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Getting Active: What Does it Mean for Children With Down Syndrome?

Improving the health and well-being of children with Down syndrome through participation in active physical recreation.



Nora Shields, PhD
La Trobe University

Regular physical activity is a very important part of growth and development for all children including those with Down syndrome. Exercise is particularly important for children with Down Syndrome as it will help:

- Develop physical and social skills.
- Establish a regular routine around exercise early in their life so that they can continue to exercise when

they are adults.

- Prevent serious secondary conditions associated with having Down syndrome including diabetes, osteoporosis, and early-onset dementia.

Many children with Down syndrome don't get enough exercise. The recommended amount of physical activity for all children is at least 60 minutes of moderate level activity each day, and the recommendations are not different for children with Down syndrome.

Moderate level means activity that makes you sweat lightly such as walking briskly. It is worth considering that the recommend amount of physical activity is a minimum amount; some researchers believe children should be doing twice this amount!

There are many reasons why children with Down syndrome find it hard to do physical activity. We did a study to find out what makes it harder for children with Down syndrome to take part in physical activity. We interviewed 20 parents (16 mothers, 4



World Health Organization

For children and young people, physical activity includes play, games, sports, transportation, chores, recreation, physical education, or planned exercise, in the context of family, school, and community activities.

- Children and youth aged 5-17 should accumulate at least 60 minutes of moderate to vigorous-intensity physical activity daily.
- Amounts of physical activity greater than 60 minutes provide additional health benefits.
- Most of the daily physical activity should be aerobic. Vigorous-intensity activities should be incorporated, including those that strengthen muscle and bone, at least 3 times per week.

Source:

www.who.int/dietphysicalactivity/factsheet_young_people/en/http://www.who.int/dietphysicalactivity/factsheet_young_people/en/

fathers) of children with Down syndrome aged between 2 and 17 years. They told us that the main things that made it harder for their children with Down syndrome to be active were:

- Characteristics commonly associated with Down syndrome such as: low muscle tone, being overweight, having a congenital heart defect and delayed development of verbal and interpretative communication skills.
- Competing family responsibilities such as the child's need for one-on-one supervision to be active while parents need to get chores done;
- Reduced physical or behavioural skills such as a lack of coordination, increased frustration, or not adequately engaging with the activity, contributing to parents' overprotection or fear of their child getting hurt
- A lack of accessible programs including mainstream programs willing to include a child with Down syndrome.

However, parents also told us about what

things helped their child with Down syndrome to engage in physical activity. These were:

- Children who were enthusiastic and determined to succeed, enjoyed being active (and receiving praise!). They also developed skills such as coordination and ability to understand rules.
- The positive role of the family such as parents being active themselves and sourcing opportunities for their child and having siblings as role models.
- The opportunity for social interaction with peers such as being involved in activities that provide opportunities to talk and play with peers.
- Structured accessible programs that make adaptations for children with Down syndrome such as providing direct attention and guidance, or breaking down new skills into manageable components.

Our research highlights the important role of families in ensuring that their children with Down syndrome are physically active. In many cases it is the family's

decision whether or not their child is active. This can be hard for families, particularly when they are often trying to simply get through the day. The thing to remember is that being active is as important an activity for children with Down syndrome as taking daily medicine. You may not see the benefits from day to day but over a lifetime it can make a big difference!

Some things to think about when helping your child participate in physical activity:

- Preferences: What activities are they interested in? What is their preference? What will they enjoy doing? If the answer is playing on



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- Nora Shield



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Want to learn more on the topic?

Suggested articles:

1. Shields N, Synnot A (2016). Perceived barriers and facilitators to participation in physical activity for children with disability: a qualitative study. *BMC Pediatrics* 16:9.
2. Barr M, Shields N. (2011). Barrier & facilitators to physical activity in children with DS. *Journal of Intellectual Disability Research*, 55, 1020–1033.
3. Mahy J, Shields N, Taylor N, Dodd KJ. (2010). Barrier & facilitators to physical activity in adults with DS. *Journal of Intellectual Disability Research*, 54, 795–805.
4. King M, Shields N, Imms C, Black M, Ardern C (2013). Participation of children with intellectual disability compared with typically developing children. *Research in Developmental Disabilities* 34, 1854–62.
5. Shields N, Taylor N. (2010). Effects of a student-led progressive resistance training program on muscle strength and physical function in adolescents with Down syndrome. *Journal of Physiotherapy*, 56, 187-193.

equipment then do your best to spend some time at the local park a couple of times a week.

- Type of activity: Try to encourage activities that your child can continue to do as an adult. You may want to consider skills that are a rite of passage for all children such as learning to ride a bike and learning how to swim.
- Cost: you can't beat walking as a good low-cost activity. It also provides a nice time to share your day together.
- Role models: often children want to do the things that their siblings or friends do, so see if there are activities that they can also be involved in, perhaps dancing or gymnastics, it will be motivating for them.
- Social interaction: research shows us that social interaction is the most commonly reported facilitator of participation in physical activity. As one participant told us in our research study '*if you can make it social- you're in!*'
- Routine: having exercise as part of their routine is important for children with Down syndrome and when it is part of their routine it is more likely to be done. It can be tricky to establish a routine as young people with Down syndrome may not like the feeling of getting hot and sweating, so persistence is important.

Take home points for clinicians

- Be a physical activity champion- promote physical activity early and often.
- Set a physical activity goal for every child with Down syndrome- there is a long-term benefit to establishing good activity habits early.
- Think holistically- physical activity can be therapy or recreation or both!

Take home points for families

- Ask your child what activity they want to do or would prefer to do.
- Target skill development early- this can include running, jumping, climbing, hopping, skipping, cycling, throwing and catching.
- Use simple strategies to get your child to do more physical activity in everyday life- this could include walking to school, walking the dog, doing the grocery shopping together, taking the stairs not the elevator or dancing to music (kids love it when you join in!).