



# EXERCISE AND CANCER

## TIPS FOR PHYSICAL EDUCATION TEACHERS

This leaflet is for physical education teachers with students who have been affected by blood cancer. It promotes an active, safe, and adapted lifestyle during and after treatment.

### Perspective

After treatment for pediatric cancer, several difficulties can arise. Some students will have lost abilities that they previously had. Some will have new health conditions, such as cardiac, neurological, pulmonary, digestive, hormonal or cognitive problems, as well as brittle bones.

During and after cancer treatments, daily physical activity can be integrated in a safe manner.



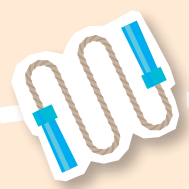
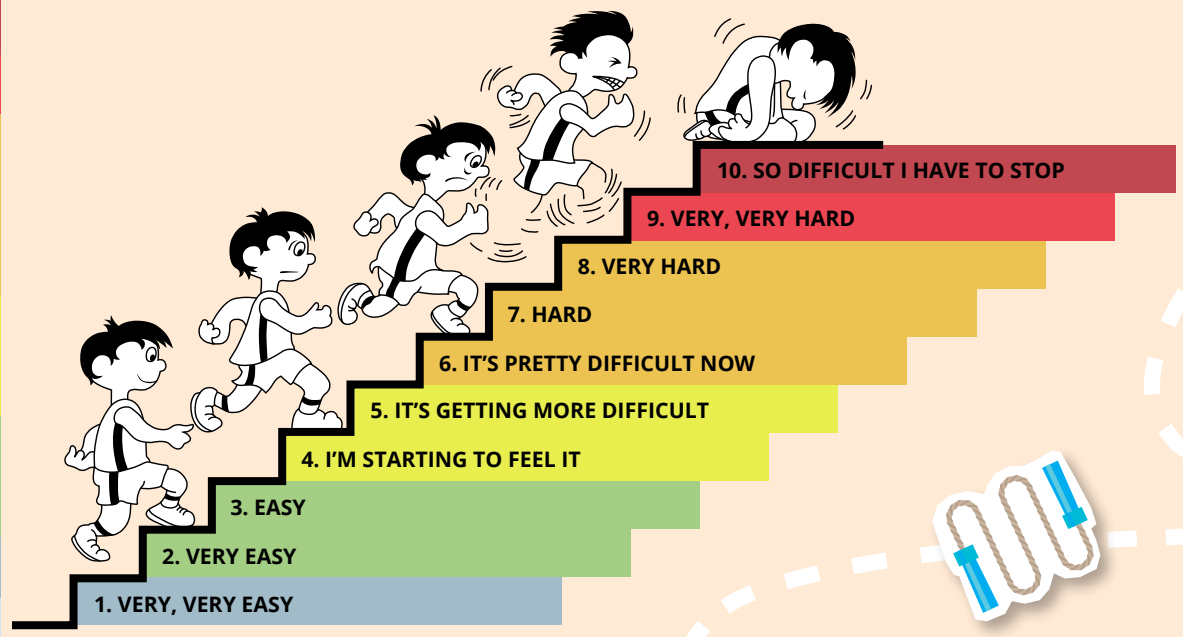
Physical activity is important to help:

- Improve muscle strength
- Increase cardiovascular endurance
- Maintain body weight
- Improve flexibility
- Improve bone health
- Reduce fatigue
- Improve functional capacity
- Improve quality of life
- Promote a gradual return to school and daily activities



### Borg Rating of Perceived Exertion Scale (0-10)<sup>3</sup>

10	<i>exhaustion</i>
9	<i>very, very hard</i>
8	<i>very hard</i>
7	<i>hard</i>
6	<i>somewhat hard</i>
5	<i>moderate</i>
4	<i>fairly light</i>
3	<i>light</i>
2	<i>very light</i>
1	<i>very, very light</i>
0	<i>at rest</i>



Activities can include games, sports, dance, cycling, walking, running, and fitness, alone or in groups. No matter the activity, **the important thing is to adapt** and be attentive to the signs the student may exhibit.



## Recommendations

For this group, as for the general population, at least 60 minutes of activity per day is recommended. This can be divided into several short periods throughout the day.

The intensity of the activity can vary from moderate to vigorous. Use the following scale to help you measure fatigue.

Another simple way to assess intensity is to observe breathing and ability to speak:

- Can the student speak easily during the activity? This indicates the intensity is moderate.
- Is it difficult for the student to hold a conversation during the activity? This indicates a higher intensity.

## Safety

Physical activity is safe during and after treatment if you keep an eye out for specific signs. Stop and postpone physical activity if the student shows evidence of:

- Nausea
- Onset or increase in pain
- Vertigo or dizziness
- Palpitations or chest pain

## Mainstreaming

Students may face several difficulties when returning to school. Their abilities might not be the same. They might compare their abilities with what they were before, or to other students (for example, tiring more quickly, diminished strength, etc.).

Students may want to hide their weaknesses and difficulties, so it is important to be attentive and grant extra rest breaks without excluding them from activities. Choosing games where their abilities can shine can help restore confidence.

This adjustment period can also be difficult for the teacher. It may require modifying a program to include the student, or perhaps adapting what the student can do during an activity.



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to help!

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## Drinking water is important!

Always have a water bottle nearby. Hydration is very important for youth affected by blood cancer.

## Doctor and family

Check with the family to see whether they have received other recommendations from the attending physician that may apply to the student.



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**Sources:** 1. Canadian 24-Hour Movement Guidelines for Children and Youth. Guideline Development Report 2016: An Integration of Physical Activity, Sedentary Behavior, and Sleep. Canadian Society for Exercise Physiology. 2. Duhamel, G. *et al.* 2020. Systematic Review of Physical Activity Prescription with Pediatric Oncology Patients Towards Recommendations. Accepted before publication. 3. Lazaar, N. *et al.* 2004. Modalities of Submaximal Exercises on Ratings of Perceived Exertion by Young Girls: A Pilot Study. Perceptual and Motor Skills, 99 (3\_suppl), 1091–1096. <https://doi.org/10.2466/pms.99.3f.1091-1096>