



Special Olympics

Healthy Athletes

MedFest®

A Training Manual for Clinical Directors





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Special Olympics Healthy Athletes® is supported in part through a cooperative agreement with the U.S. Centers for Disease Control and Prevention, a grant from Lions Clubs International Foundation, and the generous support of corporate sponsors.

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Special Olympics

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Dear Clinical Director:

Special Olympics provides year-round sports training and athletic competition in a variety of Olympic-type sports for children and adults with intellectual disabilities, giving them the continuing opportunities to develop physical fitness, demonstrate courage, experience joy and participate in a sharing of gifts, skills and friendship with their families, other Special Olympics athletes and the community.

Healthy Athletes® was developed because Special Olympics athletes cannot participate successfully in their sport unless they are in good health. Research and studies have shown that Special Olympics athletes experience an array of health problems and too frequently fail to receive, or have limited access to, the health care they need. In an effort to provide more health opportunities, improve understanding and training for health professionals, and increase access to health care for Special Olympics athletes, Healthy Athletes was formally launched in 1997. After several years of successful event-based health screenings and care, the program has been expanded worldwide.

I am delighted that you are interested in starting a Special Olympics Healthy Athletes Program in your community. Your efforts will be the foundation that establishes these much needed health and learning opportunities for Special Olympics athletes. You will also provide the opportunity for health care providers in your area to be trained in the specific needs of our athletes and experience the joy of being a part of the Special Olympics family.

Thank you for your time, interest in and dedication to people with intellectual disabilities.

Sincerely,

Eunice Kennedy Shriver

*Eunice Kennedy Shriver
Founder and Honorary Chairman, Special Olympics*



Special Olympics

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OVERVIEW

SPECIAL OLYMPICS OVERVIEW

Mission

The Special Olympics mission is to provide year-round sports training and athletic competition in a variety of Olympic-type sports for children and adults with intellectual disabilities by giving them continuing opportunities to develop physical fitness, demonstrate courage, experience joy and participate in a sharing of gifts, skills and friendship with their families, other Special Olympics athletes and the community.

Background

Special Olympics offers 30 officially recognized, Olympic-type individual and team sports that provide meaningful training and competition opportunities for people with intellectual disabilities, including age-appropriate activities and activities for lower ability athletes.

All Special Olympics programs are designed to serve all ability levels, and there is no charge to participate. For people with severe limitations who do not yet possess the physical and/or behavioral skills necessary to participate in these sports, Special Olympics also offers a Motor Activities Training Program (MATP).

Participation in Special Olympics is open to anyone with intellectual disabilities aged 8 years and older. For children with intellectual disabilities ages 2 through 7 years, Special Olympics offers a Young Athletes™ program.

Special Olympics Unified Sports® brings together athletes with and without intellectual disabilities to train and compete together. Unified Sports competitions are an important part of Special Olympics World Games, as well as local, State/Provincial and National Games.

Coaches play a unique role in Special Olympics around the world. On a day-to-day basis, the volunteer coach spends more time interacting with athletes than any other Special Olympics volunteer. Coaches not only serve as athletic trainers, they also serve as mentors, advocates and friends.

Special Olympics is comprised of:

- More than 2.8 million athletes in more than 180 countries;
- More than 200 affiliated Special Olympics organizations;
- 700,000 volunteers around the world;
- 500,000 coaches around the world; and
- More than 20,000 annual competitions around the world.

HEALTHY ATHLETES

The Special Olympics Healthy Athletes® program 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.

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; and
- Advocate for improved health policies and programs for people with intellectual disabilities.

The seven Healthy Athletes Disciplines are:

- 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)
- Special Olympics MedFest® (2007)

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. 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 Special Olympics athletes around the world.

As a result of Train-the-Trainer seminars conducted annually since 1999 at the World Summer Games and other regional events, Healthy Athletes has expanded rapidly worldwide. To date more than 500 clinical directors have been trained to implement Healthy Athletes screenings in their home states, provinces or countries.

The Healthy Athletes initiative is supported in part through a cooperative agreement with the U.S. Centers for Disease Control and Prevention, a grant from Lions Clubs International, generous support from health-related organizations and corporate sponsors and most importantly, volunteer services from thousands of healthcare professionals and students. Additional information about Healthy Athletes can be found in Appendix E.



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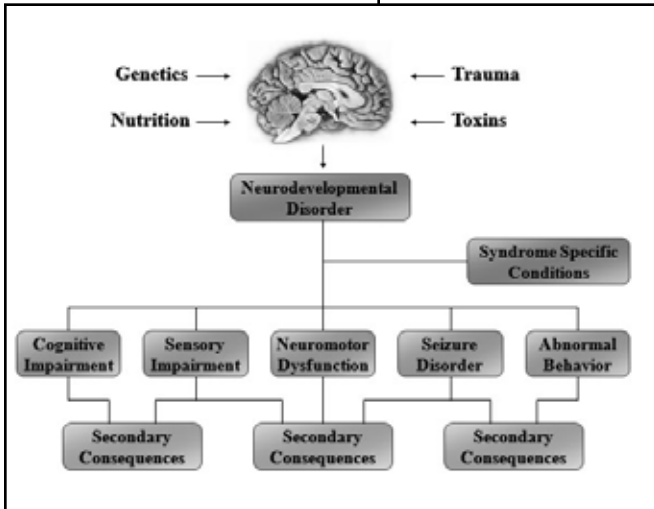
ATHLETE RISK

People with Intellectual Disabilities

A person with intellectual disabilities is generally defined by the American Association on Intellectual and Developmental Disabilities as an individual having an IQ under 70, with significant limitations in adaptive behavior as expressed in conceptual, social, and practical adaptive skills.¹ According to current theory in the field of developmental medicine, all people with intellectual disabilities have an underlying

neurodevelopmental disorder (ND).² The ND is the primary cause of the intellectual disability. Though it may only be identifiable in up to 70% of cases, there are literally thousands of NDs, each of which may be associated with one or more primary complication, such as cognitive impairment, sensory impairment, seizure disorder, behavioral disorders, neuromotor dysfunction and syndrome-specific conditions such as cardiac defects and other physical malformations.³

Any related primary complication of the underlying ND may in turn lead to secondary health consequences. It is the presence of these primary complications and their secondary health consequences that create significant barriers to Special Olympics athletes reaching their full potential in sports competition and in many other aspects of their daily lives.



RISK

Physical Activity and People with Intellectual Disabilities

With the general increase in community-based supports and services, people with intellectual disabilities increasingly have been living in the community. Greater access to these supports and services has led to an overall increase in their life expectancy.^{4,5} As life expectancy has increased for people with both physical and intellectual disabilities, Special Olympics too has increased in the number of people aging with some form of disability.^{6,7} Interestingly, as information about health status of people aging with intellectual disabilities has grown, Special Olympics too has observations which indicate that many people with intellectual disabilities show the physical signs of aging at an accelerated rate.⁸

As people with intellectual disabilities age, they experience the same general health effects of aging as would any other non-disabled person (i.e. fatigue, memory loss, arthritis, heart disease, diabetes, etc.). However, they have additional physical and psychological concerns secondary to their primary disability such as: pain, osteoporosis, pressure sores, contractures, poor physical fitness, medication side effects, behavioral issues, oral health problems, bowel, bladder or gastrointestinal dysfunction, and a higher prevalence of overweight or obesity.^{9,10,11,12} While many assume that health care for those with intellectual disabilities is comprehensive and effective, this is not the case.¹³

A key element of health and wellness efforts for this population has been the recognition that people with intellectual disabilities are at increased risk for these preventable health conditions.

Physical activity and sports contribute to both the physical and emotional health across the lifespan. The health-related benefits of physical activity, including reduction of risk for cardiovascular disease, diabetes, cancer, and dementia, have been well

documented.^{14,15,16} Likewise, the emotional and psychological advantages from participation in sports are supported in the literature.¹⁷ Physical activity has been recognized as a tool to increase overall health, sense of well-being, cognition, and functional independence in people as they age. Unfortunately, the minimal research that has been conducted on the levels of physical activity of people with intellectual disabilities has suggested that they are less physically active than their peers without intellectual disabilities.

Sports Medicine Risks and People with Intellectual Disabilities

Regardless of the underlying ND, each Special Olympics athlete is unique in his or her abilities and in his or her physical presentation. As a population, however, the increased primary complications and secondary health consequences associated with Special Olympics athletes potentially place them at an increased risk of certain types of athletic injury. Increased athletic risk in the Special Olympics population can be divided into five broad categories: 1) cardiogenic risk 2) traumatic impact risk, 3) seizure risk, 4) endurance risk and 5) risks associated with acute infection.

Cardiogenic Risk

In all athletes under 40 years of age, the most prevalent cause of sudden cardiac death is related to the presence of a cardiac defect.¹⁸ While the prevalence of cardiac defects is not known in the Special Olympics athlete population, it is known in some of the more common NDs that cause intellectual disabilities. Fetal Alcohol syndrome, Down syndrome and Fragile X syndrome are all highly associated with defects of the heart or aorta (roughly 35%, 45% and 50% respectively).^{19,20,21} Some NDs, such as Williams syndrome, are even more likely (up to 75%) to be associated with cardiac defects.²²

In the general population, the cardiac defect rate is around 0.9%.²³ This means that about 0.9% of the general population of athletes under 40 years of age likely carry with them the number one risk factor for sudden cardiac death during athletic activity. While no reliable estimates for people with intellectual disabilities exist, experts in the field believe that this rate may be anywhere from 10 to 20 times more prevalent in the Special Olympics population.² Screening for cardiac defects, therefore, is a very important step in promoting safe participation in Special Olympics.

Special Olympics athletes, by virtue of their intellectual disabilities, are much more likely to be taking medications than the general athlete population. Many of the commonly seen medications in this population (e.g., antipsychotic and antiseizure medications) are used on a long term basis and consequently are often associated with long term side effects. These side effects might include osteoporosis, weight gain, sun sensitivity or potentially fatal Long QT syndrome.³⁴ Though the prevalence of Long QT syndrome is not known in the intellectual disabilities population, a recent survey of Special Olympics athletes found that 5% of athletes were taking medications which could induce Long QT as a side effect.

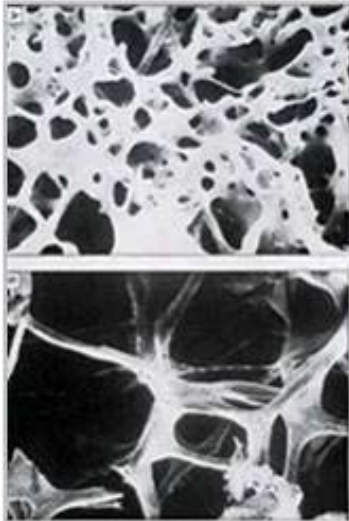
The high prevalence of cardiac defects and the use of dysrhythmia-inducing medications in this athlete population necessitate that special attention be paid to the cardiac exam of someone with intellectual disabilities.



Special Olympics

Healthy Athletes

MedFest



Traumatic Impact Risk

The Special Olympics Healthy Athletes program has documented that low bone density (osteopenia / osteoporosis) occurs in about one out of every five Special Olympics athletes (average age, 24).²⁴ While the causes for this are not completely known, it is likely that much of this can be attributed to medications which many Special Olympics athletes take.

Low bone density is correlated with an increased risk of bone fracture. A t-score (a rating of bone density) of -1.5 is roughly 4 times more likely to be associated with a bone fracture than a t-score of 0, and a t-score of -3 is more than 18 times more likely.²⁵ A t-score of -1 or lower is considered osteopenic. Though fracture rates in Special Olympics athletes have not been studied, it seems plausible that fracture risk would be higher in this population, and especially in athletes taking at-risk medications. In a recent unpublished program evaluation of Special Olympics athletes, it was noted that 31% of athletes were taking medications which could induce low bone density. Though, athletes not taking medications which induce low bone density as a side effect had an average t-score of 0.0, athletes taking these medications had an average t-score of -0.6.

Aside from the risks associated with low bone density, it should be noted that some of the NDs found in Special Olympics athletes are associated with collagen and bone abnormalities, as well as macrostructural abnormalities of the spine, joints and limbs. The most well-known associated musculoskeletal complication is the atlantoaxial instability (AAI) often seen in Down syndrome.

AAI can be observed by x-ray in around 15% of people with Down syndrome.²⁶ In about 90% of these cases (13-14% of people with Down syndrome) the AAI is asymptomatic.²⁷ While the establishment of a link between AAI and spinal cord injury has not been proven in all cases, it appears as though there is a link between spinal cord injury and AAI in the roughly 1% of people with Down syndrome who have symptomatic AAI.²⁸ Currently, Special Olympics requires x-ray screening of all athletes with Down syndrome for the presence of AAI.

Seizure Risk

Seizure disorders occur in roughly 26% of people with intellectual disabilities.²⁹ While the risks associated with having a seizure during certain types of activity (such as swimming) may be fairly obvious, they are still worth mentioning here. It is important to note that many anti-seizure medications have behavioral side effects which the athlete may find conflict with his or her best athletic performance.³⁰ It has been reported, anecdotally, that some Special Olympics athletes have been known to skip doses of their anti-seizure medications in order to reduce these behavioral side effects on the day of competition.

Clearly, athletes interested in any sports involving water, heights or high speeds should have any seizure disorder well under control before they engage in such activities. Additionally, compliance with medication regimens should be stressed and encouraged.

Endurance Risk

Many NDs are associated with metabolic abnormalities, thyroid disorders, kidney disorders, thermoregulation disorders, or extraordinary differences in pain perception. Any of these factors may predispose an affected athlete to developing heat stroke or electrolyte disturbances. While most metabolic risks can be managed with diet, proper hydration and exercise self-monitoring, it is important to note any special circumstances that may increase an athlete's metabolic risk for sports injury and to discuss these issues with the athlete, the athlete's coach and the athlete's family.

Acute Infection Risk

For the most part, Special Olympics athletes are at the same risk of acute infection as the general population. However, because they have greater difficulty accessing quality medical care, they are more likely to have chronic infections or untreated/undiagnosed acute infections. Complicating this is an often seen under-reporting of infectious symptoms by people with intellectual disabilities. An example of this can be found in an unpublished study of a sample population of 150 athletes who presented for medical screening at a Special Olympics MedFest event. While at the screenings, none of the athletes complained of any urinary symptoms, however, six presented with an active urinary tract infection.



While there is usually a period of weeks or months between an athlete's physical examination and their first participation in sports activity or training, there are serious risks associated with sports participation while experiencing an acute untreated infection. It is therefore recommended that any athlete experiencing an acute infection during medical screening not be cleared for sports participation until the infection has successfully resolved.

Other Health Concerns

Aside from the medical risks that are specific to this population, Special Olympics has identified a number of unmet health needs which are likely to affect an athlete's ability to perform at his or her best. These unmet health needs include: vision deficits, hearing deficits, nutrition and unhealthy weight, poor oral hygiene and health, foot pain and musculoskeletal deficiencies.³¹ The presence of these unmet health needs indicates that access to health services for the intellectual disabilities population is a concern for all health disciplines and it further strengthens the importance of programs such as MedFest to serve as a bridge between athletes and the health community.



Special Olympics

Healthy Athletes
MedFest



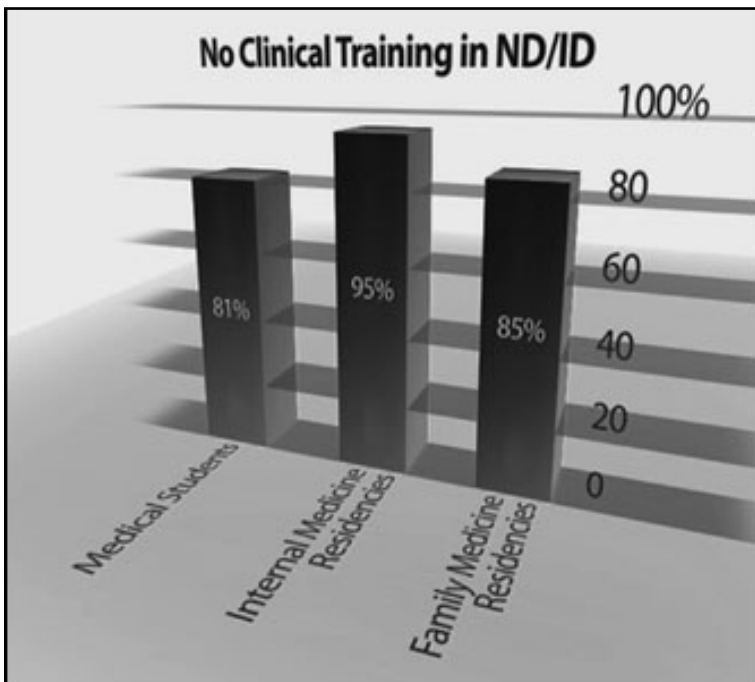
HISTORY

HISTORY OF MEDFEST

Since the early days of Special Olympics, ‘medical volunteer days’ have been organized in order to help athletes obtain the sports physical necessary to participate in trainings and Games. In 1999, this event was given a name by volunteers in Chicago – MedFest. Three years later, Special Olympics Healthy Athletes, along with other medical volunteers from the American Academy of Developmental Medicine and Dentistry, the American Academy of Family Physicians and the American College of Sports Medicine worked to formalize the way in which medical physicals should be delivered to people with intellectual disabilities at MedFest events. The purpose of MedFest is fivefold: 1) offer a free sports physical and other health screening services to people with intellectual disabilities, 2) recruit new athletes to Special Olympics, 3) retain existing Special Olympics athletes, 4) provide physicians, nurses and other healthcare providers with training and specialized experience in the examination and assessment of people with intellectual disabilities, and 5) foster new partnerships between Special Olympics and the community.

Lack of Physician Training

Aside from screening athletes for risk factors, MedFest serves an unmet need in the realm of medical education. A recent survey found that 81% of graduating medical students reported not having any training in the care of people with ND/intellectual disabilities and that, furthermore, 90% of primary care residency programs were not offering any training in caring for this population as well.³² This means that the vast majority of primary care physicians, especially those who focus on adults, have had very little training in caring for people with ND/intellectual disabilities.



This lack of training is important, because it calls into question the quality of care that some physicians can provide to their patients with intellectual disabilities. The resulting physicals that have been provided to Special Olympics athletes in the past may not, for example, have taken the previously mentioned athletic risks into account. MedFest provides an opportunity for many physicians to interact with people with intellectual disabilities and, therefore, to begin to learn more about them.

Providing a High Quality Sports Physical to People with Intellectual Disabilities

It is important to note that in addition to reading this MedFest training manual, MedFest Clinical Directors and volunteers are expected to, at a minimum, provide the recommended standard of care described in Preparticipation Physical Evaluation, Third Edition (also known as “the blue book.”) While this book contains guidelines for the recommended standard of care for the general population, volunteer clinicians should remember that there are differences between the general population and the intellectual disabilities population when it comes to risks associated with physical activity.

Throughout this manual, some of these important differences are mentioned, as are some screening techniques which may not be found in the “blue book.” Utilizing this information in addition to the aforementioned guidelines should yield the most appropriate physical examination for people with intellectual disabilities.





Special Olympics



PROGRAM MODELS

MEDFEST PROGRAM MODELS

At its core, MedFest is an event where a volunteer team of health professionals assemble to provide people with intellectual disabilities free access to sports physicals that will qualify them for Special Olympics. The event may be used primarily to attract new athletes or to provide requalification physicals which are periodically required of Special Olympics athletes. MedFests may be free-standing events that are not associated with any sports activity or they may be conducted in conjunction with sports training or competition. Additionally, MedFests may be associated with other Healthy Athletes disciplines or they may be offered as a single discipline, only providing sports physicals.

Because MedFest is a very flexible program, it can fit the needs and cost structures of most Special Olympics Programs. In planning a MedFest event, there are three decisions that must be made immediately, that impact the rest of the planning process:

1. Is the purpose of our MedFest to recruit new athletes, retain existing athletes, or both?
2. Will our MedFest be a stand-alone event or will it be held in conjunction with a Games event?
3. Will our MedFest be a single discipline (medical only) or multidiscipline event?

Recruitment vs. Retention

The first question that must be answered is whether MedFest will be used primarily to recruit new athletes, retain existing athletes or both. The answer to this question will determine who the strategic partners will be for planning and what type of medical volunteers will be primarily involved.

The average Special Olympics athlete is around 23-years-old and will spend about 10 years participating. Special Olympics typically allows athletes as young as 8-years-old to join and has no upper age limit for participation. If the primary goal of a MedFest program is to recruit new athletes, the majority of participants will be under the age of 18. The medical team, therefore, should primarily consist of people with pediatric experience. This also means that the strategic partners will likely consist of a school district that can help identify and transport potential Special Olympics athletes.

If the purpose of MedFest is for retention of existing athletes by providing access to requalification physical examinations, then the volunteers should be adult-oriented healthcare professionals. Residential, habilitation and disability employment programs will likely become the strategic partners in this case.

Most MedFest programs provide a mix of recruitment and retention functions. Usually that mix tends to be around 85-95% recruitment and 5-15% retention. This means that it is best to have a mix of medical volunteers (both pediatric and adult-oriented) or volunteers, such as family physicians, who are comfortable examining all patients over the age of eight.

Stand Alone vs. Games-Based

MedFest can be either a stand alone event or a Games-based event. Factors that determine which type of MedFest a Special Olympics Program will coordinate will center on the limitations and preferences of the Program itself. Some Programs do not have the time or volunteer resources to put on another event outside of a large Games event. In this case, it is easier to provide a Games-based MedFest.

From the stand point of overall Program effectiveness, there does not appear to be a difference between a stand alone or Games-based MedFest. While Games-based events can be more fun for athletes and for volunteers, they can be more logistically complex for organizing staff. It is also important to note that newly recruited athletes cannot participate in competition directly after being medically cleared because this will violate the organizational rules of mandatory athletic training prior to competition. Existing athletes who had been training and are just getting a requalification exam are the exception to this rule.

Single Discipline vs. Multiple Discipline

Logistically, a single discipline MedFest event is the easiest to plan and execute. A single discipline MedFest consists of a check-in station where athlete paperwork will be checked; a med-check station where medications are screened, a vitals station where height, weight, vision, hearing, pulse, temperature and blood pressure are measured; an exam area where physicians perform medical examinations; and a check-out station where paper forms are collected and athletes receive any giveaways.

Athlete flow at a standard MedFest is linear: check in ➡ vitals ➡ exam ➡ check out. In the case of a multidisciplinary MedFest, however, athletes will start at any discipline they choose. This will help reduce the overall time of the event by ensuring that more stations are working at full capacity soon after the start of the event. The only caveat to this approach is that the minimum required information for medical clearance must be completed for each athlete.

Because portions of the medical physical exam overlap with other Healthy Athletes discipline screenings, it is important to modify the medical screening process to accommodate the addition of other screening venues. MedFest physicians and medical volunteers provide a minimal level of vision, hearing, foot, dental and musculoskeletal examinations, however, the Healthy Athletes disciplines which focus on these areas will do a much more thorough assessment. To promote efficiency and eliminate redundancy, MedFest volunteers may eliminate certain parts of the medical physical exam if the athlete has been seen that day by another Healthy Athletes discipline. For example, if the athlete has visited Opening Eyes, MedFest volunteers may forgo the usual MedFest vision examination. In most cases of overlap though, it is usually best to eliminate the redundant test from the added discipline, rather than from the core MedFest stations. This ensures that MedFest protocols (and thus the minimum information necessary for medical clearance) remain intact.

Since the primary purpose of any MedFest is the medical clearance of athletes, all disputes between Clinical Directors of different disciplines shall be resolved and coordinated by the MedFest Clinical Director. However, the MedFest Clinical Director should not act in any way as to compromise the clinical integrity of the established protocols of the other disciplines. While it is optional to include a discipline, once that discipline is included, its protocols should be adhered to whenever possible.

To ensure that all athletes complete each discipline, athlete cards such as the one seen in Appendix D can be used. Because athlete flow can be more chaotic at a multidisciplinary MedFest event, it is recommended that athlete cards and athlete evaluation forms be checked for completeness prior to the athlete exiting the event. Athletes with missing evaluation information should be directed back to the appropriate station to complete their evaluation.





Special Olympics

Healthy Athletes
MedFest

PLANNING

PLANNING MEDFEST (SIMPLE EVENT)

Because they are the simplest and most common type of MedFest, the planning of a free-standing, mixed recruitment/retention, single discipline MedFest is discussed in detail below.

Number of Athletes

The determining factor for all other aspects of MedFest event planning is the number of athletes expected to attend the event. In a mixed recruitment/retention MedFest, the Special Olympics Program will likely be working closely with school districts, group homes, habilitation programs and advocacy organizations to bring potential and existing athletes to the event. These organizations should be able to accurately predict the number of athletes that will attend. As the date of the event draws closer and pre-registration/history/consent forms are signed and returned to the Special Olympics Program office, this number will become more and more reliable. The expected turn out for an event will usually be a function of the population of the area served, the efficiency of transportation and the level of unmet medical need of the area. MedFest events in the past have ranged from serving 50 to 5,000 athletes. However, the majority of MedFest events serve anywhere between 100 and 500 athletes.

Number of Physician Stations

The number of physician stations needed is a direct function of the number of athletes expected and the amount of time the event will be operating. A single physician should be able to perform a physical exam and complete the necessary paperwork for six athletes every hour. A very efficient physician may be able to perform these exams faster, however, pressure to do so may compromise the quality of the physical exam delivered. It is therefore recommended, for planning purposes, that physicians be expected to see one athlete every ten minutes. Very simply, then, the planning formula used to determine the number of physician stations is:

$$\text{Number of athletes} \div (6 \times \text{Number of event hours}) = \text{Number of physician stations}$$

For example if a MedFest expected 300 athletes and was planning on operating for 5 hours the formula would be as follows:

$$300 \div (6 \times 5) = 10 \quad \text{or} \quad 300 \div (30) = 10$$

It is important to remember that some physicians who specialize in caring for adults may not be comfortable performing physicals on children. Likewise, some physicians who specialize in caring for children may not be comfortable performing physicals on adults. This will impact how many (and of what specialty) physicians may actually need to volunteer. Additionally, it is important to remember that the above formula determines the number of physician stations. Some physicians will only volunteer for a few hours. In this case, additional physician volunteers will need to be scheduled to make sure that the physician station is fully functional at all times during the event.

It should be noted that physicians (MD or DO, in the United States) are not the only professionals who can perform a medical physical. Though laws regarding this vary, it is often the case that other qualified health professionals may perform medical physicals under physician supervision. Licensed nurse practitioners and physician assistants are typically such professionals. Some physicians may wish to use MedFest as a teaching experience for medical, physician assistant, or nurse practitioner students. Though laws regarding this vary, generally it is acceptable as long as a fully licensed physician checks

the work of each student and provides his or her signature as the medical authority granting clearance to the athlete. Students and other unlicensed professionals should never provide the final clearance or sign the clearance form without a licensed qualified professional double checking and countersigning their work.

Number of Vitals Volunteers

Vital signs at MedFest include, but are not limited to, pulse, oxygen saturation (if possible), temperature, blood pressure in both arms, height, weight, body mass index (BMI), vision screening, hearing screening and a medication check. Well-suited volunteers for the vitals station are volunteers with a healthcare background. As a general guideline, if the volunteer is part of a profession that sees patients in a clinical setting, they will be comfortable performing vitals. If no volunteers with a healthcare background can be found, other volunteers can be trained, usually in less than 30 minutes, by the MedFest Clinical Director.



On average, if there is no waiting time, the entire battery of vital signs can be measured in ten minutes (two minutes for the pulse, oxygen saturation and temperature; four minutes for the blood pressure in both arms; four minutes for the height, weight and BMI). Usually, one volunteer will perform the height, weight, and BMI, while the other vitals will be performed by another volunteer. To estimate the number of vitals volunteers needed, use the following formulas:

$$\text{Number of athletes} \div (15 \times \text{Number of hours}) = \text{Number of height/weight volunteers}$$

$$\text{Number of athletes} \div (10 \times \text{Number of hours}) = \text{Number of pulse/BP/temp. volunteers}$$

If our hypothetical MedFest event expected 300 athletes over a 5 hour period, the number of recommended volunteers (and thus stations) would be:

$$300 \div (15 \times 5) = 4 \quad \text{or} \quad 300 \div 75 = 4 \quad (\text{height and weight})$$

$$\text{and } 300 \div (10 \times 5) = 6 \quad \text{or} \quad 300 \div 50 = 6 \quad (\text{pulse/bp/temp})$$

In this hypothetical situation, a total of ten volunteers would be recommended.

A third type of volunteer for MedFest is the general/administrative volunteer. These volunteers will help check and collect paperwork, direct athletes from one station to another, and coordinate lunch, transportation and athlete giveaways. Because athletes will tend to arrive in groups, it is recommended that at least two volunteers work the check-in station at all times. In most cases, two volunteers at the lunch and check-out are also necessary. Additionally, a volunteer should be stationed at the volunteer registration station and at every point of transition from one area of MedFest to another, including entry and exit ways. At a minimum, then, there should be between 12-15 general/administrative volunteers. Additional general/administrative volunteers should be added to accommodate larger events, as needed.



Special Olympics

Healthy Athletes
MedFest

Operations Worksheet

The following chart is meant to demonstrate a way of estimating the volunteer and time needs of a hypothetical MedFest event. This hypothetical event is expected to run 5 ½ hours, and is expected to process 300 athletes.

In order to properly estimate the number of volunteers and stations needed, the time each athlete will spend in each area must first be calculated. Adding these times per area together gives an estimate of how long the MedFest experience will be for each athlete. In this case, it is estimated that each athlete will spend approximately 34 minutes in the MedFest screenings, excluding lunch.

In order for the last athlete screened to be finished on time, they would need to begin their MedFest examination 34 minutes prior to the end of the event. This means that, effectively, the check in area has nearly five hours, or 300 minutes, to process 300 athletes. In order to accomplish this goal, the check in area must be set up in such a way that it can process one athlete, on average, every minute. Because the check in area must proceed at the rate of one athlete per minute, the rest of the areas must also operate at this pace.

In order to estimate the number of stations per area, the area time per athlete must be divided by the required area output per minute. In this example, because the check in, medication check and exit areas are expected to take two minutes per athletes, two stations in each of those areas will be required in order to keep the operating pace of processing one athlete per minute. Likewise, four hearing, four vision, four height/weight, six BP/Pulse/Temp stations and ten physical exam stations will be needed.

To estimate the total number of volunteers needed, start with the total number of stations needed per area (34, in this case), add additional volunteers for those stations which require assistants or chaperones, (four assistants for vision and ten chaperones for the medical exams), and add a volunteer to help transition to and from each area (eight, in this case). In this example this would mean 56 total volunteers would need to be active at all times.

Area Name	Area Time Per Athlete	Required Area Output per minute	Number of Stations per Area	Total Area Volunteers
Check In	2 min	1 Athlete	2	3
Medication Check	2 min	1 Athlete	2	3
BP/Temp/Pulse/O2 Sat.	6 min	1 Athlete	6	7
Height/Weight/BMI	4 min	1 Athlete	4	5
Near/Far Vision	4 min	1 Athlete	4	9
Hearing Screening	4 min	1 Athlete	4	5
Physical Examination	10 min	1 Athlete	10	21
Exit Station	2 min	1 Athlete	2	3
Totals	34 min			56

Estimating Square Footage Needs

Once the number of athletes, volunteers, areas and stations have been estimated, square footage requirements are ready to be addressed. In estimating square footage needs, it is important to keep the special needs of some of the areas in mind. For example, screening for far vision requires adequate lighting, at least a 10-foot (3.0 meters) unobstructed distance from the athlete to the vision chart, and a wall on which to hang the vision charts. Additionally, hearing screenings require a quiet room. Because each venue has different acoustic properties and each event will have different noise levels, it is also good to plan for the contingency that the noise may be too loud for the physicians to perform an adequate cardiac examination. In an ideal situation, each physician would perform the cardiac exam as part of his or her evaluation. However, if during the event, the clinical personnel feel that the noise level is too high to adequately perform this exam, a single physician could perform all of the cardiac examinations in the quiet room.

If the venue is a clinic, quiet areas and privacy in exam rooms will not be difficult to secure. However, many events occur in gymnasiums, auditoriums or other large venues and, therefore, require substantial pipe-and-drape partitioning.

All areas require adequate seating and large thoroughfares to accommodate people traveling in groups and/or wheelchairs. At no place in the physical layout of a MedFest should any person in a wheelchair be expected to travel through a space less than 4 (1.2 meters) feet wide.

The size of the waiting area depends on how efficient the entire MedFest team works and how well transportation to and from the event is coordinated. Though waiting is an inevitable part of a MedFest event, thorough planning and proper execution can minimize this inconvenience to the athletes. In general, athletes will likely arrive by the bus load. Ideally, groups of athletes will be scheduled far enough apart so that there is minimal overlap. The waiting area, therefore, should be able to accommodate the largest group plus 50% of the preceding expected group and 100% of the following group. In the hypothetical example of the 300 athlete MedFest, 30 athletes would ideally arrive every 30 minutes. In this case, the waiting area should accommodate 75 people.

In general, a seated person requires approximately 8 (.75 m²) square feet. Therefore, the waiting area in the hypothetical example would require about 600 (55.8 m²)square feet plus adequate thoroughfares.

Most stations just require tables and chairs. Space requirements for such stations can be determined by adding 8 feet (2.4 meters) to each dimension of the table in question. For the hypothetical example, the assumption will be made that each table is 3' x 6' (.9 m x 1.8 m). This gives a rough square footage requirement of each of these stations of 11' x 14' (3.4 x 4.3 m), or roughly 154 square feet (14.3 m²).





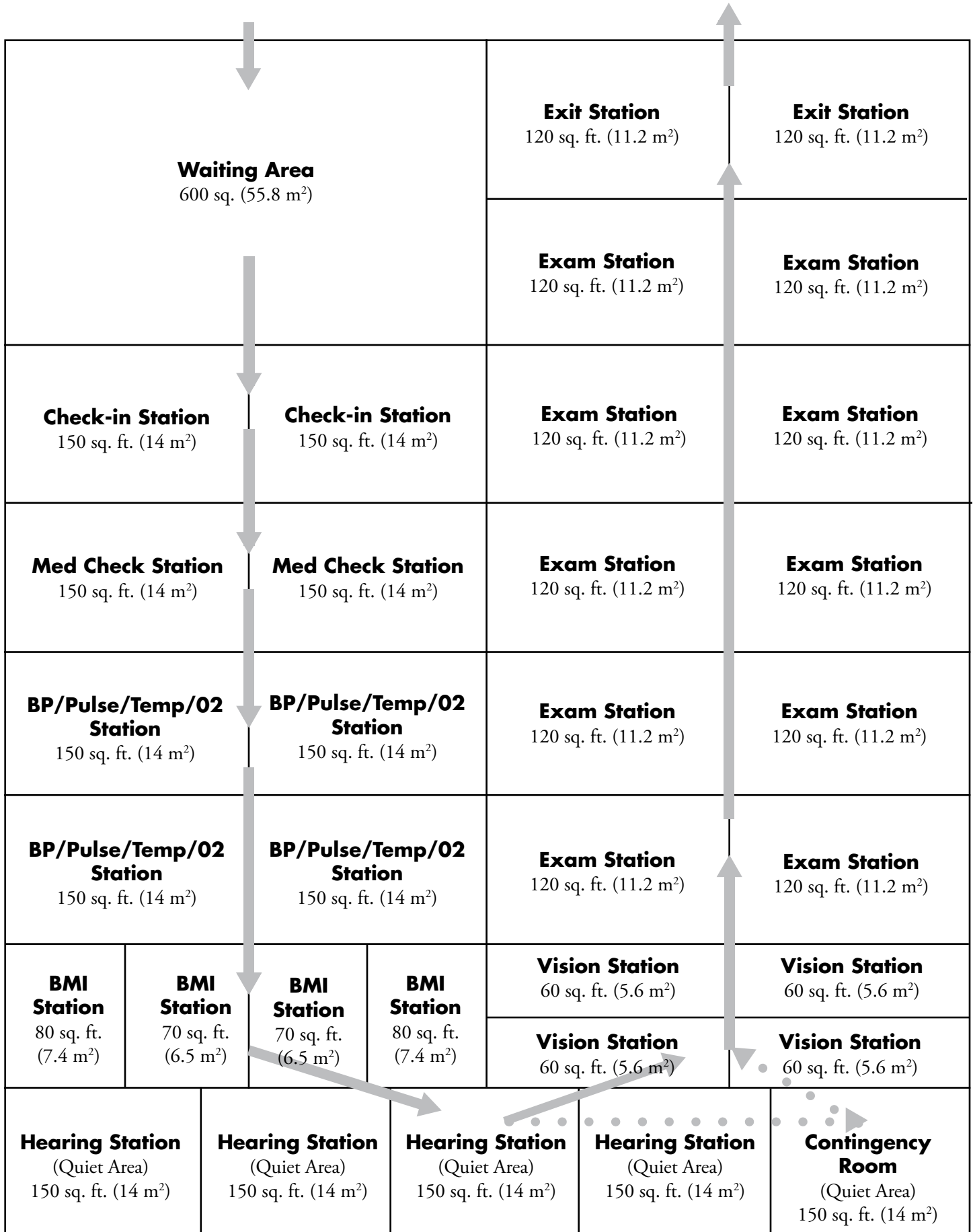
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Vision screening requires roughly 5' x 14' (1.5 m x 4.3 m), or 70 square feet (6.5 m²) per station. Physical exam stations require a minimum of a 6' x 8' (1.8 m x 2.4 m) room, though an 8' x 10' (2.4 m x 3.0 m) room is preferred. Four feet (1.2 m) should be added to one dimension of the room, to account for walkway space. Therefore, each medical examination room could be estimated at requiring 120 square feet (11.2 m²) of space. The total estimate of required square footage for the hypothetical example could be estimated as such:

Area Name	Number of Stations	Square feet (meters) per Station	Square feet (meters) per Area
Check In	2	154 (14.3 m ²)	308 (28.6 m ²)
Medication Check	2	154 (14.3 m ²)	308 (28.6 m ²)
BP/Temp/Pulse/O2 Sat.	4	154 (14.3 m ²)	616 (57.2 m ²)
Height/Weight/BMI	4	81 (7.5 m ²)	324 (30.1 m ²)
Near/Far Vision	4	70 (6.5 m ²)	280 (26.0 m ²)
Hearing Screening	4	154 (14.3 m ²)	616 (57.2 m ²)
Physical Examination	10	120 (11.2 m ²)	1200 (111.5 m ²)
Exit Station	2	125 (11.3 m ²)	250 (23.2 m ²)
Waiting Area	1	600 (55.8 m ²)	600 (55.8 m ²)
Contingency Room	1	120 (11.2 m ²)	120 (11.2 m ²)
Totals			4622

Recommended MedFest Layout





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Volunteer Recruitment

MedFest planners often encounter a scheduling conflict early in the planning process. School partners typically can only transport students during weekdays when school is in session. Physicians, on the other hand, are often much more willing to volunteer their time on a weekend. Because athlete transportation may be impossible without the help of a school district, MedFest events are usually scheduled for a weekday. This means that in order to secure enough volunteers, physicians will need to be contacted as far in advance of the event as possible.

Professional and academic partnerships are often a rich source of volunteers. Medical, nurse practitioner, and physician assistant schools are often in a position to provide large numbers of licensed teaching staff and professional student volunteers, and are likely to do so on a weekday. If a MedFest partners with such organizations, the teaching staff must double-check and countersign every physical that is performed by a student (provided that there are no laws against this procedure in the locality of the event).

Pediatric, Internal Medicine, Psychiatry, Neurology and Family Medicine residencies are also good sources of professional volunteers. The chairman of the department of each of these programs should be contacted if you are interested in recruiting physician residents as volunteers.

Malpractice Coverage (United States only)

Military bases, Veterans Affairs hospitals and state run institutions for people with intellectual disabilities can be good places to recruit physician volunteers. Unfortunately, many of these physicians, as well as some hospital-based physicians, may only have malpractice insurance that protects them at their primary place of employment. These physicians will be concerned about their exposure to possible malpractice claims resulting from their participation in MedFest.

For events in North America, Special Olympics has malpractice coverage through a private insurance company. This coverage acts as a secondary coverage for physicians who already have malpractice insurance. It will also act as primary malpractice insurance for physicians who do not have malpractice insurance. In order to ensure that each volunteering clinician is covered both primarily or secondarily, the names of each volunteer should be collected and given to Special Olympics staff (who are, in turn, required to inform the insurance company) prior to the date of the MedFest.

Role of the Clinical Director

MedFest Clinical Directors play a vital role in the success of the event. A Clinical Director should be licensed to practice medicine in the state or country in which the screenings are held. Preference should be given to practicing physicians with certification in either developmental medicine, developmental and behavioral pediatrics or with an extensive history of working with people with ND and intellectual disabilities. If candidates lack this experience, preference should be given to those with a family practice, sports medicine or general practice background, followed by a pediatric or internal medicine background. Other physicians with either an MD or DO degree (in the United States) may serve as Clinical Directors as well.

The Clinical Director will serve as the primary authority for medical operations of the MedFest event. He or she will assist Special Olympics staff in recruiting volunteers, finding referral networks, approving clinical equipment, enforcing the standard of care and improving protocols.

Highly motivated and experienced licensed nurse practitioners may also fulfill the Clinical Director role, however, the following criteria must be met:

1. Local statute does not prohibit licensed nurse practitioners from performing physical exams and writing prescriptions without physician supervision.
2. The nurse practitioner in question has extensive experience working with people with intellectual disabilities.
3. The nurse practitioner has been certified as a developmental disabilities nurse by the Developmental Disabilities Nurses Association (USA).
4. A physician is not available to the Special Olympics Program to act as Clinical Director.



Partnering with a School System / Transportation

School systems can offer tremendous resources to MedFest organizers. School systems often keep track of students with “learning disabilities” or other academically challenged students. Often, these schools will know which students will qualify for Special Olympics. Additionally, school systems often have access to mass transit and are used to coordinating this on a large scale. School systems may also be able to contribute some screening equipment, volunteers (such as nurses and audiologists), and even lunches.

Lunches / Meals

Depending on the size of the MedFest, providing for lunches and snacks may be recommended. At the very least, a small supply of snacks and fruit juice should be kept on site for athletes or volunteers who might experience hypoglycemia during the event. Since school systems are often budgeted to provide food to their students, partnering with them to provide meals or snacks may be the most cost-effective way of providing this service.



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Public Relations

Providing free medical screening to people with intellectual disabilities is an attractive human interest story to most local newspapers and media outlets. It is also a good photo opportunity for local political leaders. It is recommended that a public relations strategy for Special Olympics Programs be developed which incorporates MedFest as a center piece. Local ministers of health, cabinet health secretaries, mayors, governors, senators, donors and providers of in-kind support should be invited to attend MedFest. Such public relations strategies can help solidify strategic relationships and potentially create opportunities for future relationships and funding.

Referral Network

This is perhaps the most important aspect of a MedFest event and the most often overlooked. Prior to the MedFest event, the Clinical Director, with the help of the Special Olympics Program, should attempt to establish a network of professionals willing to accept referrals from the MedFest event. In addition to primary medical care, other important professions to include in the network are audiology, optometry/ ophthalmology, podiatry, dentistry, physical therapy, nutrition, cardiology, and neurology. If no network can be established, the athlete should be referred to their primary care physician for follow-up, or if the volunteer is willing, to the practice of the MedFest volunteer.

Follow Up

It is recommended that a volunteer (preferably one with a social work or nursing background) contact athletes who received recommendations during a MedFest two to four weeks following an event, to ensure that the proper appointments have been made. While it is not the duty of this volunteer to make the appointments for the athlete, it is prudent to remind them of the recommendations that were made by the MedFest physicians.



EVENT CHECKLIST

6 months prior to event:

- Secure date with facility.
- Send event date to all coordinators.
- Develop event materials for coaches.

3 – 4 months prior to event:

- Meet with all coaches interested in attending event (mandatory for all new coaches).
- Distribute materials (coaches manuals, applications for participation, event guides, transportation information) to all coaches and interested agencies.
- Hold kick-off meeting with coordinators to review prior event(s) and discuss changes.
- Send out a “save the date” announcement to all physicians, clinical staff.
- Meet with government and corporate representatives.

1 month prior to event:

- Begin pre-registration for the event.
- Meet with facility to review equipment needs and set-up requirements.
- Begin registering physicians, nurses and clinical staff.
- Begin registering volunteers and staff to assist in the event.
- Secure menu with food vendors.
- Order volunteer t-shirts.

2 weeks prior to event:

- Complete and review pre-registration.
- Coordinate and schedule all transportation.
- Send reminders and confirmation pieces to all registered for the event.
- Distribute staff and volunteer job assignments.
- Conduct walk-through of facility and review any changes to the set-up.

Week of the event:

- Pack all materials and supplies.

Day before event:

- Load all vehicles with paperwork, supplies and any equipment.
- Equipment arrives at event site.
- Set up all pipe and drape stations, tables and chairs throughout, and any other equipment.

Day of the event:

- Special Olympics staff, coordinators and volunteers set-up stations with equipment, supplies, paperwork, materials, etc.



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BASIC EQUIPMENT

Basic equipment must be purchased or borrowed in preparation for the MedFest event. The quantities of each piece of equipment will vary based on the size and configuration of the event. The following is a brief list of necessary equipment.

Blood Pressure Cuffs

Each station should have self-inflating blood pressure cuffs which are meant to be placed around the upper arm. Manually inflated cuffs are acceptable, however they can be very strenuous for the volunteer. Wrist blood pressure measurements are often inaccurate and such equipment should be avoided. The blood pressure units will come with a cuff that is sized to fit most adults. Unfortunately, these cuffs may produce inaccurate results for people with very thin or very large arms. It is therefore recommended that at least one small and one extra large cuff be purchased and kept in the vitals area for every four blood pressure stations that will be operating.

Pulse Oximeters

Pulse oximeters, such as the one shown here, are the preferred standard equipment for MedFest. Other pulse oximetry devices are also acceptable.

Stadiometers and Flexible Measuring Tape

Athletes should have their height measured without their shoes on. Stadiometers that are built on scales should be avoided because they become more inaccurate the more the person weighs. For ease of BMI calculations, height should be measured in meters. For athletes in wheelchairs or with significant spasticity, height may be measured with the athlete lying on the exam table. Alternatively, height may also be measured using flexible measuring tape and adding the distances from the bottom of the heel to the center of the knee, the center of the knee to the center of the hip joint, and from the center of the hip to the top of the head.

Weight Scale

A standard digital scale that measures in increments of .2 kg or less is desired. For ease of calculation of BMI, weight should be measured in kilograms. Athletes using wheelchairs may have difficulty having their weight measured. If an athlete can be transferred out of the wheelchair, the wheelchair should be weighed with and without the athlete in it. The athlete's weight can be derived from these two numbers. A special type of scale is usually necessary to measure the weight of people in wheelchairs, it is therefore recommended that at least one scale be modified for such purposes.

Thermometers / Temp Strips

Digital thermometers or temp strips may be used to determine the oral temperature of the athlete. Aural temperatures may be used if compliance with standard oral thermometry is compromised. Axial thermometry is not recommended. Rectal thermometry is prohibited.

Vision Charts

The Lea eye chart is the preferred method of measuring near and far vision in the intellectually disabled population. Standard Snellen charts require a degree of literacy that may not be appropriate for all Special Olympics athletes.

Audiometer

MedFest relies on a modified pure tone hearing screening as the standard screening test. Tuning forks, rubbing fingers and conversational cues can be very subjective and are somewhat difficult to standardize. MedFest requires testing at 1000Hz, 2000Hz and 4000Hz in each ear at 25dB. Though this is not a complete hearing screening, it is more reliable than other methods. If an athlete will not comply with this testing the use of an otoacoustic emission test is recommended.

Exam Tables

Every medical examination should be performed on an exam table. Adequate abdominal and cardiac examinations require that the patient be examined in the supine position. Padded, portable exam tables often used by physical and massage therapists are the easiest to use and set up. However, makeshift exam tables using a standard 3 x 6 (.9m x 1.8 m) conference table and a table cloth can be effective. If makeshift tables are used, Special Olympics staff should test the weight capacity of the table prior to allowing any athletes to use them. The table should be able to hold at least 400 pounds (182 kg.)

Hand Sanitizer

Alcohol based gel or foam hand sanitizer should be used by each clinician between each patient. Each medical exam station should have its own dedicated supply of hand sanitizer.

Tongue Depressors

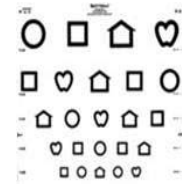
Though many clinicians are comfortable not using tongue depressors, some clinicians prefer using them. A supply should be kept on site for those clinicians wishing to use them.

Otosopes and Speculum Covers

Otoscopy is essential for a proper athlete evaluation. Inexpensive, battery powered otoscopes are available and should be kept at each exam station. Each otoscope should be accompanied by an adequate supply of speculum covers. These covers must be changed after every athlete. So, the total supply of speculum covers should exceed the total number of athletes expected for the event.

Stethoscopes

Physicians and other licensed practitioners should be encouraged and reminded to bring their own stethoscope. Each stethoscope transmits sounds differently. If a physician is used to performing a heart examination with a particular stethoscope, he or she is used to hearing certain tonal information associated with cardiac abnormalities. Upon changing stethoscopes, the quality of his or her exam could become compromised. A poorly performed cardiac exam could have dire consequences for the well-being of an athlete. For physicians who forget to bring their own stethoscope, it is recommended that a few high quality stethoscopes be kept onsite for the event.





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Referral Form



Non-Latex Gloves

A supply of medium and large non-latex gloves should be kept onsite for physicians performing examinations. Non-latex gloves are preferred because of the possibility of latex allergies. These gloves will be changed after every examination. It is therefore recommended that an ample supply of gloves be kept on site during the event.

Referral Notes

Approximately 96 to 99% of all athletes screened at a MedFest will be cleared, without qualification, for sports participation. Some athletes however will require additional professional evaluation which cannot be rendered at the MedFest event. A standardized referral note (Appendix C) should be kept in each examination station.

Pipe and Drape

Privacy for athletes is a necessity during the screening. Adequate pipe and draping must be supplied in order to create private rooms.

Clip Boards and Pens

Having a large number of clip boards and pens will help the check-in process to go smoothly. Arranging the athlete medical forms in either alphabetical order or scheduled arrival time will facilitate faster processing time at the check-in area.

PRE-REGISTRATION AND CHECK-IN

Pre-Registration, History and Consent

People with intellectual disabilities have a wide range of communication and cognitive abilities. Some are quite capable of rendering a reliable personal health history, others are not. Some may be their own legal guardian and some may not. All MedFest participants must be pre-registered in order to receive their sports physical and medical clearance. Pre-registration allows for better planning of the MedFest event but, more importantly, it ensures that the medical history and consent forms will be completed. This is vital, because a physician cannot give medical clearance to an athlete if no medical history or consent has been obtained.

As a matter of policy, in order for a non-pre-registered athlete to participate in MedFest, the athlete must: 1) be of legal age of consent (18 in the United States); 2) be considered his or her own legal guardian; *and* 3) must be deemed by the examining physician to be fully competent to give a full medical history. In the event that the first two criteria are met but the third is not, the medical physical may still be performed. However, the athlete cannot be cleared for sports participation until a full history has been obtained and the examining physician has had the chance to review his or her examination results along with the completed medical history.

Pre-registration materials consist of the athlete health history form and the Special Olympics consent forms. Other materials may also be required by individual Special Olympics Programs on an as needed basis. The desired health history form can be found in Appendix A of this text.

Check-In

MedFests are often held in gymnasiums, arenas or other structures which occupy multiple levels. Frequently athletes must travel long distances or climb stairs or ramps in order to get to the MedFest screening area. This extra exertion will result in increased blood pressure and pulse readings. If possible, athletes should wait at least 5 minutes, seated in the waiting area, before they are called to begin the screenings. Additionally, all MedFest areas must be fully accessible for people using wheelchairs.





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HEALTH HISTORY

ATHLETE MEDICAL HISTORY (Appendix A)

The Health History Form

The health history form was developed from recommended sports physical history forms that have been modified for the intellectual disabilities population.

Medications

The average adult with intellectual disabilities in the US is taking seven different prescription medications. The average athlete who is taking prescription medications is taking 2.5 prescription medications. As discussed previously, many medications used on a long-term basis in this population have side effects which potentially exacerbate risks associated with sports participation. These medications should be screened at the medication check area of the MedFest.

Please note that female athletes and their families often forget that birth control pills or long-term depot hormone therapy, such as Depo-Provera, are medications. Female athletes of reproductive age should be asked if they are taking hormone therapy of any kind.



Vaccine History

Because people with intellectual disabilities often have difficulty accessing the health care they need, they may or may not be properly vaccinated. If it is known that an athlete is lacking recommended vaccinations, the reviewing clinician should refer the athlete for vaccination. Lack of a vaccine history is not a contraindication to sports participation.

Sports of Interest

In some cases, athletes may be cleared for some sports, but not for other sports. As an example, athletes with a history of poorly controlled seizures within the last twelve months should not be cleared for sports involving water or high speeds like cycling or horseback riding. However, such athletes could be safely cleared for a sport like bowling. Knowing the athlete's sports of interest can help guide the physician's interaction with the athlete. Not knowing, however, is not a contraindication to sports participation.

History of Infection

Active infection is a relative contraindication to sports participation. Urinary symptoms, cold symptoms and symptoms of other active infections should temporarily prohibit the athlete from participating in sports. This restriction, however, should be temporary and the athlete should be allowed to resume sports participation upon resolution of symptoms. In many cases, resolution of symptoms can be determined by the athlete or the athlete's caregivers. The examining MedFest clinician shall determine whether the athlete should require medical referral and thus additional proof of resolution of symptoms prior to sports participation.



Cause of Intellectual Disability

At least 70% of people with an intellectual disability, with the help of the medical profession, can find the underlying cause of their intellectual disability. Unfortunately, most athletes and their families will not know what that cause is. Because the underlying neurodevelopmental disorder may be an indication for certain treatment modalities or dietary restrictions that may dramatically change an athlete's ability to participate in sports, athletes should be referred to a physician in order to find their underlying neurodevelopmental disorder. Lack of a neurodevelopmental disorder is not a contraindication to sports participation.

Additional Conditions or Syndromes

There are a number of specific syndromes that can be highly associated with both intellectual disabilities and cardiac defects. A list of these syndromes are provided as examples on the healthy history form. An underlying cardiac defect is the greatest risk factor for sudden death in young athletes. Any signs or symptoms of cardiac dysfunction, or any findings on the physical exam suggestive of a cardiac disorder in the presence of one of these conditions listed, should be taken very seriously. Unless the athlete has been given corrective surgery or has been previously cleared via thorough cardiac work-up, athletes with these disorders and either a suspicious history or suspicious physical findings should not be cleared for participation, pending further medical evaluation. Athletes with any of these disorders, but with no suspicious history and with no suspicious physical findings can be cleared for sports participation.

Cardiac History and Section 1 (Cardiac Risk)

A history of cardiac death in relatives or a history of an abnormal electrocardiogram or an abnormal echocardiogram could be contraindications for sports participation, but should be considered in conjunction with the following information and with the overall clinical picture of the athlete.

The first part of Section 1 (CR) asks about common symptoms that may be associated with serious underlying cardiac pathology. Any of these symptoms alone may be a contraindication for sports participation. However, some symptoms, such as shortness of breath, should be taken as part of the larger clinical picture in determining sports clearance.

The second part of Section 1 (CR) asks about many common diagnoses which may be contraindications to sports participation. Conditions such as arrhythmogenic right ventricular hypertrophy (ARVH), dilated cardiomyopathy, endocarditis, heart infection, high blood pressure (>160/100), hypertrophic cardiomyopathy, left ventricular hypertrophy, long QT syndrome, and pericarditis are all contraindications for sports participation because of their increased risk of sudden death associated with athletic activity. Other conditions, such as heart defect, racing heartbeat, heart disease, heart murmur and high cholesterol may also be associated with an increased risk of sudden death, but should be considered with the overall clinical assessment of the athlete.

Section 2 (Trauma Risk)

The first part of Section 2 (TR) asks questions about specific conditions which may be associated with negative outcomes in the event of a traumatic impact. Negative outcomes may include organ fracture, bone fracture, significant blood loss, brain damage, paralysis or death. Generally, people with one of the listed conditions are only at risk for one or





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two of the above negative outcomes. Often athletes with one of the listed conditions will receive partial clearance for participation. That is, clearance to participation in some sports, but not in others. In these cases, it is important for the clinician to know in which sports the athlete plans to participate. The clinician may then provide specific clearance for those sports, if the athlete is not at an increased risk for negative outcomes.

The second part of Section 2 (TR) asks about specific neurological signs which may indicate significant risk associated with trauma to the spinal column. Athletes with any of these symptoms, especially if the symptoms are new or of a progressive nature, should be denied clearance for any sport in which traumatic impact is a possibility. Additionally, these athletes should be referred for immediate medical follow-up.

Section 3 (Endurance Risk)

Section 3 (ER) presents a list of conditions which may predispose the athlete to an increased risk of negative outcomes associated with endurance sports, such as dehydration, electrolyte abnormalities, heat stroke, heat exhaustion or complications related to these issues. In many cases, these athletes can be fully cleared for athletic activity, especially in sports which do not require significant activity for prolonged periods of time. Other athletes, however, may only receive partial clearance or clearance contingent upon discussion with Special Olympics staff and coaches regarding endurance risk prevention and proper hydration techniques.

Section 4 (Psychiatric Risk)

Psychiatric disorders are often associated with intellectual disabilities. Athletes with self-injurious or aggressive behavior are of most concern when considering the health and safety of Special Olympics athletes. As with seizures, a 12-month period of control over self-injurious behavior or aggressive behavior may be indicative of a higher level of athlete safety in the future. While most psychiatric conditions are not a contraindication to sports participation, a significant recent history of self-injurious or aggressive behavior may be cause for partial clearance or denial pending further medical evaluation. In making this determination, a clinician should consider the severity of the incidents, the circumstances involved and the sports in which the athlete will be participating. As an example, an athlete with mildly aggressive behavior participating in an individual sport may not pose much risk to the health and safety of other athletes and therefore could be cleared for participation. However, a strongly aggressive person with a frequent history of biting, scratching and gouging who wants to play a team sport may need to demonstrate significant improvement in behavior before being cleared for participation.

Athletes with Down Syndrome Only

Currently, all athletes with Down syndrome must be screened, by x-ray, for atlantoaxial instability (AAI). If they have AAI, they must sign a waiver to participate in certain sports. Because symptomatic AAI appears to be correlated with spinal cord injury, a physical exam of athletes who are positive for AAI is extremely important. Athletes exhibiting physical signs and symptoms of AAI should not be cleared for any sports participation until a parent or guardian has discussed these findings with a primary care physician or a neurologist.

Because athletes with asymptomatic AAI must sign a waiver as well, symptomatic AAI may represent a progression of disease and an increase in injury risk that the parents were not aware of when they signed the initial participation waiver. In other words, the presence of a previously signed waiver for an athlete found to have symptomatic AAI on a physical exam should not automatically clear the athlete for all sports participation.

It is also important to note that AAI can occur in some athletes who were previously determined as not having AAI. For this reason, neurological evaluation of any athlete with Down syndrome is extremely important. Any neurological findings in these athletes may warrant further medical evaluation prior to sports clearance.





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MEDICATIONS

MEDICATIONS AND VITALS (Appendix B)

Medication Check

Special Olympics athletes are much more likely to be taking medications than neurotypical athletes, especially antipsychotics and antiseizure medications. These medications are often used on a long term basis and consequently are associated with long term side effects. These side effects might include osteoporosis, weight gain, sun sensitivity, constipation or potentially fatal Long QT syndrome.

Athletes and their parents (or guardians) should be warned if they are taking medications which may produce these side effects. A medical referral should be made if the athlete is exhibiting signs of the potential side effects of the medications. For example, if a peripheral bone density screening shows a t-score of -1.9 and the athlete is on a medication which may produce osteoporosis, a medical referral should be made.



The presence of a medication with a high risk of Long QT syndrome should prompt the physician to not clear the athlete for participation until the presence of Long QT syndrome has been ruled out. The presence of medications with other side effects is not an absolute contraindication for participation in Special Olympics. An alphabetized, color-coded medication list of 700 generic and trade name medications has been assembled to help check athlete medication regimens for potentially harmful side effects (included in MedFest packet).

Height

For ease of Body Mass Index calculation, height should be measured in meters. For consistency of measurement over time, athletes should remove their shoes prior to being measured.

Weight and Body Mass Index

Weight should be measured in kilograms, with the athlete's jacket and shoes off. With height and weight measured, BMI can be calculated: $BMI = kg/m^2$.



Normal BMI usually falls within the range of 18.5 to 25. Below this may be considered underweight and above this may be considered overweight. Certain factors such as body frame size and muscle mass may determine if an athlete outside the normal BMI range needs nutritional counseling.

Blood Pressure

Because of the increased prevalence of disorders of the heart and aorta in Special Olympics athletes, blood pressure should be obtained independently in both arms. Blood pressure found to be outside the normal range of 90/50 to 140/90 should be repeated. It is important

to note that poorly fitting blood pressure cuffs may lead to abnormally high or low pressure readings. A blood pressure over 160/100 in either arm is cause to deny medical clearance. Likewise, systolic pressure difference of more than 20 mm/hg between right and left arms may indicate aortic coarctation or other circulatory disorders which may be cause to deny clearance. To summarize, if blood pressure readings are:

- < 90/50 – reconfirm, deny clearance, refer
- >140/90 – reconfirm, clear and refer
- >160/100 – reconfirm, deny clearance, refer
- > 20 mm/hg difference – reconfirm, deny clearance, refer

Pulse

Pulse should not only be evaluated for rate, but also for regularity. Generally, the volunteers at the vitals station will not comment on the regularity of a pulse, therefore, the examining physician should note whether a heart rhythm is regular or irregular.

Oxygen Saturation (if available)

Occasionally, certain disorders may be detected via blood oxygen saturation levels. Portable oxygen saturation monitors may have difficulty properly functioning if the athlete: 1) has dark skin, 2) has dirty skin, 3) has cold fingers or 4) has not positioned their finger properly. Oxygen saturation levels below 90% should trigger a repeat test. If the finding remains below 90%, this may be cause for medical referral.

Temperature

Athletes with an oral body temperature over 99°F or over 37.5°C should only be cleared for participation pending full resolution of the underlying cause. Active viral or bacteria infection is an absolute contraindication to sports participation. Therefore, no athlete with an elevated temperature should be cleared for participation. Athletes exhibiting an elevated temperature should be referred for immediate medical evaluation.

Hearing

In order to adequately assess hearing, it is suggested that a pure tone audiometer be used to screen for hearing loss. Audiometers should be set at 25dB for both right and left ears. The ears should be tested individually at 1000 Hz, 2000Hz and 4000Hz in the quietest environment possible. An audiologist is the preferred volunteer to administer this test, but because of the simplicity of the test other health volunteers can easily learn how to use the audiometer with minimal training the day of the event. It is important to note that cerumen impaction is a common occurrence in the intellectual disabilities population and is frequently the cause of failed hearing tests. It is best to note the cerumen status of any athlete who has failed their hearing exam.



VITALS





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Vision

As shown in the equipment section, the Lea eye chart is the preferred vision chart for MedFest vision screening. To ensure accurate testing, the chart should be hung on a well-lit wall. Tape should be placed on the floor ten feet away from the wall in order to mark where the athlete will stand during this test. The chart contains 4 shapes, a house, an apple, a circle and a square. For verbal, non-hearing-impaired athletes, the volunteer will first show them the four shapes and have them repeat back what the shapes are. The athlete then covers one eye. Another volunteer can point to the 20/40 (or 10/20) line. If the athlete can read the line with 100% accuracy, the volunteer should then ask the athlete to read the next line down. Repeat this, as necessary, until either the athlete has read the 20/20 line with 100% accuracy, or the athlete misidentifies a shape. If the athlete misses one or more shapes, record their vision as the last line that was completely read with 100% accuracy. Once one eye has been fully tested, cover the other eye and test in the same fashion as before. If an athlete fails the 20/40 line, there is no need for further testing, the athlete has failed his or her vision examination and will need to be referred to the Opening Eyes program or to an optometrist or ophthalmologist for further evaluation. Note that the vision test should be performed while the athlete is wearing their glasses or contacts.

The Lea eye chart comes with cards that have the shapes on them. Non-verbal athletes may point to the shapes they see instead of speaking the name of the objects.



ATHLETE PHYSICAL (Appendix B)

Physical Examination

General sports physical guidelines apply to Special Olympics athletes, with a few noteworthy additions. For basic reference about sports physical protocols, Special Olympics recommends using the Preparticipation Physical Exam Guidelines, Third Edition. These guidelines have been endorsed by some of the most well-respected organizations in sports medicine. The following paragraphs contain special considerations that should be given to Special Olympics athletes.

Communication

Once an athlete presents to the examining clinician, the clinician should first attempt to assess the athlete's communication preferences. Some athletes will be engaging, some will be withdrawn, some will be very physically affectionate and some will not want to be touched. In many cases, regardless of their ability to communicate verbally, athletes may be very astute in observing non-verbal cues. It is therefore important for the examining clinician to be mindful of the non-verbal signals that the athlete may be sending.

Oral Hygiene

Poor oral hygiene is an often overlooked problem for people with intellectual disabilities. One of the strongest biases that people have is the perceived link between poor dentition/oral hygiene and intellectual disability. In many cases, clinicians expect people with intellectual disabilities to have poor dentition and therefore have a higher threshold for dental referral. When judging the adequacy of an athlete's dentition/oral hygiene, use the high standard that would be expected from any patient. Since it is a medical and not a dental professional performing this exam, any deviation from "good" oral hygiene should at least prompt a referral to the Special Olympics Special Smiles Program, if one is available. If not, a referral to a dental clinic is recommended.

Cerumen Impaction

Cerumen impaction is the most common reversible cause of hearing loss in the intellectual disabilities population. It is extremely important that all athletes be screened for this. If cerumen impaction is present, over-the-counter drops may be given to the athlete to take home with them. Frequently, these products will be donated by pharmacies or the manufacturer.

Heart Murmur

Because of the combination of a high incidence of heart defects in the ND/ intellectual disabilities population and the lack of access to adequate medical care often experienced by this population, previously undiagnosed heart conditions may be detected at a MedFest event. Any heart murmur that is detected should be auscultated in both the supine and upright positions. A change in quality of the heart murmur corresponding with the change in examination positions should prompt referral for further cardiac evaluation. In this instance, sports participation should be denied, pending the further cardiac evaluation and clearance. Generally, any heart murmur that is 3/6 or higher is cause to deny clearance pending further cardiac evaluation.

Hepatomegaly/Splenomegaly

Both hepatomegaly and splenomegaly are contraindications for sports participation pending resolution or further evaluation and clearance.

PHYSICAL





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Neurological Examination/Range of Motion/Strength

Many Special Olympics athletes will have abnormal neurological and musculoskeletal findings. Usually, these findings are long-standing and are generally not contraindications to sports participation. In the presence of abnormal neurological or musculoskeletal findings, the clinician should consider whether participation in a particular sport will likely cause additional injury to the athlete over and above what would normally be expected for an athlete without the abnormal findings.

Neurological or musculoskeletal findings that are suspected to be of new onset may represent a new or progressing disorder and should be referred for further evaluation. In this case, the athlete should not be cleared for sports participation until the referral evaluation has been completed.

Notes

The MedFest history and physical forms have been standardized for ease of use, interpretation and for data collection purposes. Though there is a lot of information that is captured on these standardized forms, not every physical exam variable can be standardized. The “Notes” section is provided on the form for examining clinicians to make additional notes, comments or recommendations.



ATHLETE CLEARANCE (Appendix C)

Levels of Clearance

There are four clearance categories in which all Special Olympics athletes at a MedFest event will fall. The majority will be cleared to participate in all sports. A significant minority will be cleared to participate in all sports, but will be given recommendations to seek further evaluation due to findings in the history or physical exam. A small minority will be prohibited from participation in some sports but not all, pending further evaluation and/or resolution of symptoms. Finally, a very small minority will be prohibited from participating in any sports pending further evaluation or resolution of symptoms.

Full Clearance: 70 to 90% of athletes

Example: most athletes

Full Clearance with Referrals: 10 to 30% of athletes

Example: athlete with sub-optimal vision correction

Partial Clearance with Referrals: 0-10 % of athletes

Example: athlete with seizures, cleared for bocci but not swimming

No Clearance, Pending Further Evaluation: 0 to 5% of athletes

Example: athlete with active infection

As a guiding principal for clearance, remember that the true purpose of a sports physical for Special Olympics athletes is not to determine if the athlete is capable of participating in a particular sport. Special Olympics provides the platform for athletes to determine their own capabilities. Instead, the purpose of the sports physical is to determine if the athlete will incur a higher risk of serious injury if they participate in a particular sport. It is only a significantly increased risk of serious injury or death that should prohibit an athlete from being cleared medically.



CLEARANCE



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REFERRALS



RECOMMENDATIONS AND REFERRALS (Appendix C)

Writing Recommendations

The MedFest recommendation form contains standardized recommendations based upon the objective parameters measured at a typical MedFest event. There is an area for notes which may be filled in by the clinician. It is recommended that this form be double-checked with the completed history and physical form for the sake of consistency. It is also recommended that a copy of this form be kept by the Special Olympics Program and that a Special Olympics volunteer attempt to contact athletes within four weeks of the screening as a reminder to follow-up with the medical recommendations.

Referring to Other Healthy Athletes Disciplines

It is important for MedFest clinicians to know what services are offered by the Special Olympics Healthy Athletes program. Some of these programs provide free comprehensive diagnostic services and some limited treatment services. For example, some Opening Eyes programs have the ability to give a comprehensive vision exam and to fabricate corrective lenses for the athlete, on site. Utilizing these services may be more convenient and less costly for the athlete.

Writing Prescriptions

In the event that a condition is detected in an athlete that requires immediate treatment, there are two acceptable courses of action. First, the athlete may be referred to an emergency room or another practicing physician for immediate follow-up. Second, the examining clinician may accept the athlete into his or her own practice, at the time of examination. In such cases the clinician may provide the athlete with a prescription. It is important to note that the purpose of a MedFest is only to provide medical clearance for potential Special Olympics athletes. It is not to provide ongoing clinical care or follow up. If any care is rendered or prescriptions written, the examining clinician becomes ethically (and depending on the area, legally) responsible for following up with the athlete. Special Olympics does not assume any responsibility for any treatment rendered (including prescriptions) as a result of the MedFest medical screening protocols.

Provider Directory

As a service to individuals with intellectual and developmental disabilities and their families, the Healthy Athletes Provider Directory was created on www.specialolympics.org. The Provider Directory is an online database of health care professionals who are able and willing to treat patients with intellectual disabilities. Health care providers can create and maintain a listing in the Provider Directory, which currently is open to health care providers in the United States, Mexico, Canada and the Caribbean.

OTHER CONSIDERATIONS

Adding Medical Tests

It is acceptable for Clinical Directors to alter MedFest somewhat to fit the needs and resources of the community in which it is being offered. In general it is acceptable to add protocols but it is not acceptable to eliminate them.

1) Non-Invasiveness: All MedFest protocols are to be non-invasive. Therefore, gynecological and rectal exams are strictly prohibited. Blood testing and x-ray examination are also considered invasive and are prohibited. Urinalysis, EKG, echocardiography, ultrasound, bone densitometry and bioelectrical impedance are considered non-invasive and therefore can be done. Other tests should be discussed with Special Olympics and will be considered on a case-by-case basis.

2) Free: MedFest is a free, elective event. No athlete should be required to undergo any testing which would cost him or her money.

Autism

Autistic behavior is encountered frequently in the intellectual disabilities population. Fragile X and many other neurodevelopmental disorders are associated with autistic features. One of the common characteristics of autism is an aversion to visual or auditory stimulus. When a MedFest event is at its activity peak, there can be a lot of commotion and noise. This may be overwhelming to some athletes, especially those with autistic features. For these athletes, completing the MedFest protocols in the quiet contingency room may be necessary.

Wheelchairs

A number of Special Olympics athletes will require the use of a wheelchair. In most cases, the pre-registration process should alert the planning staff as to how many athletes with wheelchairs will participate in the event. Some MedFest protocols will need to be modified in order to accommodate the athlete. Specifically, the modified height and weight protocols described earlier will need to be used. It is imperative that all areas of MedFest accommodate athletes using wheelchairs.





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COMMUNICATION

COMMUNICATION

There are numerous definitions of health literacy. The United States Institute of Medicine's report *Health Literacy: A Prescription to End Confusion* uses a definition of health literacy that is also used in "Healthy People 2010": "the degree to which individuals have the capacity to obtain, process and understand basic health information and services needed to make appropriate health decisions."³⁴

Health literacy goes beyond creating brochures or handouts using words at a level that is easy to read. In the broadest form of the definition, people who are health literate can identify their health problem, formulate the questions they need answered, find the information they need, understand that information and then use it to take actions to improve their health.

Methods for determining the literacy level and health literacy level for materials, instruction and interaction focus primarily on adult learners with low reading ability. People with intellectual disabilities have other hurdles to overcome, such as processing time and using receptive and expressive communication systems. In addition, many adults with intellectual disabilities did not have the opportunity to learn to read or attend school in their younger years. Simply put, there is so much more to health literacy for people with intellectual disabilities than has been discussed in literature thus far.

In his "Call to Action for People with Disabilities," former United States Surgeon General Richard Carmona brings the notion of health literacy into play for people with disabilities in two ways. He asks us to "increase awareness among people with disabilities of the steps they can take to develop and maintain a healthy lifestyle... [and] increase accessible health care and support services to promote independence for people with disabilities."³⁵

Put the Athlete First

Too often people with disabilities are described by their condition first. Although a specific disability label may provide some insight to a person's abilities or behavior, it does not do justice to their individuality. Because of this, Special Olympics uses "person-first" language. This means putting the person before the disability. For instance, when describing an athlete, you might say, "I met a young athlete from southern Oregon who has Down syndrome."

Sometimes using person-first language feels awkward, but it is an important way to show respect for Special Olympics athletes. Simply put, you can't fail if you:

- Put the person first;
- Look for the person's individuality; and
- Look for common ground for conversation (ask about their sport, etc.).

Strategies for Effective Communication

People with intellectual disabilities generally understand more than they can easily share. In most cases, receptive language is far better than expressive language. The athletes you will meet at a Special Olympics event will have a wide range of communication techniques. Many will have no trouble carrying on a conversation, answering questions

or sharing stories. And just like everyone else, Special Olympics athletes will use gestures and vocal cues along with what they have to say. Sometimes these gestures and other cues are very important and will help you understand what he or she is trying to say.

Some people with intellectual disabilities cannot use their voice to communicate, but rely solely on other nonverbal cues such as sign language, photos or symbols, communication devices, or codes developed over the years with family and friends such as a blink for “yes” or “no.”

Be a Good Communication Partner

As always, pay close attention to any unintentional messages you may be sending with your body language, tone of voice or positioning. To be a good communication partner you must make eye contact, exercise patience, pay attention to your body language and be aware of personal space.

Additional tips for being a good communication partner include:

- Try to be at eye level with athletes. In other words, if they are sitting, you sit too.
- Be patient and wait for an answer. When you see an athlete is thinking about what to say, be patient and say nothing. This gives the athlete time to process information and respond.
- Try not to finish the athlete’s sentence. It is sometimes hard to wait for another person to search for a word, but do your best. Second-guessing how a person will finish a sentence takes away their role in the conversation.
- Use appropriate tone and age-appropriate language. Avoid using “baby talk.”
- Use clear, concise and plain language. Clear language will make it easier for athletes to understand your message.
- Be willing to say something again using different words if a person does not understand. Use visual cues such as photographs.
- Ask for help. If you have trouble communicating with an athlete, ask for assistance from the athlete’s coach or support person.
- Provide supportive feedback.



Special Olympics



FUNDING

MEDFEST FUNDING

Grants for Special Olympics Programs to fund MedFest are available through Special Olympics, Inc. Though these grants are an excellent way to get a MedFest Program started, it is recommended that local sponsors be sought to fund the ongoing MedFest event. Local hospitals, insurance companies, pharmaceutical companies or local small businesses may be interested in underwriting the cost of the MedFest event. Generally, sponsoring entities will be interested in the community goodwill generated from such an event. It is therefore important to ensure that sponsors receive public recognition 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 MedFest event.

Possible costs to keep in mind as you plan an event include the following:

- Equipment rental/purchase
- Medical supplies/ materials (stethoscopes, blood pressure cuffs, etc.)
- General education materials
- Food and drinks for volunteers and athletes
- Postage for mailings
- Photography
- Reimbursement for parking
- Thank-you notes to volunteers and sponsors
- Gift for volunteers
- Signs

Grants to support MedFest activities

- Healthy Athletes capacity grants are available to support the initiation and growth of Healthy Athletes activities. Requests for these grants should be submitted to Special Olympics at least 60 days prior to an event. The grants can be used for equipment, supplies, athlete and volunteer support, and promotion. MedFest Clinical Directors must work with their local Special Olympics Program to identify the needs for these grants.
- Healthy Athletes development grants are also available for program development 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 individual impact of Healthy Athletes activities in the community. These one-year grants are available to Special Olympics Programs to assess athlete compliance and health behavior change, as well as community response.

For more information on these grants, contact your regional Healthy Athletes Coordinator (contact information included in Appendix F).

FREQUENTLY ASKED QUESTIONS

Can nurse practitioners and physician assistants volunteer at MedFest?

Yes. The level of supervision of these professionals that is necessary depends upon the rules of practice for the locale in which the MedFest is being held.

Can physicians from other states or countries volunteer at MedFest?

Yes. However, a licensed physician from that locale must double-check and countersign the physicals performed by that physician, as the locally licensed physician will be held responsible for the clearance of the athlete.

Can medical, nursing or physician assistant students volunteer at MedFest?

Yes. Students may volunteer at any station in which they feel comfortable working. Students working at the examination station must be double checked and countersigned by a licensed physician from that locale, as the locally licensed physician will be held responsible for the clearance of the athlete.

Can military physicians volunteer for MedFest?

Yes. However, sometimes military licenses do not extend to the civilian population. In this case the military physicians work must be double-checked and countersigned by a licensed physician from that locale, as the locally licensed physician will be held responsible for the clearance of the athlete.

Does Special Olympics malpractice insurance cover all MedFest volunteers?

Yes, in the United States. However, prior to the day of the MedFest event, a list of all clinical volunteers and their insurance status (whether or not they have malpractice insurance) should be given to the Special Olympics administrative office who will, in turn, give it to the insurance company. MedFest malpractice insurance acts as a secondary insurance for those who already have malpractice coverage, but acts as primary insurance for those who do not.

Can we discuss sex education, HIV or condom use with the athletes?

No. Special Olympics is specifically prohibited from discussing these topics with its athletes due to the stipulation of the grant given to Special Olympics by the United States Government.

Can somebody else discuss sex education, HIV, or condom use with the athlete?

Yes. Though Special Olympics is prohibited from discussing these topics at a MedFest event, other entities not funded through the MedFest grant may discuss these topics. Special Olympics is not responsible for what an athlete does directly before or after he or she participates in the MedFest event.

Can we offer finger-stick blood testing for diabetes, cholesterol, liver function or HIV?

No. Any test which draws blood from the athlete is considered invasive. Through the stipulations of the funding provided to Special Olympics and insurance guidelines, no invasive tests may be given to Special Olympics athletes during the MedFest event, even if the athlete consents to and specifically requests such testing.



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Can somebody else offer blood testing for diabetes, cholesterol, liver function or HIV?

Yes. Though Special Olympics is prohibited from offering invasive tests, other entities not funded through the MedFest grant may do so. Special Olympics is not responsible for what an athlete does directly before or after he or she participates in the MedFest event.

Can we offer vaccinations at MedFest?

No. Vaccination is considered invasive. Through the stipulations of the funding provided to Special Olympics and insurance provisions, no invasive procedures may be given to Special Olympics athletes during the MedFest event, even if the athlete consents to and specifically requests such treatment.

Can somebody else offer vaccinations to Special Olympics athletes?

Yes. Though Special Olympics is prohibited from offering invasive treatments such as vaccination, other entities not funded through the MedFest grant may do so. Special Olympics is not responsible for what an athlete does directly before or after he or she participates in the MedFest event.

Can we discuss alcohol, tobacco, or illegal drug use with athletes?

Yes. Alcohol, tobacco, and illegal drug use can have a negative impact on sports health and sports training. Athletes should be encouraged to abstain from alcohol, tobacco, and the use of illegal drugs, when appropriate.

How do we follow up with any recommendations or referrals made at MedFest?

It is recommended that the Special Olympics Program identify a person such as a social worker, volunteer or staff member who will attempt to contact MedFest participants requiring follow-up after the MedFest event, to remind them of their referrals and recommendations.

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APPENDICES

Appendix A – Healthy History Form

Appendix B – Vitals, Physical Exam and Recommendations Form

Appendix C – Referral and Medical Clearance Form

Appendix D – Healthy Athletes Multidisciplinary Athlete Card

Appendix E – Healthy Athletes

Appendix F – Contact Information

Appendix G – MedFest Training Competency Tests

APPENDICES

SPECIAL OLYMPICS			HEALTH HISTORY			MEDFEST			
Athlete Name:			Date of Birth:			<input type="checkbox"/> Male		<input type="checkbox"/> Female	
<input type="checkbox"/> African	<input type="checkbox"/> American Indian/Eskimo	<input type="checkbox"/> Middle Eastern	<input type="checkbox"/> Asian/Pacific Islander	<input type="checkbox"/> Australian Aboriginal					
<input type="checkbox"/> Caucasian	<input type="checkbox"/> Hispanic/Latin American	<input type="checkbox"/> Mix (check all that apply)	<input type="checkbox"/> Other:						
Social Security # (if US citizen) :			Day Phone #:			Night Phone #:			
Health Insurance Company:			Policy #:						
Athlete's Address:			City:			State:			
Parent/Guardian Name:			Day Phone #:			Night Phone #:			
Parent/Guardian Address:			City:			State:			
Primary Care Physician's Name:			Day Phone #:						
Primary Care Physician's Address:			City:			State:			
Emergency Contact Name:			Day Phone #:			Night Phone #:			
Do you have any religious objections to medical treatment?			<input type="checkbox"/> No	<input type="checkbox"/> Yes, Please Describe:					
Where do you live?	<input type="checkbox"/> With Parents or Other Family Members	<input type="checkbox"/> Independently	<input type="checkbox"/> Group Home	<input type="checkbox"/> Institution/Facility					
Please list any medications, vitamins or dietary supplements below (include birth control or hormone therapy, if applicable).									
Medication, Vitamin or Supplement		Dosage	Times per Day	Medication, Vitamin or Supplement		Dosage	Times per Day		
Please check which of the following vaccines the athlete has had.									
<input type="checkbox"/> Anthrax	<input type="checkbox"/> Influenza (flu)	<input type="checkbox"/> Pertussis (DTP)	<input type="checkbox"/> Small Pox						
<input type="checkbox"/> Chickenpox (VZV)	<input type="checkbox"/> Japanese Encephalitis	<input type="checkbox"/> Pneumococcus	<input type="checkbox"/> Tetanus (DTP)						
<input type="checkbox"/> Diphtheria (DTP)	<input type="checkbox"/> Lyme Disease	<input type="checkbox"/> Polio	<input type="checkbox"/> Year of last dose:_____						
<input type="checkbox"/> Hepatitis A	<input type="checkbox"/> Measles (MMR)	<input type="checkbox"/> Rabies	<input type="checkbox"/> Tuberculosis						
<input type="checkbox"/> Hepatitis B	<input type="checkbox"/> Meningococcus	<input type="checkbox"/> Rotavirus	<input type="checkbox"/> Typhoid Fever						
<input type="checkbox"/> Hemophilus Influenza B	<input type="checkbox"/> Mumps (MMR)	<input type="checkbox"/> Rubella (MMR)	<input type="checkbox"/> Yellow Fever						
List any allergies				List any special diet needs					
List all past or ongoing medical conditions				List all past surgeries					
List any medical conditions which run in your family				Which sports are you interested in playing?					
Please answer the following questions (circle questions you do not know the answer to).									
How long has it been since you visited an emergency room?			How long has it been since you visited a physician?						
How many times did you visit an emergency room last year?			How many times did you visit a physician last year?						
Have you ever had a seizure in your lifetime?			<input type="checkbox"/> Yes	<input type="checkbox"/> No	Do you take birth control or another hormone therapy?			<input type="checkbox"/> Yes	<input type="checkbox"/> No
Have you had a seizure in the last 12 months?			<input type="checkbox"/> Yes	<input type="checkbox"/> No	Have you taken antibiotics in the past month?			<input type="checkbox"/> Yes	<input type="checkbox"/> No
Has any family member or relative died while exercising?			<input type="checkbox"/> Yes	<input type="checkbox"/> No	Do you have burning or discomfort when urinating?			<input type="checkbox"/> Yes	<input type="checkbox"/> No
Has any relative died of a heart problem before age 40?			<input type="checkbox"/> Yes	<input type="checkbox"/> No	Do you currently have any symptoms of a cold or flu?			<input type="checkbox"/> Yes	<input type="checkbox"/> No
Do you currently have any chronic or acute infection?			<input type="checkbox"/> No	<input type="checkbox"/> Yes, please describe?:					
Have you ever had an abnormal Electrocardiogram (EKG)?			<input type="checkbox"/> No	<input type="checkbox"/> Yes, why?:					
Have you ever had an abnormal Echocardiogram (Echo)?			<input type="checkbox"/> No	<input type="checkbox"/> Yes, why?:					
Has a doctor ever limited your participation in sports ?			<input type="checkbox"/> No	<input type="checkbox"/> Yes, why?:					

What is the medical cause of the athlete's intellectual disability?	List any additional conditions or syndromes (see list below)		
Adams-Oliver Syndrome	Ehler-Danlos Syndrome	Kearns-Sayre Syndrome	Townes-Brocks Syndrome
Allagile Syndrome	Eisenmenger Syndrome	Laurence-Moon-Biedle Syndrome	Treacher Collins Syndrome
Apert Syndrome	Ellis Van Crevald Syndrome	Leopard Syndrome	Tuberous Sclerosis
Cantrell Syndrome	Emery-Dreifuss Dystrophy	Marfan Syndrome	Turner Syndrome
Carpenter Syndrome	Fanconi Anemia	Mucopolysaccharidosis	VACTERL Syndrome
Cayler Syndrome	Farber Syndrome	Muscular Dystrophy	VATER Syndrome
CHARGE Syndrome	Fetal Alcohol Syndrome	Osler-Weber-Rendu Syndrome	Velo-Cardio-Facial Syndrome
Congenital Rubella Syndrome	Fragile X Syndrome	Progeria	Von Hippel Lindau Syndrome
De Lange Syndrome	Friedreich Ataxia	Scimitar Syndrome	William-Beuren Syndrome
Dejerin-Soltas Syndrome	Hemorrhagic Telangiectasia	Shones Syndrome	Williams Syndrome
DiGeorge Syndrome	Heterotaxy Syndrome	Shprintzen Syndrome	Wolff-Parkinson-White Syndrome
Down Syndrome	Holt-Oram Syndrome	Smith Magenis Syndrome	Zellweger Syndrome
Dubowitz Syndrome	Ivemark Syndrome	Smith-Lemli-Opitiz Syndrome	
Edwards Syndrome	Kartagener Syndrome	TAR Syndrome	

Please indicate if you have ever had any of the following conditions (circle questions you do not know the answer to).

SECTION 1 (CR)	SECTION 2 (TR)	SECTION 3 (ER)	
Chest Pain During or After Exercise <input type="checkbox"/> Yes <input type="checkbox"/> No	Atlanto-Axial Instability <input type="checkbox"/> Yes <input type="checkbox"/> No	Asthma <input type="checkbox"/> Yes <input type="checkbox"/> No	
Dizziness During or After Exercise <input type="checkbox"/> Yes <input type="checkbox"/> No	Broken Bones (More Than One) <input type="checkbox"/> Yes <input type="checkbox"/> No	Diabetes (Type I) <input type="checkbox"/> Yes <input type="checkbox"/> No	
Fainting During or After Exercise <input type="checkbox"/> Yes <input type="checkbox"/> No	Concussions (More Than One) <input type="checkbox"/> Yes <input type="checkbox"/> No	Diabetes (Type II) <input type="checkbox"/> Yes <input type="checkbox"/> No	
Headache During or After Exercise <input type="checkbox"/> Yes <input type="checkbox"/> No	Dislocated Joints (More Than One) <input type="checkbox"/> Yes <input type="checkbox"/> No	Ectodermal Dysplasia <input type="checkbox"/> Yes <input type="checkbox"/> No	
Irregular Heart Beat <input type="checkbox"/> Yes <input type="checkbox"/> No	Easy Bleeding <input type="checkbox"/> Yes <input type="checkbox"/> No	Heat Exhaustion <input type="checkbox"/> Yes <input type="checkbox"/> No	
Loss of Consciousness <input type="checkbox"/> Yes <input type="checkbox"/> No	Enlarged Spleen <input type="checkbox"/> Yes <input type="checkbox"/> No	Heat Stroke <input type="checkbox"/> Yes <input type="checkbox"/> No	
Shortness of Breath <input type="checkbox"/> Yes <input type="checkbox"/> No	Hepatitis <input type="checkbox"/> Yes <input type="checkbox"/> No	Sickle Cell Disease <input type="checkbox"/> Yes <input type="checkbox"/> No	
Skipped Heart Beats <input type="checkbox"/> Yes <input type="checkbox"/> No	Osteogenesis Imperfecta <input type="checkbox"/> Yes <input type="checkbox"/> No	Sickle Cell Trait <input type="checkbox"/> Yes <input type="checkbox"/> No	
Arrhythmogenic Right Ventricular Hypertrophy <input type="checkbox"/> Yes <input type="checkbox"/> No	Osteopenia or Osteoporosis <input type="checkbox"/> Yes <input type="checkbox"/> No	Single Kidney <input type="checkbox"/> Yes <input type="checkbox"/> No	
Dilated Cardiomyopathy <input type="checkbox"/> Yes <input type="checkbox"/> No	Spina Bifida <input type="checkbox"/> Yes <input type="checkbox"/> No	Thyroid Disease <input type="checkbox"/> Yes <input type="checkbox"/> No	
Endocarditis <input type="checkbox"/> Yes <input type="checkbox"/> No	Burner, stinger or pinched nerve in neck, arms, shoulders/hands <input type="checkbox"/> Yes <input type="checkbox"/> No	SECTION 4 (PR)	
Heart Defect <input type="checkbox"/> Yes <input type="checkbox"/> No	Difficulty controlling bowels <input type="checkbox"/> Yes <input type="checkbox"/> No	Aggressive Behavior (AB) <input type="checkbox"/> Yes <input type="checkbox"/> No	AB during the past year? <input type="checkbox"/> Yes <input type="checkbox"/> No
Heart Disease <input type="checkbox"/> Yes <input type="checkbox"/> No	Difficulty controlling bladder <input type="checkbox"/> Yes <input type="checkbox"/> No	Self-Injurious Behavior (SIB) <input type="checkbox"/> Yes <input type="checkbox"/> No	SIB during the past year? <input type="checkbox"/> Yes <input type="checkbox"/> No
Heart Infection <input type="checkbox"/> Yes <input type="checkbox"/> No	Numbness in arms or hands <input type="checkbox"/> Yes <input type="checkbox"/> No	Autism <input type="checkbox"/> Yes <input type="checkbox"/> No	
Heart Murmur <input type="checkbox"/> Yes <input type="checkbox"/> No	Numbness in legs or feet <input type="checkbox"/> Yes <input type="checkbox"/> No	Attention Deficit/Hyperactivity <input type="checkbox"/> Yes <input type="checkbox"/> No	
High Blood Pressure <input type="checkbox"/> Yes <input type="checkbox"/> No	Tingling in arms or hands <input type="checkbox"/> Yes <input type="checkbox"/> No	Bipolar Mood Disorder <input type="checkbox"/> Yes <input type="checkbox"/> No	
High Cholesterol <input type="checkbox"/> Yes <input type="checkbox"/> No	Tingling in legs or feet <input type="checkbox"/> Yes <input type="checkbox"/> No	Depression <input type="checkbox"/> Yes <input type="checkbox"/> No	
Hypertrophic Cardiomyopathy <input type="checkbox"/> Yes <input type="checkbox"/> No	Weakness in arms or hands <input type="checkbox"/> Yes <input type="checkbox"/> No	Psychosis <input type="checkbox"/> Yes <input type="checkbox"/> No	
Left Ventricular Hypertrophy <input type="checkbox"/> Yes <input type="checkbox"/> No	Weakness in legs or feet <input type="checkbox"/> Yes <input type="checkbox"/> No	Schizophrenia <input type="checkbox"/> Yes <input type="checkbox"/> No	
Long QT Syndrome <input type="checkbox"/> Yes <input type="checkbox"/> No	Recent change in coordination <input type="checkbox"/> Yes <input type="checkbox"/> No		
Pericarditis <input type="checkbox"/> Yes <input type="checkbox"/> No	Recent change in ability to walk <input type="checkbox"/> Yes <input type="checkbox"/> No		
Racing Heart Beat <input type="checkbox"/> Yes <input type="checkbox"/> No			

Athletes with Down syndrome, please answer the following questions.

If the athlete has Down Syndrome, Special Olympics requires a full radiological examination establishing the absence of Atlanto-Axial Instability before he/she may participate in sports or events which, by their nature, may result in hyperextension, radical flexion or direct pressure on the neck or upper spine. The sports and events for which such a radiological examination is required are: judo, equestrian sports, gymnastics, diving, pentathlon, diving starts in swimming, butterfly stroke, high jump, alpine skiing, snowboarding, squat lift, and football (soccer) competition.

Has an x-ray evaluation for Atlanto-Axial Instability been done? Yes No | If yes, was it positive for Atlanto-Axial Instability? Yes No

Please sign and date.

Athlete Signature	Date	Legal Guardian Signature	Date
Print Name		Print Name	

VITAL MEASURES

Height _____	Weight _____	BMI _____	Temp _____	Medication Risks	<input type="checkbox"/> bmi	<input type="checkbox"/> bmd	<input type="checkbox"/> lqt	<input type="checkbox"/> sun	<input type="checkbox"/> csp						
BP Right _____	BP Left _____	Pulse _____	O2 Sat. _____	R. T-Score _____	L. T-Score _____										
Near Vision		Can't Evaluate	Far Vision				Can't Evaluate	Hearing	1000 Hz	2000 Hz	4000 Hz	Can't Evaluate			
	Pass	Fail		20/20	20/30	20/40	>20/40		Pass	Fail	Pass	Fail	Pass	Fail	
Right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Right	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Left	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Left	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Left	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

PHYSICAL EXAM

HEAD AND NECK						RANGE OF MOTION										
Oral Hygiene	<input type="checkbox"/> Good	<input type="checkbox"/> Needs Improvement				mobility =	hyper	full	partial	little	none					
Right Ear Canal	<input type="checkbox"/> Clear	<input type="checkbox"/> Cerumen Impaction	<input type="checkbox"/> Foreign Body	Neck			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
Left Ear Canal	<input type="checkbox"/> Clear	<input type="checkbox"/> Cerumen Impaction	<input type="checkbox"/> Foreign Body	Right Shoulder			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
Right Tympanic Membrane	<input type="checkbox"/> Clear	<input type="checkbox"/> Infection	<input type="checkbox"/> Perforation	Left Shoulder			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
Left Tympanic Membrane	<input type="checkbox"/> Clear	<input type="checkbox"/> Infection	<input type="checkbox"/> Perforation	Right Elbow			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
Thyroid Enlargement	<input type="checkbox"/> No	<input type="checkbox"/> Yes, describe:	Left Elbow			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
Lymph Node Enlargement	<input type="checkbox"/> No	<input type="checkbox"/> Yes, describe:	Right Wrist			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
CARDIAC EXAMINATION						Left Wrist						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Heart Murmur (supine)	<input type="checkbox"/> No	<input type="checkbox"/> 1/6	<input type="checkbox"/> 2/6	<input type="checkbox"/> 3/6	<input type="checkbox"/> 4/6	<input type="checkbox"/> 5/6	<input type="checkbox"/> 6/6	Right Hand			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Heart Murmur (upright)	<input type="checkbox"/> No	<input type="checkbox"/> 1/6	<input type="checkbox"/> 2/6	<input type="checkbox"/> 3/6	<input type="checkbox"/> 4/6	<input type="checkbox"/> 5/6	<input type="checkbox"/> 6/6	Left Hand			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Heart Rhythm	<input type="checkbox"/> Regular	<input type="checkbox"/> Irregular	Spine			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
CHEST EXAMINATION						Right Hip						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lung (Right)	<input type="checkbox"/> Clear	<input type="checkbox"/> Not Clear, describe:	Left Hip			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
Lung (Left)	<input type="checkbox"/> Clear	<input type="checkbox"/> Not Clear, describe:	Right Knee			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
EXTREMITIES						Left Knee						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Right Leg Edema	<input type="checkbox"/> No	<input type="checkbox"/> 1/4	<input type="checkbox"/> 2/4	<input type="checkbox"/> 3/4	<input type="checkbox"/> 4/4	Right Ankle			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Left Leg Edema	<input type="checkbox"/> No	<input type="checkbox"/> 1/4	<input type="checkbox"/> 2/4	<input type="checkbox"/> 3/4	<input type="checkbox"/> 4/4	Left Ankle			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Radial Pulse Symmetry	<input type="checkbox"/> Yes	<input type="checkbox"/> R>L	<input type="checkbox"/> L>R				STRENGTH									
Dorsalis Pulse Symmetry	<input type="checkbox"/> Yes	<input type="checkbox"/> R>L	<input type="checkbox"/> L>R				strength =		full	partial	little	none				
Cyanosis	<input type="checkbox"/> No	<input type="checkbox"/> Yes, describe:				Neck			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Clubbing	<input type="checkbox"/> No	<input type="checkbox"/> Yes, describe:				Right Shoulder			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
ABDOMINAL EXAMINATION						Left Shoulder						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Abdominal Tenderness	<input type="checkbox"/> No	<input type="checkbox"/> RUQ	<input type="checkbox"/> RLQ	<input type="checkbox"/> LUQ	<input type="checkbox"/> LLQ	Right Biceps			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Hepatomegaly	<input type="checkbox"/> No	<input type="checkbox"/> Yes				Left Biceps			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Splenomegaly	<input type="checkbox"/> No	<input type="checkbox"/> Yes				Right Triceps			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Bowel Sounds	<input type="checkbox"/> Yes	<input type="checkbox"/> No				Left Triceps			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Kidney Tenderness	<input type="checkbox"/> No	<input type="checkbox"/> Right	<input type="checkbox"/> Left				Right Grip			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
NEUROLOGICAL EXAMINATION						Left Grip						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Right Triceps Reflex	<input type="checkbox"/> 2/4	<input type="checkbox"/> 0/4	<input type="checkbox"/> 1/4	<input type="checkbox"/> 3/4	<input type="checkbox"/> 4/4	Back			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Left Triceps Reflex	<input type="checkbox"/> 2/4	<input type="checkbox"/> 0/4	<input type="checkbox"/> 1/4	<input type="checkbox"/> 3/4	<input type="checkbox"/> 4/4	Abdomen			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Right Patellar Reflex	<input type="checkbox"/> 2/4	<input type="checkbox"/> 0/4	<input type="checkbox"/> 1/4	<input type="checkbox"/> 3/4	<input type="checkbox"/> 4/4	Right Hip			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Left Patellar Reflex	<input type="checkbox"/> 2/4	<input type="checkbox"/> 0/4	<input type="checkbox"/> 1/4	<input type="checkbox"/> 3/4	<input type="checkbox"/> 4/4	Left Hip			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Abnormal Gait	<input type="checkbox"/> No	<input type="checkbox"/> Yes, describe:	<input type="checkbox"/> non-ambulatory				Right Quads			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Tremor	<input type="checkbox"/> No	<input type="checkbox"/> Yes, describe:				Left Quads			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Spasticity	<input type="checkbox"/> No	<input type="checkbox"/> Yes, describe:				Right Hamstring			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Notes						Left Hamstring						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						Right Ankle						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
						Left Ankle						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

RECOMMENDATIONS

- Athlete has been cleared for participation in all sports.
- Athlete has been cleared for participation in the following sports only, pending further medical evaluation and clearance:

<input type="checkbox"/> Alpine Skiing	<input type="checkbox"/> Bowling	<input type="checkbox"/> Football (Soccer)	<input type="checkbox"/> Sailing	<input type="checkbox"/> Team Handball
<input type="checkbox"/> Aquatics	<input type="checkbox"/> Cross Country Ski	<input type="checkbox"/> Golf	<input type="checkbox"/> Snowboarding	<input type="checkbox"/> Tennis
<input type="checkbox"/> Athletics	<input type="checkbox"/> Cycling	<input type="checkbox"/> Gymnastics	<input type="checkbox"/> Snowshoeing	<input type="checkbox"/> Volleyball
<input type="checkbox"/> Badminton	<input type="checkbox"/> Equestrian	<input type="checkbox"/> Judo	<input type="checkbox"/> Softball	
<input type="checkbox"/> Basketball	<input type="checkbox"/> Figure Skating	<input type="checkbox"/> Power Lifting	<input type="checkbox"/> Speed Skating	
<input type="checkbox"/> Bocce	<input type="checkbox"/> Floor Hockey	<input type="checkbox"/> Rollar Skating	<input type="checkbox"/> Table Tennis	
- Athlete is restricted from participation in all sports pending further medical evaluation and clearance.

SCREENER SIGNATURE AND DATE

Screener's Signature	Screener's Name	Date
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Referrals Based on Health History

- High-risk medication for Long-QT syndrome. EKG and further medical evaluation is strongly advised
- Possible at-risk medication for Long-QT syndrome. EKG and further medical evaluation is advised.
- Possible at-risk medication for osteoporosis. Bone density testing and medical evaluation is advised.
- Possible at-risk medication for sun sensitivity. Sun protection and further medical evaluation is advised.
- Possible at-risk medication for weight gain, if overweight, further medical evaluation is advised.
- Possible at-risk medication for constipation, further medical evaluation is advised.
- No medical cause of intellectual disability is noted, further medical evaluation is advised.
- Seizure activity within the past 12 months, partial restriction (see below) pending further medical evaluation and clearance.

Referrals Based on Vital Measures

- BMI indicates obesity, nutritional counseling is strongly advised.
- BMI indicates overweight, nutritional counseling is advised.
- BMI indicates underweight, nutritional counseling is advised.
- Blood Pressure is greater than 160/100, participation restricted pending further medical evaluation.
- Blood Pressure is greater than 140/90, further medical attention is advised.
- Blood Pressure is less than 90/50, participation restricted pending further medical evaluation.
- Blood Pressure difference between right and left is greater than 20 mm/hg, further medical attention is strongly advised.
- Pulse is greater than 100 beats per minute, further medical evaluation is advised.
- Pulse is less than 60 beats per minute, further medical evaluation is advised.
- Pulse is irregular, participation restricted pending further medical evaluation.
- Oxygen Saturation is less than 90%, further medical evaluation is advised.
- T- score is less than -1, indicating low bone density, further medical evaluation is advised, nutritional counseling is advised.
- Oral temperature greater than 37.5C (99F), participation restricted pending further medical evaluation.
- Screening indicates possible vision deficit, further vision evaluation is advised (or Opening Eyes)
- Screening indicates possible hearing deficit, further hearing evaluation is advised (or Healthy Hearing)

Additional Referrals

- Dental evaluation is suggested (or Special Smiles)
- Podiatric evaluation is suggested (or Fit Feet)
- Nutrition/lifestyle evaluation is suggested (or Health Promotion)
- Physical Therapy evaluation is suggested (or FUN Fitness)
- Medical attention is needed for the following:

Medical Clearance

- Athlete has been cleared for participation in all sports.
- Athlete has been cleared for participation in the following sports only, pending further medical evaluation and clearance:
 - Alpine Skiing Bowling Football (Soccer) Sailing Team Handball
 - Aquatics Cross County Ski Golf Snowboarding Tennis
 - Athletics Cycling Gymnastics Snowshoeing Volleyball
 - Badminton Equestrian Judo Softball
 - Basketball Figure Skating Power Lifting Speed Skating
 - Bocce Floor Hockey Roller Skating Table Tennis
- Athlete is restricted from participation in all sports pending further medical evaluation and clearance.

Additional Notes




Special Olympics

Healthy Athletes
MedFest

APPENDIX D: Healthy Athletes Multidisciplinary Card

At multidisciplinary Healthy Athlete events, a multidisciplinary card should be completed at each discipline as a way to both:

- Ensure that the athletes have completed each discipline; and
- Determine which MedFest screenings, if any, can be eliminated.

 Special Olympics Healthy Athletes MedFest	<input type="checkbox"/> Med Check	<input type="checkbox"/> Healthy Hearing
	<input type="checkbox"/> Vitals	<input type="checkbox"/> FUN Fitness
	<input type="checkbox"/> MedFest	<input type="checkbox"/> Fit Feet
	<input type="checkbox"/> Special Smiles	<input type="checkbox"/> Health Promotion
	<input type="checkbox"/> Opening Eyes	<input type="checkbox"/> Check-Out
		<input type="checkbox"/> Lunch

APPENDIX E: Healthy Athletes

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

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

- 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 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 Olympics Special Smiles® (1992)

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
- Oral health education
- Individually fitted sports mouth guards, if needed
- Personal prevention products
- Information for follow-up care by community-based dentists

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 the 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.





Special Olympics FUNfitness (1999)

FUNfitness, developed by the American Physical Therapy Association, provides fitness screening and education services. 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; functional strength of the abdominal, upper extremity, grip and lower extremity muscles; static and dynamic balance; and aerobic fitness are assessed and used as the basis for one-on-one education and onsite 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.

Special Olympics Healthy Hearing (2000)

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 US—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.

Special Olympics Health Promotion (2001)

Special Olympics launched new efforts to improve the general health and fitness of its athletes. Health Promotion focuses on healthy lifestyles and the facilitation of healthy choices. 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. The nutrition component includes athlete education 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.

Special Olympics Fit Feet (2003)

Fit Feet was 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 and they are not always fitted with the best shoes and socks for their particular sport. Fit Feet evaluates foot and ankle deformities. Athletes receive foot and ankle screening for deformities and are checked for proper shoes and socks, and they receive education in proper footwear and care of the feet and toes.

Healthy Athletes Software (HAS) System

In support of the Healthy Athletes initiative, Health One Global Ltd. created a Web-based software application called Healthy Athletes Software (HAS) to enable the electronic capture of screening data across all Healthy Athletes disciplines worldwide. HAS was officially launched at the 2003 Special Olympics World Summer Games in Dublin, Ireland, and has been used at all events since then. HAS is rapidly becoming the world's largest and highest quality health database reporting 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 advocacy communities. Special Olympics issues policy briefs and other reports based on captured data.

As in clinical practice, all athlete data are confidential. Access to the HAS system is password protected, and is further limited by the individual's role in Healthy Athletes. Each athlete is assigned a unique identifier that can be coordinated within and across all disciplines. This identifier allows confidential cataloguing of data from each screening in which an athlete participates.

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, then entered into the HAS database later. The ideal situation is to have Internet access and personal computers available at the screening event for immediate data entry from paper forms.

The HAS data collected during the 2003, 2005 and 2007 World Games were sorted by demographic and delegation factors in real time. Reports were generated for each team and each country. 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 increase available information for the global research and policy-making communities.





Special Olympics

Healthy Athletes
MedFest

APPENDIX F: CONTACT INFORMATION

MedFest Team:

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APPENDIX G: MEDFEST TRAINING COMPETENCY TESTS ADMINISTRATIVE TEST QUESTIONS

1. MedFests are mostly organized by:

- A. Local Special Olympics staff
- B. The local MedFest Clinical Director
- C. The local school district
- D. A and B only
- E. A and C only
- F. A, B, and C are correct

2. The average MedFest physical exam:

- A. Takes about 10 minutes to perform
- B. Includes gynecological or rectal exams
- C. Requires blood pressures to be taken in both arms
- D. A and B only
- E. A and C only
- F. B and C only

3. Concerning MedFest volunteers:

- A. The number of volunteers depends on the number of athletes expected at the event
- B. The volunteers must all be licensed clinical professionals
- C. The volunteers should receive an orientation prior to the event
- D. A and B only
- E. A and C only
- F. A, B and C are correct

4. Concerning the physical layout of a MedFest event:

- A. The square footage needed depends on the number of athletes expected at the event
- B. The area should be accessible to people using wheelchairs
- C. A contingency room should be available for quiet examination of athletes, if needed
- D. A and B only
- E. A and C only
- F. A, B, and C are correct

5. Concerning athlete pre-registration:

- A. All athletes should be pre-registered before a MedFest event
- B. Athletes can always complete their registration on site, if they have not pre-registered
- C. Pre-registration should be performed by the MedFest Clinical Director
- D. A and B only
- E. A and C only
- F. A, B, and C are correct



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6. Concerning malpractice insurance:

- A. Examining clinicians are required to have their own malpractice insurance
- B. Volunteers and their insurance status do not need to be reported to Special Olympics
- C. American Specialty can cover volunteers under all circumstances
- D. A and B only
- E. A and C only
- F. None of the above

7. Concerning the medication check station:

- A. The presence of any medication on the list is a contradiction to sports participation
- B. The presence of a medication having a high risk for long-QT is a contraindication
- C. The presence of a medication having a risk for weight gain is a contraindication
- D. A and B only
- E. A and C only
- F. A, B, and C are correct

8. Concerning multidisciplinary MedFests:

- A. Athletes should complete all disciplines before final clearance is given
- B. Athletes should complete other disciplines prior to medical examination
- C. Some parts of the medical exam may be eliminated if they are done by other disciplines
- D. A and B only
- E. A and C only
- F. B and C only

9. Concerning the medical history:

- A. All athletes with Down syndrome must complete the atlantoaxial instability section
- B. The presence of a medical condition with a high rate of cardiac defects is always a contraindication
- C. Athletes always provide accurate verbal medical histories
- D. A and B only
- E. B and C only
- F. A, B, and C are correct

10. Concerning additional testing:

- A. Protocols may be added but not taken away
- B. Invasive testing should be performed at MedFest events
- C. The athlete's medical insurance should be billed for tests added to MedFest protocols
- D. A and B only
- E. A and C only
- F. A, B, and C are correct

CLINICAL TEST QUESTIONS

1. *Neurodevelopmental Disorders:*

- A. Are frequently associated with intellectual disabilities
- B. Are frequently associated with neuromotor impairment
- C. Are frequently associated with behavioral disturbances such as autism
- D. Are frequently associated with sensory impairment
- E. Are frequently associated with seizure disorders
- F. All of the above

2. *Sudden Cardiac Death:*

- A. Is probably less likely in athletes with intellectual disabilities
- B. Is increased in the presence of cardiac defects
- C. Can occur because of medication induced long-QT syndrome
- D. A and B only
- E. A and C only
- F. B and C only

3. *Low Bone Density:*

- A. Is associated with a higher risk of bone fracture
- B. Occurs in 55% of SO athletes
- C. Can be caused as a side effect of certain medications
- D. A and B only
- E. A and C only
- F. A, B and C are correct

4. *Seizure Disorders:*

- A. Occur in 15 to 30% of people with intellectual disabilities
- B. Should be well controlled for a month before an athlete is cleared for water sports
- C. May be fatal to an athlete
- D. A and B only
- E. A and C only
- F. B and C only

5. *Atlantoaxial Instability:*

- A. Is asymptomatic in 13 to 14% of people with Down syndrome
- B. Is symptomatic in 1 to 2% of people with Down syndrome
- C. Always prohibits athletes from participating in Special Olympics
- D. Is always correlated with high rates of spinal cord injury
- E. A and B only
- F. A, B, C and D are correct



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6. *Metabolic Disorders:*

- A. Can be neurodevelopmental disorders
- B. Can lead to heat stroke
- C. Can always be treated with proper hydration
- D. A and B only
- E. A and C only
- F. B and C only

7. *Acute Infection:*

- A. Should be resolved before an athlete is cleared for sports activity
- B. Is more likely to be undiagnosed in people with intellectual disabilities
- C. Can be treated by the examining physician at a MedFest, with proper follow-up
- D. A and B only
- E. A and C only
- F. A, B, and C are correct

8. *Most athletes at MedFest:*

- A. Will be cleared for sports participation and will not need further medical referrals
- B. Will be cleared for some sports but not all sports
- C. Will be cleared for all sports but will need further evaluation
- D. A and B only
- E. A and C only
- F. B and C only

9. *Heart Murmurs:*

- A. Are always a contraindication to sports participation
- B. Should be thoroughly evaluated prior to sports clearance
- C. Are more likely to be detected in a quiet environment
- D. A and B only
- E. B and C only
- F. A, B, and C are correct

10. *Musculoskeletal and Neurological Abnormalities:*

- A. Are frequently found on physical exam on athletes with intellectual disabilities
- B. Are always a contraindication to sports participation
- C. May require further evaluation if new or progressive in nature
- D. A and B only
- E. A and C only
- F. A, B, and C are correct

HEALTHY ATHLETES TEST QUESTIONS

1. Match the Healthy Athletes discipline with its primary function:

- | | |
|------------------|----------------------------------|
| Opening Eyes | A. Podiatric evaluation |
| Healthy Hearing | B. Dental evaluation |
| Special Smiles | C. Audiological evaluation |
| FUNFitness | D. Disease prevention evaluation |
| Health Promotion | E. Optometric evaluation |
| MedFest | F. Physical Therapy evaluation |
| Fit Feet | G. Medical evaluation |

2. Concerning MedFest funding:

- A. Funding comes primarily from a grant from the US government
- B. No other sources of funding are allowed
- C. Grants must be submitted to Special Olympics headquarters in a timely fashion
- D. A and B only
- E. A and C only
- F. A, B, and C are correct

3. Concerning the role of the MedFest Clinical Director:

- A. Clinical Directors should be prepared to commit to volunteering for at least 3 years
- B. Clinical Directors should help recruit volunteers for the MedFest event
- C. Clinical Directors should help train volunteers prior to the MedFest event
- D. A and B only
- E. A and C only
- F. A, B, and C are correct

4. Concerning the Healthy Athletes venue at Special Olympics games:

- A. Every Healthy Athletes discipline is always represented at the venue
- B. MedFest may be part of the Healthy Athletes venue
- C. New athletes cleared medically at a venue may participate in sports events later that day
- D. A and B only
- E. A and C only
- F. A, B, and C are correct

5. The Healthy Athletes program is:

- A. Always looking for ways to improve
- B. Always free for Special Olympics athletes
- C. Always fun for Special Olympics athletes
- D. A and B only
- E. A and C only
- F. A, B, and C are correct



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ANSWERS

Administrative Test Questions:

1. A
2. E
3. E
4. F
5. A
6. E
7. B
8. C
9. A
10. A

Clinical Test Questions:

1. F
2. F
3. E
4. E
5. E
6. D
7. F
8. A
9. E
10. E

Healthy Athletes Test Questions:

1. Opening Eyes E
 Healthy Hearing C
 Special Smiles B
 FUNFitness F
 Health Promotion D
 MedFest G
 Fit Feet A
2. E
3. F
4. B
5. D



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