



## North Mississauga Soccer Club Injury Prevention Toolkit

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### Common Soccer Injuries

Common soccer injuries include:

- |                 |                      |                   |
|-----------------|----------------------|-------------------|
| 1. Ankle sprain | 3. Calf strains      | 5. Foot fracture  |
| 2. Knee sprain  | 4. Clavicle fracture | 6. Wrist fracture |

## **Maximizing Prevention of Injury**

### **Training Fundamentals**

1. Never train hard when stiff and sore
  - Whenever coaches introduce a new movement pattern at moderate intensity or increase movement pace significantly, some athletes are stiff and sore the next day. This stiffness and soreness is called Delayed Onset Muscle Soreness (DOMS).
  - If the athlete trains as hard as the day before, his or her movements may be uncoordinated, performance may suffer, and injury often results on the third day of hard training.
  - When athletes are stiff and sore, they need to train using the same movement pattern but at lower intensity until the soreness is gone (typically a few days) and then build up intensity again.
2. Introduce new activities gradually
  - Skills that are complex, explosive, and powerful can cause the body to break down if they are repeated too often without a rest or a change to another movement pattern.
3. Poor fitness levels cause injury
4. Wear the right footwear
5. Listen to your body
  - Athletes who know how to listen to their bodies can often feel the start of chronic injuries.
  - The art lies in separating the discomfort that comes with hard training from the pain that signals danger ahead.<sup>2</sup>

### **Preparation Fundamentals**

1. EAP matters
  - Keep your Emergency Action Plan (EAP) up-to-date, and make sure it includes practice sites. For more information on Emergency Action Plans, see the NCCP's Planning a Practice module.
2. Walk the playing or practice surface for dangers
  - The playing surface needs to be checked before practices and competitions for unsafe conditions: debris, uneven surfaces, malfunctioning equipment, foreign objects, etc.
  - Report any conditions that could lead to injury, and make sure extra equipment and supplies are kept away from the playing area.
3. First-aid/CPR certification is a must
  - At least one member of your support staff should be certified in first aid and CPR.
4. The right equipment prevents injury
5. Use taping and braces when necessary
6. Hold a pre-season meeting with participants, parents, and support staff

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<sup>1</sup> UPMC Sports Medicine  
<https://www.upmc.com/services/sports-medicine/for-athletes/soccer>

<sup>2</sup> Coaching Association of Canada –  
Prevention and Recovery: Reference  
Material Version 0.5, 2013

- Everyone should be aware of injury prevention plan and requirements.<sup>3</sup>

## **Injury Prevention Program: Warm-Up and Physical Literacy**

Preventing injury and building resiliency will keep youth engaged in sports, will provide a more enjoyable experience, and will maintain sport participation.

Injury prevention program includes implementation of 2 sub-programs in all Canada Soccer clubs and academies across Canada:

- FIFA 11+ conditioning program for children aged 14 years and over,
- Canadian Sport for Life Movement Preparation program for children aged 7 years old and older<sup>4</sup>

### **FIFA 11+ Program**

The “11+” is an injury prevention programme that was developed by an international group of experts based on their practical experience with different injury prevention programmes for amateur players aged 14 or older. It is a complete warm-up package and should replace the usual warm-up prior to training. In a scientific study, it was shown that youth football teams using the “11+” as a standard warm-up had a significant lower risk of injury than teams that warmed up as usual.<sup>5</sup>

### **FIFA 11+ Structure**

- The “11+” has three parts with a total of 15 exercises, which should be performed at the start of each training session.
- Part 1: running exercises at a slow speed combined with active stretching and controlled partner contacts;
- Part 2: six sets of exercises focusing on core and leg strength,



<sup>3</sup> Coaching Association of Canada – Prevention and Recovery: Reference Material Version 0.5, 2013

<sup>4</sup> Canada Soccer Injury Prevention Program <https://canadasoccer.com/play-landing/injury-prevention/>

<sup>5</sup> FIFA 11+ Manual [https://www.fifamedicalnetwork.com/wp-content/uploads/cdn/11plus\\_workbook\\_e.pdf](https://www.fifamedicalnetwork.com/wp-content/uploads/cdn/11plus_workbook_e.pdf)

- balance and plyometrics/ agility, each with three levels of increasing difficulty;
- Part 3: running exercises at moderate / high speed combined with planting / cutting movements.
- A key point in the pro-programme is to use the proper technique during all of the exercises. pay full attention to correct posture and good body control, including straight leg alignment, knee-over-toe position and soft landings.<sup>6</sup>

The manual can be found on the North Mississauga Soccer Club website in the “Coaches’ Resources” section.

### **Canadian Sport for Life Movement Preparation**

Physical literacy movement preparation is movement that focuses on incorporating and improving fundamental movement skills and fundamental sport skills into activity. It prepares the body for movement and enhances the way you move for short-term and long-term benefits. Movement Preparation improves the way you move, which reduces the risk of injury during physical activity. It also teaches skills that will benefit participation in unfamiliar activities.

Movement preparation that is geared toward physical literacy – focusing on the techniques that improve and incorporate fundamental movement skills and fundamental sport skills – can also foster a more physically active and healthy lifestyle.

Benefits:

- Children become better movers and better athletes
- Children strengthen their bodies through increased participation in physical activity
- Children prepare their muscles for immediate activity and develop the skills and confidence to safely participate in unfamiliar activities
- Children acquire the skills, confidence and motivation to overcome challenges.<sup>7</sup>

### **Movement Preparation Structure**

The manual can be found on the North Mississauga Soccer Club website in the “Coaches’ Resources” section.

- Dynamics
- Accelerations
- Cutting
- Ladders
- Core<sup>8</sup>

### **Cool-Down**

An effective cool-down can speed up recovery following practice or competition, as it increases the rate at which the byproducts of exercise are removed from the working muscles. The accumulation of these byproducts can contribute to fatigue, but low-intensity exercise can help accelerate recovery by decreasing

<sup>6</sup> FIFA 11+ Manual [https://www.fifamedicalnetwork.com/wp-content/uploads/cdn/11plus\\_workbook\\_e.pdf](https://www.fifamedicalnetwork.com/wp-content/uploads/cdn/11plus_workbook_e.pdf)

<sup>7</sup> Canadian Sport for Life – Movement Preparation <https://sportforlife.ca/movement-preparation/>

<sup>8</sup> Canadian Sport for Life – Movement Preparation <https://sportforlife.ca/movement-preparation/>

the concentration of these byproducts. Accelerating recovery can have major effects on performance and injury prevention:

- The gains made in the rest period following a workout may be greater.
- The ability to perform in future events may improve.
- The ability to train harder during subsequent workouts may improve.
- The risk of injury may decrease, as fatigue predisposes the athlete to injury.

### **Principles of an Effective Cool-down**

- The cool-down should consist of low-intensity aerobic exercise at 30-45% of VO<sub>2</sub> max or heart rate reserve.
- The cool-down should use muscle groups similar to those used in the athlete's sport.
- The cool-down should provide opportunities to slow down skills and focus on technique<sup>9</sup>

## **Hydration, Nutrition, and Sleep**

The Importance of Fluids Proper hydration is important for all athletes to:

- Replace water lost as a result of sweating
- Avoid marked decreases in performance that result from dehydration
- Help maintain core body temperature within acceptable limits during exercise<sup>10</sup>

Body weight (kg)	Approximate quantity of fluid absorbed by the body in one hour (mL)	
	from ...	to ...
30	300	450
40	400	600
50	500	750
60	600	900
70	700	1050
80	800	1200
90	900	1350

### **Rehydration after Activity**

- After an exercise where sweating has been profuse, it is extremely important to replace fluid. For each kg of body weight lost, at least 1.0 litre of fluid plus an extra 0.5 litre should be consumed.
- It is important to drink more than one litre per kg of body weight lost to account for urinary losses.
- The colour and amount of urine are an easy way for athletes to monitor their dehydration level. Scanty, dark urine signals a need for more fluid, in which case athletes should force themselves to drink more fluids. Plenty of clear-coloured urine usually indicates adequate hydration.<sup>11</sup>

### **Nutrition**

"Fluids and Foods before, during and after Training and Competition" by the Sport Nutrition Advisory Committee can be found on the North Mississauga Soccer Club website in the "Coaches' Resources" section.

<sup>9</sup> Coaching Association of Canada – Prevention and Recovery: Reference Material Version 0.5, 2013

<sup>10</sup> Coaching Association of Canada – Prevention and Recovery: Reference Material Version 0.5, 2013

<sup>11</sup> Coaching Association of Canada – Prevention and Recovery: Reference Material Version 0.5, 2013

## **Sleep: A Key Factor in Recovery and Regeneration**

Getting the right amount of sleep is just as important for recovery and regeneration as eating and hydrating properly. Sleep is also one of many variables that can give athletes an advantage over the competition. Lack of sleep is also an important factor in sport performance. It can have negative effects on performance, slow down recovery, and compromise the immune system. Chronic sleep deprivation may increase the risk of injury and may even cause the body to store extra fat.

### **Signs and Symptoms of Sleep Deprivation**

- Forgetfulness
- Time to exhaustion decreases
- Early fatigue during training or competition
- Unexpected emotional responses: pessimism, sadness, stress/anxiety, anger
- Inability to solve problems during practice or competition
- Decreased alertness and poorer focus on task
- Increased risk of not completing physical and intellectual tasks
- Slower recovery from training or competition or from injury

### **Strategies for Avoiding Sleep Deprivation**

Athletes should:

- Get two consecutive good nights of sleep before a competition
- Develop and stick to regular sleep habits that provide all the sleep needed
- Maintain regular eating habits — skipping meals or eating too big a meal just before bed can interfere with sleep
- Sleep more when they train more
- Take occasional 10-minute naps during competitions with multiple events
- Use training logs to monitor training and recovery — record key facts such as sleep patterns, motivation, feelings, physiological responses to training (e.g., resting heart rate), stresses (exams, work, etc.), and social activities
- Reduce their intake of caffeinated beverages and products

Coaches should:

- Build extra sleep and rest into road trips
- Alter the intensity and frequency of training on extended road trips
- Adjust training during unusually stressful periods such as final exams
- Ensure that injured athletes get lots of exposure to bright light (natural or artificial)
- Stick to recovery activities the day after a hard training day or competition, and do them later in the morning or day

### **Sleep Duration Recommendation<sup>12</sup>**

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<sup>12</sup> Canadian Sport for Life – Sleep, Recovery and Human Performance

Active Start (U4-U5)	13-16 hours
FUNdamentals (Females U6-U8; Males U6-U9)	10-11 + 30 min nap between 2-4pm
Learn to Train (Females U8-U11; Males U9-U12)	9.5-10 + 30 min nap between 2-4pm
Train to Train (Females U11-U15; Males U12-U16)	9 + 30 min nap between 2-4pm
Train to Compete (Females U15-U21+; Males U16-U23+)	8-10 + 30 min nap between 2-4pm
Train to Win (Females U18+; Males U19+)	8-10 + 30 min nap between 2-4pm

### **Return to Play After Injury**

1. Clinical Phase
2. Functional and Conditioning Phase
3. Conditioning
4. Soccer-specific introduction
5. Position-specific movement and coordination
6. Reactive phase
7. Game simulation
8. Game participation