

**THE EXERCISE
MEDICINE PROGRAM**
FOR CHILDREN WITH
BLOOD CLOTS

SickKids[®]



**Promoting a
healthy and
active lifestyle.**

**Maximizing the quality
of life through exercise,
nutrition and sleep
recommendations.**

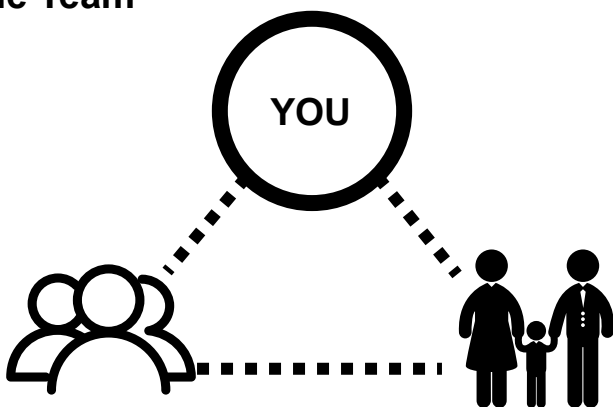
About the Exercise Medicine Program

The Exercise Medicine Program was created within the Labatt Family Heart Centre at The Hospital for Sick Children. It represents the first pediatric program in Canada that focuses on promoting physical activity and individualized lifestyle recommendations for children and adolescents with blood clots, based on a comprehensive medical and functional evaluation.

WHY

Heart-healthy lifestyle behaviors are easier to maintain through life if acquired in childhood and encouraged by the family. Early promotion is the best way to ensure positive long-term health outcomes for children with blood clots. A healthy lifestyle helps reduce additional risk factors that contribute to cardiovascular disease, such as obesity, high blood pressure, diabetes and mental health disorders like depression and anxiety.

The Team



Medical Support

Physician
Physiotherapist
Kinesiologist

Family

What to expect once you are enrolled?

Physical Exam

Exercise Assessment

Strength and Flexibility Evaluation

Lifestyle Assessment

Months 1-2

Regular check-ins by telemedicine

Months 4-5

Regular check-ins by telemedicine



Start

Initial Assessment



Month 3

Follow-up virtual assessment



6th Month

Final Assessment

Ask your doctor how to enroll in this program.

General Health Recommendations

FOR CHILDREN 7-11 YEARS

At least
60 minutes
of physical activity daily
can be broken up
in shorter sessions
throughout the day.



**2 hours
per day**
of screen time.
Break up long
periods of sitting as
often as possible.



9-11 hours
of uninterrupted
sleep per night with
consistent bed and
wake-up times.

3-4x / week: Aerobic Exercises

- Moderate (50-70% of maximal heart rate)* to Vigorous (70-80% of maximal heart rate)** intensity activities
- Progressive, 30-60 minutes / session

3x / week: Resistance Training

- ~20 minutes / session on non-consecutive days
- Add 5-10 minutes of warm-up and cool-down
- Promotes muscle growth and bone health
- Increases strength and mobility development

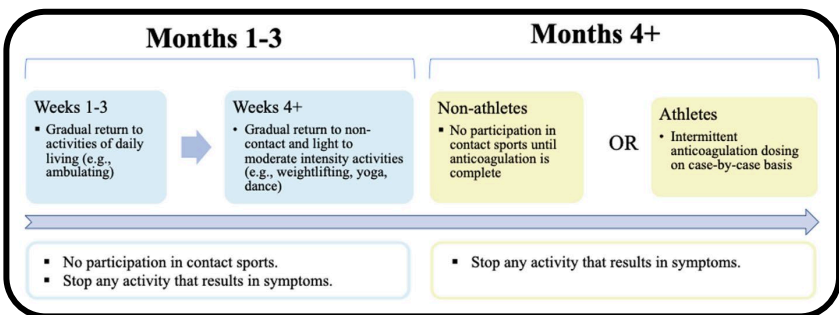
- Be active during recess and after school. Make time for outdoor family events on the weekend.
- Be creative and try out new things: **every move counts!**
- Children on blood thinners should avoid sports that require physical contact between players (see next page).

* Intensity: 5-6, on a scale 0 to 10, where the highest level of effort possible is 10

**Intensity: 7-8, on a scale 0 to 10, where the highest level of effort possible is 10

Let's get active every day!

Recommendations for participation in sports and activities while on blood thinners



Degree of contact and intensity of sports and activities

Intensity	Contact or Collision	Limited contact	Noncontact
Light (Minimal effort, no perspiration)	Diving Gymnastics Martial arts** Ski jumping	Horseback riding Field events (High jump, Pole vault) Martial arts** Water skiing Windsurfing	Archery Curling Cricket Darts Fishing Field events (throwing) Lawn Bowling Riflery Sailing Tai chi Yoga Weightlifting
Moderate (Not exhausting, light perspiration, able to have a steady conversation)	Boxing Downhill Skiing Football (tackle, touch) Handball Hockey (ice, field) Rodeo Rugby Snowboarding Wrestling Volleyball** Ultimate Frisbee	Baseball Fencing Handball Skateboarding Skating (Ice, In-line, Roller) Softball Surfing Volleyball**	Bodybuilding Bowling Dance Field events (jumping) Golf Running (sprint) Table tennis
Vigorous (Heart beats rapidly, sweating, only able to speak a few words)	Cheerleading Basketball Lacrosse Soccer Water polo	Canoeing or kayaking (white water) Cross-country Skiing Cycling (outdoors) Speed skating Synchronized swimming Racquetball Squash	Badminton Canoeing or kayaking (flat water) Cycling (stationary bike) Power lifting Orienteering Rope jumping Rowing Running (middle-long distance) Scuba diving Swimming Tennis

Additional Information

Get around and be active!

Activities such as walking to and from school as well as playing outdoor on weekends can optimize children's daily physical activity levels and improve their overall fitness.

Let's get started: Challenge yourself and try to get on 12 000 steps daily!



Accumulation

The concept refers to meeting the goal of 60 minutes per day by performing activities in multiple shorter bouts spread throughout the day. Start with smaller amounts of physical activity and gradually increase duration, frequency and intensity over time. Use a workout plan to help keep children motivated and achieving their workout goals.



Coach yourself!

Children should learn how to monitor the intensity of their activities and the appropriate level for their condition. It is important to stop the exercise in the presence of any exertional symptoms such as dizziness, difficult breathing or chest pain.

Things that can help you:

- Talk Test
- Breathing techniques
- Heart rate monitoring with a wearable device



In addition, children should be reminded to take appropriate breaks, and stay hydrated between the sessions and throughout the whole day.



Team sports

Age-appropriate team-based activities or sports help children to connect with peers, get socially engaged and keeps them motivated.

Additional Information

Sleep

Sleep is essential for children's physical as well as cognitive growth. Bedtime routines, and both the quality and quantity of your child's sleep are crucial for developing a good sleeping hygiene. Sleep problems can often be caused by bad sleeping habits and can be corrected by making a few simple changes to your child's lifestyle and sleep routine.

Mindfulness

Meditation is a simple practice available to all, which can reduce stress, increase calmness and clarity and promote happiness.

Mindfulness is not something useful only in times of stress, it is a tool that can help your child to explore new sensations, including those that are unpleasant. For parents, the best way to teach a child to be mindful is to embody the practice oneself.

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SLEEP



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Food is Fuel

Healthy eating habits are essential for children's growth and development. A balanced diet suggests a variety of foods to get enough nutrients through vegetables and fruits, whole grains, and protein. Limit intake of sugary drinks, sweets, highly processed foods, and foods high in sodium and saturated fat. The sooner nutritious choices are introduced into children's diets, the easier they will be able to develop a healthy relationship with food that can last them a lifetime.



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This brochure summarizes data from multiple sources addressing physical activity among children and adolescents with heart disease and matching the general physical activity recommendations for healthy children and adolescents (5–17 years) in Canada. However, these recommendations will be individually adapted within the Exercise Medicine Program. This brochure was created by Dr. Barbara Cifra and Johanna Schmickler (Technical University of Munich) during her observership at SickKids. Modified for the Thrombosis Service by Dr. Laura Avila and Angelika Stavrakoukas.