

COMPETITIONS FOR DISABLED CHILDREN: SAFETY MEASURES

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Introduction:

“Athletic competition is inherent to the human spirit”(Bergeron, 1999). This holds true for persons with or without disabilities. • majority of them never participate in any physical or social activity. While many opportunities exist for individuals with disabilities, the two most limiting factors for participation in athletics are awareness and access (Wu and Williams, 2001). Healthcare practitioners should make every effort to inform these individuals of the multiple opportunities and encourage their participation. Perhaps the two most well-known competitions that exist for individuals with disabilities are the *Special Olympics* and *Paralympics*. The goal of the Special Olympics is participation and typically involves individuals with mental handicaps. The goal of the Paralympics is winning, involving individuals with various physical disabilities who compete nationally and internationally to determine who the best is.

In 1924, the first international competition for athletes with physical disabilities, the International Silent Games, was held. The first winter Paralympics games were held in 1976 and were hosted in Ornskoldsvik, Sweden.

World Health Organization (WHO)

Impairment: Any loss or abnormality of psychological, physical, or anatomical structure or function.

Disability: Any restriction or lack (resulting from an impairment) of an ability to perform an activity in the manner or within the range considered normal for a human being.

Handicap: A disadvantage for a given individual, resulting from an impairment or a disability that limits or prevents the fulfillment of a role that is normal (depending on age, sex, and social and culture factors) for that individual.

National Collegiate Athletic Association (NCAA): A disabled athlete is one who is confined to a wheelchair; deaf, blind, or missing a limb; has one of a pair of organs; or a behavioral, emotional or psychological disorder that substantially limits a major life activity.

Pre-participation Assessment:

Pre-participation assessments (PPA) should be performed in a systematic comprehensive fashion similar to that performed for able-bodied athletes. Sports medicine practitioners should not be overly focused on the athlete's impairment/disability, and miss common medical issues. Careful evaluation of the athlete's wheelchair, prosthetics, orthotics, and assistive/adaptive devices should also be performed prior to competition. This is usually facilitated by consultation with the individual's Orthotist, Prosthetist, or other health care specialists with experience in this area. Sports medicine practitioners, who are not familiar with certain impairments, should solicit assistance from practitioners with more experience. This often requires a team approach. For example a physician specializing in sports medicine may have little experience in spinal cord injuries, while a spinal cord injury specialist may have even less experience in sports medicine. Together, however, they can jointly assess an individual and clear them safely for participation. Practitioners should avoid mass screening stations for individuals with disabilities in favor of private office setting visits. It is recommended that the PPA be performed by a medical team that is involved in the longitudinal care of the disabled athlete, as knowledge of baseline functioning is essential.

Individuals with conditions such as osteogenesis, imperfect, arthrogryposis, hemophilia, high cervical lesions, or those missing one of a paired set of organs should avoid contact sports or sports with a high risk of falling. The specific elements required in the PPE are determined by the sport, the level of participation, the athletic organization, the clinical indications, and the athlete. The PPE should provide information to guide the athlete, trainer, coach, and team physician toward safe participation, activity limitations, and disability specific training. The objectives of the examination include the following: Identify conditions that may require further medical evaluation before the athlete enters into training, require close supervision during training, and may predispose to injury.

Special Populations and Specific Sport Adaptation

Adapted sports are designed to depart as little as possible from the original versions. The following is an overview of each sport and its adaptations.

Archery: Adaptive equipment is allowed, including the following: Trigger releases, Wrist/elbow supports Standing supports, Bow supports.

Basketball: Five players on a regulation court, following the rules of the NCAA. There can be special rules, such as no contact, no dribbling, and lower baskets.

Bowling: Unmodified, except for the use of devices such as bowling sticks and prostheses. Special Olympics regulations allow target bowl (i.e., regulation pins, 2-lb ball, and short and carpeted lanes) and frame bowl (i.e., plastic pins, plastic ball, and short lane).

Hockey: Floor hockey is played in a gymnasium with a felt disc, struck with wooden hockey sticks, or fiberglass rods. Sled hockey is played on an ice rink. Pictures are used to propel the sleds as well as strike the puck.

Racquetball: Racquetball follows the rules of the American Amateur Racquetball Association. In some divisions, multiple bounces are allowed.

Skiing: Athletes with hemiplegic or amputees can use one ski and two outriggers or two skis and two outriggers. Sit-skis and mono-skis are also available for participants with muscular dystrophy, spina bifida, paraplegia, and cerebral palsy.

Soccer: Follows the rules of the U.S. Soccer Federation. The field size (usually 80 × 60 m) and the number of players (generally seven) are flexible, as goal size (for athletes with cerebral palsy).

Swimming: Flotation devices can be used in competition in some divisions.

Table Tennis: U.S. Table Tennis Association regulations are used, often no distinction between disabled and able bodied competition.

Tennis: Wheelchair tennis is played on a regulation-sized tennis court by USTA rule, except two bounces are allowed.

Track and field: Utilize same rules as able-bodied competitors.

Competitions for handicapped children: High level competitions for many are therefore inadvisable. One should consider the following:

1. Grasp and release is difficult for brain damaged children; special balls which have ridges are easier to hold and release than small balls, beanbags are easier to catch because they do not bounce away. Soft, medium sized balls also facilitate catching.
2. Moving objects are difficult to deal with, it will help to remember that it is
 - a) Easier to catch a bounced rather than a thrown ball
 - b) Easier to kick a stationary rather than a moving ball
 - c) Easier to practice hitting a ball (First with the hand and then with an implement) if it is attached by a string to a beam so that it is at exactly the right height.

3. A fast flying ball may be too difficult to contact, so games such as volleyball must be played with a light ball or a balloon.

Variations on athletic competition:

There are a good many ways of involving handicapped children and adults in competition.

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1. Stationary shot



2. Shuttle run



3. Single-handed pass



4. Footwork: body control



5. Chest pass



6. Bounce pass



7. Two-handed long throw



8. Shooting on the move



— Path of ball
- - - Path of player

Fig. 5 Circuit for basketball skills (players on feet or in wheelchairs)

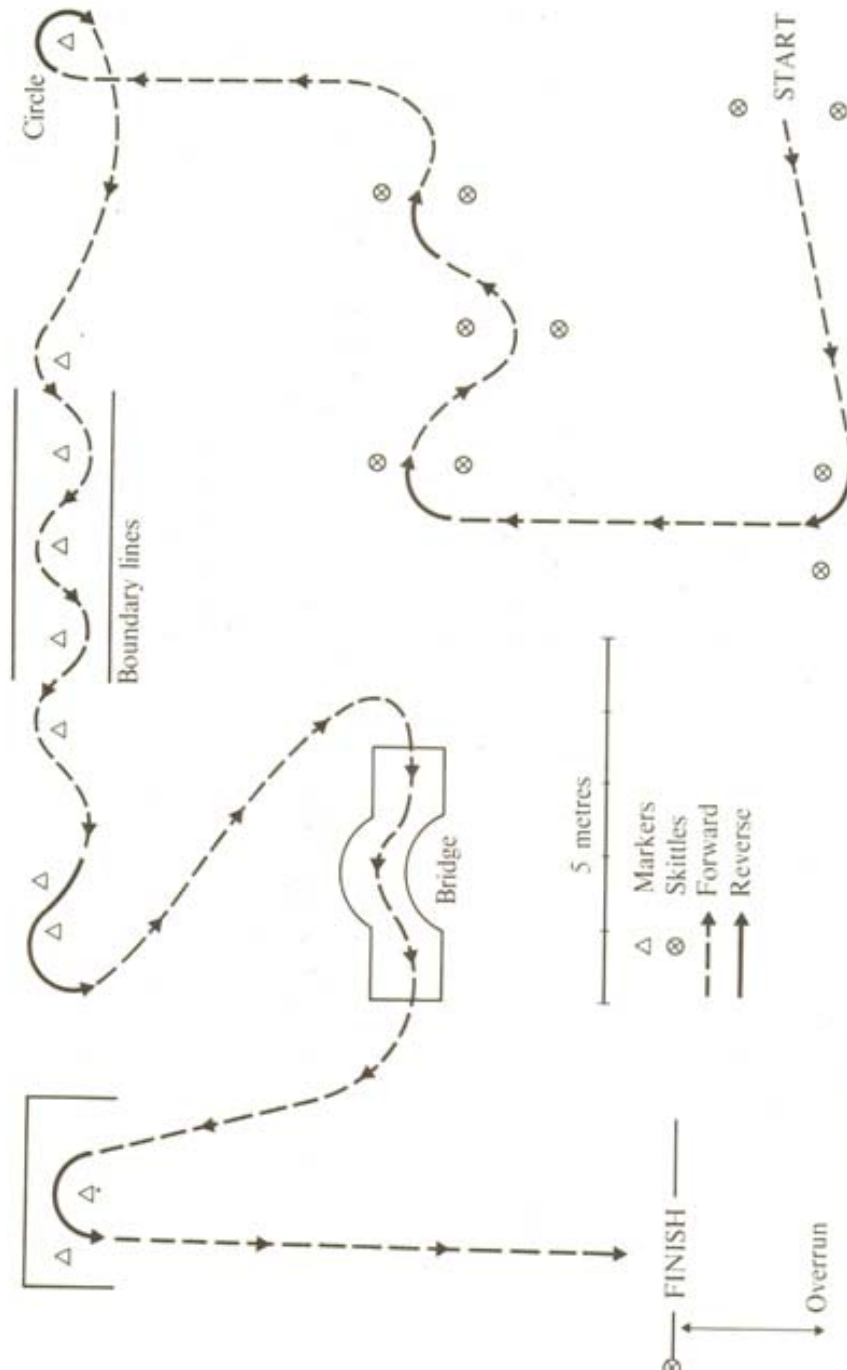


Fig. 4 A typical slalom course

Competition in athletic events:

SINGLE EVENT		
THROWING	JUMPING	RUNNING
Discuss, Shot, Javelin -Distance, Precision Medicine ball Light ball Cricket ball Beanbag Club	Long Jump- Sail Hitch-Kick Hang High Jump- Scissors Western roll Straddle Fosbury Flop Hop step and Jump	On Foot- 60mts,80mts,100mts, 200mts,400mts Relay Distance-running including 800mts, 1500mts Wheelchair and tricycle 60mts, 80mts, 100mts, Relay, Slalom Electric Chair Slalom
COMBINED EVENTS		
PENTATHLON	TRIATHLON	MODERN PENTATHLON
Speed : 100mts Endurance : 1500mts Strength : Shot Agility : Slalom Fitness: 400mts or 50-m Swim	Speed : 100mts Endurance : 1500mts Strength : Shot	Pistol- shooting Running : 200mts Riding Swimming: 25mts,50mts Fencing
OFFICIALS: Clerk to the course Judges : Track Events- starter, Time keeper, Judges: Field Events		

Basic Principles applicable to all game

Coordination	Specification	Activity
Footwork and body control involves	Direction and area	Forward, backward, sideways, pivot near to and far from the body
	Pathways	Direct or flexible
	Timing	Quick, slow, acceleration, de-acceleration
	Tension	Firm (strong) Fine (light/ delicate)
Ball handling Involve	Receiving	With different body parts e.g., hands, feet Area: high, wide, low
	Sending away	With different body parts Areas: in air, on the ground, up, down
	Carrying	With different body parts With different implements
Playing the game Involve	Rules of increasing complexity: pupils rule, teacher rules, standard rules	
	Size of team: generally from very small (1 vs 1) to larger team	

Athletics:

The rules for the competitions may be obtained from the Spastic Society for the Spastic Society games and from the British Association for the Disabled For the National and International Games.

Running: Those who are able- the Blind, the deaf and the minimum brain damaged – may take part in normal running races.

Conclusion: Too many people still believe that disabled children are to do things for them and to protect them. It is perhaps worth bearing in mind the old Chinese proverb: “give a man a fish and you feed him for one day: teach a man to fish and you feed him for life”, let us give these children in our care the chance to become at self sufficient as possible. Games and athletics may well play valuable part. The above mentioned competitions may enhance the needy activity on day basis.