SPECIAL OLYMPICS
Healthy Athletes
An Overview
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Global Clinical Advisor
Special Olympics International

Special Olympics
Healthy Athletes
Special Olympics

MISSION STATEMENT

• Year round sports training and athletic competition
• Olympic-type sports

Physical fitness  Joy  Courage

Sharing Gifts, Skills Friendship
SPECIAL OLYMPICS

Acceptance

Not Pity
“Offering sport in its purest form, Special Olympics has been a catalyst to help bring people with intellectual disabilities out of the shadows of neglect and into the mainstream of life.”
**Intellectual Disability**

**Definition** - any condition that impairs development of brain, before birth, during birth or in childhood.

Several hundred causes. One third causality unknown.

**Three major causes:**
- Down Syndrome
- Fetal Alcohol Syndrome
- Fragile X Syndrome
1-3% of the World Population, or approximately 170 million people.

1 in 8 people have a direct connection with someone with intellectual disabilities.
Prevalence of Intellectual Disability

- 10 x more prevalent than cerebral palsy.
- 25 x more prevalent than total blindness.
- 50 x more prevalent than total deafness.
The GOAL of Special Olympics

- Promote global athlete leadership.
- Dedicate the movement to dignity and empowerment.
- Replace stigma and rejection with positive emphasis on potential, ability, and acceptance.
Founded in 1968, Special Olympics (SO) has provided sports training and competition to individuals with intellectual disabilities (ID) for more than 30 years.

- An international organization dedicated to empowering individuals with ID to be productive and respected members of society.
- Has more than 200 programs in over 160 countries
- 750,000 volunteers and more than 140,000 coaches around the world
- Goal of serving 3 million athletes globally by 2010
- International hosts for World Winter and Summer Games – Shanghai, China (2007), Boise, Idaho (2009), Greece (2011)
The first Special Olympics World Games were held in 1968 at Chicago's Soldier Field

- Mrs. Shriver opened the first Special Olympics Games with these words:
  - "In ancient Rome, the gladiators went into the arena with these words on their lips:
    - 'Let me win, but if I cannot win, let me be brave in the attempt.'"
**Special Olympics Growth**

- Currently 2.5 million athletes participate
- Anticipated 3 million participants by 2010
- Most of growth outside of the United States
Special Olympics can change the world by helping to create a global family where attitudes of fear, prejudice, embarrassment and indifference have given way to welcome, acceptance and understanding. We are on the verge of an extraordinary opportunity to promote the celebration of differences and transform the perceptions toward individuals with intellectual disabilities – one attitude at a time.
Special Olympics Selected as the “Most Liked Charity”

THE CHRONICLE OF PHILANTHROPY

The Charities Americans Like Most—and Least

by VINC E STEELE

Many organizations that drew significant support also had strong appeal. For example, 34 percent supported the N.R.A. and 33 percent trusted the Billy Graham Evangelistic Association, the two groups that had the most influence. Neither group responded to the Chronicle’s inquiries regarding the survey data.

An organization’s longevity had a big influence on whether it was listed. The United Way organization was not only the most influential group but also first among those for Americans and most influential. The American Civil Liberties Union and the National Rifle Association were seen as the least influential.

The poll results were based on responses from 1,729 people and have a sampling error of about 2 percentage points. Responses were asked to track 16 organizations and assess several scales designed to show numerical and financial contributions.

Names of Men and Women

The survey found that men and women had similar views about which charities they felt the most. The American Red Cross and Ronald McDonald House were among the most popular charities for both men and women, but for men preference was different for each man. Men favored the Salvation Army, while women preferred Meals on Wheels and Animal Welfare.

Race and Gender also influenced preferences. The top two organizations among blacks were the United Negro College Fund and the N.A.A.C.P., while Hispanics ranked the American Red Cross as No. 1 and whites chose the Ronald McDonald House. Women Against Drunk Driving, however, was among the top three for both blacks, Hispanics, and whites.

Religious and Political Tensions

Religious and religious matters could also be an issue in how people viewed such important charities as St. Vincent de Paul, the Salvation Army, and St. Joseph Orphanage. Some groups that continued to grow...
What type of Games?
  – Summer World Games
  – Winter World Games
  – National Games
  – State Games
  – Single Sport Competition
  – Local Games
Powerlifting
Floor Hockey
Track & Field
Language Guidelines

• Appropriate terminology:
  – A person has *Intellectual Disabilities*, rather than is suffering from afflicted with, or a victim of Intellectual Disabilities.
  – Individuals, persons or people *with* Intellectual Disabilities.
Language Guidelines

– Distinguish between adults and children with Intellectual Disabilities. Use adults or children, or older or younger athletes.

– *Down syndrome* has replaced “Down’s Syndrome” and mongoloid.

– A person is *physically challenged* or *disabled* rather than crippled.
Language Guidelines

- Terminology to avoid:
  - Do not use the label *kids* when referring to Special Olympic athletes.
  - Use the work *special* with extreme care when talking about persons with Intellectual Disabilities.
“We are in the business of sport, but we are also in the business of changing lives.”

Timothy Shriver
President and C.E.O.
Special Olympics, Inc.
Special Olympics
Healthy Athletes Program
We are the Healthy Athletes Team
You work with your program. Standardized program taught globally. Administered locally.
Flame of Hope

We carry the ‘Flame of Hope’ for improved healthcare
Only TWO things will Hurt!

Feet

Cheeks
Special Olympics Organization

- Special Olympics Incorporated
  - Programs
    - Special Olympics University
      - Healthy Athletes
        - FUNfitness
        - Opening Eyes
        - Fit Feet
    - Special Smiles
    - Healthy Hearing
    - Health Promotion
More Than Just Sports

Healthy Athletes:

A program designed to help Special Olympics athletes improve their health and fitness. This leads to an enhanced sports experience and improved well being.
Athletes receive a variety of health services through clinics conducted in welcoming environments at Special Olympics competitions, while health care professionals learn about the health needs of Special Olympics athletes and gain confidence and satisfaction in volunteering their skills to an underserved population.
Healthy Athletes

- Advocate for improved health care policies and programs for persons with intellectual disabilities.
Why Healthy Athletes is needed

• Special Olympics athletes have a significant and diverse range of health challenges.
• Special Olympics athletes have a significant unmet need for care.
Why Healthy Athletes is needed

- Too much of the care is crisis oriented.
- There is under investment by society, health systems, health professions in care for people with intellectual disabilities.
Collect Data

• Collect and analyze data on the health status and health needs of those with intellectual disabilities.
Provide Education

- Educate health care professionals and students on the needs of the ID population.
- 4 hour and 2 hour DVDs
- Improve skills
- Increase Comfort Level
Physical Health: Mortality

- Life expectancy differs between individuals with ID and individuals in the general population.
Utilization of Health Care

Compared to the general population, individuals with ID:

- Have 4 times more preventable mortality.
- Receive less care - 2.7 visits yearly compared to 3 for men, 5 for women and 6 for children or elderly.
Utilization of Health Care

- Receive less care from specialists - only 30% - 47% see specialists when 92% have medical needs requiring specialty care.
Healthy Athletes

• Special Olympics Healthy Athletes was formally established as an SO program in 1997 to improve access, availability and referral for health care for Special Olympics athletes.
Goals of Special Olympics Healthy Athletes

- Delivery of healthcare services to Special Olympics athletes.
- Referral for professional service as indicated.
- Recruitment and training of health professionals in working with persons with intellectual disabilities.
Goals of Special Olympics Healthy Athletes

- Documentation of the health status and health needs of Special Olympics athletes.
- Advancement of knowledge about effective health care delivery to persons with intellectual disabilities.
- Advocacy for improved public policy in support of health needs of persons with intellectual disabilities.
Why Healthy Athletes Works

- Special Olympics, Inc. leadership
- Programs
- Standards for programs and data collection
- Competent clinical directors (YOU!!)
- Volunteers, volunteers, volunteers!!!
- Contributions (in-kind and sponsors)
- Creativity, creativity, creativity!!!
- Persistence, persistence, persistence!!!
- Smile, smile, smile!!!
Chronology of Healthy Athletes Program

200 Programs in 160 countries around the world
Healthy Athlete Goals

• It is the goal of Healthy Athletes to have ongoing programs in every state and country in which there is a Special Olympics program, thus creating a legacy of Special Olympics Healthy Athletes - a program that improves the access health care for people with intellectual disabilities.
Special Olympics Fit Feet

- Provides screenings of the feet and ankles
- Assesses the correctness of footwear
- Provides community referral as needed
- Educates athletes, coaches and families about proper shoes and socks
Screenings Include

- Biomechanics evaluation
- General foot exam (skin, nail, and bone analysis)
- Education on general and specific foot care
- Education on shoes, socks, orthotics, and insoles
“70% of the athletes have to be followed by a podiatrist and most of them should have functional foot orthoses”. Marc Bourgeois, Ph.D,Pod
Foot Screening Results – By Age

- **Ingrown Toenails**
- **Corns/Callouses**
- **Athlete's Foot**
- **Fungus**

Ages:
- 8-17
- 18-34
- 35-50
- 51-70

**Fit Feet**
Healthy Athletes

Special Olympics isn’t nice – it’s **important!!**
For the athletes, for you and for the world.

*Enjoy the experience!*
it's all about attitude...
Never Doubt That A Small Group Of Thoughtful, Committed People Can Change the World. Indeed, It Is The Only Thing That Ever Has.

~Margaret Mead
One of these hands is yours!
Foot and Ankle Pathologies in Special Olympics Athletes

Karen A Langone, DPM
FACFAOM FAAPSM
President-Elect, AAPSM
Lead Clinical Director
New York State
Fit Feet
Special Olympics International
• Overview of the conditions associated with the intellectually disabled
• Overview of common lower extremity pathologies
Property of Special Olympics
Goals and Objectives

- Overview of Special Olympics and “FIT FEET” Program
- Review podiatric conditions seen in Special Olympians
- Preliminary data analysis on screened participants
- Podiatric needs/role for the future
  - research
  - involvement
Special Olympics

- History
- Mission
- Organization
Special Olympians

- Who can participate?
- Intellectually disabled individuals
Healthy Athletes Program

developed because persons with intellectual and developmental disabilities have a 40% greater risk of preventable secondary healthy conditions, such as obesity, poor fitness, nutritional deficits, untreated or poorly treated vision, dental, hearing and podiatric problems. These disparities in healthcare result from lack of access and ability to pay for services.
Healthy Athlete Components

- **Fit Feet** (Podiatric Medicine)
- **Health Promotion** (nutrition, lifestyle & well-being)
- **FUNfitness** (PT)
- **Healthy Hearing** (Audiology)
- **Opening Eyes** (Optometry)
- **Special Smiles** (Dental)
- **Medfest** (pre-competition physicals)
## Healthy Athletes
### World Games 2007

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Number screened</th>
<th>% of participants registered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthy Hearing</td>
<td>3,156</td>
<td>43%</td>
</tr>
<tr>
<td>Health Promotion</td>
<td>2,609</td>
<td>36%</td>
</tr>
<tr>
<td>Opening Eyes</td>
<td>3,571</td>
<td>49%</td>
</tr>
<tr>
<td>Special Smiles</td>
<td>3,805</td>
<td>52%</td>
</tr>
<tr>
<td>FUNFitness</td>
<td>2,576</td>
<td>35%</td>
</tr>
<tr>
<td><strong>Fit Feet</strong></td>
<td><strong>2,817</strong></td>
<td><strong>39%</strong></td>
</tr>
</tbody>
</table>
Fit Feet

Special Olympics collaboration with American Academy of Podiatric Sports Medicine (AAPSM)
Federation of International Podiatrists (FIP)
• General Podiatric Screening
Podiatrist Involvement

- Day of screening volunteer: participates day of event, examining and screening athletes for foot and ankle pathology, provides appropriate referrals and orthotic services
- Clinical Director: coordinates all pre set up, screens athletes, ensures proper data collection, oversees student volunteers. Attends one day training session, recruits and trains additional volunteers
- Lead Clinical Director: oversees all games within his/her state to ensure podiatric coverage, coordinates set up, screens athletes, arranges + oversees student and resident volunteers
- Global Clinical Advisor: World Games, spring and fall
Why Participate?

• 50% of athletes screened at Special Olympics World Games had at least one foot pathology
• Many athletes are in inappropriate or ill fitting shoe gear
• Only 1 in 50 medical providers has had formal training or practical experience in examining or caring for people with intellectual disabilities
• Give back
Fit Feet Evaluation

Biomechanical
Structural
Gait Analysis
Dermatological Assessment
Shoe Gear Evaluation
Education and Checkout
Screening Process

3 Step Evaluation:
- structural and dermatological
- biomechanical eval
- gait analysis
?orthotics
STRUCTURAL EVALUATION
GAIT ANALYSIS
DERMATOLOGICAL ASSESSMENT
SHOE GEAR EVALUATION
EDUCATION AND CHECKOUT
EDUCATION AND CHECK OUT

Giveaways

• Cfo etc
Pathologies in the Special Olympic Athlete

- INTELLECTUAL DISABILITY
  - intellectual functioning level (IQ) is below 70-75;

- Genetic/congenital
  - Down Syndrome
  - Fragile X
  - Prader-Willi

- Malnutrition
- Brain injury
  - trauma
  - cerebral palsy

- Environmental
  - Fetal alcohol syndrome
% of Special Olympians?

- Diamond, et al; classic description
- These conditions are often overlooked due to more pressing medical issues
Down Syndrome-Lower Extremity Impact

- Short lower extremities/short in stature
- Hypotonia at birth
- Hyper flexibility
- Metatarsus adductus
- Patellar instability
- Genu valgum
- Hypermobile pes valgus/pes planus
- Metatarsus primus varus
- Hallux abductovalgus/varus
- Clinodactyly
- Syndactyly
- Brachymetatarsia
• With Hallux Valgus or Hallux Varus
• *4 studies; 40-90%
• Related shoe gear fitting problems are significant
• Highly associated with atavistic cuneiform
• Results in large space between hallux and 2\textsuperscript{nd} digit \textit{Goldstein’s Sign}
PES PLANUS

- Related to associated ligamentous laxity seen with Down Syndrome
- Structural and mechanical components
- Associated with abducted angle of gait
Ligamentous Laxity

- Upwards to 80% of Down Syndrome individuals vs. 20% control
GENU VALGUM

- 22%
Patellar Instability

• Also related to ligamentous laxity
METATARSUS ADDUCTUS
Clinodactyly

- permanent lateral or medial deviation or deflection of one or more fingers

Dorlands
SYNDACTYLY
Gait Abnormalities

- Gait Abnormalities

- Longer stance time
- Reduced hip extension
- Early hip extension near end of swing—an attempt to land flat footed vs normal heel contact
- Increased ankle joint plantarflexion
- Increased hip abduction during gait
- Increased double support time
- Shorter step lengths
- Increased hip/knee flexion
- Excessive pronation


Prader-Willi Syndrome

- lower extremity impact
- Genetic
- Hyperphagia
- Obesity
- Hypotonia
- Mental retardation
- Short stature
- Small hands and feet (acromicria)
FRAGILE X SYNDROME

- lower extremity impact
- Very loose connective tissue
- Hyperextensible joints
- Excessive pronation
- Pes Planus
Cerebral palsy

- lower extremity impact
- Spasticity-UMN loss
- HIP-adductors, flexors, internal rotators
- KNEE-flexors
- ANKLE-plantar flexors
- contractures
Cerebral palsy

- lower extremity impact-gait
- Clumsy, awkward
- Scissors gait
- Toe walking
- Typical arm swing to counter the hip adduction
Preliminary Data Analysis of “FIT FEET” screenings

- Foot types/gait
- Pathology
- Shoe gear sizing issues
- Need for referral
Pes Planus

**CAVANAGH**
- **25% USA white**
- 4 studies* on Down Syndrome;
- 52-100% incidence
- 2,600 fit feet exams demonstrated 37-58% incidence
- *Diamond, Mahan, Concolino, and Prasher
PES CAVUS

- 3 studies* on Down Syndrome;
- 4% incidence

- 2,600 fit feet exams demonstrated 9% incidence

- *Diamond, Mahan, and Prasher
OVERPRONATION IN GAIT

• 2,600 fit feet exams demonstrated 55% incidence
HALLUX ABDUCTO VALGUS

- 3 studies* (#200) on Down Syndrome
- 26-54% incidence
- 2,600 fit feet exams demonstrated 7-12% incidence

*Concolino, Scheffler NM and Mahan KT.
• 2,600 fit feet exams demonstrated 33% incidence
BRACHYMETATARSIA

- 2 studies* on Down Syndrome
- 10% incidence
- 2,600 fit feet exams demonstrated 5% incidence
- * Mahan and Scheffler
Tinea Pedis

- Mahan* study on Down Syndrome
- 50% incidence
- 2,600 fit feet exams demonstrated 14% incidence

*Mahal KT
• Mahan* study on Down Syndrome
• 4% incidence

• 2,600 fit feet exams demonstrated 3% incidence

• *Mahan KT
HYPERHYDROSIS

- Prasher* study on Down Syndrome
- 8% incidence
- 2,600 fit feet exams demonstrated 7% incidence
- *Prasher, VP
2 studies* on Down Syndrome
44% incidence
2,600 fit feet exams demonstrated 9% incidence

*Mahan KT and Prasher, VP
SHOE GEAR INCOMPATIBILITY

- SHOES TOO BIG 40% (10%)
- SHOES TOO SMALL 16% (5%)
SHOE GEAR INCOMPATIBILITY

• Issue of shoe size mismatch and foot morphology
Need for Referral

- 2,600 fit feet exams demonstrated 34% of those screened needed follow-up
Conclusion - Limitations

• Primary flaw: historical studies look at *Down Syndrome only*

• 50% of the historical study subjects were institutionalized on assessment

• Fit Feet exams include *all* potential intellectual disabilities

• Fit Feet population are *ATHLETES!*
Conclusions - benefits

Screenings are invaluable for identifying problems early and reducing morbidity.

*FIT FEET* data analysis will provide screeners with greater direction of pathologies to be evaluated.

Data will demonstrate the needs of the Special Olympics athletes to the Podiatric Community.
• PODIATRIC NEEDS/ROLE
• future*Research*“FIT FEET” Clinical Directors* General Volunteers* Reduced or Donated Services to Athletes in Ne
- **Work/Requirements**: Podiatrists/chiropodist or other licensed and trained professionals, willing to accept the responsibility of coordinating events for up to 3 or more years—a minimum of 1 event per year proven interest of service. Member of or active in local/state/national professional organization. Geographical accessibility to Program activities demonstrated leadership abilities. Willing to assist with garnering corporate sponsorship, networking, and soliciting. Willing to tap into clinical network to solicit clinical volunteers for screening events. Train local volunteers to work within the guidelines of the local program to coordinate events yearly. Ensure proper data collection and quality assurance. Develop network for follow-up referral for athlete.
REFERENCES


Welcome to The American Academy of Podiatric Sports Medicine

The American Academy of Podiatric Sports Medicine serves to advance the understanding, prevention and management of lower extremity sports and fitness injuries. We believe that providing such knowledge to the profession and the public will optimize enjoyment and safe participation in sports and fitness activities. We will accomplish this mission through professional education, scientific research, public awareness and membership support.

We welcome you to our website and hope you find it useful. If you are in the podiatric sports medicine field and are interested in AAPSM Membership, please click here.