



Special Olympics

Healthy Athletes
FUNfitness

**Learn how to
organize, promote and present**



a fitness screening developed in collaboration with
American Physical Therapy Association for Special Olympics Healthy Athletes®



Dear Colleague,

Welcome to FUNfitness, the fitness screening event developed in collaboration with the American Physical Therapy Association for Special Olympics Healthy Athletes®. We are delighted that you are part of this pioneering effort to improve the health of Special Olympics athletes, improve the knowledge of athletes, families and coaches, and to increase the abilities of the athletes to perform in sports and in life.

Enclosed you will find the most current version of the FUNfitness Screening Manual an electronic copy is also available on the Special Olympics Website (http://resources.specialolympics.org/Sections/Healthy_Athletes_Resources.aspx). The manual was developed to assist physical therapy professionals to host the fitness event. Also included are camera-ready color and black-and-white copies of the FUNfitness logo. The logo can be duplicated for public relations purposes

Chapter 1 provides an overview of Healthy Athletes and the disciplines represented in the initiative.

Chapter 2 guides the physical therapy professional through the process of developing and hosting the event.

Chapter 3 provides guidelines for the tests performed by physical therapists when assessing the flexibility, functional strength, balance and aerobic fitness of Special Olympics athletes. These test instructions were written in a very detailed and specific manner for two primary reasons: 1) the clarity and specific description makes the testing self-explanatory so that only brief in-service education is needed; 2) the clarity and specific detail helps ensure standardized performance in collecting the data. A 2-part video of the test protocol is also available online at:

- FUNfitness part 1: <http://www.youtube.com/watch?v=UjLJe8EveBM>
- FUNfitness part 2: <http://www.youtube.com/watch?v=x0jB3MSZ1Zs>

Chapter 4 was developed to assist the physical therapy professional in educating the participants, families and coaches. It contains an educational description of the muscles involved in each test, and the impact of loss of function. You may choose to use this chapter as a discussion point or as a handout for your participants. These pages may also be copied and provided to for families and coaches for future instruction.

Chapter 5 includes hard copies of the multiple forms that you might need. All these forms are also on the website in word format, so that you can modify them for your specific use. Also enclosed is a paper copy of the FUNfitness Healthy Athletes Software System (HAS) score sheet, a two-page data collection form for use at each event to record your findings. The most up-to- date score sheet is available on the Special Olympics Web site (http://resources.specialolympics.org/Sections/Healthy_Athletes_Resources.aspx), Make sure you are using the HAS form dated 2011 or more recent. Please discard any forms you may have that are either undated or have a date prior to 2011 in the “footer”.

All consenting athlete data are entered into a Web-based Healthy Athletes Software System (HAS) for future evaluation. The data collected on the score sheet are the property in the aggregate of Special Olympics and individually of each Special Olympics Program. Others may also request aggregate utilization of data related to their or other events. Any requests to use the data for analysis and research in the aggregate must be made to the Special Olympics, Inc Research Department after consultation with the Global Advisor regarding content and format of the request. Also enclosed is a copy of the Athlete Scorecard, a take-home education brochure that the physical therapist gives to each athlete. It includes multiple exercise choices that are self-explanatory graphics with simple language to enhance usability by the athlete. The current Athlete Scorecard is also on the website (http://resources.specialolympics.org/Sections/Healthy_Athletes_Resources.aspx)

These 2011 versions of the manual, the score sheet and the athlete Scorecard are not the first, and certainly will not be the final, versions. We are always very interested in your feedback after you hold the FUNfitness event, so please feel free to send us ideas and comments. Updates will occur as new ideas and evidence-based information become available. Prior to conducting a FUNfitness screening Clinical directors should visit the Healthy Athletes links provided above and make sure that the procedures you use follow current protocol. Thank you for the time and commitment to your profession that you have shown with your interest in this exciting fitness event.

Sincerely,

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Chapter 1

Introduction to Healthy Athletes

INTRODUCTION

Special Olympics Healthy Athletes®

Special Olympics Healthy Athletes is designed to help Special Olympics athletes improve their health and fitness.

The ultimate goal of Healthy Athletes is to improve each athlete's ability to train and compete in Special Olympics as well as in life.

Objectives

The key objectives of Special Olympics Healthy Athletes are as follows:

- To improve access and health care for Special Olympics athletes at event-based and other health screening clinics
- To make referrals or recommendations for follow-up to community health professionals as appropriate
- To train health care professionals, students and others about the needs and care of people with intellectual disabilities
- To collect, analyze and disseminate data on the health status and needs of people with intellectual disabilities
- To advocate for improved health policies and programs for people with intellectual disabilities

Components of Special Olympics Healthy Athletes

Special Olympics-Lions Clubs International Opening Eyes® (1991)

Special Olympics Special Smiles® (1992)

Special Olympics FUNfitness (1999)

Special Olympics Healthy Hearing (2000)

Special Olympics Health Promotion(2001)

Special Olympics Fit Feet (2003)

These health screenings and examinations are conducted at Special Olympics local, state or country, Regional and World Games, and occasionally at special events. Healthy Athletes screenings have provided free care to thousands of Special Olympics athletes. The screening data are aggregated and assessed to improve individual athlete health, and to assist in policy recommendations and advocacy for improved health care for all Special Olympics athletes.

The Healthy Athletes initiative is supported by a grant from the Centers for Disease Control and Prevention, significant in-kind donations of health care equipment and products, monetary sponsorships from organizations such as Lions Clubs International, additional cash donations, local support from health-related organizations and industries and most important, volunteer services from thousands of healthcare professionals and students. As a result of train-the-trainer seminars conducted since 1999, Special Olympics Healthy Athletes is expanding rapidly worldwide. More than 1000 clinical directors have been trained to implement Healthy Athletes screenings in their home states, provinces or countries.

Opening Eyes. In 1991, Special Olympics established Opening Eyes. Opening Eyes and Special Smiles jointly formed the basis of the Special Olympics Healthy Athletes initiative in 1996.

Opening Eyes conducts extensive vision screening and prescription eyeglasses and sports eyewear. Through the global partnership of Special Olympics and Lions Clubs International, Special Olympics athletes receive the following:

- Extensive vision and eye health tests
- Refraction for those requiring further screening
- Prescription eyeglasses, if needed
- Prescription protective sports eyewear, if appropriate
- Referral for follow-up care

Lions Clubs International has been committed to global blindness prevention and sight conservation programs for more than 80 years. Lions have been in the forefront of eye health initiatives, including vision screenings, free and reduced-cost eye care programs, used eyeglasses collection and Sight-First. By partnering to create Opening Eyes, the two organizations (Lions Club and Special Olympics) have brought eye care to more Special Olympics athletes around the world than would have been possible otherwise. The partnership has tripled the amount of quality vision care available to all Special Olympics athletes through grants to individual Special Olympics Programs worldwide. The Special Olympics-Lions Clubs International partnership uniquely serves the worldwide volunteer community. Eye health professionals who perform the technical screening are joined by volunteer Lions Club members who handle athlete registration, distribution of glasses and protective sports goggles and the less technical near and far visual acuity and color vision testing.

Special Smiles. Special Smiles offers dental screenings, health education and prevention services, and refers athletes to potential sources of treatment and follow-up care. At a Special Smiles event, dental professionals provide the following services to athletes:

- Oral screenings/health education
- Individually fitted sports mouth guards, if needed
- Oral health education and personal prevention products
- Information concerning needed follow-up care by community-based dentists and education institutions.

Athletes and their families receive education about the importance of good oral hygiene habits, and are instructed in correct tooth brushing and flossing methods.

The Academy of General Dentistry and American Dental Association recognize credits for participation, allowing students and dentists the opportunity to gain a comfort level working with the Special Olympics population while gaining education credits.

FUNfitness. FUNfitness provides fitness screening and education services. FUNfitness, developed in collaboration with the American Physical Therapy Association, has been a part of Special Olympics events since 1999. Physical therapists, assisted by physical therapist assistants and students, provide an assessment of athlete flexibility, functional strength, balance and aerobic condition. Flexibility of hamstring, calf, shoulder rotator and hip flexor muscles; static and dynamic balance; and aerobic fitness are assessed and used as the basis for one-on-one education and on-site consultation to athletes and coaches on how to improve performance. Physical therapists also discuss with athletes, families and coaches the components of a good fitness program for risk prevention, and make recommendations for optimal function in sports training and competition so that the athletes train and compete safely.

Healthy Hearing. Healthy Hearing provides external ear canal inspection, evoked otoacoustic emissions screening, tympanometry, and pure tone screening for those with identified need. Individual molded ear plugs and referral and access to hearing aids are offered at many Healthy Hearing screening events. Reduced hearing can have a significant negative impact on an athlete's ability to compete and understand verbal information from coaches, teammates, judges and officials. Healthy Hearing assesses the hearing of individual athletes, and reports to coaches and caregivers if any follow-up care is needed.

Certified audiologists supervise Healthy Hearing screenings. Most often, volunteers include other audiologists, speech-language pathologists, special educators and graduate students in these disciplines. Healthy Hearing uses an approach similar to the model used by most school systems in the United States—athletes receive an examination of the ear canals for the presence of cerumen (earwax) and an individual hearing acuity test using an evoked otoacoustic emissions (EOAE) instrument that measures hearing without any behavioral signal from the athlete. These two steps can be accomplished in a relatively quiet area at Special Olympics events, and take only a few minutes out of the athlete's event schedule.

If an athlete does not pass the initial screening, at least two other stations are available to assess the condition of the middle ear. The results of the screening are noted and given to the athlete and coach, accompanied by comments and professional judgments. Athletes may be referred for earwax removal, further testing of middle ear problems or management of hearing loss.

Health Promotion. Health Promotion focuses on healthy lifestyles and the facilitation of healthy choices. In 2001, Special Olympics launched new efforts to improve the general health and fitness of its athletes. The rationale for Special Olympics to promote overall health is the long-standing awareness that people with intellectual disabilities frequently have medical conditions such as heart disease, obesity and diabetes, and that they tend to develop these conditions at earlier stages of life. Findings also show that exercise and diet can improve performance and reduce health risks.

Health Promotion uses interactive educational tools and motivational information to encourage Special Olympics athletes to improve their nutrition, keep physically active and modify lifestyles to lower disease risk. Nutritionists and dietitians educate athletes on the importance of good eating habits in a fun environment. In the sun safety component, athletes learn about the dangers of exposure to the sun and how to protect themselves while training and competing in sports. Education in tobacco cessation and the effects of smoking is provided. Bone density screening and education on strong bones are now being provided at most events.

A new component of Health Promotion is the year-round community-based emphasis on nutrition and fitness for Special Olympics athletes. Because Special Olympics is a worldwide movement with athletes from countries at varied stages of health service development, Special Olympics Health Promotion can offer a flexible spectrum of health education, including such areas as personal safety, hygiene and avoidance of communicable disease.

Fit Feet. The newest Healthy Athletes screening is Fit Feet, developed in collaboration with the American Academy of Podiatric Sports Medicine.

Many Special Olympics athletes suffer from foot and ankle pain or deformities that impair their performance. Also, athletes are not always fitted with the best shoes and socks for their particular sport. Healthy Athletes, in cooperation with the American Academy of Podiatric Sports Medicine, has developed the Fit Feet screening discipline to evaluate foot and ankle deformities. Athletes receive foot and ankle screening for deformities and are checked for proper shoes and socks. Athletes receive education in proper footwear and care of the feet and toes.

Healthy Athletes Software System (HAS)

In support of the Healthy Athletes initiative, Better Health Global Ltd. has created a Web-based software application called Healthy Athletes Software System (HAS) to enable the electronic capture of screening data across the Healthy Athletes disciplines. HAS was officially launched at the 11th Special Olympics World Summer Games in Dublin, Ireland, and has been used at all events since June 2003. HAS is rapidly becoming the world's largest health database on people with intellectual disabilities. This database is invaluable not only for Special Olympics athlete management and administration, but also for the wider scientific and political communities.

Data capture

Each of the Healthy Athletes disciplines has a discipline-specific HAS form. These forms are readily available for clinical directors on the Special Olympics Web site or electronically from the regional Healthy Athletes coordinators, the global advisors or the managers at Special Olympics headquarters.

Several methods are used to capture the data at the screenings. At the very least, the athlete's data are captured on a paper HAS form. Data on that form can then be entered into the HAS Web site later. Ideally, programs would have Web access and personal computers available at the screening event for immediate data entry from paper forms.

Confidentiality

As in clinical practice, all athlete data are confidential. Access to the HAS system is limited by the individual's role in Healthy Athletes.

Results

Prior to participation in Special Olympics events, athletes or their guardians are asked to sign a Consent Form. In addition to a consent to participate in the athletic events, this consent includes participation in the Healthy Athletes screening and gives Special Olympics permission to use the data collected at Healthy Athletes screenings.

Once entered into the HAS database, reports can be generated summarizing the screening data for each event. Data can also be aggregated across many events, geographical regions. Data can be evaluated by each screening test administered, and reports can be generated that describe the health of Special Olympics athletes. Each athlete can receive an integrated personal report card summarizing all screenings that the athlete participated in and describing services, screening results, and referral information.

Data collected from screenings are valuable to promote a change in the perception of people with intellectual disabilities, garner support from government and nongovernmental organizations, recruit volunteers, and provide data and information to researchers and policy-makers.



Special Olympics



Chapter 2

FUNfitness Event Guide

- Organization (Volunteers and Funding)
- Preparing for Your Event
- Promoting Your Event
- Research
- Event Checklist and Media Fact Sheet

PLANNING YOUR OWN FUNFITNESS EVENT

FUNfitness is the result of collaboration between American Physical Therapy Association (APTA) and Special Olympics. The original event was developed by APTA and its North Carolina chapter as a flexibility screening for athletes participating in the 1999 Special Olympics World Summer Games. In November 1999, APTA agreed to develop the original FUNfitness, a physical therapy screening program for Healthy Athletes to address ongoing fitness needs of Special Olympics athletes. Special Olympics FUNfitness underwent major revision in 2006 to add aerobic testing and tests for athletes in wheelchairs, and has subsequently had other more recent revisions. This manual reflects the version current in 2011 as dated on this manual.

Organization

Several organizational steps can be followed in planning to initiate FUNfitness:

1. A Special Olympics Program can develop an interest in hosting FUNfitness, and contact either the regional Healthy Athletes Coordinator or the FUNfitness Global Clinical Advisor.
 - 1a. The Special Olympics Program can nominate an appropriate physical therapy professional for training as the Clinical Director.
 - 1b. The SO Program can request assistance from the appropriate physiotherapy professional organization to identify a professional for training.
2. The state or country physical therapy association can develop an interest in hosting FUNfitness, and contact the FUNfitness Regional Clinical Advisor or the regional Healthy Athletes Coordinator.
3. An identified physical therapy professional will submit a resume for review by both the Global Clinical Advisor and the Special Olympics Program.
4. If the identified physical therapy professional meets the qualifications for and agrees to become the state or country Clinical Director, he/she will be invited to the next train-the-trainer session to learn how to coordinate the event.
5. Once trained, the state or country Clinical Director should meet with the Special Olympics Program Director to mutually agree on the following topics:
 - Location and date of the event at which FUNfitness will be held
 - Amount and location of space for FUNfitness at the event(s)
 - Dates and times of the screening
 - Recruitment of volunteers
 - Scheduling of volunteer orientation to Special Olympics
 - Issues of fundraising and publicity
6. The state or country Clinical Director can then appoint any physical therapist or physical therapist assistant to assist with the FUNfitness planning.

7. The state or country Clinical Director has the assistance and support of a FUNfitness Regional Clinical Advisor as well as the FUNfitness Global Clinical Advisor.. State Clinical Directors in the United States also have a Coordinator of Clinical Services to assist them.

Referral

FUNfitness involves screening and one-on-one education about stretching, strengthening, balance, falls prevention, and aerobic fitness training. Review your state or country practice act to determine the legality of providing screening and individual education. If you have any questions, contact your professional association or your board of examiners.

If your state or country professional practice act does not allow you to either screen or provide individual education without a referral, you will need to obtain a referral before the event from the appropriate referring practitioner, and have it on-site. If your state or country professional practice law does not allow you to screen or educate an individual without supervision, you will need to arrange for this supervision during the event.

Insurance and Risk Management

Special Olympics provides both professional and general liability coverage for health care and general volunteer services provided under its auspices. It is recommended that physical therapy professionals who participate in FUNfitness have their own primary professional liability insurance to cover the services provided. This could be individual insurance or employer insurance that covers off-site events. Individuals will need to check with their employers and/or supervisors well in advance to verify if employer insurance will cover them for this activity. If you do have professional liability insurance, the Special Olympics coverage is a secondary insurance. If you do not have primary liability insurance, the Special Olympics coverage is your primary insurance.

Each Healthy Athletes volunteer must also sign the Hold Harmless Agreement with Special Olympics in order for all parties to be protected from litigation. Volunteers should insert their name, license number and the status of their liability coverage, and sign in the appropriate place. An employed representative of the state or country Special Olympics Program should sign on behalf of Special Olympics.

Specific questions about coverage can be addressed directly to Special Olympics Legal Counsel, at +1 (202) 824-0209

ORGANIZATION

Getting Help

Delegating responsibilities well ahead of time will help to make the planning process go smoothly. The following are roles and responsibilities that the FUNfitness state or country clinical director might delegate:

Event coordinator (the major role of the clinical director)

The event coordinator is responsible for working with local programs and sites to coordinate the event. Many programs now have a “Healthy Athletes Coordinator” who will be a key contact person for this. He/she should work closely with the Special Olympics Program to decide on site size and location, hours of screening, equipment needed, and provision of amenities (food, water, gifts) for volunteers. This person should also develop methods to encourage athletes to attend the event. He/she should work with local medical and professional groups to strengthen ties between the sponsors and the local community.

Volunteer coordinator

The volunteer coordinator is responsible for recruiting and scheduling volunteers. This person should work with the Special Olympics Program to decide when and how the Special Olympics volunteer orientation will be completed. The volunteer coordinator should also provide orientation and training to volunteers in the FUNfitness screening, as well as maps and parking information. On-site assignments and definition of responsibilities are included in the position’s duties.

Media spokesperson

The media spokesperson is the primary contact for media information. He/she will organize interviews about the event (before, during and after the event). The spokesperson should work with the local Special Olympics Program director or media person to coordinate and plan publicity. Some of the FUNfitness publicity might be rolled into usual Special Olympics Games media information. Ideally, the media spokesperson should have prior experience with the media, think well on his/her feet and have good writing skills.

Fundraiser

The fundraiser solicits contacts and funds for the event. He/she should have a fact sheet with information about Special Olympics, Healthy Athletes, FUNfitness and physical therapy to share with potential supporters. Information is available from the APTA Web site, www.apta.org/Consumer, or the Special Olympics Web site, www.specialolympics.org.

The Host professional organization may consider creating a budget line for state Games if it wishes to host FUNfitness yearly. Money may also be solicited from local businesses or fraternal organizations, especially if their names are associated with the event. Local or regional universities or schools might donate for publicity, a school challenge or a service-learning project. The sponsor may then create a budget line for future donations.

All sponsors should be publicly recognized at the event for their support. A thank-you note or letter should also be sent to all sponsors. This recognition will reaffirm your appreciation for their participation in the FUNfitness event.

Possible costs to keep in mind

As you plan the event, you might want to consider possible costs of the following:

- Equipment rental
- General education materials
- Gifts for athletes
- Food and drinks for volunteers
- Postage for mailings
- Photography
- Reimbursement for parking
- Thank-you notes
- Gift for volunteers
- Signs
- FUNfitness materials (athlete score cards, pins)

Grants to support FUNfitness activities

Several types of grants are available to Special Olympics Programs to support the initiation and development of Healthy Athletes activities. For information about these grants, contact your Healthy Athletes coordinator Shantae Polk, Special Olympics Manager, FUNfitness, at +1 (202) 824-0239 or spolk@specialolympics.org

Healthy Athletes capacity grants are available to the Special Olympics Program and are designed to support the initiation and growth of Healthy Athletes activities. Requests for these grants, should be submitted at least 60 days before an event. The grants can be used for equipment, supplies, athlete and volunteer support, and promotion. FUNfitness Clinical Directors must work with the Special Olympics Program to identify needs for these grants. Contact the Healthy Athletes coordinator for your Special Olympics Program to request support for FUNfitness activities in your state.

Healthy Athletes development grants are available to the Special Olympics Program for developing the program and planning for growth and sustainability. These three-year grants, which range from \$10,000 to \$15,000 yearly, require a more thorough program proposal.

The Healthy Athletes impact grant is designed to evaluate the community and individual impact of the Healthy Athletes activities. These one-year grants are available to Special Olympics Programs to assess athlete compliance and health behavior change, as well as community program response to athlete need. For more information contact Shantae Polk, FUNfitness Manager, spolk@specialolympics.org, (202) 824-0239.

Volunteer Recruitment

Volunteers can be recruited via Physical therapy Listservs organized through your state or regional professional offices, contacting local practices, hospitals and rehab centers and by attending PT conferences, educational sessions and meetings. Schools for physical therapy and physical therapy assistant training are great sources for recruiting students and many programs require community service and related experiences. Faculty at these programs may also want to volunteer. Remember that recruitment process does take time, so you should start to find volunteers at least three months before your event. Once you or your state or country have hosted a FUNfitness event, you will have a

trained pool of volunteers. Consider creating a spreadsheet with information about your volunteers for future use (see forms, pg. 93).

Anyone who wishes to volunteer should be sent a FUNfitness volunteer form (see forms, pg. 83), a generic Special Olympics volunteer form, and the Special Olympics hold harmless agreement (see pgs. 87-88). Completion of these forms will verify licensure in the state where the event is being held, coverage by malpractice insurance and days/ hours of availability. Completion of these forms also allows the volunteer to be registered by Special Olympics as an official volunteer so he/she is covered by Special Olympics professional and general liability insurance for all activities performed in association with the event.

Each volunteer must participate in a Special Olympics orientation before taking part in an event. Your Special Olympics Program usually will give these orientations on-site, but may also arrange to give them ahead of time at local Special Olympics headquarters or at local sites.

Volunteers should also have a FUNfitness orientation before participating. It is a good idea to develop some type of orientation explaining the event, using the physical therapist guidelines and the education chapters of the manual. The materials have been developed and written so that orientations can be done in a variety of ways (meeting, videotape, conference call or mailing). A training video has recently been completed and can be accessed online at www.specialolympics.org. An actual group orientation may not be necessary, and may be difficult to organize. However, students often appreciate the opportunity to learn the event and practice ahead of time. We now have online videos for recruits to view. A 2-part video of the test protocol is also available online at:

FUNfitness part 1: <http://www.youtube.com/watch?v=UjLJe8EveBM>

FUNfitness part 2: <http://www.youtube.com/watch?v=x0jB3MSZ1Zs>

Send a letter or email to all volunteers to confirm the date(s) and time(s) that they are working at the event and any attire recommended or requested for the event. Schedule volunteers for a specific period of time (all day, morning or afternoon) with at least a 30-minute shift overlap in case the next volunteer is delayed. Tell volunteers to allow an additional 30 to 45 minutes before their shift to find parking and to check in at the Special Olympics volunteer table. The letter should include a site map with the location of the FUNfitness event and parking. Instruct volunteers to bring a pen, a goniometer and a tape measure. Instruct volunteers to bring few personal items, and to store them in a pocket or fanny pack. Each volunteer will receive a Special Olympics T-shirt to wear on the day of the event. This shirt will permit entrance at the event, and may be the ticket for lunch if it is provided by the Special Olympics Program.

Volunteers can be kept informed before the event with updates by e-mail or fax. A short note regarding publicity, sponsors or monetary support will maintain enthusiasm and create a sense of involvement.

Plan to give or send your volunteers some form of thank-you. A letter, note, certificate or T-shirt will reaffirm your appreciation for their participation in the FUNfitness event.

The basis minimum number of people to staff a full-day FUNfitness event is 12-15. These volunteers include physical therapists, physical therapist assistants, and/or student at flexibility, strength, balance, aerobic and education stations; and other volunteers at registration and exit stations, and as the event manager and athlete escorts. The volunteer numbers may need to be adjusted according to total numbers of participants expected at the Games and the projected hours of the Healthy Athletes events. Each clinical director should check with the Special Olympics state/country program coordinator to determine the potential number of participants registered to compete and the hours of the Healthy Athletes events. An estimated 40 to 50 percent of participants attend Healthy Athletes events. The clinical director should estimate the numbers of volunteers needed based on this expected participation, the size of the space available, and on the hours of coverage required.

Staffing During the Event

FUNfitness is made up of four screening stations:

1. Flexibility
2. Functional strength
3. Balance
4. Aerobic fitness

Screening	Area Tested	Test
Flexibility	Anterior Hip Muscles Hamstring Muscles Calf Muscles Shoulder Rotator Muscles	Modified Thomas Test Passive Knee Extension Passive Ankle Dorsiflexion Apley's Test
Functional Strength	Hip and Knee Extensor Muscles Abdominal Muscles Grip Shoulder and Scapular Muscles	Timed Sit to Stand Test Timed Partial Sit-up Test Grip Test Seated Push-up Test
Balance	Dynamic Balance Static Balance	Functional Reach Single Leg Stance Eyes open Eyes closed
Aerobic Condition	Step Test Alternative Walk Test Wheel Test	2 minute Step Test 5 minute Wheel Test

In addition to the screening stations, the FUNfitness event includes the following stations:

1. Registration Station
2. Education Station
3. Exit Station

Stations	Number of Volunteers
Registration	2-4 registrars (PT, PTA and Student) to help fill in the top of the Score Sheet, and to explain the event.
Screenings (4)	10-12 physical therapists 10-12 assistants or students Each station is staffed by a "team" of a physical therapist, and an assistant or student.
Education	2-4 Assistants or students 1-2 Physical therapists to supervise the assistants or students
Exit	2 PT to check forms. 2 PTA, students or general volunteers to hand out pins and gifts.

Additional volunteers

- Rovers—at least two volunteers to direct and supervise the stations and the flow of athletes in the event.
- Escorts—four to eight persons (physical therapist, physical therapist assistant, student, others) to accompany athletes to each test station

PREPARING FOR YOUR EVENT**Event space and set-up**

The space needed for the event is at least 40 feet by 50 feet. Additional space measuring at least 50 by 15 ft is needed if you are performing the wheel test. The furniture and equipment needs to be delivered to your event site on the day of the event. Arrange a set-up time with your local event director on the basis of when your event is scheduled. Allow two hours and at least two people to set up. Set up your banner, equipment, supplies and internal signs.

Preparation of the HAS data form

You can add information to the header of this electronic form (Date, Event, Location and SO Program) before you print a copy for each of your events.

EVENT FLOW**Registration**

The registration station is the first stop. Volunteers should clearly and briefly explain the screening, and show athletes what will happen in the FUNfitness event. The athlete is asked to provide information for the top portion of the FUNfitness score sheet. If the athlete is less than 18 years old, he or she should be accompanied by a parent/guardian or coach. The parent or coach, or volunteers at the registration station may assist the athlete in completing the form, if necessary. (See sample dialogue at the end of this chapter.)

Athletes and families sign a blanket consent form when they register to participate in the Games. This form covers not only participation in Games, but in Healthy Athletes events. Check with your Healthy Athletes coordinator to make sure that the consent form used by your program covers Healthy Athletes activities. Ask your Special Olympics b Program to give you a list of all athletes who have signed these consent forms for use on site. If the athlete and family have not signed the consent form, ask them to sign the specific Healthy Athletes Consent form at the FUNfitness registration station.

Volunteers will give athletes a score sheet with their name on it. Athletes should carry this form from station to station.

Screening stations

Escorts will then direct the athletes to one of the screening stations (flexibility, functional strength, balance or aerobic fitness). At each of the stations, several screening tests may be administered (see staffing during the

event section above). An athlete can start at any test site, but the rovers must control the direction of athlete flow through the event.

Once an athlete has begun, he/she will continue through all tests before going to the education and exit station. Note: at all times, the athlete participates in the screening voluntarily. An athlete may choose not to do some tests, may not understand some of the tests, or may be unable to perform some of the tests. Education and exercises can still be provided even if all of the tests are not completed.

The screening stations can be set up several ways:

1. One physical therapist or a student under the supervision of a physical therapist (with a physical therapist assistant) can be assigned as a team to each test site. A test site can do one or more measurements (like hamstring and calf muscle length), or do all of a category of measures (like flexibility). A total of four stations with twelve screening tests should be recorded before the athlete proceeds to the education or exit station. Athletes may refuse to participate in some of the tests.
2. One physical therapist and a physical therapist assistant or student can be assigned as a team to a testing site. This physical therapist, or the student under the supervision of the physical therapist team will perform all tests on an individual athlete with the assistance of the physical therapist assistant. A total of twelve screening tests should be recorded before the athlete proceeds to the education or exit station.

All can be any one of the following possibilities:

- a. All tests and education at individual screening stations
- b. All tests except education, which is set up as separate station
- c. All tests at each station except aerobic fitness, which is set up as a separate station

Regardless of how the venue is set up, ideally, a physical therapist or physical therapy student under the supervision of a physical therapist performs the specific test as outlined in the screening manual. Various volunteers, including the physical therapist assistant, student, coach, or other volunteers may assist with the measurement and with recording the measurement. The volunteer who is assisting should also check the education box. Guidelines for when to provide education are included on the score sheet by each test.

Education station: Once all screening stations are completed, athletes will be escorted to the education station. A physical therapist will supervise and direct the activities in the education station. The therapist, assistant and students will instruct the athletes in exercises for the areas identified on their score sheet (an “X” in the education box) and score card. Each exercise will be demonstrated by the therapist, assistant or student, and then performed by the athlete and any others in attendance who live or work with him/her. Other Special Olympics athletes might also be on hand to demonstrate the exercises to their peers. When necessary the physical therapist performing a test can educate the athlete at the same time, and eliminate the need for an Education station.

Exit station: Once the athlete has completed all stations, he/she will be escorted to the exit station. Volunteers will collect the FUNfitness score sheet and give each athlete a FUNfitness pin and/or gift. Exit staffers will make sure that each athlete has his/her athlete score card with the appropriate exercises checked.

The Physical Therapist working at the exit station should review the HAS form to insure that all data is correctly entered. They will also review the form and decide if a referral for Physical Therapy or Primary Care Physician should be checked (Guidelines for consideration of referral are included in the Test Protocol chapter). The FUNfitness score sheets for data entry will be saved and given to the Special Olympic program for data entry.

During the day

The key to successful screening is flexibility. The structure and assignment of volunteer staff may need to be adjusted to accommodate athlete numbers. Volunteers can rotate sites for some variety, especially if they are working more than one shift. If the event gets very busy, one physical therapist may do two or more tests to speed up the flow.

All equipment and measuring devices should be wiped frequently with a cleansing agent. Hand sanitizer should be available for use by volunteers, as water for hand washing is usually not available.

End of the day

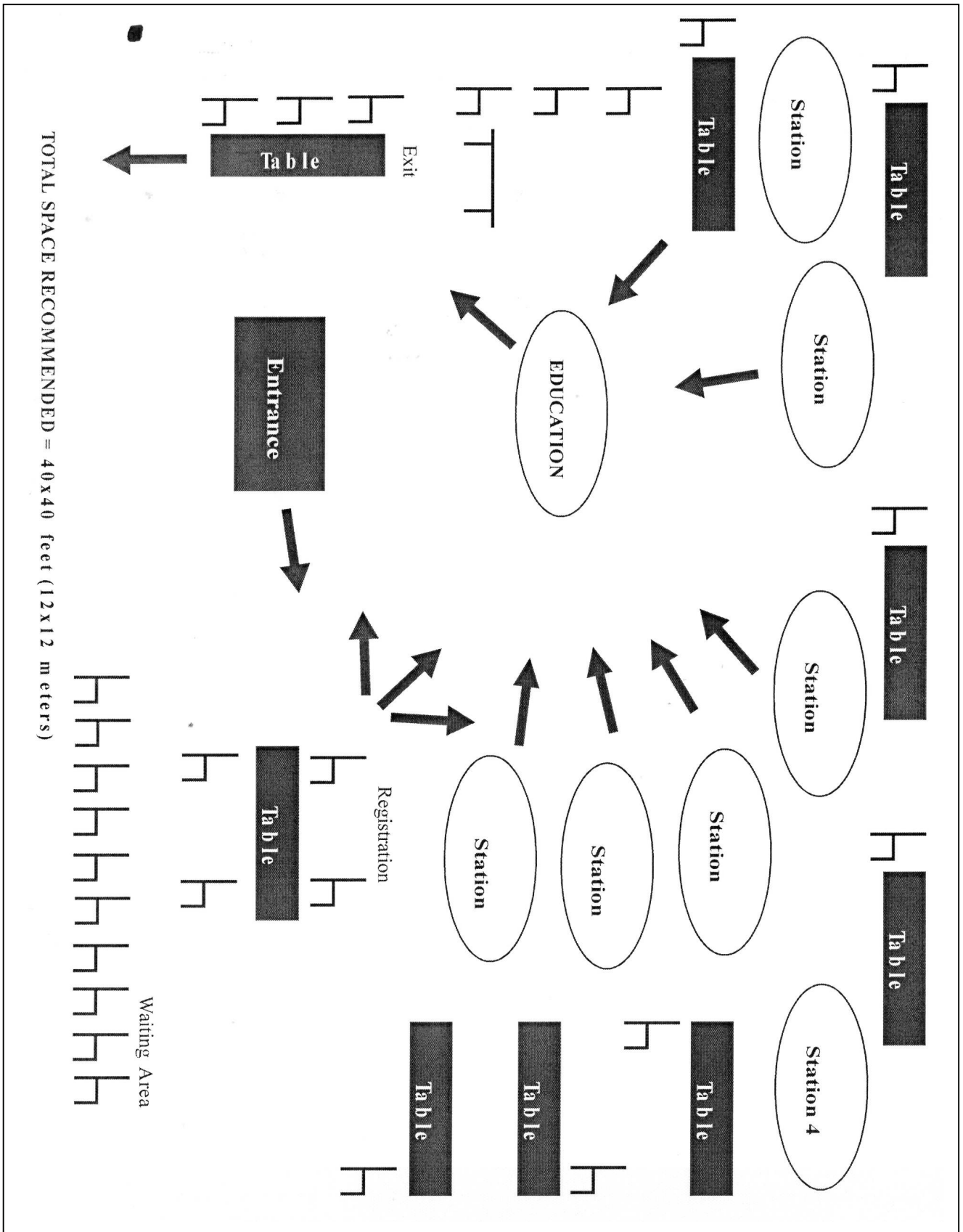
At the end of the day, clean the event site and leave it as it was found. Place all trash in appropriate containers as noted by the Special Olympics Program director. Remove any items that you brought with you, including personal belongings.

End of the event

At the end of the event, remove any equipment and supplies that you furnished. Return equipment furnished by local businesses, or make arrangements for pickup. Equipment furnished by the local Special Olympics should be left as it was found. It will take approximately four persons one to two hours to close the event.

Data Entry

The Clinical Director needs to work with their SO Program to identify a protocol for managing the HAS forms and data entry. A process for follow-up with any athletes who require physical therapy or other health services should also be developed.



Promoting Your Event

Before the event

Contact your SO Program to determine if you should send any specific news releases to local newspapers and radio stations two to three weeks before the event. If you need a media list, check with the SO Program to see if they have a list, or call local media outlets to get the names of the persons to whom the releases should be sent. A sample press release is located at the end of this section.

Select a spokesperson (or several) who will be available to speak to media if they wish to do interviews before, during or after the event. It is helpful if the spokesperson has had prior experience with the media.

In all cases, it is advisable to talk with your Special Olympics Program director regarding what should be released to the media.

News releases

The news release is the basic and most accepted method of conveying information to many media sources. The classic organization of a news release is the inverted pyramid, with the facts of the story (who, what, when, where, why and how) appearing in descending order of importance. When writing a news release, use short and concise sentences and paragraphs. Use words that are familiar to the public; avoid physical therapy jargon. A news release is usually one page long. Print it on your letterhead using a format similar to the one on page. It should be double spaced and should include the name, address, telephone number and e-mail address of the person the reporter can contact for more information.

A sample press release has been prepared by Special Olympics Healthy Athletes, and APTA. You can use this release as a basis to produce a local press release, or create your own.

Another alternative for the media is a fact sheet (see sample at the end of this chapter). This is a one-page reference sheet that contains the basic facts of the event in outline form. It gives a reporter essential “at-a-glance” information about the event.

Work with the local media to coordinate and plan publicity. Use local TV and radio as well as newspapers for public awareness. Local businesses may wish to sponsor advertising, and you can also use public service announcements (PSAs), which are free. If you need specific assistance with writing a news release, contact the public relations department of your professional association for advice and direction.

Photography

Athletes, or their parents or guardians, sign a form when they register to compete that provides blanket permission for the use of photographs of athletes taken on site and in conjunction with the Games and their associated events. This release permits the use of photographs for related articles only, not for marketing or soliciting funds. Before taking a photo of anyone you should always ask for their permission.

You may take the photos yourself, or hire a professional photographer. If you plan to submit your photographs to local media, send the standard 5" X 7" size or a digital photo.

Here are some tips for successful photographs:

- Use a 35-mm camera with a flash attachment, or a digital camera.
- Take "tight" shots of a physical therapist and participant. Tight shots are least cluttered and most interesting.
- Angle your shot to add depth.
- Identify the photograph on a separate sheet so you will can identify the persons in the photograph

Research

The score sheet is used to collect data on both the exercise behaviors of the athletes and the physical components of fitness (flexibility, strength, balance and aerobic fitness). The FUNfitness event, the score sheet, and the data collection process have been designed to enhance standardization of measurement and recording. The long-term objective is to develop a database about athletes with intellectual disabilities who participate in Special Olympics.

Special Olympics has developed a collaboration with HealthOne Global Ltd. to develop a Web-based system for Healthy Athletes. This system, called Healthy Athletes Software System (HAS), was introduced at the World Summer Games in Dublin, Ireland, in 2003. It will ultimately be available to every state and country for data entry and report generation.

Data are currently being collected on the paper score sheets that you can print from the Special Olympics Web site. These data are manually entered into HAS. It may eventually be possible to enter data into personal digital assistants and upload them directly into HAS. Always consult the SO website for the most current version of the HAS form prior to doing a screening.

The next step is to encourage states and countries to begin entering their own data. A start-up primer is being distributed to all clinical directors to walk them through data entry. Special Olympics and HealthOne Global can create a practice Web site to learn data entry. Each clinical director will be responsible to oversee entering the discipline data, including training the data entry person(s). The clinical director has several alternatives for data entry that should be explored with his/her Special Olympics Program director:

- Special Olympics staff might be trained to perform data entry.
- Special Olympics volunteers might be trained for data entry.
- Professional students might perform data entry.

The clinical director and the Special Olympics Program director should decide what method of data entry is feasible, then plan who will enter the data and how they will be trained. The ideal method is to contact the data management coordinator at Special Olympics before the Games to create a data site and populate this site with the participating athletes. Data can then be entered at the Games site if electricity, an Internet connection and computers are available. If that is not possible, data should be entered within 30 days following the Games.

Special Olympics maintains overall ownership of the data, and has permission to use these data in the aggregate for scientific purposes. Each Special Olympics Program retains ownership of the athlete data collected at events in its state or country, and should be queried regarding use of any Healthy Athletes discipline data. If a volunteer wishes to use data, the volunteer should contact Special Olympics Research Department for permission. The volunteer will need to submit a proposal to use the data. The proposal should include resumes of the principal investigators, a brief description of the project, the data requested, the intent of the project and the general data analysis methods. An institutional review board (IRB) approval, including an appropriate consent form, must also be submitted. If the services of an IRB are not available, Special Olympics can convene its own review board to evaluate the project. Special Olympics must review the project results and any materials prepared for presentation or publication before their submission.

Student grants are available each year for students training to become physical therapists or physical therapist assistants. These grants, usually for approximately \$2,000 to \$4,000, are for exploration and research into the components of the FUNfitness event, the data or interventions with people who have intellectual disabilities. These grants are available through the Special Olympics Research Department (aharris@specialolympics.org).

Sample dialogue at the Registration Station to explain FUNfitness screening

- Welcome to FUNfitness.
- We are physical therapists.
- We are doing some tests to see
- How flexible you are,
- How strong you are,
- How good your balance is, and
- How physically fit you are.
- After we do each test, we will write down some numbers on this form.
- If we think you need to do exercises to improve your flexibility, strength, balance or physical fitness, we can show you some exercises that can help you do better in your competitions, or that will help you move better.
- We also can recommend that you work with a physical therapist after today.
- You do not have to do these tests if you don't want to.
- Would you like to do a FUNfitness screening with us?
- If so, please sign your name here.

Sample dialogue at the Exit Station to verify permission to use the FUNfitness data

- Thank you for doing the FUNfitness screening.
- We are collecting the data forms on the athletes who do these tests.
- We enter the information on this form into a computer.
- We can then see how all the athletes do on these tests.
- This use of information is called research. It helps us plan better health services and tell others about the services that are needed.
- Whenever we use this information, we will keep your name private, so no one will know your information specifically.
- You do not have to let us use this information if you don't want to.

- Would you let us keep this information about you in our computer?
- If so, please sign this form.

FUNFITNESS VOLUNTEERS ROLES AND TASKS

Role: Registration Station Volunteer

Tasks

1. Greet athletes and welcome them to FUNfitness.
2. Ask if they have mailed in a signed Healthy Athletes consent form.
 - a. Check master Healthy Athletes consent form list in alphabetical order.
 - b. If there is no completed consent form, athletes must complete one on the spot. If they are over 18 years old, their signature is sufficient. If they are under 18 years old, they must have a guardian or adult who is with them sign also.
3. File any new consent forms in alphabetical order in an accordion file folder, so if the athletes return on the same or the following day, they can be easily located.
4. If an athlete does not have an ID badge, use an index card to create a temporary badge. Write the athlete's name on it and apply a colored dot indicating FUNfitness. The athlete can use the index card throughout the Healthy Athletes area and leave it at the exit station (in case they return to Healthy Athletes later or the next day).
5. Explain to the athletes that there are four stations for them to complete. They will receive a special dot for completing FUNfitness.
6. Place the athlete's FUNfitness score sheet and an athlete score card on a clipboard.
7. Assign a guide to the athlete or to a group of athletes who come together.
8. Encourage athletes to visit stations that aren't too busy.
9. Encourage athletes to complete all the tests in FUNfitness.

FUNFITNESS VOLUNTEERS ROLES AND TASKS

Role: Exit station volunteer

Tasks

1. Collect any completed FUNfitness forms (and any miscellaneous reporting forms from screening venues). Place these in a Completed Box. PT at exit should check forms before collecting to assure that all tests are complete. File any incomplete forms in alphabetical order in another box in the event that the athlete returns.
2. Give athletes a Healthy Athletes lapel pin for attending FUNfitness (this is a general attendance prize available to each athlete).
3. Give athletes a FUNfitness goody bag with prizes.
4. Place a FUNfitness dot on the back of the athletes' ID badges. If they have at least four dots, they get to pick a grand Healthy Athletes prize (posters, water bottles, coin purses, gift certificates).
5. Encourage them to attend other venues in the Healthy Athletes event.
6. If athletes need help going to a competitive event, find an escort to assist them.

FUNFITNESS VOLUNTEERS ROLES AND TASKS

Role: Escort/Guide

Tasks

1. As athletes enter FUNfitness after registering, greet them and escort athlete(s) through the stations. Try to stay with one or a small group of athletes as possible as they move all stations.
2. Monitor number of athletes at various stations and guide them to less busy areas if there is a waiting line or crowd.
3. Try to make certain that the athlete completes all the stations.
4. Guide them to the Exit when all stations are completed.
5. Ask them when their next competitive event is and help them keep track of time so they don't miss their event. Allow 30 min. for them to be at their event prior to the start of time. Escort them back to their competitive event if they need assistance getting there.
6. If an athlete leaves FUNfitness without completing all stations, make certain that the partially completed form gets back to the Entrance station for filing in a special accordion file.

FUNfitness CLINICAL DIRECTOR EVENT CHECKLIST**Initial Planning (9–12 Months Prior to the Event)**

- Arrange initial meeting between clinical director and a Special Olympics Program representative to discuss:
 - Games at which to HA events will take place
 - Number of athletes attending Games or participating in Healthy Athletes
 - Facilities/space needed
 - Equipment required
 - Individual and joint publicity and fundraising options
 - Special Olympics volunteer orientation sessions and materials
 - Risk management issues
 - Food and water supplies
- Contact appropriate state or community and local health and medical associations to discuss any partnership opportunities and any state/county restrictions regarding your event.
- Develop a potential fundraising plan to support your event, if needed.

Event Preparation (4-8 Months prior to the Event):

- Review equipment list and any additional needs, and arrange for purchase or rental of equipment.
- Determine items to be in the FUNfitness gift kit for athletes, and initiate ordering.
- Develop community sources of funding for necessary items, if necessary, in conjunction with your Special Olympics Program.
- Order FUNfitness pins, thera-bands, and athlete score cards from Special Olympics.
- Recruit local physical therapists, physical therapist assistants and students as volunteers.
- Send out volunteer sign-up sheets, Special Olympics volunteer sheets, and hold harmless agreements.
- Create a volunteer spreadsheet and a volunteer contact e-mail group.
- Develop a volunteer schedule.
- Notify each volunteer of his/her proposed schedule, and general Special Olympics Games information.

Two to four months prior to the event:

- Set up volunteer orientations for both Special Olympics and FUNfitness.
- Determine volunteer attire for event.
- Choose and arrange recognition of volunteers and sponsors (letters, thank-you notes, gifts).
- Provide information to media personnel for the press release.
- Arrange for photographic coverage of your event.
- Keep in contact with your volunteers — send updated information, parking sites and maps.

One month prior to the event

- Arrange for delivery and return of equipment.
- Arrange for set-up and breakdown of event space.
- Send last-minute information to volunteers.
- Encourage volunteers to view training video
- Contact your media regarding on-site coverage of your event.

Day of the event

- Arrive early to set up equipment and signs.
- Arrange give-away items in a safe area near the exit station.
- Review responsibilities with volunteers, and review tests and data form.
- Conduct a “dry run“ if time permits.
- Review plans with your media person and photographer.
- Clarify schedule and clean-up plans.
- Supervise and participate in the event.

Event Closure

- Arrange for return of equipment and breakdown of site.
- Collect data forms.
- Clean up screening area.
- Pack up all extra supplies and gifts.

After the Event

- Send thank-you notes and certificates to all volunteers and sponsors.
- Request input regarding event from all volunteers and Special Olympics personnel.
- E-mail photos to volunteers and Special Olympics..
- Publicize your event in local and professional newsletters.
- Send a news release and photo to your national professional group.
- Arrange for entry of data forms.
- Complete and submit the Special Olympics FUNfitness Event Summary form.

MEDIA FACT SHEET

- FUNfitness is the result of a professional relationship between American Physical
- Therapy Association (APTA) and Special Olympics.
- APTA developed, piloted and revised FUNfitness in 1999 and 2000.
- FUNfitness was premiered at the Special Olympics Winter World Games in
- Anchorage, Alaska in March 2001.
- FUNfitness is a fitness screening performed by physical therapy professionals for
- Special Olympic Healthy Athletes.
- The purposes of FUNfitness are to assess all components of fitness; to educate athletes, families and coaches about the importance of fitness; and to provide a hands-on opportunity to learn about the role of the physiotherapist in fitness.
- Physical therapists assess
 - flexibility of the hamstring, calf, shoulder rotator, and hip flexor muscles;
 - functional strength of the abdominal, and upper and lower extremity muscles;
 - static and dynamic balance; and
 - aerobic fitness (2 minute Step Test, Wheel Test, or 3 minute Walk Test).
- Physical therapy professionals also instruct athletes on ways to become more fit, and to train year-round for better performance.
- Training sessions are held each year to train physical therapists from around the world in the development of the even in their countries.

SAMPLE**FOR IMMEDIATE RELEASE****Contact: Media Spokesperson
Telephone Number****Month/Year****PHYSICAL THERAPISTS FROM AROUND THE GLOBE
MAKE FITNESS FUN AT SPECIAL OLYMPICS WORLD GAMES***Physical Therapists Conduct Flexibility, Strength, and Balance Assessment for Athletes*

NAGANO, JAPAN, FEBRUARY 27, 2005 - Physical therapist members of American Physical Therapy Association from Massachusetts, Montana, and North Carolina joined with physical therapy professionals from other countries to host FUNfitness, a fitness screening assessment program for athletes at the Special Olympic World Winter Games.

“APTA is delighted that the screening event they developed in their partnership with Special Olympics is offered at the Special Olympics Games. “As experts in neuromuscular and musculoskeletal dysfunction, physical therapists are able to give excellent feedback to athletes about their flexibility, functional strength, and balance,” stated Donna Bainbridge, PT, EdD, ATC, Special Olympics Global Advisor for FUNfitness.

FUNfitness is part of the Special Olympics Healthy Athlete Program, which was developed to educate participants and give them access to health care they need and often don't receive. The current FUNfitness event is an outgrowth of pioneering efforts of the North Carolina chapter at the World Summer Games in 1999. At World, Regional, Country and State games, physical therapists assess flexibility of the hamstring, calf, anterior hip, and shoulder muscles, functional strength of the abdominal and leg muscles, and balance of Special Olympics athletes. They also instruct athletes, family members, and coaches on how to improve these areas of fitness through specific exercises. Each athlete receives a personalized FUNfitness scorecard that

illustrates how certain muscles are used in sports and the appropriate exercises to stretch and strengthen each muscle group.

The states and countries who participated in the FUNfitness program were:

- Australia,
- Brunei,
- China and Chinese Taipei
- Indonesia,
- Japan,
- Macau,
- Malaysia,
- Namibia,
- Singapore,
- South Africa,
- Thailand

The American Physical Therapy Association is a national professional organization representing nearly 70,000 members whose goal is to foster advancements in physical therapy practice, research, and education.

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Special Olympics

Healthy Athletes 
FUNfitness

**Chapter 3
Physical Therapist
Guidelines**

Flexibility

HAMSTRING FLEXIBILITY

Supine (Passive) Knee Extension

Athlete testing position

- Athlete is positioned supine on a table or mat.
- Hip and knee of the side to be measured should be flexed to 90 degrees.
- Athlete, physical therapist assistant (PTA) or student maintains hip position at 90 degrees flexion.

Physical therapist (PT) position

- PT stands beside the leg to be measured with eyes level with the leg.
- PTA or student stands on the opposite side to assist with passive knee extension.

Goniometer alignment

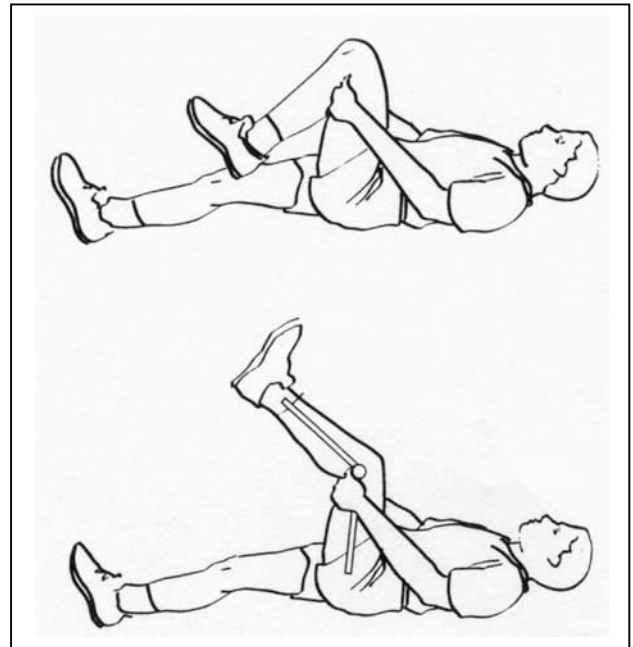
- Align the proximal arm of the goniometer with the lateral midline of the femur, using the greater trochanter as a reference.
- Align the distal arm of the goniometer with the lateral midline of the fibula, using the lateral malleolus as a reference.
- Center the fulcrum of the goniometer over the lateral femoral epicondyle.

Measurement

- Athlete (or PTA/student) is instructed to hold the thigh in 90 degrees of flexion, and relax the lower leg..
- Ankle should remain in neutral or plantarflexion.
- PT passively straightens the knee as far as possible without pain.

Recording

- Measure the angle between the thigh and leg.
- If the knee goes fully straight, record the final value as 0 degrees.
- If the knee does not go straight, record the value as negative (e.g., -40).
- If the knee goes beyond the fully straight position into hyperextension, record the value as positive (e.g., +5 degrees).
- Repeat the measurement on both sides.
- Flexibility of -15 degrees or more or asymmetry may indicate need for education.



Example: PT moves the knee to maximum extension, but participant is 40 degrees from the 0 position. This is recorded as -40 degrees extension. When measuring flexibility, please note it is imperative to indicate whether a result is positive (+) or negative (-).

CALF MUSCLE FLEXIBILITY

Supine (Passive) Ankle Dorsiflexion

Athlete Testing Position

- Position the athlete supine on a table or mat.
- Position the hip and knee on the side to be measured in as much extension as possible.

Physical therapist position

- PT is seated or squats on the side to be measured with eyes level with the leg.
- PTA or student is positioned by the foot to assist with recording.

Goniometer alignment

- Align the proximal arm of the goniometer with the lateral midline of the fibula, using the fibular head as a reference.
- Align the distal arm of the goniometer parallel to the lateral midline of the fifth metatarsal.
- Center the fulcrum of the goniometer over the lateral aspect of the lateral malleolus.

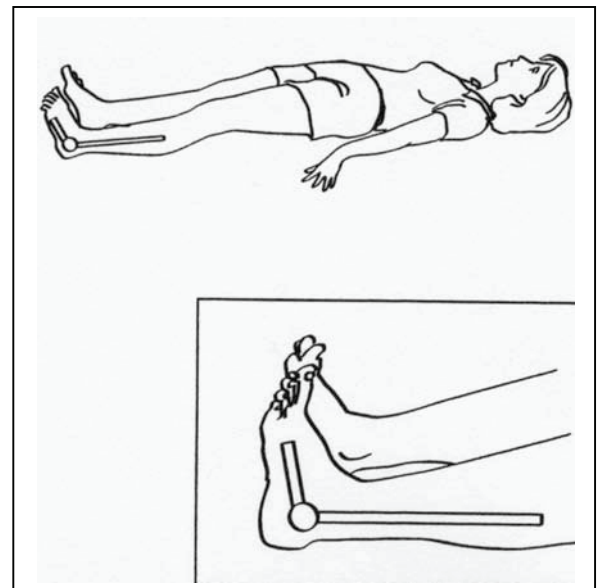
Measurement

- Athlete is instructed to relax the foot and ankle.
- Knee should remain in extension during the measurement.
- PT should passively dorsiflex the ankle (grasp and pull down on the heel while pushing up on the foot with the forearm).
- Repeat the measurement on both sides.

Recording

- Measure the angle between the leg and the foot. Neutral position (0 degrees) is a right angle between leg and foot.
- Record the actual angle in relation to the neutral position.
- If the athlete cannot reach neutral position (0 degrees) and remains in a plantarflexed position, record the angle as negative (e.g., -10 degrees).
- If the athlete goes beyond neutral into dorsiflexion, record as positive (e.g., +10 degrees).
- If athlete only reaches neutral, record as 0 degrees.
- Repeat the measurement on both sides.
- Flexibility of less than +10 degrees, including any negative numbers (e.g., -10 degrees), or asymmetry indicate need for education.

Example: Athlete relaxes, and PT is able to move the ankle to 10 degrees beyond neutral. The recording is noted as +10 degrees dorsiflexion.



ANTERIOR HIP FLEXIBILITY

Modified Thomas Test

Athlete testing position

- Athlete is positioned supine on a table or mat.
- Both hips should be flexed to 90 degrees.
- PT supports hip to be measured.
- Athlete, PTA or student maintains the opposite hip in 90 degrees flexion.

Physical therapist position

- PT stands on the side to be measured.
- PT supports the leg with one arm, and places the other hand on the anterior crest of the pelvis.
- PTA or student stands on the opposite side and supports the opposite leg with the hip in 90°

Goniometer alignment

- Align the proximal arm of the goniometer with the lateral midline of the pelvis aiming at the axilla.
- Align the distal arm of the goniometer with the lateral midline of the femur as a reference.
- Center the fulcrum of the goniometer over the lateral aspect of the hip joint, using the greater trochanter as a reference.

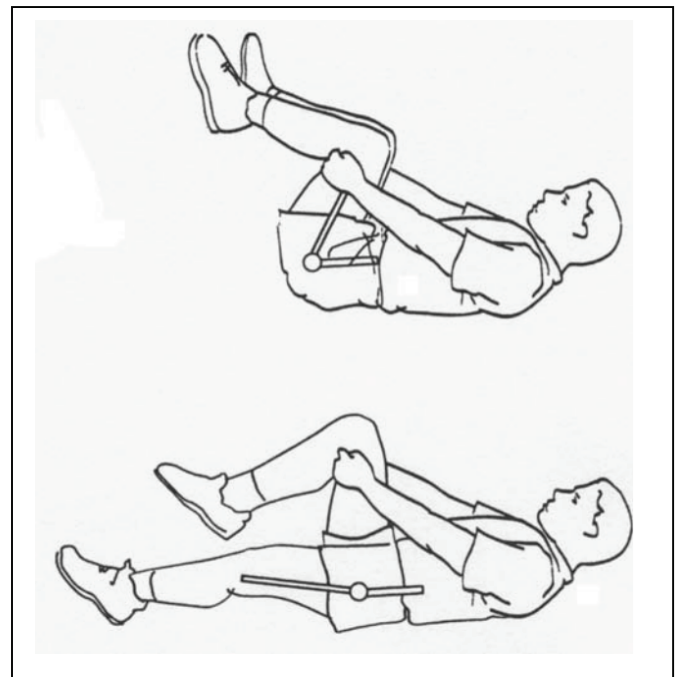
Measurement

- PT flexes the hip to be measured to 90° degrees.
- Athlete is instructed to “relax and let me lower your leg.”
- PT lowers the leg passively until the pelvis begins to rotate forward under the hand.
- Opposite hip should not be allowed to move into extension during the test.
- PT may want to move the leg up and down to feel the rotation of the pelvis or change in pressure under the low back. Keep a hand beneath the lower back to ensure that it remains flattened.

Recording

- The point at which the pelvis moves forward is the end of the test.
- At this point, the angle between the pelvis and thigh is measured.
- If the thigh lowers to the table surface, the result is recorded as 0 degrees.
- If the thigh does not reach the table, the angle is recorded as negative (e.g., -25 degrees).
- Flexibility of -10 degrees or more or asymmetry indicate need for education.

Example: PT moves the leg from the 90-degree position to 50 degrees. Record -40 degrees, as participant lacks 40 degrees of full extension (0 degrees).



FUNCTIONAL SHOULDER ROTATION

Modified Apley's Test

Participant testing position

- Athlete stands or sits across a chair, facing the back. (Athlete may also sit in a wheelchair.)
- Athlete is instructed to reach one arm behind the head and down the back, while the other arm reaches behind the hip and up the back.

Physical therapist position

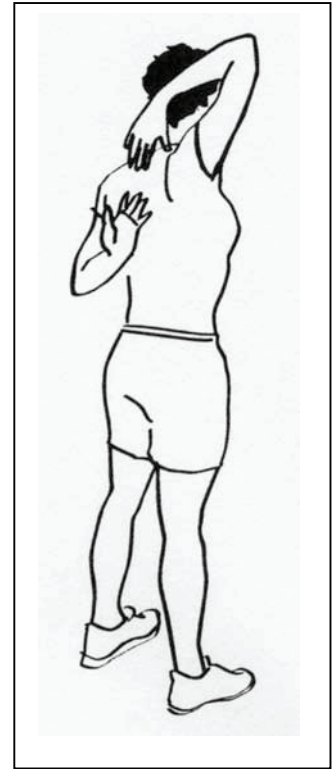
- PT demonstrates the test.
- PT then stands behind the athlete.
- PTA or student stands in front of the athlete for safety.

Measurement

- PT demonstrates the test position.
- Athlete is instructed to “try to touch your index fingers together.” (one arm is in flexion/abduction/lateral rotation; the other is in extension/adduction/ medial rotation).
- The measurement is the distance in centimeters between the index fingers

Recording

- Use a tape measure to measure the distance between the index fingers.
- Determine the side being recorded by the arm on top (i.e., left arm on top = left; right arm on top = right).
- If the fingertips touch, record the distance as 0.
- If the fingertips cannot touch, record the separation as negative (e.g., -15.2 centimeters).
- If the fingers overlap, record the overlap as positive (e.g., + 2.5 centimeters).
- Symmetry occurs if each arm reaches equally toward the middle (approximately T7) or at the level of the inferior angle of the scapula.
- Asymmetry occurs if the arms do not approach the midline evenly (i.e., one arm is more flexible and overreaches the midline, or is less flexible and cannot approximate the midline).
- Mark the flexibility of each arm for both the left and right sides.
 - Within normal limits
 - More flexible than normal
 - Less flexible than normal
- Repeat on both sides and record on the score sheet.
- Numbers higher than -15 centimeters (e.g., -18 cm.) or asymmetry indicate need for education.



Strength

TIMED-STANDS TEST

Sit to Stand with No Assistance

Description

The timed-stands test is a simple method to quantify functional lower extremity muscle strength (hip and knee extension). The test requires the athlete to complete 10 full stands from a seated position as quickly as possible without the use of the arms.

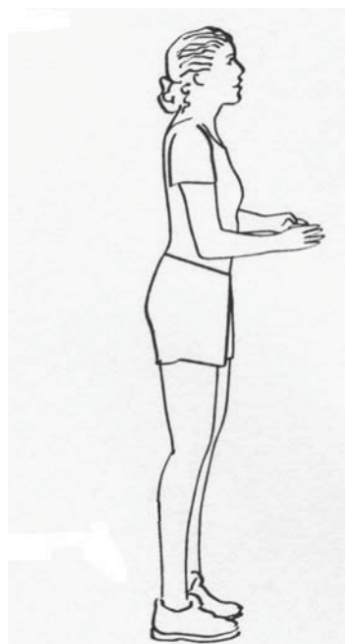
Mode of administration

- Have athlete sit on a firm straight-backed chair
- Use pieces of hard foam or wood to adjust the height of the chair seat and/or to position the feet flat on the floor as necessary with hips and knees at a 90° angle.
- Have the athlete position the arms by the sides with the elbows flexed to 90 degrees.
Arms remain in this position for the entire test.
- Athlete is instructed to “stand from sitting, then sit down again, without using your arms. Repeat this 10 times as quickly as possible.”
- PT demonstrates the test.
- PT tells the athlete to start with a “ready, set, go.”
- PT, PTA or student stands beside the athlete in case the athlete loses his/her balance during the task.

Scoring

- PT or PTA starts a stopwatch or timer when he/she says “go.”
- Timer continues until the athlete **sits down** from the 10th stand.
- Record the time to perform the task in seconds.
- If the athlete cannot perform 10 repetitions, note the number of repetitions in the time recorded.

Time greater than 20 seconds or inability to do 10 stands indicate need for education.



PARTIAL SIT-UP TEST

Strength/Endurance of Abdominal Muscles

Description

The partial sit-up test is a simple method to quantify abdominal muscle strength/ endurance. The test requires the athlete to complete 25 sit-ups within one minute from a supine position.

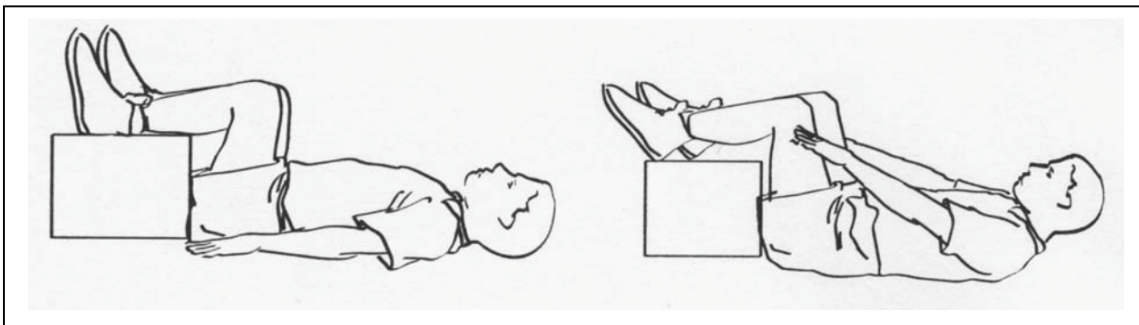
Mode of administration

- Participant is positioned supine on mat. If athlete cannot get on the mat, the test can be carefully done on a sturdy table
- Athlete's legs are flexed to 90 degrees hips/90 degrees knees and placed on a chair or stool.
- PT uses pieces of hard foam or wood to adjust the height of the stool if necessary.
- Athlete arms are positioned straight out in front of the chest with the elbows extended. Arms remain in this position for the entire test.
- Athlete is instructed to "lift your head and slowly sit up until you touch the target, then slowly lower back down again. Repeat this until I tell you to stop." "We want you to do as many as you can in one minute.
- PT must verify that the scapula has lifted off the mat.
- Goal is to have athlete do a partial sit-up, defined as sitting up until the base of the scapula clears the floor or table.
- PT demonstrates the test.
- PT coaches the athlete to begin when he/she says "ready, set, go."
- PT sits near the athlete to encourage the athlete to continue the task correctly.

Scoring

- PT or PTA starts a stopwatch or timer when he/she says "ready, set, go."
- Timer continues until one minute has elapsed or until the athlete does 25 sit-ups correctly.
- The number of sit-ups completed is recorded.
- The athlete can stop to rest momentarily, then begin again.
- If the athlete cannot continue for one full minute, the number of sit-ups completed is recorded.

The inability to do 25 sit-ups indicate need for education.



HAND-GRIP TEST

Strength of the Hand and Forearm

Description

The hand-grip test is a standardized method of assessing strength of the hand and forearm muscles, and has been correlated to upper extremity function. The test involves completing three grips on each side and recording the best value.

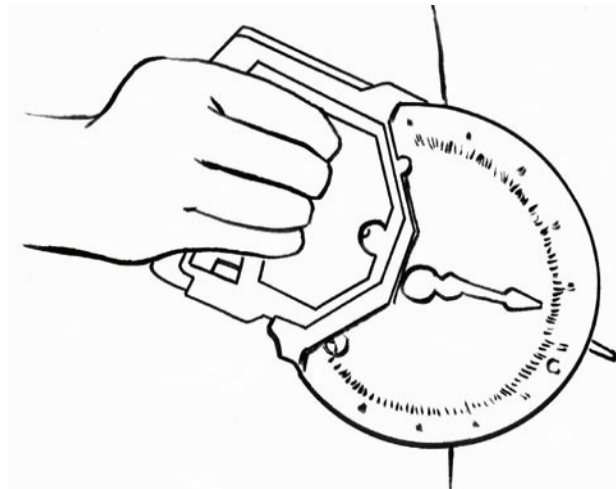
Mode of administration

- PT uses an adjustable hand-grip dynamometer.
- PT indicates the dominant hand on the form (hand used for eating or writing).
- PT explains to the athlete that
 - the athlete is not to move the rest of the body while squeezing; and
 - the athlete gets three tries to squeeze as hard as possible.
- PT has the athlete sit up straight in a straight-backed chair or wheelchair for the test
- PT demonstrates to athlete that he/she must keep the arm and hand at the side with the elbow bent to 90 degrees while squeezing.
- PT sets the dial to zero.
- PT coaches the athlete to begin when he/she says “ready, set, go.”
- PT instructs the athlete to do one strong squeeze (“as hard as possible”) for six seconds, then to let go.
- PT resets the dial to zero for the next trial.
- Each squeeze is followed by a test on the opposite side so the tested side can rest.

Scoring

- Record the results from each trial in **Kilograms**.
- Accept the highest squeeze as the final result
- Record the greatest grip in the space indicated on form.
- Compare the result for each side with the standardized 10th percentile norms for age and sex. See pages 50-51 for the hand grip norms by age.

A result below the 10th percentile of normal for age and sex may indicate the need for education.



Hand Grip Strength 10th Percentile Cut-offs By Age
All Measures in Kilograms (kgs)

Males			
Age	One Hand		Both Hands
10	5.5		11.0
11	8.0		16.0
12	11.5		23.0
13	14.0		28.0
14	19.5		39.0
15	27.5		55.0
16	34.0		68.0
17	35.0		70.0
18	40.5		81.0
19	42.0		84.0
	Right	Left	
20-24	44.5	40.8	85.3
25-29	42.6	39.0	81.6
30-34	40.8	37.2	78.0
35-39	39.0	35.4	74.4
40-44	36.3	33.6	69.9

Females			
Age	One Hand		Both Hands
10	5.0		10.0
11	6.0		12.0
12	9.0		18.0
13	13.0		26.0
14	13.5		27.0
15	15.5		31.0
16	16.5		33.0
17	15.5		31.0
18	15.5		31.0
19	18.0		36.0
	Right	Left	
20-24	21.8	18.6	40.4
25-29	20.9	17.7	38.6
30-34	20.4	17.2	37.6
35-39	19.5	16.3	35.8
40-44	18.6	15.9	34.5

45-49	34.5	31.3	65.8
50-54	32.7	29.5	62.1
55-59	30.8	27.7	58.5
60-64	28.6	25.4	54.0
65-69	26.8	23.6	50.3
70-74	24.5	21.8	46.3
75-79	22.7	20.0	42.6
80-84	20.9	18.1	39.0

45-49	18.1	15.0	33.1
50-54	17.2	14.5	31.8
55-59	16.8	13.6	30.4
60-64	15.9	13.2	29.0
65-69	15.0	12.2	27.2
70-74	14.5	11.8	26.3
75-79	13.6	10.9	24.5
80-84	13.2	10.4	23.6

SEATED PUSH-UP

Strength of the triceps and shoulder/scapular stabilizer muscles

Description

The seated push-up test is a method of assessing strength of the triceps and shoulder and scapular muscles. The test involves pushing the body up out of a seated position, and slowly lowering it back to sitting.

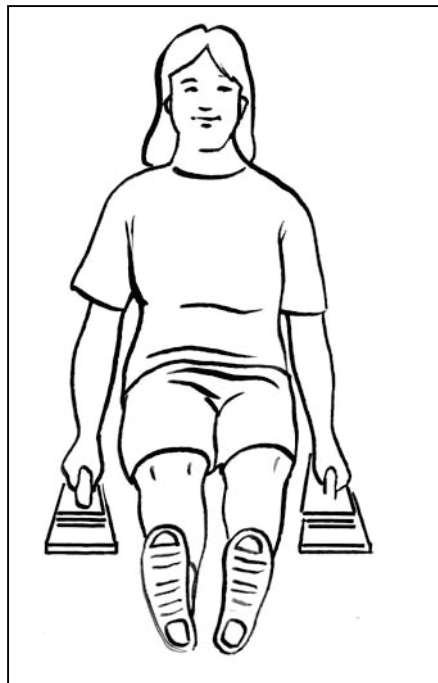
Mode of administration

- PT positions the athlete on the floor (If the athlete uses a wheelchair he or she can push up on the armrests).
- PT places the athletes' knees out straight with heels resting on the floor or table.
- PT or PTA must hold the push-up blocks to prevent them from tipping.
- PT instructs the athlete to push his/her body up from the table or floor until the elbows are straight, hold for 20 seconds, then slowly lower back into the seat.
- Athlete can practice prior to the test.
- PT coaches the athlete to begin when he/she says "ready, set, go."

Scoring

- PT times with a stopwatch the number of seconds that the athlete can hold in the push-up position.
- Record the number of seconds held on the score sheet.

The athlete who cannot hold for at least 5 seconds twice needs education.



Balance

SINGLE-LEG STANCE WITH EYES OPEN

Single-Leg Balance

Description

The single-leg stance test with eyes open is a simple method to quantify balance with the assistance of visual cues. The test requires the athlete to stand on one leg with the eyes open. Balance must be maintained as long as possible.

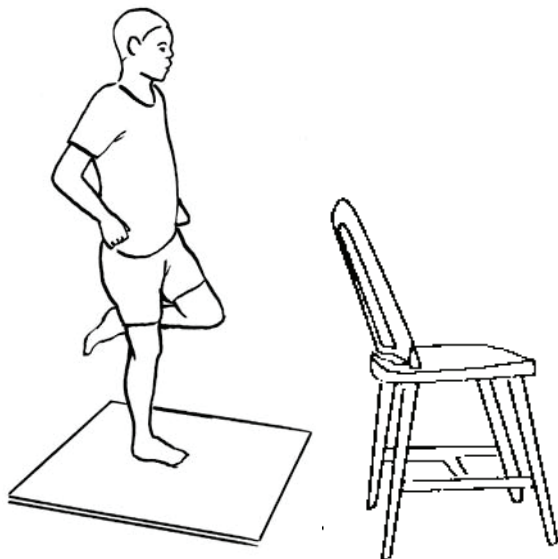
Mode of administration

- Athlete stands on both legs with feet shoulder width apart.
- Athlete is placed within arms' reach of a chair for security.
- The athlete is instructed to place hands on hips.
- Athlete is instructed to “slowly lift one leg and balance. I will time you until you lose your balance.”
- PT demonstrates the test.
- PT stands in front of athlete to encourage the athlete to continue without fear of falling. PTA or student stands behind athlete for safety.
- PT coaches athlete with a “ready, set, now stand on one leg.”
- Test continues until athlete loses balance, or puts the other foot down (maximum time = 20 seconds).

Scoring

- PT or PTA starts a stopwatch timer when he/she says “ready, set, now stand on one leg.”
- Timer continues until balance is lost, or foot of the flexed leg touches the ground.
- The time completed before loss of balance (up to 20 seconds) is recorded.

Stance time of fewer than 20 seconds or asymmetry might indicate need for education.



SINGLE-LEG STANCE WITH EYES CLOSED

Single-Leg Balance

Description

The single-leg stance test with eyes closed is a simple method to quantify balance without the assistance of visual cues. The test requires the participant to stand on one leg, with eyes closed or wearing a blindfold. Balance must be maintained as long as possible.

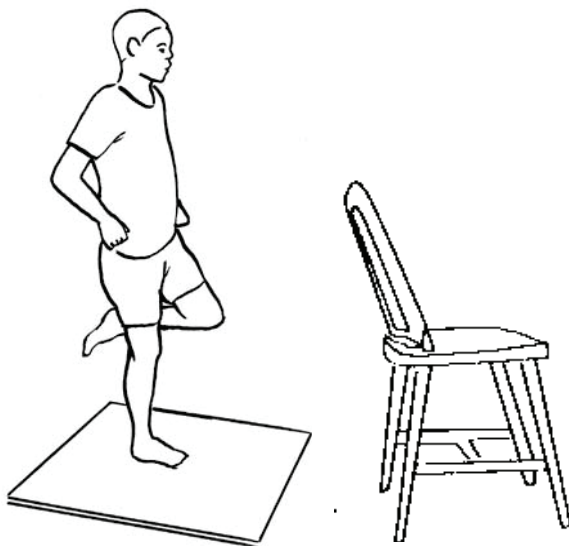
Mode of administration

- Athlete stands on both legs with feet shoulder width apart.
- Athlete is placed within arms' reach of a chair for security.
- Hands are placed on hips
- Arms remain in this position for the entire test.
- Athlete is requested to "lift one leg, then close your eyes and balance. I will time you until you lose your balance."
- PT demonstrates the test.
- PT stands in front of the athlete to encourage the athlete to continue with without fear of falling. PTA or student stands behind athlete for safety.
- PT coaches the athlete with a "ready, set, stand on one leg, now close your eyes."
- If athlete cannot keep eyes closed, PT may cover eyes with a headband or a blindfold.

Scoring

- PT or PTA starts a stopwatch timer when he/she says, "ready, set, stand on one leg, now close your eyes."
- Timer continues until balance is lost, or foot of the flexed leg touches the ground.
- The time completed before loss of balance (up to 10 seconds) is recorded.

Stance time of fewer than 10 seconds or asymmetry might indicate need for education.



FUNCTIONAL REACH TEST

Forward Reach Without Loss of Balance

Description

The forward [functional] reach test is a simple method to quantify balance that allows use of visual cues, but perturbs body position. The test requires the athlete to reach forward beyond the length of his/her arm without loss of balance. The preferred position for this test is standing, but it can also be done sitting.

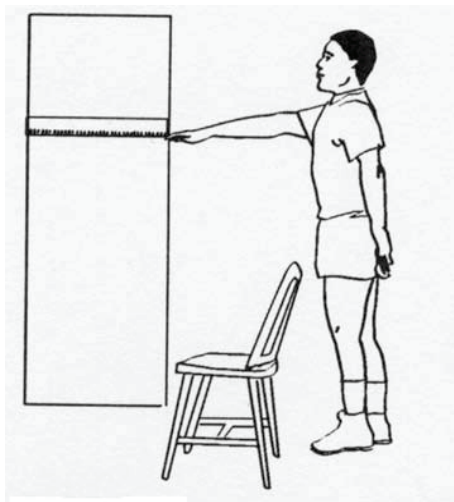
Mode of administration

- PT attaches a tape measure to a wall or partition, horizontal to the floor at the shoulder level of the athlete.
- Participant stands on two legs, positioned shoulder width apart.
- Test can be done seated if the athlete cannot stand.
- Athlete is placed within arms' reach of a chair for security.
- Arms are positioned at the sides. One arm remains relaxed in this position for the entire test.
- Athlete is requested to lift the arm closest to the ruler or tape measure to 90 degrees forward flexion and extend fingers.
- PT demonstrates the test.
- PT stands in front of athlete to encourage the athlete to continue without fear of falling. The athlete is told to keep his feet still or not move his feet. PT can place a line or piece of tape on the floor to indicate where the toes must stay.
- PTA or student stands next to athlete for safety.
- PT puts a clipboard at the end of the athlete's longest fingertip to record the starting position.
- PT coaches athlete with a "ready, set, reach as far forward as you can without losing your balance."
- PT uses the clipboard to record the final position of the fingers.

Scoring

- PT, PTA or student stands at the end of the athlete's fingers.
- Record the starting position with the use of a clipboard on the ruler at the end of the longest finger.
- After the athlete bends forward, use the clipboard to record the centimeter measurement at the end of the longest fingertip as the athlete reaches without loss of balance. Record reach on both sides.
- Athletes may not lean against the wall or the ruler during the test.

Reach of fewer than 20.3 centimeters or asymmetry may indicate need for education.



AEROBIC FITNESS

Ability to walk, wheel or step for a period of time without undue fatigue

Description

Submaximal aerobic tests assess cardiovascular and pulmonary efficiency.

Measurement of heart rate

Heart rate is the number of heartbeats in a period of time, usually beats per minute (BPM). The resting heart rate, or rate at rest or not having recently exerted, is a basic indicator of aerobic fitness level. We have utilized several methods of obtaining heart rate and some are either inconsistent or inaccurate.

The preferred method is the use of a pulse oximeter on the fingertip, and we are encouraging all programs to gradually switch to the use of the pulse oximeter. Use of the MIO watch is also an acceptable method of heart rate assessment, if you already own the watches. If no other options are available, the original manual method is available, but not very accurate. The current HAS form asks you to indicate which type of measurement was utilized so we can compare like data.

Use of Pulse Oximeter

The pulse oximeter measures BOTH heart rate and oxygen saturation (O2Sat), the measure of how much oxygen the blood is carrying as a percentage of the maximum it could carry (100%). We are recording both values on the HAS form.

Because altitude can affect O2Sat by decreasing the amount of available oxygen per volume of air and lowering the oxygen supply, it is important to record the altitude of an event so you can accurately assess the O2Sat reading. The HAS form has a record of altitude at the top right of the first page. The ranges of Altitude are quite broad (0-1500 meters, 1501-3000 meters, and ≥ 3000). Most events will occur at below 1500 meters. Altitudes for any location can be found online at:

http://www.altitude.org/find_altitude.php. _____

When using the pulse oximeter, it is important to make sure the finger is clean, dry and warm. ,preferably with no nail polish. The finger, usually the ring or index, must be inserted into the probe or sensor. In a few seconds, the results will be put on display. Oxygen saturation is read in percentage with the normal value range from 95 to 100 %. Hypoxemia is suspected once the values fall below 90% (refer to the Decision Tree at the end of this chapter for guidelines related to O2Sat readings). The probe must be cleaned by wiping the inner portion with isopropyl alcohol between athletes. This is the fastest method for obtaining a heart rate.

Use of MIO Watch

The MIO watch is a strapless monitor that records heart rate at the wrist. Place the watch on the athlete's wrist and secure the armband. Make certain that the band fits securely on the wrist (there are several size bands available). Ask the athlete to compress the two buttons on the top and bottom of the watch face and hold for 10 seconds. The heart rate will appear on the watch face. It may take several seconds for the Heart rate to register.

Manual Pulse

This method records the pulse, a tactile palpation of heartbeat on an artery. You should take the athlete's pulse after he/she has been quietly seated for two minutes, and record the number as beats per minute.

Pre-exercise heart rate (HR).

To get the pre-exercise heart rate, obtain the athlete's heart rate using the pulse oximeter or by taking their pulse after he/she has been quietly seated for two minutes, and record the number as beats per minute. Record on the form which device you used to measure heart rate

Taking the athlete pulse manually is a less desirable method of obtaining HR. However if there is not a pulse oximeter or other device available, you may need to take a pulse. For test consistency and athlete privacy, use the wrist. When taking the pulse of another person, do not use your thumb. Place your first two fingers on the radial artery just below the base of the thumb on the inside of the wrist and just above the tendons running up the wrist. Move your fingers around until you feel a steady pulse.

Pre-Exercise HR

If the pre-exercise HR is over 100 bpm do not proceed with the two minute step test. You may want to let the athlete rest a little longer and take the HR again to see if it is below 100 bpm.

Test preparation

To obtain good results, have the athlete do the following:

- Wear loose-fitting, comfortable clothes.
- Wear athletic shoes with rubber soles.
- Preferably not have caffeine or chocolate, or smoke one hour before testing.
- Not eat for one hour before testing.
- (do or do not) Drink a glass of water immediately before the test.

Mode of administration

For athletes who can walk functionally:

Two-minute Step Test

- PT records pre-exercise heart rate with the athlete seated before the test.
- Stand the athlete next to a wall (not leaning on the wall).
- Mark the minimum stepping height for the athlete.
- Run a tape measure from the iliac crest to the mid-patella.
- Mark the midway point on the tape.
- Transfer the mark on the tape to the
- Have volunteers hold a tape from the mark on the wall outward in front of the athlete.
- PT instructs athlete to bring each knee alternately up to the tape.
- PT coaches athlete to begin on "ready, set, go."
- PT clicks tally counter each time the athlete's right foot hits the ground.
- PT requests athlete to step for a maximum of two minutes.
- PT records immediate pre-exercise heart rate with the athlete seated after the test.
- PT records 2 minute post-exercise heart rate with the athlete seated.

- Athlete is encouraged to step as quickly as possible without running

Scoring**HR:**

Pre exercise HR – recorded with athlete seated just prior to the test and recorded on the HAS form

Post-Exercise HR: Recorded immediately at the end of the two minute step test and recorded on the HAS form

2 Minutes Post Exercise HR: recorded at two minutes after the 2 minute step test has ended again and recorded on the HAS form.

STEPS:

PT records the number of times that the athlete steps with the right foot. PT can make these adaptations as needed:

- If athlete cannot bring either knee to the correct height from the start, continue the test,.
- If athlete has poor balance, he/she can hold on during the test.

For athletes who use a wheelchair:**Five-minute Wheel Test**

- PT marks off a known distance (at least 50 feet or 15.2 meters) in an oval for a test space, or uses a track of known length.
- PT records athlete's pre-exercise resting heart rate in a seated position before the test.
- PT coaches athlete to begin on "ready, set, go."
- PT has athlete wheel for one minute to learn the test, then return to start line and rest for three to five minutes.
- PT requests athlete to wheel as quickly as possible for maximum of five minutes.
- PT informs athlete when two minutes remain, for motivation or can tell the athlete when each minute has elapsed or how many minutes to go when each minute has elapsed..
- PT encourages athlete as he/she wheels.
- PT records immediate post-exercise heart rate, and 2 minute post exercise heart rate.

Scoring**HR:**

Pre exercise HR – recorded with athlete seated just prior to the test and recorded on the HAS form

Post-Exercise HR: Recorded immediately at the end of the two minute step test and recorded on the HAS form

- 2 Minutes Post Exercise HR: recorded at two minutes after the 2 minute step test has ended again and recorded on the HAS form.

DISTANCE:

Record the distance covered in meters.

Three-minute Walk/Run Test

This is an alternative test to be used if Step Test cannot be performed

- PT marks off a known distance (at least 50 feet or 15.2 meters) for a test space, or uses a track of known length.
- PT records athlete's pre-exercise resting heart rate in a seated position before the test.
- PT coaches athlete to begin on "ready, set, go."
- PT requests athlete to walk as quickly as possible for a maximum of three minutes.
- PT informs athlete when one minute remains, for motivation.
- PT encourages athlete as he/she walks.
- PT records immediate pre-exercise resting heart rate with the athlete seated after the test.
- PT records 2 minute post-exercise resting heart rate with the athlete seated.

Scoring

- Record the distance covered in feet to the nearest foot (or meter).
- Record the time that the athlete was able to walk.
- Record the athlete's heart rate at the beginning and end of the test, and two minutes after test completion with the athlete seated.

Education:

After you perform the test or measurement on each athlete, record this measurement in the appropriate area on the form. On the basis of your professional knowledge of what is within the appropriate range for the age and participation level of each athlete, you may recommend education by checking the Education box beside the specific test. Suggested cutoffs for when to provide education are indicated for each test. A check in an Education box will prompt instruction of the participant, his/her family and/or coach on the appropriate exercises.

We are still in the process of evaluating this test information for the relationship of results to need for Education.

Consider the following criteria to refer for education or additional services.

- Can the Athlete talk during the test?
- Is the Athlete unusually short of breath during the test?
- Does the athlete tire easily or stop before test is over.
- Does athlete complain of discomfort or burning in the muscles.
- Does athlete sweat excessively (given the environmental conditions)
- Is color of lips, nails, cheeks pink before test? Does color change to bluish during testing?

HR Changes:

- Did the Post-Exercise HR increase significantly above the Pre-exercise HR.

- Is the difference between the post-exercise HR and the 2 minute post-exercise HR less than 24 bpm.

Depending on how hard the athlete worked during the test, if their 2 minute post-exercise HR remains high than education for aerobic fitness may be required.

In general, all SO athletes and non-athletes would benefit from:

1. increasing their weekly time in exercise or physical activity or
2. increasing the duration of periods of moderate to vigorous levels of activity.

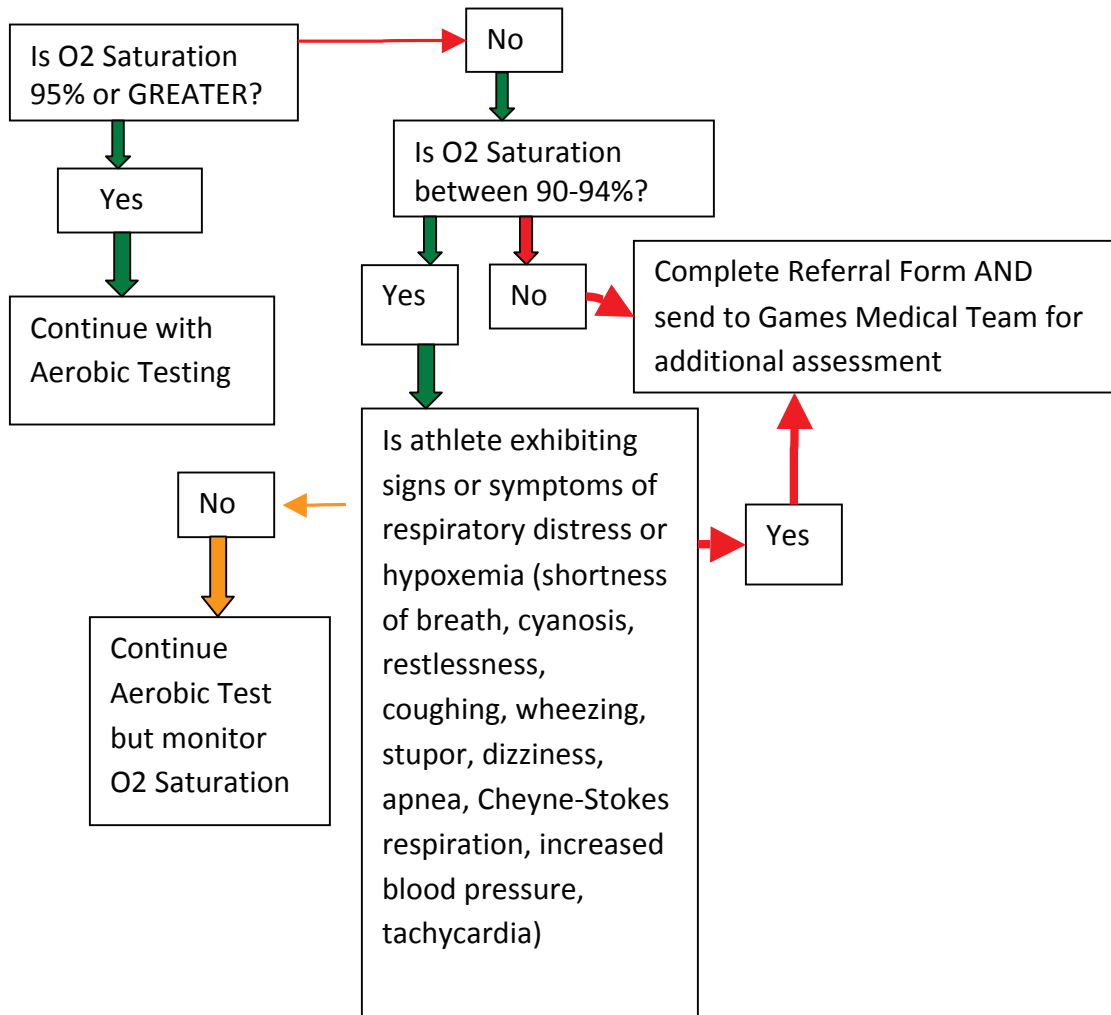
The US Centers for Disease Control Recommends:

For children: 60 minutes of Physical Activity (PA) per day

Vigorous activity 3 days per week

For Adults: 150 minutes of Moderate to Vigorous PA per week.

Decision Tree for Assessment of O2 Saturation



Physical Therapist Referral Recommendations:

Indicate on the form whether the athlete should see a physical therapist and why (Flexibility, Strength, Balance, or Aerobic Fitness).

Athletes may need Physical therapy for the following reasons:

- Does the athlete have **3 or more areas** (Flexibility, Balance, Strength or Aerobic Fitness) were “Education” was required.
- Does the athlete have **2 complete sections** of testing (all flexibility items, all balance items, all strength items or aerobic fitness – 2 of the 4) that required education.
 - Does the athlete have a physical impairment or disability and indicate a recent loss of function or falls.
 - Does the athlete, their family members or the coach indicate that the athlete has a physical impairment and may have lost function over time, and the athlete has not seen a physical therapist in recent years or at all.
- If **yes** to one of the above, is the severity of limitation significant enough to require further evaluation and treatment.

For instance if hamstring tightness is checked when the limitation is -19 degrees, this may not be too severe. If function is generally good, PT referral may not be required. This determination should be made with the athlete present.

- The limitation noted and the regulations of medical practice in the area will determine to whom the athlete should be referred.
 - The situation may indicate referral to a Physical Therapist for either rehabilitation OR fitness programming.
 - A referral to the athletes primary care physician to review the screening and to obtain a Physical Therapy referral may be necessary.

Referral to Primary Care Physician:

Indicate on the form whether the athlete should see a primary care physician and define why.

A referral to the athlete’s primary care physician might be indicated if:

- The practice regulations require that the primary physician write a Physical Therapy Referral

to obtain services

- If the findings indicate a need for medical followup and assessment.

Refer to the reference list on the Special Olympics FUNfitness website for the evidence that supports utilization of these tests and measures.

Training heart rate

Monitoring heart rate is the easiest way to determine whether exercise is being performed effectively and safely. Because it is very difficult to exercise at one specific heart rate, a training heart rate zone for each athlete must be developed.

An estimation of maximum heart rate can be determined by subtracting the person’s age from 220. To find the high end of the training zone, multiply the maximum heart rate by a chosen percentage (e.g., 85 percent). To find the low end, multiply by another chosen percentage (e.g., 70 percent).

Estimation of maximum heart rate

220 - Age _____ = _____

Target heart rate zone

Low range: MXR _____ x .50 = _____

High range: MXR _____ x .65 = _____

The high and low range of the target heart rate zone will vary depending on the age, physical condition and fitness level of each athlete.

Note:

If an athlete has the following characteristics:

- Does very little to no daily physical activity beyond self-care
- Has heart, vascular or lung problems
- Is overweight or obese
- Has any difficulty performing the aerobic test

You should start an athlete with these characteristics at a lower level of intensity. A very safe place to begin is at 50 percent intensity, with a range of 50–65 percent.

The standard “training zone“ for people who are well and perform moderate amounts of consistent physical activity and exercise each day is between 70 and 85 percent of their maximum heart rate. In the normally active person, exercising below 70 percent has little effect on fitness level, while exercising above 85 percent will not help improve the body’s energy systems and can be potentially unsafe.

Monitoring heart rate during activity

As the athlete is exercising, take the heart rate for 10 seconds and multiply by six to get the minute exercise heart rate. Compare this result with the target range numbers that you calculated to see if the athlete is in the heart rate zone



Special Olympics



Chapter 4

Education

HAMSTRING MUSCLES

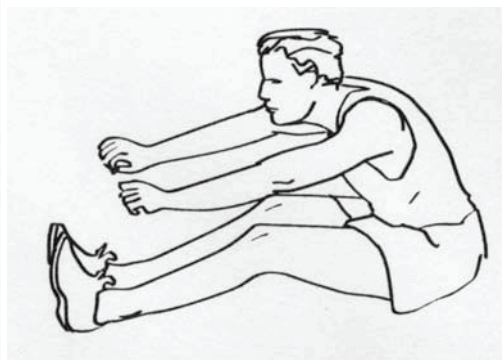
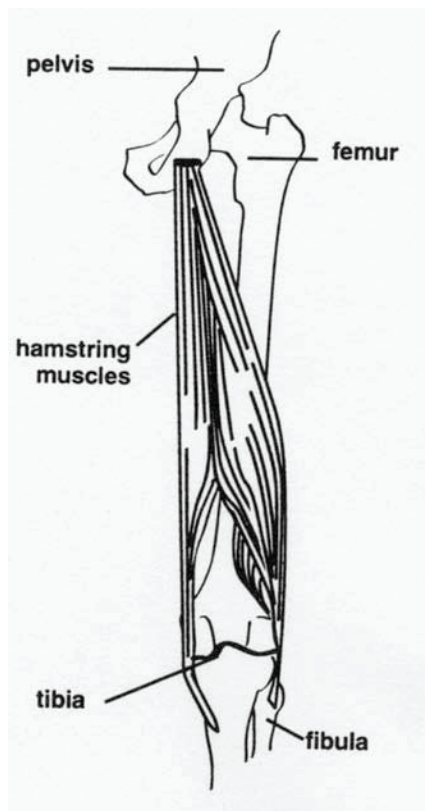
The hamstrings are three separate muscles that are located on the back of the thigh. They start on the pelvis bone and attach to the lower leg bones. See illustration below.

The hamstring muscles bend your knees and also pull your hips back.

The flexibility of the hamstring muscles is important for your daily activities and for your sports.

If the hamstring muscles are tight, these problems can occur:

- Bending forward may put stress on your lower back, and could cause pain or injury.
- Your leg is not able to move as far forward when you run, kick a ball or jump.
- You can injure the bone where the hamstring attaches, causing swelling and pain.
- You can hurt the muscle, causing a strain.



CALF MUSCLES

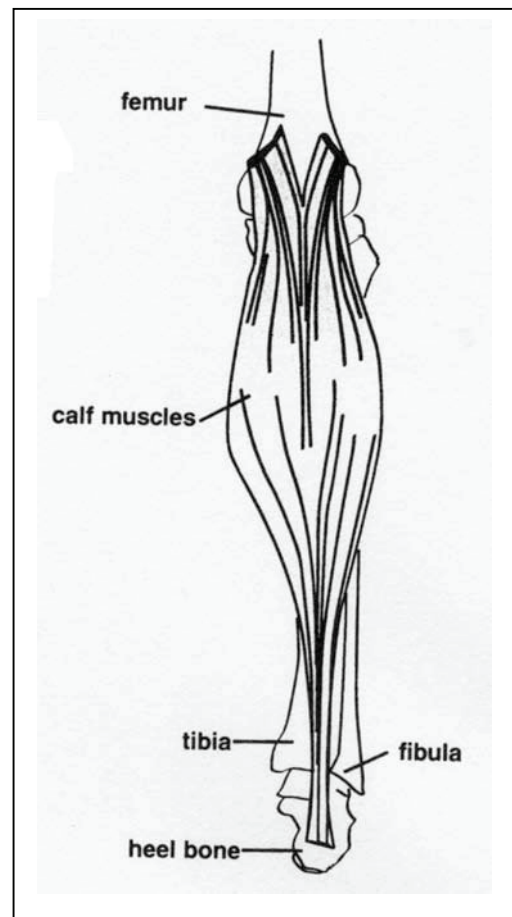
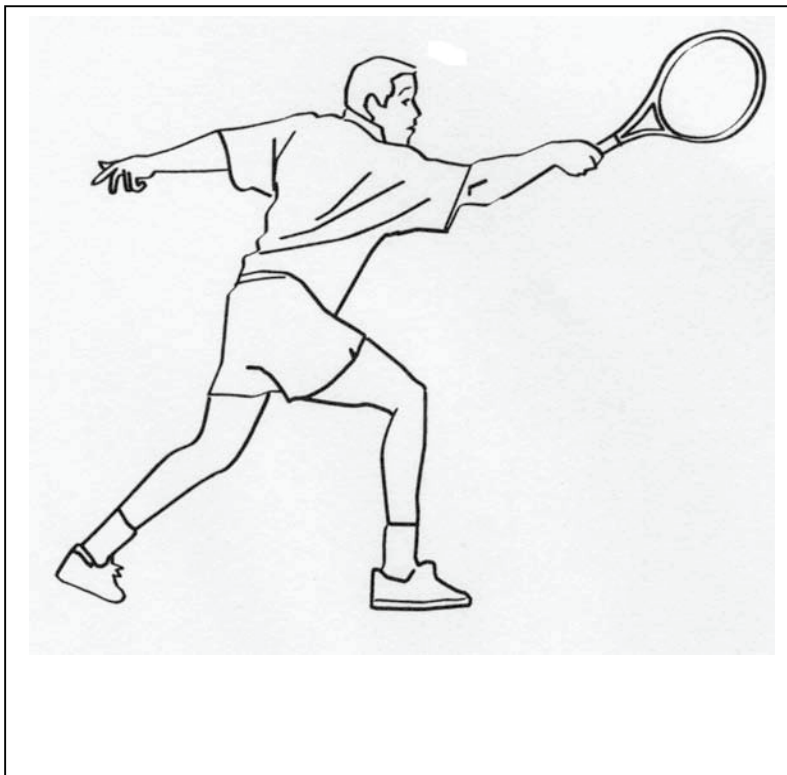
The calf is made up of two muscles that are located on the back of the lower leg. They start on the thigh bone, and the lower leg bones. They join to hook at the heel. See illustration below.

The calf muscles point your foot down, or help you go up on your toes.

The flexibility of the calf muscles is important for your daily activities and for your sports.

If your calf muscles are tight, you may have the following problems:

- Trouble getting your heel flat on the ground.
- Activities like walking, running or hopping will stress the muscle, and can cause heel pain.



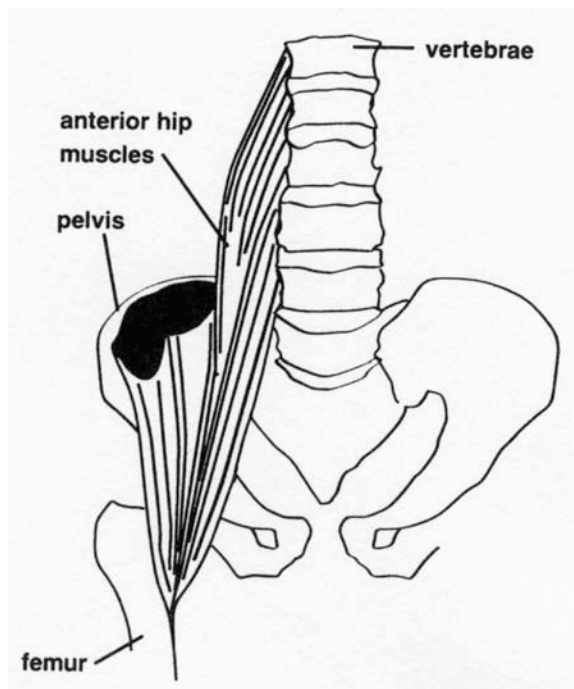
ANTERIOR HIP MUSCLES

There are three anterior hip muscles that are located on the front of the hip and thigh. Two of the muscles start on the pelvis, and the third begins on the bones of the lower back. They attach to the thigh bone. See illustration below.

The anterior hip muscles bend your hip forward. The flexibility of the hip muscles is important for your daily activities and for your sports.

If the anterior hip muscles are tight, you may have these problems:

- The muscles can get hurt when you move your leg in big motions, as in gymnastics and softball. This motion can cause swelling and pain in the front of your hip.
- The muscles can pull on the lower back. This pull can cause pain in the lower back, or increase the curve of the lower back.



SHOULDER ROTATOR MUSCLE

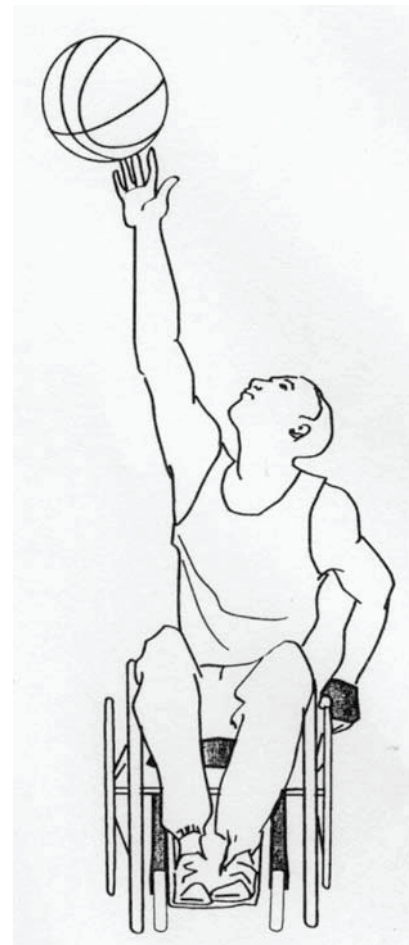
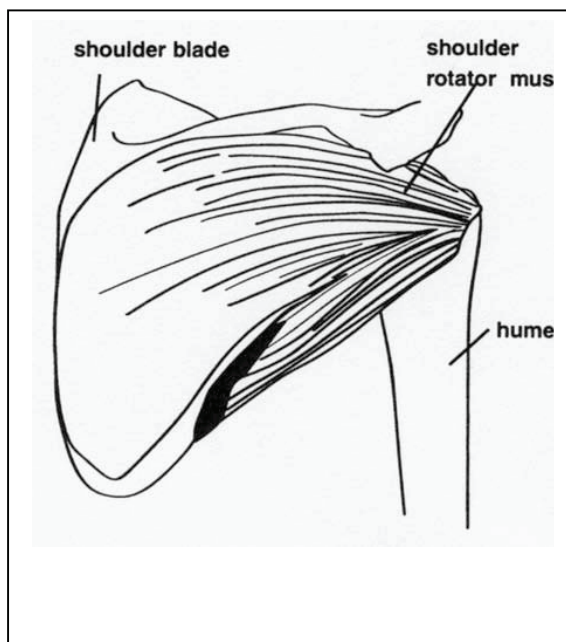
The shoulder rotators are a group of three primary muscles that start on the shoulder blade, and attach to the upper arm. See illustration below.

The shoulder rotator muscles turn the arm in and out, and they also help hold the shoulder joint together.

The flexibility of the shoulder rotator muscles is important for your daily activities and for your sports.

If the rotator muscles are tight, you may have these problems:

- It is difficult to perform actions like throwing, reaching behind your head, or reaching into your back pocket.
- The tightness can cause pressure on your shoulder as you move. This pressure could cause pain.



QUADRICEPS MUSCLES

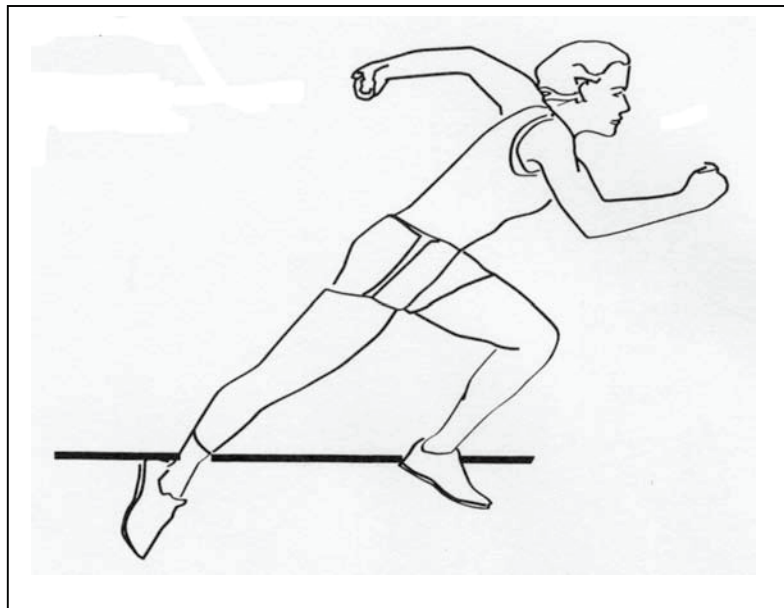
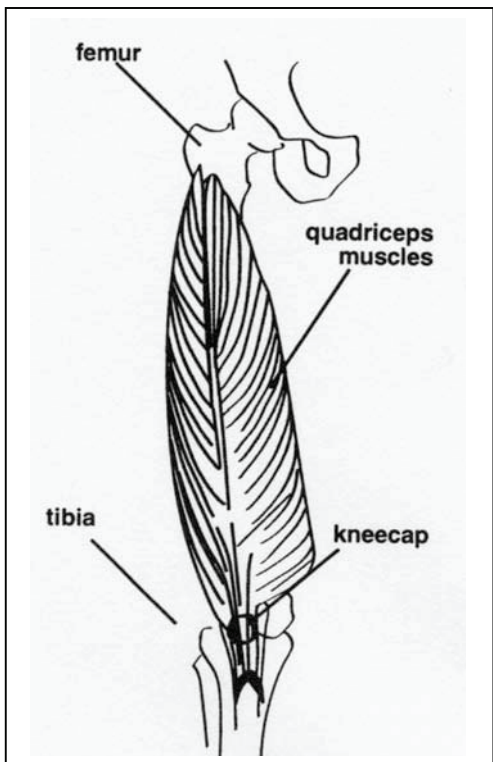
The quadriceps are made up of four muscles. These muscles are located on the front of the thigh. They begin on the pelvis and thigh bones, go over the knee and attach to the leg bone. See illustration below.

The quadriceps muscles straighten your knees. The muscles also control slow bending of the knee.

The strength of the quadriceps is important for your daily activities and for your sports.

If the quadriceps muscles are weak, you may have these problems:

- You may have trouble walking, or running down steps.
- You may not be able to jump high, or land easily.
- You may have trouble squatting.



ABDOMINAL MUSCLES

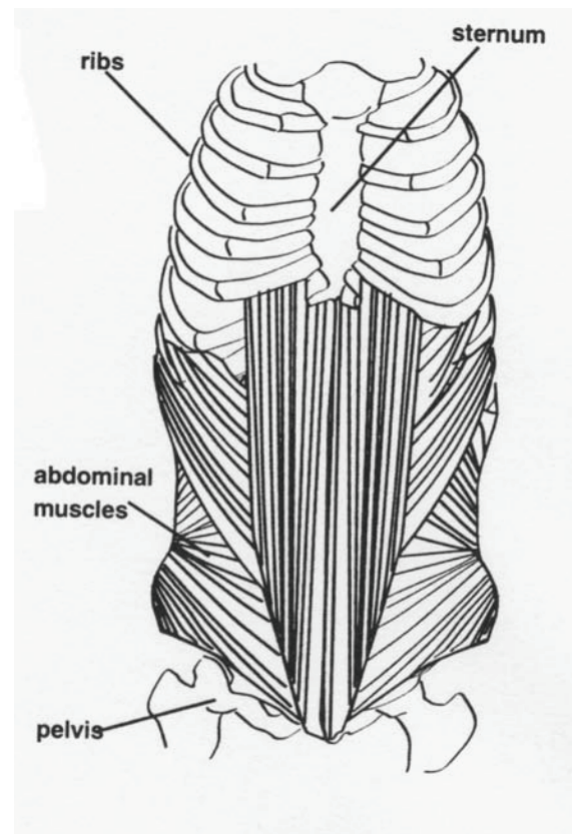
The abdominal or stomach muscles are a group of muscles located on the front and sides of your trunk. The abdominal muscles begin on the ribs and breastbone. They end on the pelvis bones. See illustration below.

The abdominal muscles help you sit up. They also support your internal organs and lower back.

The strength of the abdominal muscles is important for your daily activities and for your sports.

If your abdominal muscles are weak, you may have these problems:

- You may have trouble doing sit-ups.
- Your back has less support, and may arch more than it should.
- Your stomach and organs have less support, and your stomach may stick out.



HAND GRIP MUSCLES

- The muscles that grip are a group of many muscles.
- They are located in your forearm and hand.
- The grip muscles begin on the elbow and forearm
- They attach on the hand and finger bones.
- The grip muscles help you pick up and hold things.
- They also help you grab and release things.
- The strength of the grip muscles is important for your daily activities and for your sports.

If your grip muscles are weak:

- You may have trouble picking things up.
- You may have trouble holding things.
- You may have trouble lifting things.



ARM AND SCAPULAR MUSCLES

- The upper arm and scapular muscles are a group of many muscles.
- The scapular muscles are located on the back of your chest.
- The scapular muscles begin on the shoulder blade, ribs and spine, and end on the shoulder blade or the upper arm.
- The arm muscles are located on the shoulder and upper arm.
- The arm muscles begin on the shoulder blade and upper arm, and attach to the bones of the elbow and lower arm.
- The arm and scapular muscles help you push up.
- They help you move around and push yourself and other objects.
- Strength of the arm and scapular muscles is important for your daily activities and for your sports.

If your arm and scapular muscles are weak, these problems may occur:

- You may have trouble doing push-ups.
- You may have difficulty pushing and pulling.
- You may have difficulty with heavy tasks like lifting and throwing.



BALANCE

Balance is your ability to control the position of your body while standing or moving. Balance allows you to stand and move without falling.

Balance depends on these things:

- The use of your eyes
- The balancing system in your ears (vestibular system)
- The nerves in your joints, or joint monitors

When your eyes are covered or closed, you depend more on your balancing system and joint monitors.

When you move, your eyes watch where you are going, but you still use your balancing system and joint monitors.

Balance is important for your daily activities and for your sports.

If your balance is poor, you may have these problems:

- You may fall more easily when you stand up or move.
- You may trip or fall when you run and jump.
- You may fall more easily when you turn or reach.



AEROBIC FITNESS

Aerobic fitness is your ability to walk, run, wheel, or work for a long period without being unusually tired or short of breath.

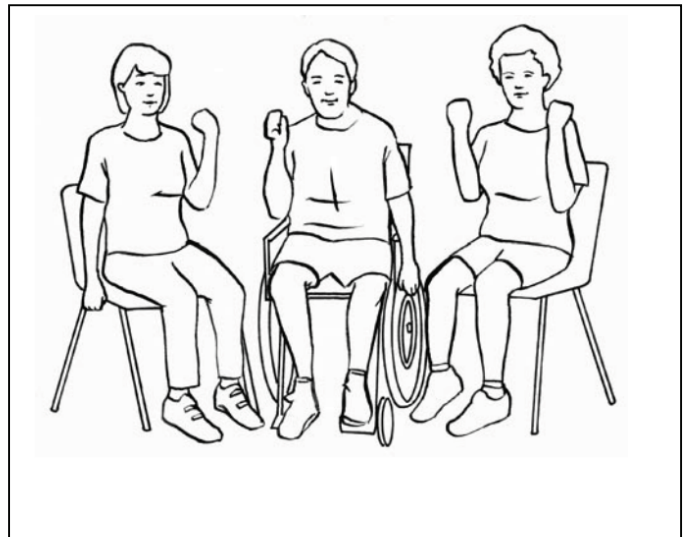
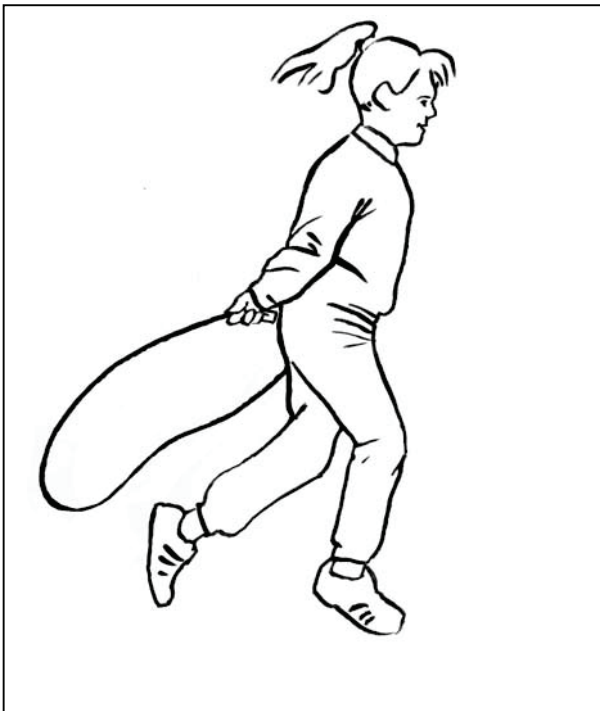
Aerobic fitness allows you to perform your daily and sports activities without becoming too tired.

Aerobic fitness depends on good condition of your heart and blood vessels, and your lungs.

Aerobic fitness is important for your daily activities and for your sports.

If your fitness is poor, you may have these problems:

- You may get tired more easily when you are active.
- You may have to stop because you are short of breath.
- You may not be able to do the activities that you want.





Chapter 5

Forms

HEALTHY ATHLETES CONSENT FORM

Special Olympics offers certain non-invasive health care services to athletes at local, state, national, and World Games venues through the Healthy Athletes program. These services may include individual screening assessments of health status and health care needs, provision of health education, routine preventive services (e.g. protective mouth guards), educational services, and, in the case of vision and hearing deficits, provision of needed eyewear (glasses, swim goggles, protective eyewear) and hearing aids. Athletes are informed as to their health status and advised of the need for follow-up care. In addition, information collected at the time services are provided has been invaluable for developing policies, securing resources, and implementing programs to better meet the health needs of athletes.

I understand that by signing below I consent to participate in the Special Olympics Healthy Athletes program that provides individual screening assessments of health status and health care needs in the areas of: vision; oral health; hearing; physical therapy; and a variety of health promotion areas (height, weight, sun protection, etc.). I understand there is no obligation for me to participate in the Healthy Athletes Program should I decide no to participate. Provision of these health services is not intended as a substitute for regular care. I also understand that I should seek my own independent medical advice and assistance irrespective of the provisions of these services and that Special Olympics is not through the provision of these provisions responsible for my health. I understand that information that is gathered as part of the screening process may be used in group form (anonymously) to assess and communicate the health needs of athletes and to develop programs to address those needs.

Authorization for Minors: I understand that by signing below I consent to _____ (athlete’s full name) participation in the Special Olympics Healthy Athletes program that provides individual screening assessments of health status and health care needs in the areas of: vision; oral health; hearing; physical therapy; and a variety of health promotion areas (height, weight, sun protection, etc.). I understand there is no obligation for the athlete named above to participate in the Healthy Athletes Program should the athlete decide not to participate or should I decide the athlete shall not participate. Provision of these health services is not intended as a substitute for regular care. I also understand that I should seek my own independent medical advice and assistance irrespective of the provisions of these services for the athlete named above and that Special Olympics is not through the provision of these provisions responsible for the health of the athlete named above. I understand that information that is gathered as part of the screening process may be used in group form (anonymously) to assess and communicate the overall health needs of athletes and to develop programs to address those needs.

Parent or Guardian (if athlete is under 18 years old)

Athlete (if 18 years old or older)

Special Olympics Program

Date

SPECIAL OLYMPICS FUNfitness EVENT SUMMARY FORM

Name of Event: _____ Date(s) of Event: _____

Venue Location: _____ Inside Outside

FUNfitness Clinical Director: _____

Your name/contact information if you are not state/country clinical director:

Volunteers

Please provide the numbers of volunteers who assisted during this event. _____

Physical therapists _____ Physical therapist assistants _____

Physical therapist students _____ Physical therapist assistants students _____

Parents _____ Others _____

Participant Tallies

Please provide the numbers of participants screened in the event.

Athletes competing _____ Athletes screened _____

Athletes referred for additional services _____

Data Entry Plan:

Who will enter Data: _____

When will data entry be completed: _____

Professional Education Programs

Please list all PT and PTA educational programs that participated in the event and a contact person for each program. _____

Community Organizations

Please list all community organizations and groups that supported your event. _____

Publicity and Sponsors

Please list the key publicity that your event received (local press, notice in trade journals, article in magazine) — attach samples if available. _____

Please list all sponsors and their donations: _____

FUNfitness VOLUNTEER FORM

NAME: Mr., _____

Ms., Dr. _____

ADDRESS:

CITY: _____ STATE: _____ ZIP: _____ (H)

PHONE: _____ FAX: _____

(Wk or Cell) PHONE: _____ E-

EMAIL:

PROFESSIONAL DESIGNATION (circle) _____

PT

PTA

STUDENT PT

STUDENT PTA

LICENSE NUMBER/STATE:

_____ EXPIRATI

ON: AVAILABILITY:

DATE	AM	PM	ANY TIME
DATE	AM	PM	ANY TIME
DATE	AM	PM	ANY TIME
DATE	AM	PM	ANY TIME
DATE	AM	PM	ANY TIME
DATE	AM	PM	ANY TIME
DATE	AM	PM	ANY TIME
DATE	AM	PM	ANY TIME

Please return completed form to:

Confirmation of Professional Liability Insurance

In order to confirm that you have liability protection when you participate in an off-site event, please sign the following statement. Thank you.

“I, the undersigned, attest to the fact that I have an individual professional liability insurance policy or employer policy that is current and that applies to my providing physical therapy services outside my regular place of employment, including providing physical therapy services at an event such as:

Name (Please print)

Signature

Date

HOLD HARMLESS AGREEMENT PURPOSE AND EXPLANATION

All health care providers recruited for or volunteering to conduct health screenings at Special Olympics Healthy Athletes events must have malpractice insurance, either from a private insurance carrier or through an institution, that is primary insurance and covers the volunteer for his/her Healthy Athletes related activities. Additionally, volunteer health care providers must have a valid license to practice in the state in which the Healthy Athletes event is being conducted. Special Olympics, Inc. (SOI) has medical malpractice insurance that provides secondary insurance coverage to a Healthy Athletes volunteer's primary insurance coverage in the event that a malpractice/liability claim were filed against the volunteer, SOI and/or its Programs are located solely in the United States (the "SOI Insurance Policy") and the policy requirements are satisfied. The specifics of the coverage are outlined below. To be eligible for coverage a volunteer must:

Be covered by a primary medical malpractice insurance policy that applies to Healthy Athletes volunteer activities; Be properly licensed in the State where the services are provided; and Sign a hold harmless agreement

The purpose of the hold harmless agreement is to protect Special Olympics as an entity if it is brought into a claim as a result of the negligent actions of a Healthy Athletes volunteer. Similarly, the agreement protects the individual volunteer if he or she is brought into a claim resulting from the negligence of Special Olympics. The language in the agreement does not cause the individual volunteer to assume responsibility for Special Olympics for any conduct which is not connected with the volunteer's actions. Special Olympics values and appreciates the services and dedication of its Healthy Athletes volunteers, but is not able to retain liability for potentially negligent acts of all volunteers in the program. Therefore, the mutual hold harmless language is a method by which each party is protected and protects the other for claims that may arise out of the program.

The SOI Insurance Policy provides the following coverage effective from 1/1/2005 to 12/31/2005. The policy covers volunteer Dentists (DDS, DMD), Doctors of Medicine and Osteopathy (MD, DO), Optometrists (OD), Podiatrists, physical therapists, and Audiologists providing non-invasive screening and educational material to athletes while acting in his/her professional capacity solely on behalf of Special Olympics as a Special Olympics registered volunteer in the U.S.

The policy applies excess of any other valid and collectible insurance. It provides a \$1,000,000 per occurrence limit and \$3,000,000 general aggregate, subject to a \$5,000 deductible.

The SOI Policy ONLY provides coverage to parties at Healthy Athletes events conducted in the United States. Liability and legal requirements for volunteer health care providers at events outside of the United States are dictated by the laws of that country, province, state, etc. To protect both the health care providers and SOI, however, health providers at events outside the United States also MUST sign the hold harmless agreement prior to participating in a screening.

Special Olympics FUNfitness EQUIPMENT

Contact Shantae Polk, Manager, at spolk@specialolympics.org to get two (2) FUNfitness banners for your event. You will keep these banners for use at subsequent events.

The following list of necessary equipment and supplies may need modification depending on the numbers of participants being screened.

Your Special Olympics Program might be able to provide electrical outlets and drapes when available, as well as some of the following equipment:

- 4 tables for Registration and Exit
- 6 tables for screening stations with mats for the tables if they are not padded
- 2 tables and 2 mats (floor or raised) for Education Station
- At least twenty-five (25) straight back chairs
- One (1) large or two (2) small partitions (use wall as a substitute)
- Badges for volunteers (4 different colors for PT, PTA, Student and Volunteer)
This makes it easier to route people to the appropriate stations/tasks.
- Water for volunteers (May need coolers, cups, ice)
- Pencils, pens and clipboards (20 each), as well as
- Tape (packing or duct), pushpins, paper clips and scissors

You, as the FUNfitness host, will need to order and provide the following items from our FF distributor (contact Shantae Polk or Donna Bainbridge for information):

- Two (2) yardsticks with velcro on the back and matching pieces of velcro for the partition
(Use tape measures in centimeters alternatively)
- Two (2) stools or blocks to use under the legs during the sit-up test
- At least twelve (12) goniometers (6 large and 6 small) – all 360 circle measures
- At least ten (10) tape measures (marked in inches and centimeters)
- At least eight (8) stopwatches or timers
- One set of adjustable push-up blocks
- One to two hand grip dynamometers
- At least two (2) tally counters
- At least 4 (4) pulse monitors
- Pieces of foam or wood (1/2, 1, 2 inches) to adjust height or leg position when testing on a chair
- Athlete Scorecards (based on anticipated numbers at event)
- FUNfitness pins
- FUNfitness gifts (based on anticipated numbers at event) - Each host will decide what to provide as gifts.
Suggestions include hats, visors, stretching straps, water bottles, squeeze balls, cold packs. Items can be placed in a plastic bag from a local vendor.

The FUNfitness host should create the following for each event:

- HAS Scoresheets – can be customized and printed at http://www.specialolympics.org/Special+Olympics+Public+Website/English/Initiatives/Healthy_Athletes/FUNfitness/Forms/default.htm
- Signs for inside the event - can be hung with pins, tape, or on a hook.
- FLEXIBILITY - Hip - Hamstrings - Heel Cords - Shoulder
- STRENGTH - Abdominals - Legs - Grip - Upper Body
- BALANCE - Functional Reach - Single Leg Balance
- AEROBIC CONDITION

**PT/PTA/Student Volunteers for FUNfitness Screening-DATE
Coordinator:**

	LAST Name	FIRST Name	PT, PTA SPT SPTA	Home #	Work #	Fax #	E-mail Address	State License #	State License Exp. Date	AM Shift	PM Shift	State District or Area
1.												
2.												
3.												
4.												
5.												
6.												
7.												
8.												
9.												
10.												
11.												
12.												
13.												
14.												
15.												
16.												
17.												
18.												
19.												
20.												
21.												
22.												
23.												
24.												
25.												

Date
Name of Volunteer
Street Address
City, State, Zip Code



Dear Name:

Thank you for volunteering at the FUNfitness screening that was held at the name the event on date, year. Your enthusiastic efforts were a vital ingredient in making the screening a huge success! Volunteers screened more than [number] athletes, and provided valuable education for improving flexibility, strength and balance to athletes, coaches and caregivers. It was inspiring to see so many physical therapists, physical therapist assistants, students and family members working together to provide screening, education and care for such outstanding athletes.

Thanks again for volunteering your time and expertise! It was a privilege to meet and work with you. We hope to see you at next year's state/country Special Olympics Games.

Sincerely,

Your name as the state/country FUNfitness Coordinator(s) Address and contact information

Media Release Form

Please complete entire form:

I hereby grant permission to _____
to photograph and/or video tape me and/or record my voice in connection with media projects for
inclusion in information to be disseminated on the role of physical therapy in the health care
delivery system.

Check one:

_____physical therapy patient/client

_____physical therapist student

_____physical therapist

_____physical therapist assistant student

_____physical therapist assistant

_____model

_____other (please explain):

Name:

Signature:

Address:

City:

State:

Zip:

Telephone Number:

PHYSICAL THERAPIST REFERRAL INFORMATION

Name (last, first, middle initial): _____

Professional credentials (degree, specialist, other profession, additional credentials): _____

Business name (if appropriate): _____

Address: _____

City: _____ State: _____ ZIP: _____

Telephone: _____

Fax: _____

E-mail (if desired): _____


PT license number: _____

Specialty areas of practice: _____

Preferred age range of clients: _____

Best time to contact: _____

Additional information: _____


Special Olympics

Healthy Athletes
FUNfitness

presents this
Certificate of Participation to

Name Here

for successful participation in the Healthy Athlete FUNfitness Event

on _____
Date _____
in _____
City, State _____

Your name and credentials
Special Olympics State/Country FUNfitness Clinical Director

Screening Supplies Order Form & Checklist

Screening Information (for single or multiple screening events)

FF Clinical Director:

Screening Location (city, state): Date of Event(mm/dd/yy): _____

Anticipated # of athletes participating in SO event: _____

Estimated # of athletes to be screened: _____

SOI FUNfitness Fulfillment (ordered by Shantae Polk, FF Manager) {donated as Value In Kind from SOI}:

Please indicate below quantity needed for your screening event:

_____ FUNfitness 2x4 Banner – Two for NEW screenings only

Your donated supplies will be ordered and shipped after receipt of this form by SO HQs. Fax or email this form to SO HQs within at least four weeks before your scheduled event date.

Shantae Polk, FUNfitness Manager
Email: spolk@specialolympics.org
Fax: 202-824-0200 or 202-628-3926

Ship Supplies ordered from SOI to: (no PO Boxes)

Contact name:

Street Address:

City, State or Province: _____

Country & Zip Code: _____

Contact Phone Number: _____

Contact Email: _____

Screening Supplies Order Form & Checklist

Clinical Supplies Checklist (purchased by local SO Program)

SOI has arranged for clinical equipment to be purchased at a discounted rate through Sammons Preston. Please use the list below as a guide for items that you will need to purchase for your screening event. Funds to purchase these items are an allowable SO Healthy Athletes FUNfitness grant expense. Each SO Program has an account with Sammons, and can order the equipment online at <http://www.sammonspreston.com/>. Please order at least 4 weeks before your event to allow time for order fulfillment and shipping.

7541	12 ½ inch Int'l Goniometer
7512	8 inch Goniometer
7539	6 inch Goniometer
7542	Individual Hand Tally Counter
7528	Digital Readout Stopwatch
5335	Push-up Blocks, set of 2
926610	Smedley Handgrip Dynamometer
561316	Rolyan Level 2 Latex Free Band – 50 yd roll
561317	Rolyan Level 3 Latex Free Band – 50 yd roll
	Stability Trainers (one pair Blue, one pair Green per state/country)
92924401	Blue pair
92924501	Green pair
ADDITIONAL ITEMS YOU MIGHT WANT:	
541302	MediCordz Wrist Cuff, Medium
92924010	Economy Exercise Handles 10-pr
2718	Tri-fold Mat with Handles
5415	MediCordz Ankle Cinch Strap
5139	Cateye Heart Beat Counter
534001	<i>Red Flex Bars – Regional/World Games ONLY</i>

Screening Supplies Order Form & Checklist

DISCOUNT HELIUM OF DALLAS WWW.BALLOONBASICS.COM
972-279-0086 FAX 972-279-0361 SALES@JUMBOBALLOONS.COM

Special Olympics has negotiated with a balloon company to have balloons produced with the FunFitness logo on them. Please use the order form below to order. Balloons must be ordered by their local Special Olympics Program and can be a covered Healthy Athletes FunFitness expense.

CUSTOM LATEX BALLOON ORDER FORM

Business Name: _____

Ordered By: _____ Date: _____

Address: _____

City/State/Zip: _____

Date Balloons are needed by: _____

Signature: _____

Phone Number: _____ Fax Number: _____

Email Address: _____

If Repeat Order - Date of Last Order: _____ Sales Number: _____

Quantity: _____

Balloon Size: 12 inch

Balloon Color(s): Standard Assorted

Ink Color(s): Black

1 or 2 side: 1 side

Screening Supplies Order Form & Checklist

DISCOUNT HELIUM OF DALLAS WWW.BALLOONBASICS.COM
972-279-0086 FAX 972-279-0361 SALES@JUMBOBALLOONS.COM

Instructions:

Wording: (Supply wording exactly as it is to appear on the balloons)

FUNfitness LOGO IS ON FILE UNDER:

Logo is being mailed.

Artwork must be camera-ready; otherwise additional art charge will apply

MAIL ARTWORK TO: SALES@JUMBOBALLOONS.COM

*******PLEASE MAKE SURE TO REFERENCE YOUR COMPANY NAME ON EMAIL**

Upon receipt of the artwork, custom balloons orders will take approximately 7-10 business days to complete. Rush orders automatically require a faster shipping method (air freight). **All freight charges are paid by the customer and will be added to the order total. The freight method cannot always be determined until the order is complete.**

Payment is required to begin production.

Payment information: _____

Credit Card # _____ Exp Date: _____

Authorizing Signature: _____

Name on Card:

Address as it appears on CC statement:

STREET:

CITY/STATE/ZIP: _____



Special Olympics

Healthy Athletes
FUNfitness

CALL TOLL-FREE

1-800-700-8585

WEB SITE ADDRESS:

www.specialolympics.org

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