

Special Olympics

Healthy Hearing



CLINICAL DIRECTOR MANUAL



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*For questions or support, please contact the Special Olympics International team at:
healthyhearing@specialolympics.org*

Dear Healthy Hearing Clinical Director,

We are delighted to know you are interested in the Special Olympics Healthy Hearing Program. The purpose of this handbook is to provide you with the necessary information to assist you in planning and implementing a successful Healthy Hearing event.

This manual provides general information about Special Olympics, the different Programs offered by Special Olympics, followed by information needed to prepare and conduct a Healthy Hearing event.

Please review this handbook as you prepare for a Healthy Hearing event.

Kind regards,

Healthy Hearing

What is an Intellectual Disability?



Intellectual disability (ID) is a term used when a person has certain limitations in cognitive functioning and skills, including communication, social and self-care skills. These limitations can cause a child to develop and learn more slowly or differently than a typically developing child. Intellectual disability can happen any time before a child turns 18 years old, even before birth.

Intellectual disability is the most common developmental disability.

According to the American Association of Intellectual and Developmental Disabilities (AAIDD), an individual has an ID if they meet three criteria:

- IQ below 70-75
- a significant limitation in two or more adaptive areas (= skills that are needed to live, work, and play in the community, such as communication or self-care)
- the condition manifests itself before the age of 18.

What can cause an Intellectual Disability?

ID can be caused by injury, disease, or a problem in the brain. For many children, the cause of their ID is unknown.

Some causes of ID, such as Down syndrome, Fetal Alcohol Syndrome, Fragile X syndrome, birth defects, and infections, can happen before birth. Some happen while a baby is being born or soon after birth.

Other causes of ID do not occur until a child is older. These might include severe head injury, infections, or stroke.

What are the most common causes of an Intellectual Disability?

The most common causes of ID are:

Genetic conditions: Sometimes an ID is caused by abnormal genes inherited from parents, errors when genes combine, or other reasons. Examples of genetic conditions are Down syndrome, Fragile X syndrome, and phenylketonuria (PKU).

Complications during pregnancy: An ID can result when the baby does not develop inside the mother properly. For example, there may be a problem with the way the baby's cells divide. A woman who drinks alcohol or gets an infection like rubella during pregnancy may also have a baby with an ID.

Problems during birth: If there are complications during labor and birth, such as a baby not getting enough oxygen, they may develop an ID.

Diseases or toxic exposure: Diseases like whooping cough, measles, or bacterial meningitis can cause an ID. They can also be caused by extreme malnutrition, not getting appropriate medical care, or by being exposed to poisons like lead or mercury.

We know that an ID is not contagious: you can't catch an ID from anyone else. We also know it's not a type of mental illness, like depression. There are no cures for ID. However, children with an ID can learn to do many things. They may just need to take more time or learn differently than other children.

How common is ID?

Approximately 6.5 million people in the United States have an ID. According to the World Health Organization (WHO) approximately 1 to 3% of the global population has an ID, which is as many as 200 million people worldwide.

ID is significantly more common in low-income countries: 16.41 in every 1,000 people. Disabilities overall are more common in low-income countries. The United Nations Development Program estimates that 80% of all people with disabilities live in low-income countries. While people with disabilities represent approximately one in 10 people worldwide, they are one in every five of the world's poorest people.

SPECIAL OLYMPICS: MORE THAN SPORTS

Healthy Communities:

In order to help athletes achieve their best performances on and off the field, more and more SO Programs are providing year-round on-going wellness opportunities, follow-up health care, education and support for athletes, families and the public as part of the Healthy Communities (HC) model made possible by the Golisano Foundation.

The ultimate goal of the HC project is to increase access to health care and resources for people with ID and increase their health status.

The criteria to become a HC are:

- 70% of athletes who receive referrals at the Healthy Athletes Program (HAP) have a place to go for follow-up care following a HAP examination.
- Programs offer health and wellness programming for athletes outside of HAP-events involving partners, coaches and/or families as appropriate.
- Sufficient sustainable resources to achieve the above criteria and deliver the project.

It's thanks to the Golisano Foundation that the HC projects are possible. In 2012, Tom Golisano donated \$ 12 million to launch the SO Healthy Communities (HC) initiative over a 4-year period. In 2015, the Golisano Foundation gave \$ 25 million to grow SO Health work, including scaling the HC model to 100 SO Programs by 2020.



Unified Schools:



Unified Schools is an education and sports-based strategy powered by an engaged youth community that increases athletic and leadership opportunities for students with and without ID, while creating communities of acceptance for all.

Unified Sports:



Dedicated to promoting social inclusion through shared sports training and competition experiences, Unified Sports joins people with and without ID on the same team. In Unified Sports, teams are made up of people of similar age and ability, which makes practices more fun and games more challenging and exciting for all. Having sport in common is just one more way that preconceptions and false ideas are swept away.

Young Athletes Program:



Young Athletes™ (YA) is a unique sport and play program for children with ID. The focus is on fun activities that are important to mental and physical growth.

Children ages 2 to 7 enjoy games and activities that develop motor skills and hand-eye coordination. YA is an early introduction to sports and to the world of SO. The children learn new things, play and have lots of fun!

Unified Leadership:

Through sports training and competitions, SO helps people with ID achieve joy, acceptance and success. They gain the confidence that comes with achievement. They feel empowered. The Athlete Leadership Programs can take athletes even farther - as leaders and spokespeople respected in their communities.

The athletes can become mentors for other athletes. They can train to become coaches and officials. They can also move toward a more public role as a speaker or spokesperson, telling audiences and journalists about the remarkable changes that SO helped bring to their lives.

HEALTHY ATHLETES

About Healthy Athletes

Special Olympics Healthy Athletes® is designed to help Special Olympics athletes improve their health and fitness. The goal of Healthy Athletes is to improve each athlete's ability to train and compete in Special Olympics as well as other sports activities.

The **key objectives** of Special Olympics Healthy Athletes are to:

- Improve access to care at event-based and other health screening clinics.
- Make appropriate referrals for follow-up to community health professionals.
- Train health care professionals and students about the needs of people with intellectual disabilities
- Collect, analyze and disseminate data on the health needs of people with intellectual disabilities.
- Advocate for improved health policies and programs for people with intellectual disabilities.

Health screenings are conducted at World Games as well as local, State and National Games, and occasionally at special events. Healthy Athletes screenings have provided free care to hundreds of thousands of Special Olympics athletes. All Healthy Athletes screening areas maintain confidentiality of each athletes' health information. Screening data are aggregated and assessed to improve individual athlete health, and to assist in policy recommendations and advocacy for improved health care for Special Olympics athletes around the world.

The **Healthy Athletes Disciplines** are:

- Lions Clubs International Opening Eyes® (started in 1997)
- Special Smiles® (started in 1997)
- FUNfitness (started in 1999)
- Healthy Hearing (started in 2000)
- Health Promotion (started in 2000)
- Fit Feet (started in 2003)
- MedFest® (started in 2007)
- Strong Minds (started in 2017)



HEALTHY ATHLETES PROGRAM: DISCIPLINES

Fit Feet:

Special Olympics Fit Feet offers podiatric screenings to evaluate ankles, feet, lower extremity biomechanics, and proper shoe and sock gear to participating athletes. Fit Feet helps Special Olympics athletes step lively on the playing field, and in everyday life. Many athletes suffer from foot and ankle pain, or deformities that impair their performance. In fact, up to 50 percent of Special Olympics athletes experience one or more preventable or treatable foot conditions that can affect their sports participation. Often, these individuals are not fitted with the best shoes and socks for their particular sport. During Fit Feet events, volunteer podiatrists work with athletes to evaluate problems of the feet, ankles and lower extremity biomechanics.



FUNFitness:

FUNfitness is the physical therapy discipline of Special Olympics Healthy Athletes® that addresses the ongoing health needs of Special Olympics (SO) athletes.

FUNfitness provides athletes the opportunity to be screened for flexibility of hamstring, calf, shoulder rotator and hip flexor muscles; functional strength of the abdominal and lower extremity muscles; and balance. During these screenings physical therapists, physical therapist assistants, and physical therapist or physical therapist assistant students work with athletes and coaches to improve optimal function in sports training and competition, prevention of or reduced risk for injury and recommending exercises and other helpful strategies.



Health Promotion:

Health Promotion, a discipline of Special Olympics Healthy Athletes, focuses on healthy living, healthy lifestyle choices, and nation-specific health issues. In addition to health education activities, health Promotion offers screenings for bone density, blood pressure, and body mass index (BMI). Its goals include encouraging and enhancing healthy behaviors and improving self-efficacy and self-advocacy.



Healthy Hearing:

The Healthy Hearing discipline of Healthy Athletes provides comprehensive hearing examinations and follow-up recommendations information. The main goals of this program are to inform athletes, parents, coaches, or caregivers about the detection of possible ear and hearing problems, recommend follow-up as needed, and to advise about the necessity of regular ear and hearing screening.



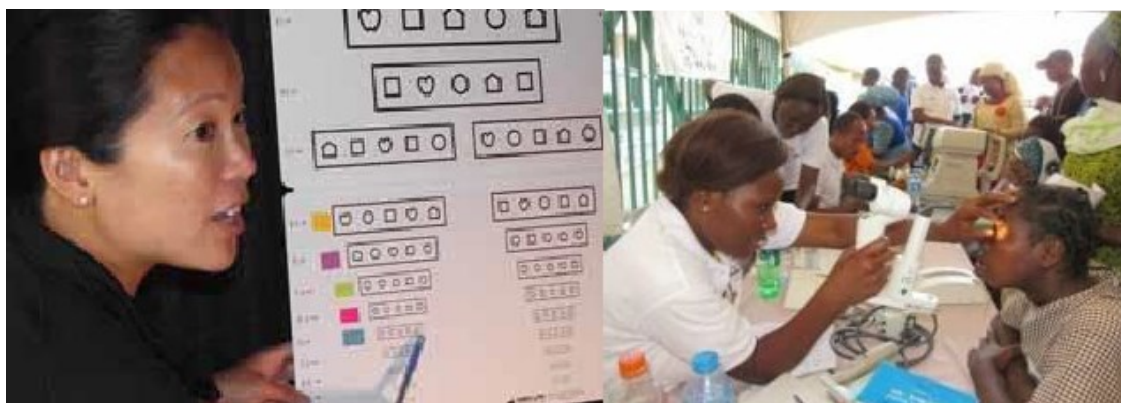
MedFest:

MedFest was created to offer the physical exam that all athletes need prior to participating in Special Olympics sports programming. It is sometimes the first exposure these athletes have to medical care. In many cases, life-threatening conditions have been found and subsequently treated thanks to MedFest. Led by volunteer physicians, nurses, physician assistants, and medical students, the MedFest screening consists of the following stations: medical history, height and weight, blood pressure, cardiology test, musculoskeletal test, orthopedic tests, abdominal evaluation, and a check out station.



Lions Club International Opening Eyes:

Opening Eyes is changing lives in communities across the globe, providing free eye assessments, prescription eyewear, sunglasses, and sports goggles to people with intellectual disabilities. The Special Olympics-Lions Clubs International Opening Eyes program is a vision and eye health screening in partnership with the Lions Clubs International Foundation. Led by volunteer vision care professionals, Opening Eyes can offer prescription eyewear, sunglasses, and sports goggles to Special Olympics athletes.



Special Smiles:

The Special Smiles discipline of Healthy Athletes provides comprehensive oral health care information, including offering free dental screenings and instructions on correct brushing and flossing techniques to participating Special Olympics athletes. This resource page is equipped with manuals and forms, event resources and Special Smiles stories and additional information. Special Smiles has demonstrated remarkable success in creating awareness and improving access to dental care for children and adults with intellectual disabilities.



Strong Minds:

Strong Minds help Special Olympics athletes strengthen their coping skills. Competition provides a natural opportunity to develop active strategies for maintaining emotional wellness under stress, such as: thinking positive thoughts, practicing calming routines, and connecting with others. Athletes try a few different strategies as they move through the station. Before exiting, athletes identify the strategies they like best, and volunteers provide them with visual reminders to use these tools in competition and in real life.



REFERENCES

- American Association of Intellectual and Developmental Disabilities
Centers for Disease Control and Prevention
- National Center on Birth Defects and Developmental Disabilities
Special Olympics International website
- United Nations Development Program World Health Organization

ACKNOWLEDGEMENT

The Healthy Hearing Program would not be possible without the many Healthy Hearing Clinical Directors who, for the benefit of our athletes' health, give a part of their valuable time and experience. We are so excited to have you as part of the team! Thank you for your willingness to serve in this role!

Healthy Hearing

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SPECIAL OLYMPICS – RELATED LINKS

- Unified Schools: <https://www.specialolympics.org/our-work/unified-schools>
- Inclusive Health: <https://www.specialolympics.org/our-work/inclusive-health>
- Unified Sports: <http://www.specialolympics.org/unified-sports.aspx>
- Young Athletes Program: <http://www.specialolympics.org/young-athletes/>
- Unified Leadership:
http://www.specialolympics.org/Sections/What_We_Do/Athlete_Leadership.aspx
- How to speak to individuals with disabilities:
https://media.specialolympics.org/resources/video/10-Commandments-How-to-Speak-with-People-with-Disabilities.mp4?_ga=2.251948681.1622762331.1548884715-1137030687.1519746336

HEALTHY HEARING – RELATED LINKS

- HH Resource page: <https://resources.specialolympics.org/health/healthy-hearing>
- HH Health Athletes System Form: <https://resources.specialolympics.org/health/healthy-athletes-system>
- HH equipment request form:
<https://app.smartsheet.com/b/form/e22a6992f5bc488cbf8b7d4f671a82a6>
- HH data requests: healthdata@specialolympics.org
- HH HAS data system: <https://has.specialolympics.org/healthone>
- HH post event report:
https://specialolympics.qualtrics.com/jfe/form/SV_4lxjGhQb8vErnZH
- HH videos: <https://www.youtube.com/watch?v=OfpAGrFhK64&feature=youtu.be>
- HH 1-minute promotional video: https://www.youtube.com/watch?v=hRLHkf_4D6o

WHAT CLINICAL DIRECTOR SHOULD KNOW/DO PRIOR TO EVENT

- Review the Healthy Athletes System (HAS) Form that you will be using during the event
 - Enables the electronic capture of screening data across the Healthy Athletes disciplines. Can be found on the Healthy Hearing Resource page and linked in “Related Links” page of this manual.
- Event information
 - When is the event?
 - Where is the event?
 - How many athletes will compete?
- Need by date of equipment
- Submit equipment request form at least 90 days prior to event
- OAE tips request (S, M and L)
- OAE-units needed
- Tympanometers needed
- Audiometers needed
- Voltage requirements
- Local screening equipment availability
- Shipping information for equipment (name + address)
- Number of volunteers needed
- Secure sponsors
- Review clinical director manual in its entirety
- Review hold harmless agreement form and make sure each volunteers signs day of event https://media.specialolympics.org/resources/health/disciplines/Hold-Harmless-Agreement.pdf?_ga=2.131091535.1385627676.1694533469-45813867.1684762500

WHAT CLINICAL DIRECTOR SHOULD DO FOLLOWING EVENT

- Data entry
 - Healthy Hearing Report
- Return local screening equipment if borrowed
- Return SOI equipment if borrowed via SOI.
 - Request equipment return label from healthyhearing@specialolympics.org
 - Return of materials and supplies one business day following event
- Thank you cards for volunteers and sponsors

REQUESTING HEALTHY HEARING EQUIPMENT

Please make your request for Healthy Hearing equipment at least **90 days** prior to your event, we cannot guarantee equipment fulfillment for submissions outside of this timeframe.

Use the following link for requesting equipment:

<https://app.smartsheet.com/b/form/e22a6992f5bc488cbf8b7d4f671a82a6>

Healthy Hearing Inbox for any questions, comments, or concerns healthyhearing@specialolympics.org

Please DO NOT contact the distributor directly. If you have multiple events, please complete 1 form for each event.

Upon submission, you will receive the following confirmation from Healthy Hearing

Conf #	Expected Timeframe	Information Included
1	5 to 10 (U.S.A.) & 10 to 20 (international) days prior to event	Will provide actual shipping information, as well as return labels and customs paperwork (if needed)

FOR YOUR INFORMATION

Please allow time to charge and do behavioral check of equipment before use. **All units are to be returned the next business day following your event.** SOI pays for units being shipped back to the distributor only. If you are instructed to ship units between venues, air bills are included with the equipment.

Please DO NOT discard enclosed air bills and DO hold on to the original shipment packaging. Please do not discard or remove documents from the packaging.

Insurance Information: While in use at events and during transport, the equipment distributor and SOI jointly carry insurance to cover hearing equipment for property damage or loss and damages due to business activities. It is not necessary to acquire additional coverage per event.

RECEIVING YOUR EQUIPMENT






- Please immediately check all equipment to ensure you have received the correct type and quantities.
- When unpacking the box, carefully remove all equipment and save all original packaging for returning equipment.
- Test all equipment to ensure it is working properly.
- Charge any equipment as needed.
- If equipment is not working properly or there are any urgent issues, please contact Healthy Hearing immediately at healthyhearing@specialolympics.org
- Note: Many issues with the OAE unit can be resolved by tightening or adjusting the probe tip nozzle. An additional nozzle is enclosed as a backup for any issues you may experience.

SENDING YOUR EQUIPMENT

- Schedule UPS pick-up or drop off at a UPS location the **NEXT BUSINESS DAY** after your event. If this is an issue, please alert Healthy Hearing immediately at healthyhearing@specialolympics.org
- Utilize original packaging to **carefully pack all equipment**.
- Make sure all test probes for OAE unit and tympanometer are cleaned and disinfected before return.
- Unplug all cords from units including headphones. Ensure that all cords are packed appropriately in carrying cases.
- Separate different size OAE foam ear tips and place in original bags. **PLEASE SEND EXTRA TIPS BACK TO SPECIAL OLYMPICS.**
- Remove any labels and other previous shipment markings on the box that are no longer applicable.
- Use adequate cushioning material that was originally sent with equipment to wrap each item in bubble wrap.
- **Make sure that all equipment is well protected.**
- Use strong tape designed for shipping.
- Please report any equipment issues to healthyhearing@specialolympics.org and place a note with a description of the problem on the equipment.
- Ensure the address label is clearly printed out and displayed on packages.
- Place international shipping paperwork (if needed) in box.

EQUIPMENT AND SUPPLY LIST

Please visit the Healthy Hearing Resource Page where the clinical director will be able to access the equipment and supply list with suggested quantities. Example below.

Screening Station Supplies					
Straight Back Chairs		need stable chairs for waiting area, check in/out and stations	35 per 80 athletes	<i>Contact Health Program Manager to procure from venue</i>	
Tables		Utilized for check in, check out, data review, stations amount may vary based on use of mat table availability	183cm (6ft) tables - 12 per 80 athletes	<i>Contact Health Program Manager to procure from venue</i>	
Tablecloths		used to cover tables in various tables at stations	based on table #	local store/online (e.g. amazon)	Cost varies
Otosopes		used to check inside athletes ears	1-2 per station	online (e.g., amazon)	Cost varies
Otoscope Specula (pediatric and adult sizes)		end tip of otoscope	150 (2 different sizes) per 80 athletes	online (e.g., amazon)	Cost varies

SPECIAL OLYMPICS HEALTHY HEARING – TO DO LIST

Volunteers:

- ✓ Search volunteers:
 - Creation of letter/mail for:
 - Student volunteers
 - Clinical volunteers (audiologists + medical doctors)
 - Non-clinical volunteers (check-in, guidance, data entry)
 - Mailing volunteers:
 - Postal addresses/email addresses
 - Educational Programs
 - Professional Societies (audiology + medical doctors)
 - Service Clubs (e.g., Lions, Rotary, ...)
- ✓ Register volunteers:
 - Digital registration
 - Extra insurance for medical doctors if ear wax removal is available
- ✓ Inform volunteers:
 - General info
 - HH-manual + screening form
- ✓ Train volunteers:
 - Practical training at the venue, pre-screening
- ✓ Thank you note (+ results) for volunteers

General:

- ✓ Equipment and supply list: adapt numbers
- ✓ SOI HAP Grant (SO Program)
 - Necessary info for HH
 - Submit to Regional HA Manager (SO Program)
- ✓ Contact potential sponsors:
 - Audiological equipment
 - ENT equipment
 - Supplies
 - Giveaways
- ✓ SOI Equipment request form (min. 3 months prior to event):
 - Fill in and submit via [Healthy Hearing Resource](#)
- ✓ Reminder sponsors:
 - Practical: receiving and returning of materials and supplies
 - Necessary information for insurance
- ✓ Purchase additional supplies
- ✓ Copies
- ✓ Thank you note (+ results) for sponsors

Forms: number of copies is dependent on number of anticipated athletes attending the screening

- ✓ HAP-flyer (SO Program to create)
- ✓ HAP passport (SO Program to create)
- ✓ HH one pager
- ✓ HH HAS screening forms: located via [Healthy Hearing Resource](#)
- ✓ HH PASS recommendation forms: located via [Healthy Hearing Resource](#)
- ✓ HH NO PASS recommendation forms: located via [Healthy Hearing Resource](#)
- ✓ Guidelines for referral follow-up: located via [Healthy Hearing Resource](#)
- ✓ Guidelines for urgent referral: located via [Healthy Hearing Resource](#)
- ✓ Guidelines for general advice: located via [Healthy Hearing Resource](#)
- ✓ Manuals for volunteers: located via [Healthy Hearing Resource](#)
- ✓ Return labels for boxes – request via healthyhearing@specialolympics.org

Clinical Directors:

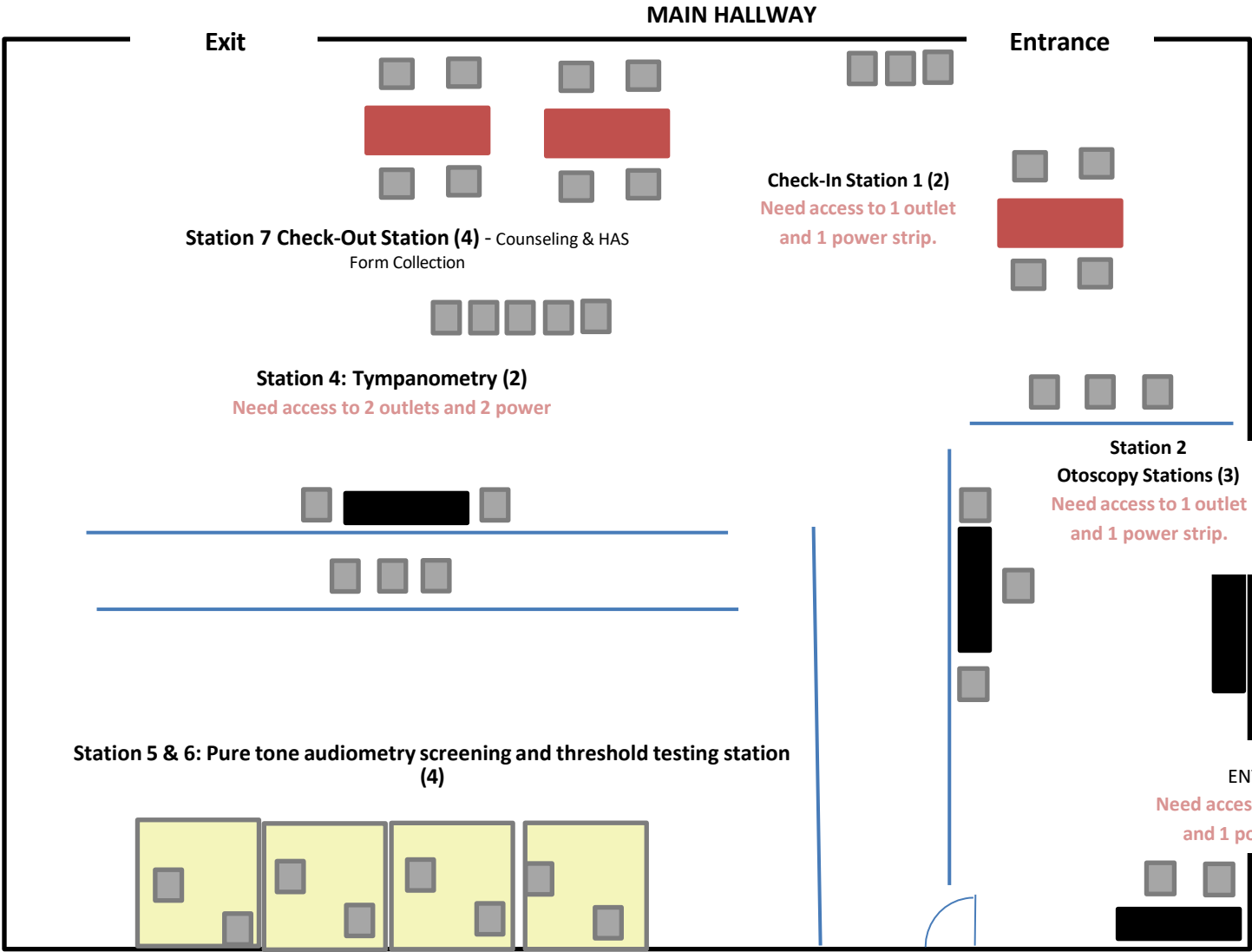
- ✓ Visit screening location (min. 3 months prior to event)
- ✓ Insurance: [Hold Harmless Agreement](#)
 - Volunteers
 - Medical Doctors (if ear wax removal) make sure that they have separate coverage
 - Equipment ordered 90 days in advance

Post-event:

- ✓ Returning equipment:
 - SOI
 - Sponsors
- ✓ Data-input
- ✓ Post-event reports
- ✓ Thank you note volunteers
- ✓ Thank you note sponsors
- ✓ Reminder letters athletes

Healthy Hearing Proposed Venue Layout

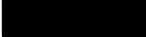



(Layout may change based on the actual space – 20 m x 14 m)



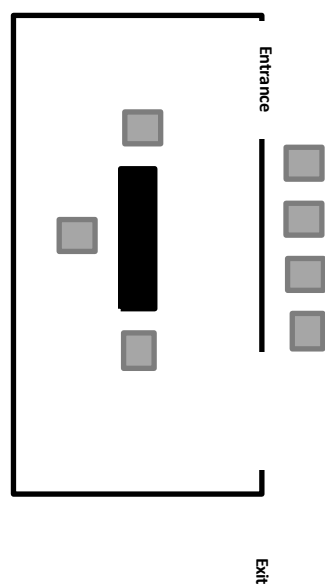
Total Need: 6 Trestle Tables; 3 classroom tables; 52 chairs
8 outlets/power strips

KEY:

One grid box = 1/3m x 1/3m (33cm x 33cm)

-  = Classroom Table (183 cm x 55 cm)
-  = Trestle Table (180 cm x 76cm)
-  = Chair
- = Partition
-  = Opening to small room

Health Hearing Proposed Layout –
Smaller silent room 2
For screening 80 athletes in 1 day




Station 3 – OAE screening
Need access to 1 outlet and
1 power strip.

**Total Need: 3 classroom
tables; 9 chairs 3
outlets/power strips.**

KEY:

One grid box = 1/3m x 1/3m (33cm x 33cm)

 = Classroom Table (183 cm x 55 cm)

 = Chair

HEALTHY HEARING STATION REQUIREMENTS

Station 1: Check-in

Procedure:

- ✓ Request athlete's data
- ✓ Questions regarding hearing: ask the athlete (not the coach) / no suggestive questions:
 - Do you think you have hearing loss?
 - Do you wear hearing aids? Which ear(s)?
If yes, Do you have your hearing aid(s) with you?

After check-in:

- ✓ Guide the athlete with their screening form to the waiting area or a volunteer takes the athlete with them to Station 2: Otoscopy

Station 2: Ear canal screen / Otoscopy

Procedure:

- ✓ Wear gloves
- ✓ Perform otoscopy in each ear
- ✓ Use same speculum for both ears, unless visible infection or blood in first ear
- ✓ Plastic ear specula = garbage bag; Metal ear specula = box to clean and disinfect/sterilize

Note of results:

Minimally blocked = ear drum > 50% visible (= PASS)

Partially Blocked = ear drum ~ 50% visible (= REFER)

Blocked = ear drum < 50% visible (= REFER)

- ✓ Take note of any abnormality of the pinna, in the ear canal or at the ear drum. Let the decision on the necessity of referral for these abnormalities be made by the Clinical Director.

Remarks:

- ✓ If extra otoscopic findings are noted, please select all that apply.

Next step:

- ✓ After otoscopy, all athletes continue to station 3 (OAE), regardless of results, unless contra- indication.

Extra: Removal of Ear Wax / Foreign body

Note of results:

Yes = complete removal of ear wax and/or foreign body

Yes, partially = partially removal of ear wax and/or foreign body

Unable to remove

Athlete refused = refusal of ear wax removal and/or foreign body by athlete

- ✓ Always fill in 1 of the options above when the ear canal is “partially blocked” or “blocked” never when the ear canal is “clear”.
- ✓ Always check what the situation is after (partially) removal of ear wax (or not). Never fill in when the first situation was already “clear”.

Station 3: Screening with Otoacoustic Emissions

Procedure:

- ✓ Wear gloves
- ✓ Perform OAE screening in each ear
- ✓ Use the same foam ear tip for both ears, unless visible infection or blood in first ear
- ✓ Foam ear tip = garbage bag

Note of results:

PASS = PASS on screening unit

NO PASS = REFER on screening unit

UNABLE TO TEST = if OAE screening not possible + check one of the reasons
= NO REFERRAL NEEDED

Next step:

- ✓ If bilateral “pass” → check-out
- ✓ If unilateral or bilateral “refer” / “no pass”
 - Athlete goes to station 4 (tympanometry) and 5 (pure tone screening), unless contra-indication

Station 4: Screening with Tympanometry

Procedure:

- ✓ Wear gloves
- ✓ Perform tympanometry in each ear
- ✓ Use the same ear tip for both ears, unless visible infection or blood in first ear
- ✓ Used ear tips → box to clean and disinfect

Note of results:

PASS = all values within the values of the normative data

NO PASS = type B-tympanogram or at least one of the numeric results outside of the normative data

UNABLE TO TEST = If tympanometry not possible + check one of the reasons
= NO REFERRAL NEEDED

Normative data for tympanometry: ("rule of 2")

PASS = admittance between 0.20 and 2 mmho
middle ear pressure between +20 and -
200daPa ear canal volume between 0.60
and 2 ml

NO PASS =
type B (flat)
type C (under pressure) with pressure more positive than +20 daPa or more negative
than - 200daPa
type As with value for admittance < 0.20 mmho
type Ad with value for admittance > 2 mmho ear canal volume <0.60 ml or > 2 ml

Comments:

- ✓ Note type of tympanogram when "no pass", this way Clinical Director can decide on follow-up recommendations.
- ✓ Type D-tympanogram, without any further abnormalities on otoscopy = "pass"
- ✓ When unilateral or bilateral "no pass" on tympanometry, but all other screening results are normal, then the athlete will not be referred for follow-up, unless the Medical Doctor or the Clinical Director at the event decides otherwise.

Next step:

- ✓ After tympanometry, all athletes continue to station 5 (Pure Tone Audiometry Screening), regardless of results.

TYMPANOMETRY NORMATIVE DATA

Ear canal volume: 0.60 – 2.00 cc
Middle ear pressure: +20 - -200 daPa
Admittance: 0.20 – 2.00 cc

Station 5: Pure Tone Audiometry Screening

Procedure:

- ✓ Test frequencies: 2000 and 4000Hz (ear by ear)
- ✓ Intensity level: 25dBHL = "pass"
- ✓ Interrupted (pulsed) tones
- ✓ Screening procedure: starting level = 50dBHL → 35dBHL (if response at 50dBHL) → 25dBHL.
- ✓ Requested response = raise hand; play audiometry if needed
- ✓ Short training and/or conditioning if needed
- ✓ Disinfect headphones before usage with new athlete

Note of results:

PASS = reliable response at 25dBHL

→ check-out if 4x "pass" (both frequencies in both ears)

NO PASS = no (reliable) response at 25dBHL, or athlete refused testing

→ station 6

Next step:

- ✓ If 4 times PASS → check-out
- ✓ If NO PASS for at least 1 of the 4 frequencies → station 6 (threshold testing with pure tone audiometry)

Station 6: Pure Tone Audiometry Threshold Testing

Procedure:

- ✓ Test frequencies air conduction: 250, 500, 1000, 2000, 3000, 4000 and 6000Hz
- ✓ Test frequencies bone conduction: 250, 500, 1000, 2000, 3000, 4000 and 6000Hz
- ✓ Mask if necessary and possible
- ✓ Determine hearing threshold, ear by ear, also for ear with "pass" at pure tone screening

Note of results:

NR = No Response: if no response for certain frequency at maximum intensity level.

Note if masking technique is used.

Note if test results are reliable or not.

Comments:

- ✓ Test as many thresholds for air and bone conduction as possible. If attention or reliability decreases, try to test at least 1 threshold for bone conduction (1000Hz).
- ✓ Ask for assistance if needed.

HEALTHY HEARING PROGRAM SPECIAL OLYMPICS INTERNATIONAL

SCREENING SUMMARY RESULTS

Athlete's Name
(print)

Special Olympics Event
(print)

Date

- **CONGRATULATIONS!** You **PASSED** your hearing screening in both

- **It is still important to:**
 - have your ears checked by a medical doctor for ear wax 1 / 2* times a year
 - have a hearing evaluation by an audiologist / ENT-specialist every 1 / 3 / 5* year(s)

- **Services provided at the Special Olympics event:**
 - ☒ Ear canal inspection
 - ☒ Hearing screening
 - ☐ Ear wax removal
 - ☐ Middle ear screening
 - ☐ Swim plugs
 - ☐ Ear protection (noise plugs)
 - ☐ Other:

Special Olympics
Healthy Hearing



.....

ENGLISH

PASS FORM

HEALTHY HEARING PROGRAM SPECIAL OLYMPICS INTERNATIONAL

SCREENING SUMMARY RESULTS

Athlete's Name (print)

Special Olympics Event (print)

Date

- **THANK YOU** for attending the Healthy Hearing screening.

You are advised to take further action as you **DID NOT PASS** your hearing screening.

➤ **You need to:**

☐ See your medical doctor for ear wax removal

☐ Right

☐ Left

☐ See your medical doctor for possible
middle ear problems

☐ Right

☐ Left

☐ See an audiologist / ENT-specialist for
hearing evaluation

☐ Right

☐ Left

☐ See an audiologist for hearing aid evaluation

☐ Urgent follow-up needed

☐ Right

☐ Left

Reason for Urgent follow-up: _____

➤ **It is also important to:**

- Have your ears checked by a medical doctor for ear wax 1 / 2* times a year
- Have a hearing evaluation by an audiologist / ENT-specialist every 1 / 3 / 5* year(s)

➤ **Services provided at the Special Olympics event:**

☒ Ear canal inspection

☒ Hearing screening

☐ Middle ear screening

☐ Ear wax removal

☐ Hearing aid fitting

☐ Hearing aid repair / maintenance

☐ Ear mold for hearing aid

☐ Swim plugs

☐ Ear protection (noise plugs)

☐ Other:

Special Olympics
Healthy Hearing



NO PASS FORM

GUIDELINES FOR REFERRAL FOLLOW-UP

- ✓ **Otoscopy:** “Partially Blocked” or “Blocked” ear canals in one or both ears
→ referral ear wax removal = “Ear wax removal required”
- ✓ **Otoscopy:** “Medical evaluation of ears needed for extra otoscopic findings” checked by Healthy Hearing Clinical Director / Medical Doctor in one or both ears (after visualization of an acute problem in the ear canal or at the ear drum)
→ referral for possible ear problem = “Medical Evaluation of Ears”
- ✓ **OAE:** “No Pass” in one or both ears
→ no referral → recommendation will depend on results on pure tone audiometry
- ✓ **Tympanometry:** “No Pass” in one or both ears (no normal type A-tympanogram OR abnormal small or abnormal big ear canal volume OR type B-tympanogram) → referral for possible middle ear problems (unless no other referral is necessary) = “Medical Evaluation of Ears”
- ✓ **Pure Tone Audiometry:** “No Pass” on pure tone audiometry in one or both ears (response > 25dBHL at 2000 and/or 4000Hz)
→ referral to rule out hearing loss = “Audiological evaluation”

BUT, to avoid over-referral:

- ✓ If the only “No Pass” is on tympanometry, no referral is made, unless the Clinical Director or Medical Doctor decides that it is necessary.
- ✓ If there is a “No Pass” on pure tone audiometry for 1 or 2 test frequencies at 30dBHL (instead of 25dBHL), no referral for possible hearing loss is needed, unless the Clinical Director decides it is necessary.

GUIDELINES FOR URGENT REFERRAL FOLLOW-UP

CONDITION	URGENT REFERRAL TO EAR, NOSE, AND THROAT PHYSICIAN IF ...	PREVALENCE
Othematoma = hematoma auris	Visual inspection shows a purplish hard swelling of the external ear. Can result from hit on ear e.g., basketball	Sporadic
Foreign body in the ear canal	Visual inspection with otoscope shows foreign body e.g., peanut, hearing aid dome, cotton wool.	Sporadic
Otitis externa	Visual inspection with otoscope shows pink ear canal mucosa, if painful during inspection, or bleeding or moist/fungal spores in dead skin in the ear canal.	More common
Myringitis	Visual inspection with otoscope shows obvious infection (fever, red or bulbous ear drum) or if painful when flying, driving up and down hills	Sporadic
Acute otitis media	Visual inspection with otoscope shows obvious infection (fever, red or purple ear drum) or if painful when flying or driving over hills.	More common e.g., with a cold/sinus trouble.
Draining ear	Visual inspection (with otoscope) shows purulent flow in the ear canal of thin or thicker moisture.	Sporadic with perforation

GUIDELINES FOR GENERAL ADVICE

General advice on recommendation forms:

It is also important to:

- ✓ have your ears checked by a medical doctor for ear wax 1 / 2* times a year
- ✓ have a hearing evaluation by an audiologist / ENT-specialist every 1 / 3 / 5* year(s)

** Circle the frequency that is appropriate and strike out the other numbers*

Guidelines for general advice:

Frequency depends on if an athlete has Down syndrome or not (and age) AND if an athlete has a hearing aid or not:

- ✓ An athlete, without Down syndrome, without hearing aid(s):
 - ✓ Ear wax: once (1) a year
 - ✓ Hearing evaluation: every 5 years
- ✓ An athlete with Down syndrome, without hearing aid(s):
 - ✓ Ear wax: twice (2) a year
 - ✓ Hearing evaluation: every 3 years \leq 35 years
every (1) year $>$ 35 years
- ✓ Athlete with hearing aid(s):
 - ✓ Ear wax: twice (2) a year
 - ✓ Hearing evaluation: every (1) year

OAE-units AuDX-I from BioLogic/ Natus

- ✓ In some cases, the power supply that is delivered with the OAE-unit does not fit in the wall outlet, this because the electrical cable has a typical “male” plug for UK or USA (see white cable in pictures).

IF you have a different plug / wall outlet:

- ✓ You will need an electrical cable between the “black” adaptor and the power outlet in the wall. This can be solved by using a computer cable (NOT a notebook cable) with a “female” electrical plug like you see on the picture below. This cable is never with the OAE-unit.
OR instead of the computer cable an adaptor for the UK or USA “male” plugs to your local type “male” plug.
- ✓ The adaptor is a 220V adaptor, which is OK (see black cable with box in picture).



Tympanometer GSI 37 from Grason Stadler

- ✓ In most cases, the power supply that is delivered with the GSI 37-tympanometer does not fit in the wall outlet, this because the electrical cable has a typical “male” plug for UK or USA (see cable in picture = same problem as with OAE- units).



This cannot be solved with a simple computer cable, because the part that fits in the charger of the tympanometer is different (see left part of picture above).

This can be solved by adding an adaptor to the electrical cable, so the plug fits in your wall outlet.

- ✓ If you really don't have an adaptor, which is recommended, you can use batteries instead. The battery department can be found in the handle of the tympanometer. Standard, there will be a rechargeable battery in the tympanometer (see battery below on the left). If not using electricity to recharge this battery, it needs to be replaced by a 9V-battery (see battery below on the right).



BUT don't forget:

- ✓ If 9V-batteries are used, you cannot put the tympanometer in the charger
- ✓ To take the 9V-batteries out of the tympanometer, and put the rechargeable battery back before sending it back to SOI (DLMR Solutions)

Extra Station: Removal of Ear Wax and/or Foreign Body

Can be completed by clinical audiologists or ENTs

Goal:

Dry removal of ear wax by an ENT, PCP, or audiologist.

Materials:

Ear hooks, ear loops or micro forceps of different sizes.

Procedure:

- ✓ Wear gloves. The ENT, PCP, or Clinical Director tries to remove ear wax at the event, if needed and possible, and after the athlete has been informed and has agreed to this.
- ✓ A second volunteer helps if needed, reassures the athlete, writes down the findings on the screening form, and makes sure that each line is completed.
- ✓ Keep the used materials in a separate and labelled box so they can be disinfected / sterilized at regular times.
- ✓ Guide ALL athletes to Station 3 (OAE) or find a volunteer to do this.
EXCEPTION to proceeding to Station 3 is the presence of significant ear discharge or any other contraindication.



explain and show



remove



check



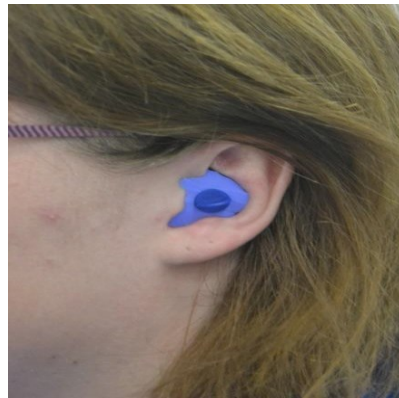
Note of results:

- ✓ Note if the ear wax / foreign body has been completely or partially removed by ear:
 - **Yes, completely** = ear wax has been completely removed
 - **Yes, partially** = ear wax has been partially removed
 - **Unable to remove** = ear wax removal has been tried, but was not possible at the event
 - **Athlete refused** = the athlete refuses ear wax removal at the event

Comments: If Program is conducting cerumen management

- ✓ Ask the Physician/ ENT/ Clinical Director for advice if needed. Make maximum use of this learning opportunity.
- ✓ Let the Physician/ ENT/ Clinical Director remove the ear wax if necessary and possible.
- ✓ Let the Physician / Clinical Director decide if referral for other than excessive ear wax is necessary or not.
- ✓ Use a video-otoscope, when available, to show the athlete or his coach the reason for referral.
- ✓ Contra-indications for further screening need to be written down clearly on the screening form. Excessive ear wax may not a contra-indication within this screening protocol, even if the ear canal is completely blocked.

Extra Station: Swim Plugs - can be completed by clinical audiologists or ENTs



Goal: Free custom-made swim plugs for athletes that need them (perforation of the ear drum, tympanic tubes, mastoid cavity).

Materials: Otoscope with plastic ear speculi (2 sizes), cotton/foam balls with thread, pen light, instant swim plug material (2 colors), syringe, cutter knife, box or plastic bag to store swim plugs, hand mirror.

Position: The athlete and the volunteer both sit down, next to a table.

Procedure:

- ✓ Inform the athlete and their coach/family/carer about the need for swim plugs for water sports, when bathing, taking a shower, washing hair.
- ✓ Ask oral permission of the athlete and their coach/family to make free custom swim plugs at the event after informing them that this process will take an extra 15 minutes.
- ✓ Ask oral permission of the athlete and their coach/family to make free custom swim plugs at the event after informing them that this process will take an extra 15 minutes.
- ✓ Explain to the athlete the procedure of how swim plugs are made.
- ✓ Make the swim plugs. Write down the athlete's name on the box or plastic bag in which the swim plugs will be stored.
- ✓ Show the athlete the finished and inserted swim plugs with a hand mirror.
- ✓ Teach the athlete and their coach/family/caregiver how to deal with the swim plugs: when to wear, how to put in the ears, how to take them out, how to clean them, how to store them, difference between right and left swim plug.
- ✓ Check the box "Swim Plugs" on the screening form.

Comment:

If no swim plugs can be made at the event, but the athlete would benefit from swim plugs, recommend the athlete and coach/family to obtain swim plugs after the event. Explain the need for swim plugs.

Check the box "Swim Plugs" on the screening form.

Extra Station: Hearing Aid Maintenance and Repair

Program can only provide hearing aid maintenance and repair services.

Goal: For Program to check for maintenance and repair of hearing aids.

Materials: Program should secure necessary materials and supplies for basic maintenance and repair of different types of hearing aids e.g., listening tube, cleaning wipes and tools; replacement ear mold tubes and scissors, glue and threading tools or different sized domes, hearing aid hooks and microphone covers – all for common hearing aid models. Spare hearing aid batteries of different sizes e.g., 13, 312, 675.

Position: The athlete and the volunteer both sit down, next to a table.

Procedure: If Program is conducting hearing aid maintenance and repairs

- ✓ The volunteer at check in or a screener has informed one of the clinical volunteers that an athlete has their hearing aid(s) with them. The clinical volunteer asks the athlete, and if possible, also his coach/carer, for permission to check the hearing aids at the end of the screening.
- ✓ One clinical volunteer will check and carry out necessary maintenance of the hearing aid(s) at an optional station right before check-out/education station.
- ✓ Check the box “Hearing Aid Repair/Maintenance” on the screening form and write in the comment section on the screening form that the athlete’s hearing aids were checked.
- ✓ Take note of the name and identification number of the athlete.
- ✓ Clean the ear molds and the hearing aids. Check the hearing aid visually and with a listening device. Replace flat batteries and tubing, etc. if necessary and possible.
- ✓ If the athlete needs new ear molds, refer the athlete to their audiologist and check the box “Replacement of Ear Molds” on the screening form.
- ✓ Explain to the athlete and his coach/family what you have done and what you advise.

Comment:

If there are no materials and supplies at the event for hearing aid fitting, repair or for making new ear molds, refer the athlete to their audiologist. Check the box “Hearing Aid Repair/Maintenance” “Hearing aid fitting” or “Replacement of Ear Molds” on the screening form.



Healthy Hearing

Healthy Hearing is changing lives in communities across the globe by providing free hearing screenings and other medical services, including ear wax removal, swim molds, hearing aid maintenance and minor repairs for people with intellectual disabilities.

The number of ear problems and hearing loss among Special Olympics athletes is greater than that found in the general population. Most athletes' hearing problems are previously undetected, un-served or under-treated. Hearing loss negatively impacts communication ability, quality of life, social interactions and health.

Importance and Impact

Healthy Hearing screenings have found that a large percentage of Special Olympics athletes have untreated ear and hearing conditions.

- **39%** have blocked or partially blocked ear canals.
- **39%** failed Puretone hearing examination.
- **137,691% of hearing screenings** performed Globally from 2007 to December 2018.

CONTACT

Healthy Hearing:
healthyhearing@specialolympics.org

Purpose of the Screening and Goals:

Increase access to hearing care for Special Olympics athletes, as well as all individuals with intellectual disabilities.

Identify permanent hearing loss and provide referral for follow-up care.

Identify medical issues causing hearing loss and refer to the appropriate medical professional for follow-up.

Raise audiologists' awareness of the hearing concerns of people with special needs, including the difficulties involved in diagnosing and accessing treatment options.

Provide educational and clinical opportunities for students training in the field of Speech Language Pathology and Audiology.

Provide a list of regional audiologists and ear, nose and throat specialists who care for people with special needs to all athletes who participate in the Special Olympics Healthy Hearing program.

Develop a body of knowledge about ear canal hygiene of children and adults with special needs.

Educate athletes about ways to prevent hearing loss from noise exposure.

