any sporting goods store. In a safe corner of a room, children can do bicep curls, tricep curls, shoulder shrugs, side bends, knee bends, lunges, and side steps. These same exercises can also be done using soup cans as light weights.

**Step exercises.** Step exercises promote fitness, balance, and leg strength. Use a short bench (4 to 6 inches high) or commercial steps used for step aerobics. Children might set a goal to step up and down for a specified length of time, or to complete a certain number of steps, or they can just step for fun in time to music. The step should be placed in front of a wall, railing, or fence to ensure balance and safety.

Many exercises, such as sit-ups, push-ups, wheelchair push-ups, and jumping jacks, do not require equipment. All that is needed is a mat or carpeted floor and enough space for movement. See Lieberman (2005a, 2005b) for more information about adapting these fitness skills for deafblind children.

## Motor Skill Activities

The fitness activities discussed above improve muscular strength and endurance, but motor skill activities help to improve agility, balance, motor coordination, manipulation skills, and eye-hand and eye-foot coordination. These skills promote independence, self-esteem, and a feeling of competence and can be very enjoyable either alone or with siblings or peers.

**Ball manipulation.** A ball can be rolled, kicked, or thrown against a wall or to a sibling or peer. This activity improves balance, eye-hand and eye-foot coordination, and agility. Choose a ball that the child is comfortable with. Children who have never played with a ball may need to begin

with one that is not fully inflated so they are not afraid of hurting themselves. It is also important to choose a ball with a texture the child likes and that is appropriate for his or her visual capacity. For example, a dark blue or purple ball might be best for a child who sees darker colors better than lighter colors.

To help children keep track of the ball, tie it to a rope, chair, or doorknob. A ball can also be tied to a tetherball pole or volleyball post. This eliminates the need to chase or search for the ball, but care must be taken to avoid running into the central pole.

**Reaching and grasping activities.** Children can practice reaching and grasping using scarves, balls made of rope, beanbags, yarn balls, deflated beach balls, or a nonlatex Koosh ball. This activity helps develop hand strength, coordination, and the ability to manipulate objects with the hands. The ability to drop objects is a prerequisite for throwing, and objects can be dropped into a hula hoop, pushed off a wheelchair tray, or dropped into an eye-level basketball hoop or large garbage can.

**Wedge mat activities.** Wedge mats are large mats in the shape of a piece of pie on its side. The highest side may be at the level of a child's knees or thighs. The mats can be used for log rolls, forward rolls, crawling, or tumbling. Once a child has tumbled to the end of the mat, he or she can trail it back to the top. This independent activity can be enjoyed outside on the grass or inside with the wedge mat placed on top of a flat mat. If there are safety hazards close to the play area, create boundaries using cones or rope placed within 5 to 10 feet of the mat. The wedge mat can also be set on a large mat to create a natural safety zone. Wedge mats can be purchased through equipment companies, sporting goods stores, or gymnastics programs.

**Locomotor activities.** Locomotor activities, like running, hopping, galloping, leaping, skipping, and jumping, work the large muscles of the legs and promote agility, coordination, gross motor skills, balance, leg strength, and endurance. For stability, they can be performed while holding onto a guide rope, wall, or fence. To learn about instructional techniques for locomotor skills, see O'Connell, Lieberman, and Petersen (2006).

**Racquet and bat activities.** Children can use a racquetball, badminton, or tennis racquet, or a bat, to hit balloons, small beach balls, Wiffle balls, or Nerf balls. The ball can be placed on a batting tee, thrown in the air, or dangled from a string tied to a beam or fixture. A ball can also be tied to the bat

or racquet so there is no need to chase or search for the ball. Balls with bells inside are good for children who have usable hearing. Children can bat for fun, distance, and cooperative games, or bat a specific number of times.

**Balance activities.** A ramp, balance board, rebounder, flat curb, or balance beam can be used for balance activities. For safety, place mats under the equipment and keep the area clear. Children can challenge themselves to balance for a specific length of time or to achieve a set number of times that they walk along a beam or jump on a rebounder.

## Goal Setting

It is important to remember that each child is different. Some will participate in activities because they enjoy the way a movement feels or the companionship of other participants. Others may want to become more skillful in an activity, and goal setting is an integral part of fitness, recreation, and sport. If a child's goal is to improve, it is important to establish a baseline for activities, such as the number of push-ups, duration of walking, or accuracy or distance of ball throwing. Teaching a child how to measure improvement is a key to continued enjoyment, challenge, and success recognition. For more information on skill development and goal setting, see Lieberman, Modell, Jackson, and Ponchillia (2006).

## Summary

Encouraging children who are deafblind to participate in activities at home is not always easy. It requires communication with the child, creativity, and practice, but the time and energy spent developing a variety of physical and recreational activities in the home will improve fitness, provide opportunities for fun and socialization, and open many doors for children who are deafblind.

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## Resources

American Printing House for the Blind PE Web site:  
"A parent/teacher resource promoting physical education and recreation for children with sensory impairments," <http://www.aph.org/pe>

Camp Abilities Web site:  
<http://www.campabilities.org>

DB-LINK Web site: <http://www.dblink.org> (see "Play and Recreation" in the "Selected Topics" section)

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