



Implementing Age-Appropriate Intermediate Nets in 10U Ice Hockey to Increase Player Development and Prevent Injuries

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Intermediate Nets at 10U

- Beginning with the 2022-2023 season, SAHA adopted the use of intermediate sized nets for 10U within the affiliate (SYTHL started in 2023-2024)
- Rule 26.6 Goal Net Variance:
 - Intermediate sized nets, no larger than 54" x 36", and pegs will be used for all games played between 8U & 10U teams within the affiliates. It is recommended that 48" x 36" nets be used at 8U and 54" x 36" nets be used at 10U. This shall apply to Tier II and recreational teams but may not apply to away games played outside the affiliate, or tournaments within the affiliate hosted by outside companies.

Intermediate Nets at 10U

Why was the change made?

1. Injury prevention for goaltenders:

- A 2019 study showed that 69% of elite goaltenders in the top male and female leagues in had at least 1 episode of hip/groin problems
- 83% of the reported problems were due to overuse as opposed to acute injuries

The prevalence of overuse injuries points to a development problem

Goaltender Hip and Groin Injuries

- In collaboration with Matt Bourgeois, we compared force generation and movement in 10U and 16U goalies
- Findings:
 - Younger goalies do not generate as much pushing force relative to their body weight
 - Younger goalies need more repetitions to move the same distance as older goalies
- Intermediate nets may reduce hip and groin overuse injuries in goaltenders by making movements proportional to body size

Intermediate Nets at 10U

Why was the change made?

2. Creating a better development environment for goalies and players:

- Goalies:
 - Learn proper movement that is proportional to their body size
 - Allow the use of pegs with the smaller/lighter nets safely
 - Make more saves (more success to increase retention)
- Players:
 - Develop better shooting, passing, and decision-making skills to score with less open net

Goaltender and Player Development

- In collaboration with Ben Csernik and Nick Wattie, we are analyzing goaltender movement and player development based on video captured from SYTHL games
- Findings:
 - Goaltender movement is not significantly different between full-size and intermediate nets
 - Goalies may stay on their feet more in the intermediate nets
- Analysis is ongoing

Parent Response!



Presentations

- 1. SAHA Board of Directors Meeting, November 9, 2023.**
- 2. USA Hockey Player Development Committee Meeting, November 14, 2023.**
- 3. Maine Affiliate Board of Directors Meeting, April 9, 2024.**
- 4. National Goaltending Symposium, St. Paul, MN June 2, 2024.**
- 5. Coaches Section, Player Development Committee, Youth Council, USA Hockey Summer Meeting, Denver, CO June 6 – 7, 2024.**
- 6. Minnesota Affiliate Board of Directors Meeting, June 25, 2024.**
- 7. SAHA Affiliate Summer Meeting, Huntsville, AL August 10, 2024.**

Presentations

- 8. “Impacts of Net/Rink Sizing on Player Development.” Episode #37 of The USA Hockey Podcast: A Youth Sports Conversation, Available on Apple and Spotify, November 5, 2024.**
- 9. Minnesota Hockey Directors and Association Leadership Conference, Minneapolis, MN May 3, 2025.**
- 10. Scientific Research on Ice Hockey, Québec City, Canada, June 1, 2025**
- 11. Carolina Amateur Hockey Association Annual Meeting, Greenville, SC July 19, 2025**

Grants

- 1. Balancing the scales: Exploring the impact of scaling playing surface and nets in youth ice hockey, Social Sciences and Humanities Research Council of Canada**
- 2. Integrating biomechanics and ice hockey analytics to evaluate injury risk and performance in goaltenders, Tannenbaum Institute for Sport Science**

Other Impacts

- 1. Video of SYTHL goalies and intermediate net recommendations incorporated into Bronze Goalie Coach Clinic curriculum**
- 2. Video of SYTHL goalies incorporated into new 6U/8U coaching curriculum**
- 3. Several districts in Minnesota are piloting the use of intermediate nets at 10U this season**

What's next?

SAHA Sponsored Research Weekend

- Research study on playing surface and net scaling on player development and goaltender movement
- September 13 and 14 in Pelham, AL
- 4 game formats
- Video analysis of player development and goaltender movement
- Biomechanical analysis of goaltender lower body movement
- (Potential) Sensor-based analytics of player movement

Questions?

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