

Fluid Replacement in Youth Hockey Players (based on 100 lb/50kg child)

Bottom Line Hydration Regimen (for exact amounts based on weight see below)

Pregame <ul style="list-style-type: none">• Before leaving home and in the car: 1/2 to 3/4 of a small water bottle during the 2 hours prior to game 250-375 mls (8-12 oz)—get the player to urinate when they arrive at the rink• In the dressing room: 125mls (4 oz or 1/2 cup) after getting dressed
Game <ul style="list-style-type: none">• Drink 100-200 mls (3-7 oz) every 20 minutes—that is up to 900 mls (30oz) for a 90 min game)—small sip with every shift• Flavored drinks can encourage consumption of fluids in children
Postgame <ul style="list-style-type: none">• Immediately after a player steps off the ice, they have a 30 minute window where their body is “hungry” to recover and the players need to start rehydrating and consuming carbohydrates with a small amount of protein during this time frame• Water and a snack should be consumed in this time period (during the ride home or at home if the ride is not too long)• Many advocate 1% chocolate milk for a quick recovery (often in tournaments with little time between games)• Chocolate milk has simple sugars and some protein (sports drinks can also fill this need)• Hydration is the most important aspect of post game recovery period and allows players to have a quicker recovery• Within 2 hours of the end of the game, players should drink what was lost—this is about ½ liter for every 0.5kg (1 lb) lost during the game in order to get the child urinating dilute urine—this is usually on the order of 300mls for a 90 min game

Children deal with exercise and fluids differently than adults

- Children’s sweating rates are lower than adults
- Children do not transfer heat to their skin as effectively as adults
- Children take longer to acclimatize to temperature changes than adults

As little as 1% weight loss can decrease athletic performance in children

- The child should drink a small amount between every shift
- Thirst cannot be used to direct the child to drink—children must be told to drink even when they are not thirsty
- Cool water or a flavored beverage is best (cool is preferred as it enhances absorption)
- Water is acceptable and carbohydrates (sugared sports drinks) are only recommended if exercise time is greater than 1 hour...but
- In a study of 9- to 12-year-old untrained boys who exercised intermittently in a hot environment, voluntary consumption increased by 45% when grape flavoring was added to the water and drinking was enhanced by a further 46% when the subjects drank a grape-flavored sports drink that contained carbohydrate (sugar) and NaCl (table salt)
- There are potential negatives to sports drinks—cost, calories, tooth decay and normalizing the intake of sugared drinks
- Fruit juices, carbohydrate gels, soda and sports drinks that have carbohydrate concentrations greater than 8% are **not** recommended during exercise as the sole beverage since these higher concentrations of sugar delay absorption of the liquid they are in

Note: Small water bottles hold ~ 500mls (16 oz)
Large water bottles hold ~ 1L (32 oz)

Note: Fluid intake for games is 13 mL/kg (6 mL/lb) bodyweight per hour of playing
Fluid replenishment post-exercise is 4 mL/kg (2 mL/lb) for each hour of exercise