

# Children, LTAD & Competition



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Photo: Bulkley Valley Cross Country Ski Club



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Optimal competition calendar planning is critical for all stages of athlete development. At certain stages the development of physical capacities takes precedence over competition, and at other stages the ability to compete becomes the focus. Competition schedules should therefore be selected based on the individual athletes' changing developmental needs, and the following factors should be considered:

- “Unconventional” settings (e.g. obstacle courses, terrain parks) for athletes in the earlier stages of development, where fun, skill and speed should be the emphasis. For example, a mix of competitions that would be suitable for athletes in the L2T stage of development are:
  - Racing Rocks! (Ski Tournaments, Team Sprints).
  - Club Races (Club Championships, Costume Relays, etc.).
  - Regional Cup Races, BC Track Attack Championships, BC Cup Series, BC Championships.
- An insufficient number of competitions (inappropriate training-to-competition ratio) during the early stages of athlete development will result in a lack of sport skills to build on in later stages.
- Optimal training-to-competition ratios should be the objective for all stages of athlete development. For example, the recommended number of races per season for the following age groups are:
  - six to eight for girls 8-11 and boys 9-12 years of age, and
  - eight to twelve for girls 11-13 and boys 12-14 years of age.
- The length and level of the competitive season

should be aligned with the changing needs of the developing athlete in the Long Term Athlete Development progression (<http://www.crosscountrybc.ca/long-term-athlete-development>).

- At the end of the L2T stage girls can begin to develop their maximal oxygen consumption rate (VO<sub>2</sub>max) through racing, as they are entering a Window of Optimal Trainability (WOT) for this performance factor. Race distances that are optimal for this stage - in order to develop VO<sub>2</sub>max - are in the range of 1.5 to 3 kilometres (5 - 10 minutes).
- Due to the longer period of pre-adolescent growth for boys (as compared to girls), it is not optimal for boys at the L2T stage to be introduced to VO<sub>2</sub>max development. Therefore most race distances for at this stage should exceed three kilometres, so that the athletes are optimizing the WOT for aerobic capacity that corresponds to the growth phase they are in.
- Competitions that provide recognition and rewards for athletes for each year of birth during the developmental stages (FUNDamentals to Learning to Compete).
- Windows of Optimal Trainability. Refer to: <http://www.crosscountrybc.ca/sites/default/files/documents/figure3.pdf>

The sport of cross-country skiing has aligned its competition model with Sport Canada's LTAD guidelines. LTAD alignment means doing the right thing for the athletes from a developmental perspective (for example, prescribing race distances and race formats that allow developing athletes to take advantage of optimal windows of trainability during the different developmental stages). This alignment is reflected in event technical packages, race distances, awards, etc.

*LTAD Resources:* <https://www.crosscountrybc.ca/ltad-resources>



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Photo: B. Calkins, Larch Hills Nordic Society



Photo: C. Newel, Kimberley Nordic Club