Athletes in the Special Olympics

John Hatzenbuehler MD FACSM
ACSM Team Physician Course 2015
Objectives

1. Describe the powerful benefits SO can have on people with intellectual disabilities
2. List the most common medical issues encountered in SO athletes
video
History of the Special Olympics

- 1960’s – Eunice Kennedy Shriver started camp in her backyard for kids with intellectual Disabilities

- 1968 – First summer Special Olympics games
  - ~1000 athletes

- 1977 – First winter Special Olympics games

- May 2014 – 4.4 mil athletes globally (200mil with ID)
  - 80,000 events held annually
Mission of Special Olympics

“To provide year-round sports training and athletic competition in a variety of Olympic-type sports for children and adults with intellectual disabilities, given 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.”
Purpose of SO

- 1. Promote a healthy competitive spirit
- 2. Develop leadership and self esteem
- 3. Facilitate physiologic health through improvement in the strength and endurance of the neuromuscular and CV systems
- 4. Nurture positive mental attitudes
- 5. Encourage a lifelong habit of physical activity as one good way of improving the QOL
Power of Sports

- Shift focus to what athletes CAN do, not what they can’t
- Instill confidence
- Inspire competition
- Improve health
- Teach athletes determination and to dream
- Become heroes to family and community
Intellectual Disability

- Limitations in cognitive function and other skills including communication and social and self care

- AmerAssoc of Intellectual and Dev Dis criteria
  - 1. IQ below 70-75
  - 2. Sig limitations in >2 adaptive areas
    - Skills needed to live, work, play in the community
  - 3. ID manifests < 18yo
Most Common Causes of ID

- Complications during pregnancy – Fetal alcohol syndrome, intra-uterine infection (rubella)
- Complications during birth – low oxygen state
- Disease/Toxic exposure – intra-cranial infection, heavy metal exposure, head injury, stroke
Health considerations in ID

- Associations with hypokinetic diseases
  - Obesity, diabetes, HTN, CVD
  - Seizure disorders, vision problems, asthma allergies
  - MSK: joint laxity, hypotonia
  - Reduced agility, balance, flexibility, reaction time
  - Tend to have lower peak HR and VO2max*

*improvable
PPE

- No specific guidelines for PPE in athletes with ID
- Do not overlook common issues (diagnostic overshadowing)
- Office based, with longitudinal provider
- Provider should understand disability-specific issues
- Evaluate any assistive or adaptive devices
- Understand the demands of the sport
Sports in SO

SUMMER GAMES
- Track and field
- Soccer
- Basketball
- Equestrian
- Gymnastics
- Judo
- Softball
- Swimming, etc

WINTER GAMES
- Alpine skiing
- X-Country skiing
- Snowboarding
- Snowshoeing
- Floor hockey
- Speed skating
Down Syndrome

- Congenital heart disease 40-45%
  - VSD, MVP, AR
- Hypothyroidism
- Obesity
- Visual acuity issues
- Leukemia
- Asthma
Down Syndrome MSK issues

- Atlantoaxial instability - ~15%
- Hallus valgus/varus
- Pes planus
- Patellar instability
- Scoliosis
Atlantoaxial Instability

- C1-C2 stability is affected
- Either by bony anomalies or lig laxity (or both)
- Narrows AP diameter -> canal stenosis with flexion/extension
- ~2% of DS patients have symptomatic AAI
  - Easy fatigability
  - Neck pain
  - Abnormal gait/incoordination
  - Limited cervical ROM/torticollis
  - Hyperreflexia/UMN lesion signs
  - Spacitcy
AAI Screening

- Cervical Xray – true lateral and flexion/extension films
- Evaluate Atlanto-dens interval (ADI)
- ADI <5mm normal, no further follow up
  - Rescreening controversial. >10yo without symptoms not nec
- ADI >5mm will need MRI to r/o spinal cord injury
- AAP/SO recommendations
  - Encourage screening all patients with DS 3-5 yo
  - At least all SO athletes needs one time screening
Sport Contraindications AAI

- Contact/collision sports
- Gymnastics
- Diving
- Pentathlon
- Butterfly stroke
- High jump
- Heading in soccer
- Diving start in swimming
- Skiing
- Snow Boarding
Healthy Athletes Program

- Worldwide most people with ID receive inadequate or no healthcare
- 1995 SO began to offer free health screenings at games
  - 15% of athletes required urgent medical evaluation
- 1997 Healthy Athletes Program – free screening
  - 39% - obvious unrecognized tooth decay
  - 38% - adults obese
  - 26% - failed hearing test
  - 20% - low bone density
Healthy Athletes Program

- FitFeet (podiatry)
- Opening Eyes (vision)
- Special Smiles (dental)
- FUNFitness (physical therapy/fitness)
- Healthy Hearing (audiology)
- Health Promotion (healthy lifestyle)
- Med/Fest (medical/sports physicals)

- SO largest public health organization for people with ID
Summary

- SO designed to use sports to improve physical and mental wellbeing
- Wide range of sporting opportunities in SO
- PPE should focus on hearing, vision, cardiac, MSK issues
- AAI screening in all DS athletes
- Healthy Athlete Program highlights the worldwide lack of healthcare provided to patients with ID
Thank You