

# Physical Activity for Children with Special Needs



*Gnshinabek*

# Objective

Understanding the importance of physical activity for children with special needs

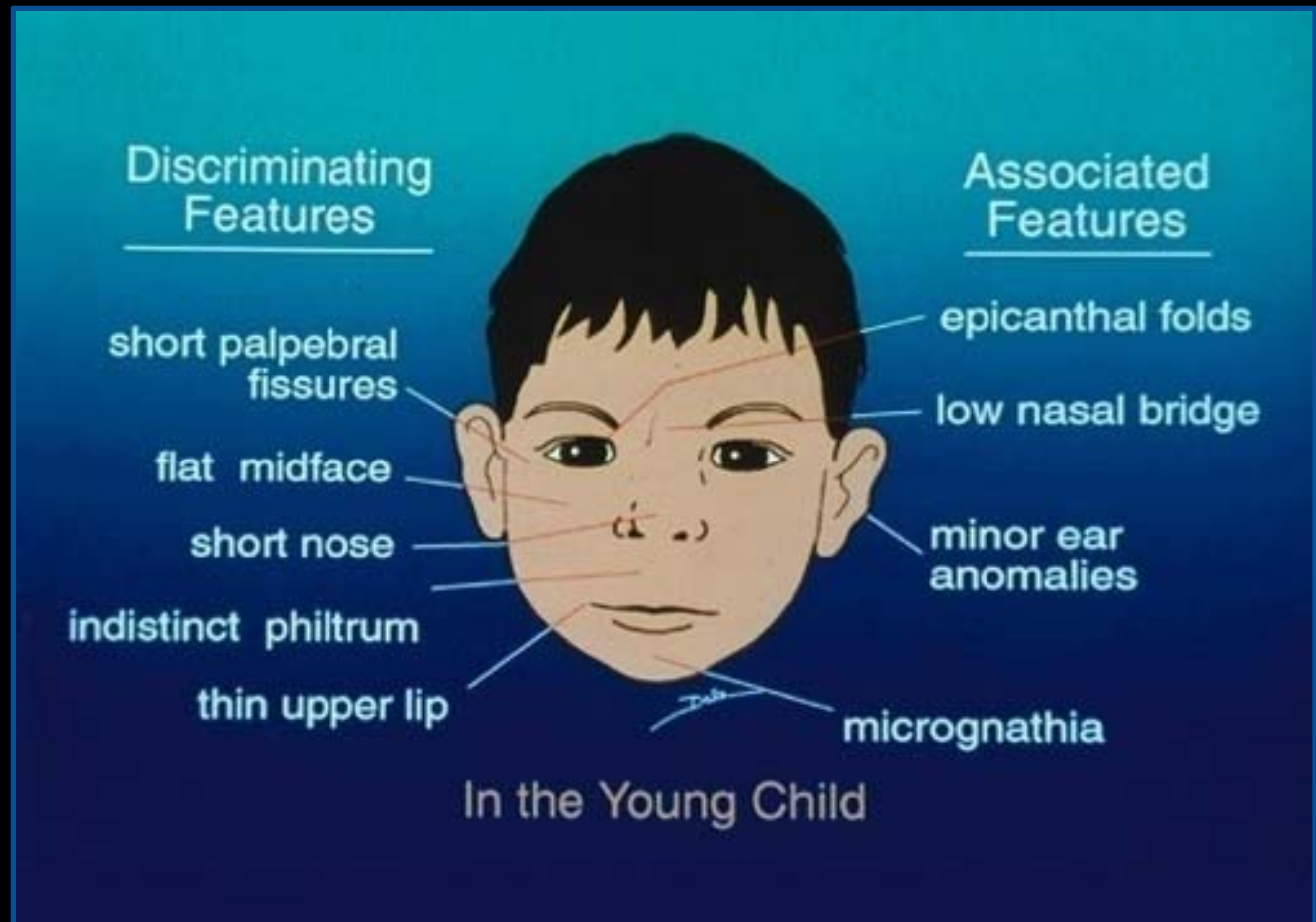


# Key Topics

- What is FASD?
- Common characteristics
- Exercise benefits the FAS brain
- Improving fitness levels
- Thinking differently

# Fetal Alcohol Spectrum Disorder

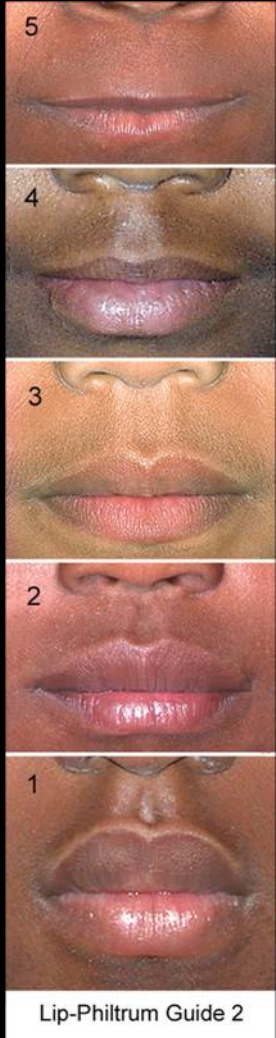
- FAS
- Partial FASD
- ARBD
- ARND



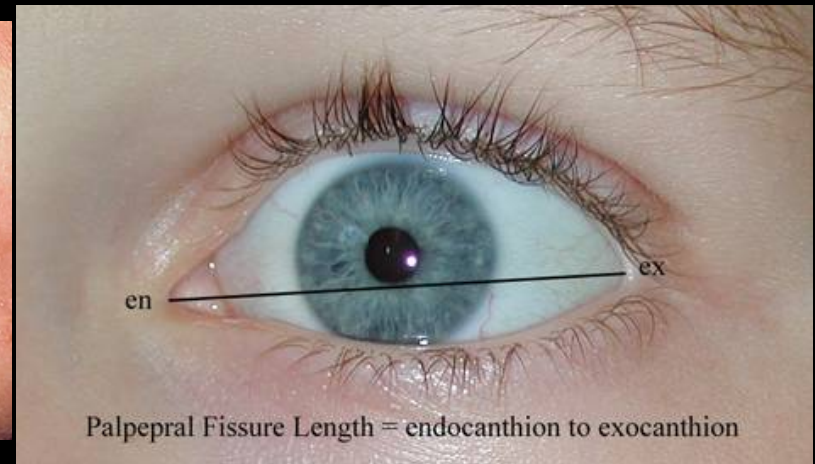
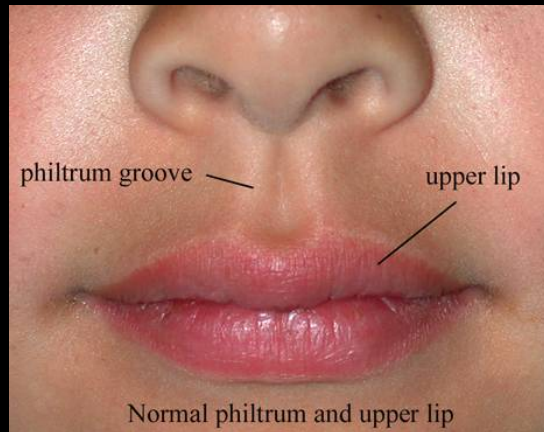
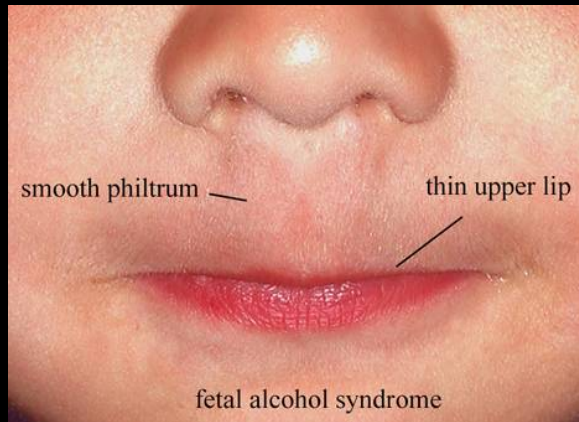
# Fetal Alcohol Syndrome (FAS)

(1) Facial Features (2) Growth Delay (3) Central Nervous System Impairments

Does not need confirmation of maternal alcohol exposure



Lip-Philtrum Guide 2



Picture courtesy of Teresa Kellerman

# **Fetal Alcohol Spectrum Disorder**

## **partial Fetal Alcohol Syndrome (pFAS)**

- (1) Facial Characteristics
- (2) Three CNS impairments
- (3) Confirmed maternal alcohol exposure

## **Alcohol Related Neurodevelopmental Disorder (ARND)**

- (1) Three CNS impairments
- (2) Confirmed maternal alcohol exposure

## **Alcohol-Related Birth Defects (ARBD)**

- heart defects, skeletal abnormalities, renal dysfunction, eye problems, hearing problems etc...



The rate of FASD is 1/100 <sup>(1)</sup>



20 babies are born with FASD in  
Canada every day <sup>(2)</sup>



In some First Nations the rate is 1/5 <sup>(2)</sup>



# Sensory Integration Impairments

## Hypersensitive

- clothing tags scratch
- bright sunlight blinds
  - loud voices startle
  - whistles pierce



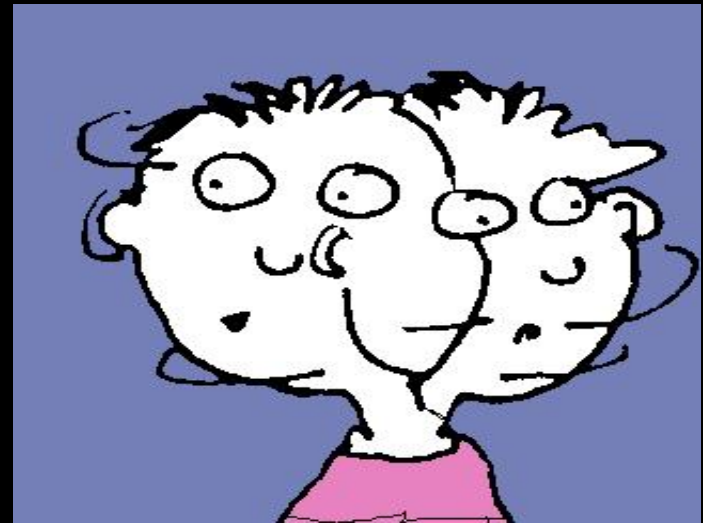
# Sensory Integration Impairments

## Hyposensitive

- Under responsive to sensation movement, sight or sound
- High pain thresholds, don't recognize an injury
- Does not feel heat or cold
- Overly physical

# Common Characteristics of children with FASD

- Unusually high or unusually low activity level
- Impulsive, fidgety, inattentive and easily distracted
- Poor sense of body awareness
- Immature gross motor skills (running, climbing)
- Uncoordinated
- Poor bilateral co-ordination



# Common Characteristics of children with FASD

- Poor sense of rhythm and time
- Responds slowly to verbal instructions
- Prefers familiarity, resists new games etc.
- Difficulty revving up or calming down
- Difficulty crossing the midline
- Poor motor planning
- Poor spatial awareness

# Cognitive Benefits of Exercise

- **“Exercise turns on the attention system, the so-called executive functions-sequencing, working memory, prioritizing, inhibiting and sustaining attention...on a practical level it causes kids to be less impulsive which makes them more primed to learn”**
- John Ratey-Associate clinical professor of psychiatry at Harvard Medical school
- Author of Spark: The Revolutionary New Science of Exercise and the Brain



# Exercise can improve mental capacity

- “exercise promotes the growth of new neurons in FASD brains, and that these neurons are better able to communicate with each other”
- Believes exercise should be a key treatment for kids with FASD
- Exercise can be continuous or broken

Brian Christie, PhD, Michael Smith Foundation Senior Scholar Division of Medical Sciences,  
Victoria, British Columbia

# Healthy Kids Report Card

**“Children with disabilities are not only missing out on receiving the health benefits of being physically active they are also missing out on the cognitive benefits.”**

- 2009 Active Healthy Kids Report Card on Physical Activity for Children and Youth

# Canada's Physical Activity Report Main Findings

Active Healthy Kids Canada, 2008

## F-Physical Activity Levels

- 87% of children and youth are still not meeting the recommended 90 minutes of physical activity a day



# Canada's Report Card

## F-Screen Time

- 90% spend 2 or more hours a day at computers, video games and/or television.
- “many” spend up to 6 hours per day

# Canada's Fitness Report Card

## Active Play

- 50% of children participate in unorganized sport
- 60% of disabled youth report that they seldom or never play games with friends in their free time

# Ability linked to self-esteem

- Children with poor coordination will generally cope with their motor difficulties by avoiding tasks and withdrawing from many activities (Polatajko, 1999)
- When tasks cannot be avoided they experience difficulty causing them to feel inadequate, frustrated, anxious and isolated
- Children who are clumsy are more likely to develop a poor self-concept (Losse et al. 1991)



# Participation

- Interventions focused on enabling participation in everyday activities had a positive impact on the children's quality of life (Mandich et al., 2003)



# Improving success during physical activity

1. Support from parents, friends, teachers, coaches, volunteers, and mentors
2. Participation in FASD/ADHD sensitive physical education classes, and after school activities
3. Participation in recreational programs that provide opportunities in a supportive learning environment

# Key Point

- Work within the parameters of the child's developmental age instead of chronological age
- Have realistic expectations

# Communication Strategies for children with FAS

- Eye contact is essential to process verbal information
- Use exaggerated facial and body language to convey your feelings ex. Shoulder shrug
- Always give separate instruction using the child's name at the beginning of the sentence
- Use as many visual cues as possible, at all times to aid in understanding and to trigger his/her memory.
- Always refer to all persons in any group by name.
- Reduce distractions .

## Communication Strategies for children with FAS

- Make your point in 5 seconds (10 words)
- Drop all extra words.
- Always state what you want the child to do. Be precise.
- When interrupted in the middle of giving a direction, always go back to the beginning and start over again.
- End all instructional conversations with the word “now”.
- Remember that just because the child can repeat instructions back does not mean she/he understands them.

# Considerations when teaching children with FASD/ADHD

Impaired functioning of their sensory system



Simplify

Difficulty translating verbal directions into action



Use simple words

Doesn't understand



Demonstrate

Would rather do nothing than risk looking stupid



Alternate pace

Overload, hypersensitive child shuts down



Choose strength based activities

Fear of failure



Establish trust

# Words of advice....

- If something isn't working, try differently not harder
- Continue trying differently until something works
- When something works stick with it!
- Maintain a sense of humour!

# Sources

- FASD Strategies not Solutions, Region 6 Edmonton and Area Child and Youth with FASD Sub-Committee
- 2009 Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth
- 1) May and Gossage, "Estimating the Prevalence of Fetal Alcohol Syndrome," Vol. 25, Num. 3, 2001; Sampson
- 2) Carol Kraft, RN, "Moving Forward with FAS," Community seminar, sponsored by "Baby Biz," Lou Soppit Community Center, Rocky Mountain House, Alberta, 18 Mar. 2005.

Laura Liberty  
FASD Worker  
Lake Huron Region  
Union of Ontario Indians  
P.O. Box 711  
North Bay, ON  
P1B 8J8  
Tel: (705)497-9127 Ext 2319  
Fax: (705) 497-9135  
E-mail: [laura.liberty@anishinabek.ca](mailto:laura.liberty@anishinabek.ca)  
Toll free: 1-877-702-5200

