# ISU Injury and Illness Survey Report

## 2024/25 Season

## July 2025

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# 1. Introduction

This report aims to identify the statistics and trends of injuries and illnesses reported to the ISU during 2024/2025 season. It also aims to identify patterns and risk factors contributing to the cases by analysing the data. The insights gained through the survey will be valuable for developing medical measures and preventive strategies to improve skaters' health and welfare, leading to enhance their performance. In this report, all statistics were categorised by male, female and under 20 years old (U20 hereunder, which includes both male and female) to identify differences between gender and age groups. In addition, potential differences were assessed by comparing 95% confidence intervals (CIs) to observe the statistical significances.

DISCLAIMER:

- These injury statistics are based **solely on data collected via the ISU online medical form**. It is the responsibility of the skater's medical staff or chief medical officer to complete it. These data may not reflect a complete picture of injuries and illnesses.

- A widely accepted definition of sport-related injury considers a concept of an athlete-exposure (AE). An injury, for example, may be reported as rate per 1,000 athlete-exposures. This is considered to be a more accurate measure to define an injury. An athlete-exposure is defined as one skater participating in one practice or competition segment, in which there is the possibility of sustaining an injury. However, since it is not realistic to track participation in all the practices, only participation in the competitions was considered. In this report, the AE in each discipline was calculated based on the average number of races/programmes that one skater competed in Beijing 2022 Winter Olympic Games and the World Championships.

  - FS: 1.65 - 2.40 programs per skater per event
  - SS: 2.30 - 3.20 races per skater per event
  - ST: 5.70 - 6.93 races per skater per event

  **The Incidence Rate (IR)** is calculated as follows: The number of injuries (diagnosis) multiplied by 1,000 and then divided by the estimated athlete-exposures (AEs), which means **the number of injuries expected to develop if the skater would have competed in 1,000 practices or competitions**. **The Injury Proportion (IP)** is calculated as follows: The number of injured skaters divided by the total number of skaters participating in the event, which means **the risk of a sport injury per participating athlete**. Then when we know the numbers of the participating skaters in each event, we assume we can estimate the relative risk of injury of skaters.

# 2. Figure Skating (FS)

## 2.1.  Overview

Table 1 illustrates the total number of reported injuries and illnesses in and out of the competitions in FS during 2024 - 2025 season.

*Table 1. Reported cases and frequencies*

|  | All | Male | Female | U20 |
|---|---|---|---|---|
| Injuries | 58 | 29 | 29 | 30 |
| Illnesses | 25 | 13 | 12 | 13 |
| **Total Cases** | **83** | **42** | **41** | **43** |

There was no difference between the number of cases reported by male and female. Notably, more than half of the cases, both injuries and illnesses, were reported by U20 skaters.

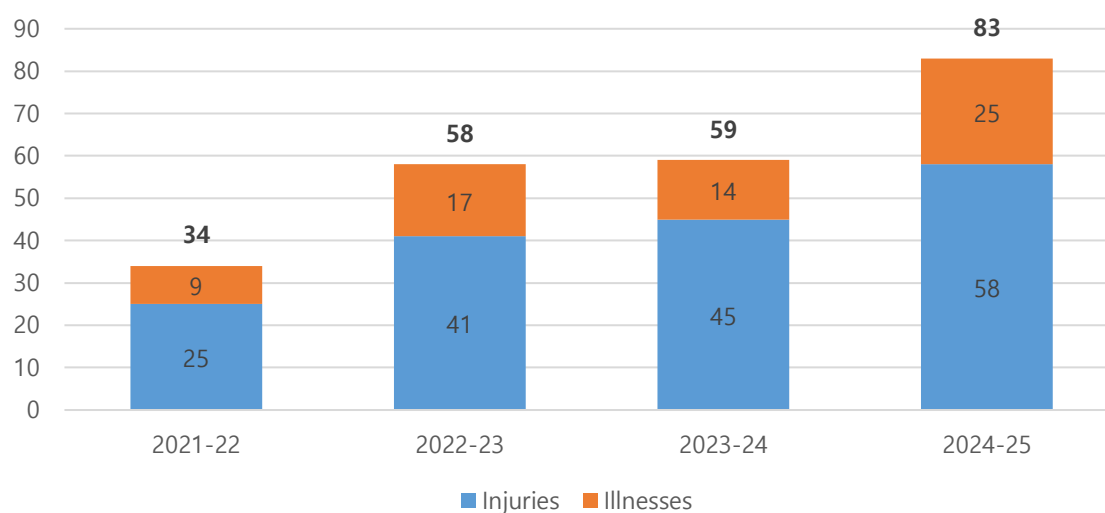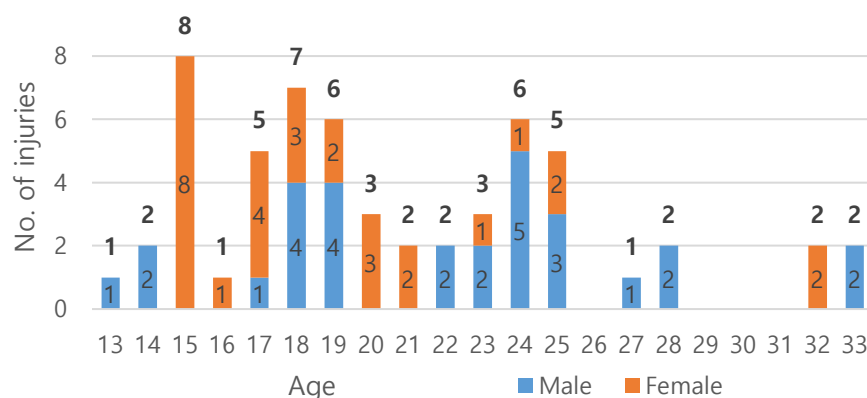Figure 1 illustrates the number of reported cases over the past four seasons.



*Figure 1. Reported cases of injury and illness from the 2021/22 to 2024/25 seasons*

## 2.2. Injury

### 2.2.1. Demography of injuries

Figure 2, 3 and table 2 and 3 illustrate the demography of injuries by gender and age groups.
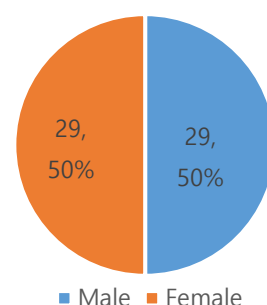


| Figure 2. Demography by age | Figure 3. Demography by gender |

*Table 2. Proportion of injury cases in each age group*

| Gender / Age group | Proportion, % (95% Confidence Interval) | | |
|---|---|---|---|
| | **Male** | **Female** | **All** |
| Under 20 | 41.4 (23.5 - 59.3) | 62.1 (44.4 - 79.7) | 51.7 (38.9 - 64.6) |
| 20 - 24 | 31.0 (14.2 - 47.9) | 24.1 (8.6 - 39.7) | 27.6 (16.1 - 39.1) |
| 25 - 29 | 20.7 (5.9 - 35.4) | 6.9 (0 - 16.1) | 13.8 (4.9 - 22.7) |
| 30 and above | 6.9 (0 - 16.1) | 6.9 (0 - 16.1) | 6.9 (0.4 - 13.4) |
| Not Recorded | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |

*Table 3. Proportion of each discipline*

| Discipline | Proportion, % (95% Confidence Interval) | | | |
|---|---|---|---|---|
| | **Male** | **Female** | **U20** | **All** |
| Singles | 55.2 (37.1 - 73.3) | 55.2 (37.1 - 73.3) | 73.3 (57.5 - 89.2) | 55.2 (42.4 - 68.0) |
| Pairs | 20.7 (5.9 - 35.4) | 13.8 (1.2 - 26.3) | 6.7 (0 - 15.6) | 17.2 (7.5 -27.0) |
| Ice Dance | 24.1 (8.6 - 39.7) | 31.0 (14.2 - 47.9) | 20.0 (5.7 - 34.3) | 27.6 (16.1 - 39.1) |

The data clearly show that younger age groups reported more injuries amongst both male and female genders. Particularly amongst **females**, injuries reported by **U20** were significantly higher than the other age groups. Besides, more than half of the injuries were reported by **single** skaters, particularly it was more than 70% amongst U20. Incident Rate and Injury Proportion of FS

In the 2024/2025 season, **the Incident Rate (IR) was 1.33 - 1.93, and the Injury Proportion (IP) was 0.3% in FS,** where majority of injuries in FS occurred during practice/training.

### 2.2.2. Regions of body parts

Table 4 illustrates the main anatomic regions and sub-regions (body parts) of injuries.

*Table 4. Regions of injuries*

| Body parts (Main/Sub) | Proportion, % (95% Confidence Interval) | | | |
|---|---|---|---|---|
| | **Male** | **Female** | **U20** | **All** |
| **Head/neck** | **10.7 (0 - 22.2)** | **6.5 (0 - 15.1)** | **3.3 (0 - 9.8)** | **8.5 (1.4 - 15.6)** |
| Head | 7.1 (0 - 16.7) | 0.0 ( - ) | 0.0 ( - ) | 3.4 (0 - 8.0) |
| Face | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |
| Neck | 3.6 (0 - 10.4) | 6.5 (0 - 15.1) | 3.3 (0 - 9.8) | 5.1 (0 - 10.7) |
| **Upper limbs** | **14.3 (1.3 - 27.2)** | **12.9 (1.1 - 24.7)** | **10.0 (0 - 20.7)** | **13.6 (4.8 - 22.3)** |
| Shoulder/clavicle/upper arm | 7.1 (0 - 16.7) | 3.2 (0 - 9.4) | 3.3 (0 - 9.8) | 5.1 (0 - 10.7) |
| Sternum/ribs | 0.0 ( - ) | 3.2 (0 - 9.4) | 3.3 (0 - 9.8) | 1.7 (0 - 5.0) |
| Elbow/forearm | 0.0 ( - ) | 3.2 (0 - 9.4) | 0.0 ( - ) | 1.7 (0 - 5.0) |
| Wrist/hand/fingers | 7.1 (0 - 16.7) | 3.2 (0 - 9.4) | 3.3 (0 - 9.8) | 5.1 (0 - 10.7) |
| **Trunk** | **17.9 (3.7 -32.0)** | **19.4 (5.4 - 33.3)** | **20.0 (5.7 - 34.3)** | **18.6 (8.7 - 28.6)** |
| Abdomen/pelvis/buttock | 7.1 (0 - 16.7) | 6.5 (0 - 15.1) | 10.0 (0 - 20.7) | 6.8 (0.4 - 13.2) |
| Lower back | 10.7 (0 - 22.2) | 12.9 (1.1 - 24.7) | 10.0 (0 - 20.7) | 11.9 (3.6 - 20.1) |
| **Lower limbs** | **57.1 (38.8 - 75.5)** | **61.3 (44.1 - 78.4)** | **66.7 (49.8 - 83.5)** | **59.3 (46.8 - 71.9)** |
| Hip/groin | 3.6 (0 - 10.4) | 6.5 (0 - 15.1) | 3.3 (0 - 9.8) | 5.1 (0 - 10.7) |
| Thigh | 7.1 (0 - 16.7) | 0.0 ( - ) | 3.3 (0 - 9.8) | 3.4 (0 - 8.0) |
| Knee | 10.7 (0 - 22.2) | 9.7 (0 - 20.1) | 6.7 (0 - 15.6) | 10.2 (2.5 - 17.9) |
| Lower leg/Achilles tendon | 3.6 (0 - 10.4) | 6.5 (0 - 15.1) | 6.7 (0 - 15.6) | 5.1 (0 - 10.7) |
| Ankle/foot | 32.1 (14.8 - 49.4) | 38.7 (21.6 - 55.9) | 46.7 (28.8 - 64.5) | 35.6 (23.4 - 47.8) |
| **Not Recorded/Other** | **0.0 ( - )** | **0.0 ( - )** | **0.0 ( - )** | **0.0 ( - )** |

The table clearly shows that **ankle/foot injuries** were by far the most commonly injured regions across all groups. Particularly amongst U20, they were significantly higher than the other regions. Ankle/Foot have been the most commonly reported injury regions over the past three seasons (2021/2022 to 2023/2024 seasons), and the trend has continued into the 2024/2025 season.

## 2.2.3. Types of injuries

Table 5 illustrates the proportion of main types and sub-types of injuries.

*Table 5. Reported types of injuries*

| Diagnosis | Proportion, % (95% Confidence Interval) | | | |
|---|---|---|---|---|
| | **Male** | **Female** | **U20** | **All** |
| **Brain/nerve** | **6.5 (0 - 15.1)** | **9.1 (0 - 18.9)** | **8.8 (0 - 18.4)** | **7.8 (1.2 - 14.4)** |
| Concussion | 0.0 ( - ) | 3.0 (0 - 8.9) | 2.9 (0 - 8.6) | 1.6 (0 - 4.6) |
| Nerve/spinal chord | 6.5 (0 - 15.1) | 6.1 (0 - 14.2) | 5.9 (0 - 13.8) | 6.3 (0.3 - 12.2) |
| **Bone** | **12.9 (1.1 - 24.7)** | **27.3 (12.1-42.5)** | **35.3 (19.2 - 51.4)** | **20.3 (10.5 - 30.2)** |
| Fracture | 9.7 (0 - 20.1) | <span style="color:red">21.2 (7.3 - 35.2)</span> | <span style="color:red">26.5 (11.6 - 41.3)</span> | 15.6 (6.7 - 24.5) |
| Stress fracture | 3.2 (0 - 9.4) | 6.1 (0 - 14.2) | 8.8 (0 - 18.4) | 4.7 (0 - 9.9) |
| **Joint/ligament** | **32.3 (15.8 - 48.7)** | **30.3 (14.6 - 46.0)** | **20.6 (7.0 - 34.2)** | **31.3 (19.9 - 42.6)** |
| Dislocation, subluxation | 3.2 (0 - 9.4) | 9.1 (0 - 18.9) | 8.8 (0 - 18.4) | 6.3 (0.3 - 12.2) |
| Lesion of meniscus/cartilage | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |
| Ligaments (sprain) | 25.8 (10.4 - 41.2) | 15.2 (2.9 - 27.4) | 11.8 (0.9 - 22.6) | <span style="color:red">20.3 (10.5 - 30.2)</span> |
| Arthritis/synovitis/bursitis | 3.2 (0 - 9.4) | 6.1 (0 - 14.2) | 2.9 (0 - 8.6) | 4.7 (0 - 9.9) |
| **Muscle/tendon** | **38.7 (21.6 - 55.9)** | **24.2 (9.6 - 38.9)** | **26.5 (11.6 - 41.3)** | **31.3 (19.9 - 42.6)** |
| Muscle strain/tear | 32.3 (15.8 - 48.7) | 9.1 (0 - 18.9) | 14.7 (2.8 - 26.6) | <span style="color:red">20.3 (10.5 - 30.2)</span> |
| Tendon rupture | 0.0 ( - ) | 3.0 (0 - 8.9) | 2.9 (0 - 8.6) | 1.6 (0 - 4.6) |
| Contusion/bruise | 6.5 (0 - 15.1) | 6.1 (0 - 14.2) | 5.9 (0 - 13.8) | 6.3 (0.3 - 12.2) |
| Chronic tendinopathy | 0.0 ( - ) | 3.0 (0 - 8.9) | 0.0 ( - ) | 1.6 (0 - 4.6) |
| Muscle cramp/spasm | 0.0 ( - ) | 3.0 (0 - 8.9) | 2.9 (0 - 8.6) | 1.6 (0 - 4.6) |
| **Skin** | **9.7 (0 - 20.1)** | **9.1 (0 - 18.9)** | **5.9 (0 - 13.8)** | **9.4 (2.2 - 16.5)** |
| Laceration/abrasion | 9.7 (0 - 20.1) | 9.1 (0 - 18.9) | 5.9 (0 - 13.8) | 9.4 (2.2 - 16.5) |
| **Other** | **0.0 ( - )** | **0.0 ( - )** | **0.0 ( - )** | **0.0 ( - )** |
| **Not Recorded** | **0.0 ( - )** | **0.0 ( - )** | **0.0 ( - )** | **0.0 ( - )** |

Overall, **ligaments (sprain)** and **muscle strain** were the two most common injuries, both of which were also the most common amongst male. In contrast, **fracture** was the most common amongst female and U20.

### 2.2.4. Causes of injuries

Table 6 illustrates the causes of injuries.

*Table 6. Causes of injuries*

| Contact with: | Proportion, % (95% Confidence Interval) | | | |
|---|---|---|---|---|
| | **Male** | **Female** | **U20** | **All** |
| Equipment | 12.9 (1.1 - 24.7) | 10.0 (0 - 20.7) | 16.1 (3.2 - 29.1) | 11.5 (3.5 - 19.5) |
| Ice | 22.6 (7.9 - 37.3) | 20.0 (5.7 - 34.2) | 25.8 (10.4 - 41.2) | 21.3 (11.0 - 31.6) |
| Boards/Pads | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |
| Person | 16.1 (3.2 - 29.1) | 10.0 (0 - 20.7) | 6.5 (0 - 15.1) | 13.1 (4.6 - 21.6) |
| Non-Contact | 48.4 (30.8 - 66.0) | 60.0 (42.5 - 77.5) | 51.6 (34.0 - 69.2) | 54.1 (41.6 - 66.6) |
| Not-Recorded/Other | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |

**Non-contact injuries** were the most common across all groups, and overall, they were significantly higher than the other causes.

### 2.2.5. Characteristics of injuries

Table 7 illustrates the characteristics of injuries by acute, recurrent or chronic.

*Table 7. Characteristics of injuries*

| Characteristics | Proportion, % (95% Confidence Interval) | | | |
|---|---|---|---|---|
| | **Male** | **Female** | **U20** | **All** |
| Acute (new onset) | 75.9 (60.3 - 91.4) | 60.0 (42.5 - 77.5) | 66.7 (49.8 - 83.5) | 67.8 (55.9 - 79.7) |
| Recurrent (upon previous injury) | 20.7 (5.9 - 35.4) | 33.3 (16.5 - 50.2) | 30.0 (13.6 - 46.4) | 27.1 (15.8 - 38.5) |
| Chronic | 3.4 (0 - 10.1) | 6.7 (0 - 15.6) | 3.3 (0 - 9.8) | 5.1 (0 - 10.7) |
| Not Recorded | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |

**Acute injuries** were the most common across all groups, and were significantly higher than the other characteristics except amongst female.

## 2.2.6. Time of injury occurrence

Table 8 illustrates the time of injury occurrence.

*Table 8. Time of injury occurrence*

| Time of injury occurrence | Proportion, % (95% Confidence Interval) | | | |
|---|---|---|---|---|
| | **Male** | **Female** | **U20** | **All** |
| Practice/Training | 79.3 (64.6 - 94.1) | 74.2 (58.8 - 89.6) | 87.5 (76.0 - 99.0) | 76.7 (66.0 - 87.4) |
| Competition | 17.2 (3.5 - 31.0) | 16.1 (3.2 - 29.1) | 9.4 (0 - 19.5) | 16.7 (7.2 - 26.1) |
| Other (specify) | 3.4 (0 - 10.1) | 6.5 (0 - 15.1) | 3.1 (0 - 9.2) | 5.0 (0 - 10.5) |
| Not Recorded | 0.0 ( - ) | 3.2 (0 - 9.4) | 0.0 ( - ) | 1.7 (0 - 4.9) |

Similar to past seasons, injuries occurring **during practice/training** were significantly higher than those during competition or other times across all groups. Particularly, nearly 90% of injuries amongst U20 occurred during practice/training.

## 2.2.7. Injury incidence by event during competition

Figure 4 illustrates the number of reported injuries during competition by event in the 2024/2025 season. A total of 9 injuries were reported.
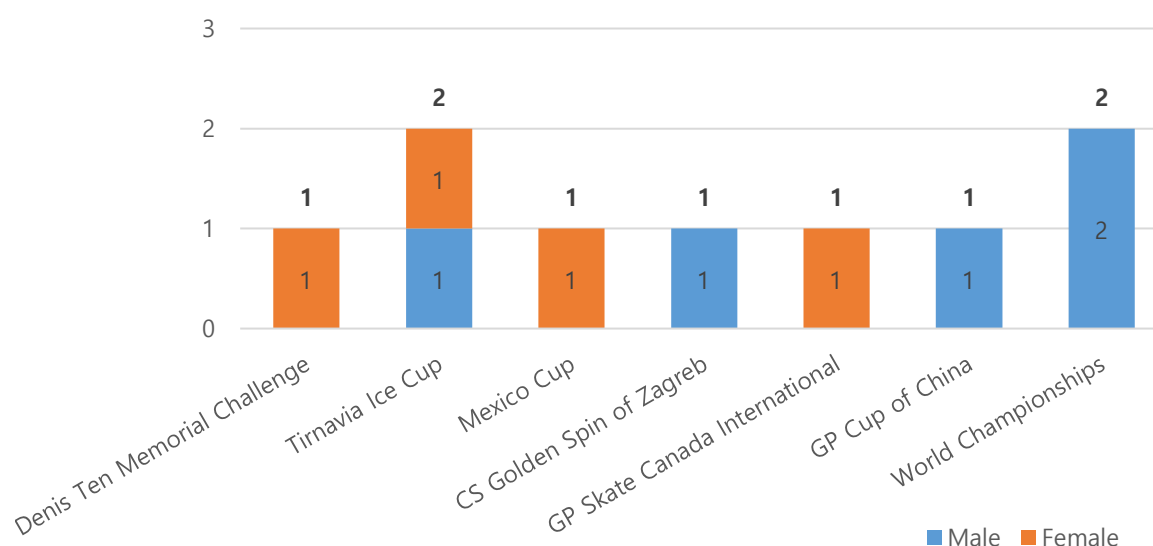


*Figure 4. Reported injuries by events 2024/2025*

### 2.2.8. Severity of injuries

Table 9 and 10 illustrate the severity of injuries from disposition and lay-off time after injury.

*Table 9. Disposition after injury*

| Disposition | Proportion, % (95% Confidence Interval) | | | |
|---|---|---|---|---|
| | **Male** | **Female** | **U20** | **All** |
| Resumed activity | 31.0 (14.2 - 47.9) | 37.9 (20.3 - 55.6) | 20.0 (5.7 - 34.3) | 34.5 (22.3 - 46.7) |
| Unable to train/compete | 65.5 (48.2 - 82.8) | 48.3 (30.1 - 66.5) | 66.7 (49.8 - 83.5) | 56.9 (44.2 - 69.6) |
| Transport to hospital | 3.4 (0 - 10.1) | 13.8 (1.2 - 26.3) | 13.3 (1.2 - 25.5) | 8.6 (1.4 - 15.8) |
| Not Recorded | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |

*Table 10. Lay-off time after injury*

| Lay-off time | Proportion, % (95% Confidence Interval) | | | |
|---|---|---|---|---|
| | **Male** | **Female** | **U20** | **All** |
| Less than 1 day | 20.7 (5.9 - 35.4) | 13.8 (1.2 - 26.3) | 0.0 ( - ) | 17.2 (7.5 - 27.0) |
| 1 to 3 days | 10.3 (0 - 21.4) | 6.9 (0 - 16.1) | 6.7 (0 - 15.6) | 8.6 (1.4 - 15.8) |
| 4 to 7 days | 17.2 (3.5 - 31.0) | 13.8 (1.2 - 26.3) | 6.7 (0 - 15.6) | 15.5 (6.2 - 24.8) |
| Greater than 7 days | 48.3 (30.1 - 66.5) | 65.5 (48.2 - 82.8) | 86.7 (74.5 - 98.8) | 56.9 (44.2 - 69.6) |
| Not Recorded | 3.4 (0 - 10.1) | 0.0 ( - ) | 0.0 ( - ) | 1.7 (0 - 5.1) |

Injury with a lay-off time greater than 7 days is considered severe. Notably, 86.7% of the injuries amongst U20 involved more than 7 days of a lay-off time. **The data illustrates that U20 skaters are at risk of injuries that are both frequent and severe in FS.**

## 2.3. Illness

### 2.3.1. Illnesses during events

Figure 5 illustrates the number of reported illnesses by event in the 2024/2025 season. A total of 24 illnesses were reported.
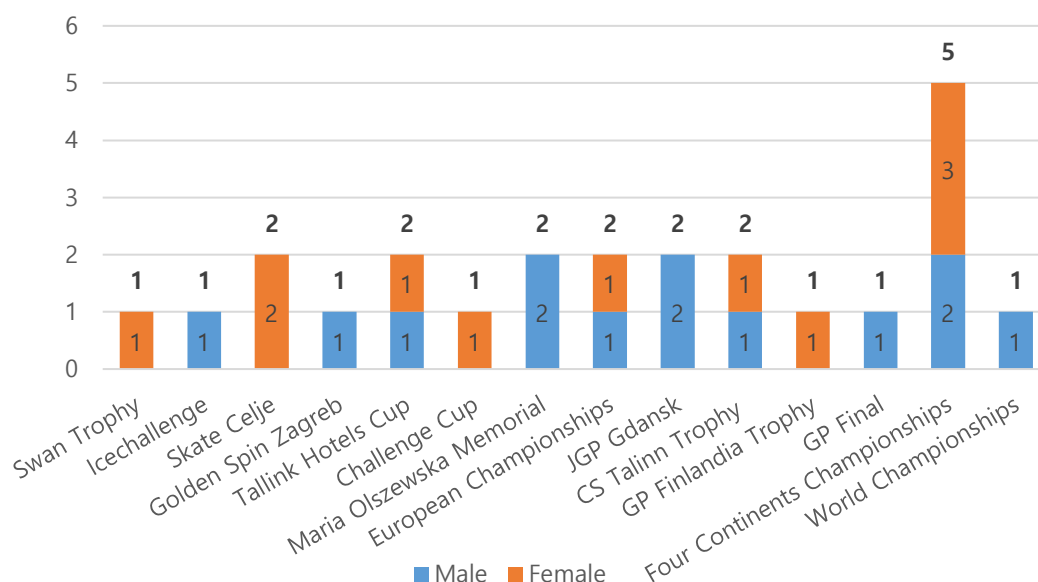


*Figure 5. Reported illnesses by events 2024/2025*

### 2.3.2. Main symptoms and causes

Figure 6 illustrates the main symptoms and supposed causes of the illnesses.
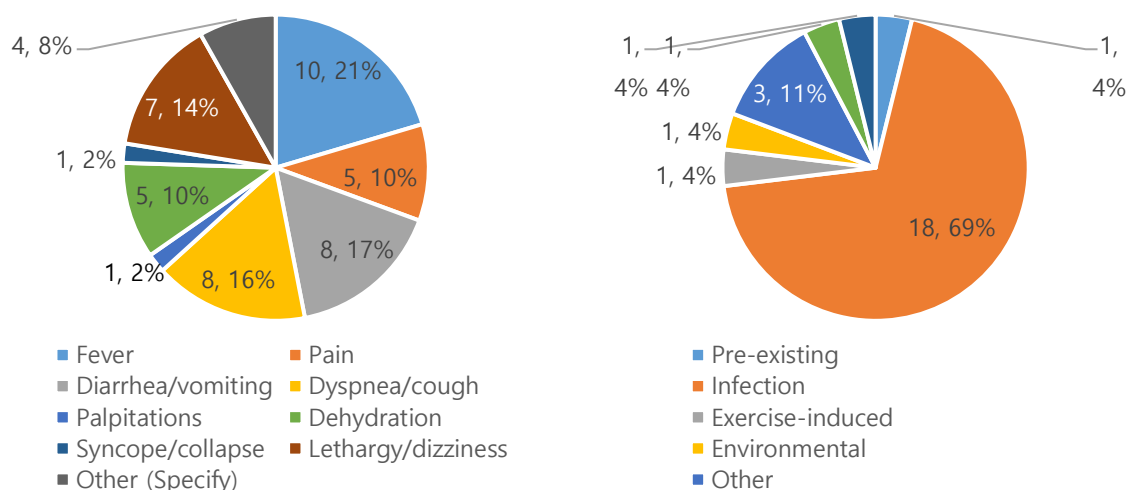


*Figure 6. Main symptoms and supposed causes*

Nearly 70% of illnesses were caused by infection. There was a notable case that five skaters reported the similar symptoms during the Four Continents Championships (diarrhea / vomiting, supposedly caused by infection). The affected skaters were from Canada (3), the US (1) and Japan (1).

## 2.4.   Summary

To summarise the injury analysis, ankle/foot injuries were both the most common and the most severe, showing significant differences in FS. 36% (21/58) of all the reported injuries were ankle/foot injuries, and 21% involved a lay-off time of greater than 7 days. Furthermore, 16% were U20 singles skaters, which clearly indicates that they are the primary target group for greater attention.
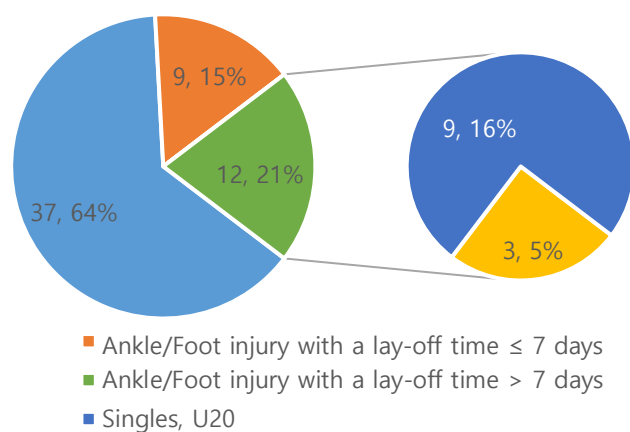


- Ankle/Foot injury with a lay-off time ≤ 7 days
- Ankle/Foot injury with a lay-off time > 7 days
- Singles, U20

*Figure 7. Primary target group*

# 3. Speed Skating (SS)

## 3.1.  Overview

Table 11 illustrates the total number of reported injuries and illnesses in and out of the competitions in SS during 2024/2025 season.

*Table 11. Reported cases and frequencies*

|             | All | Male | Female | U20 |
|------------:|:---:|:----:|:------:|:---:|
| Injuries    | 21  | 8    | 13     | 7   |
| Illnesses   | 9   | 5    | 4      | 3   |
| **Total Cases** | **30** | **13** | **17** | **10** |

Female skaters reported more injuries. U20 reported 33% of injuries and illnesses.

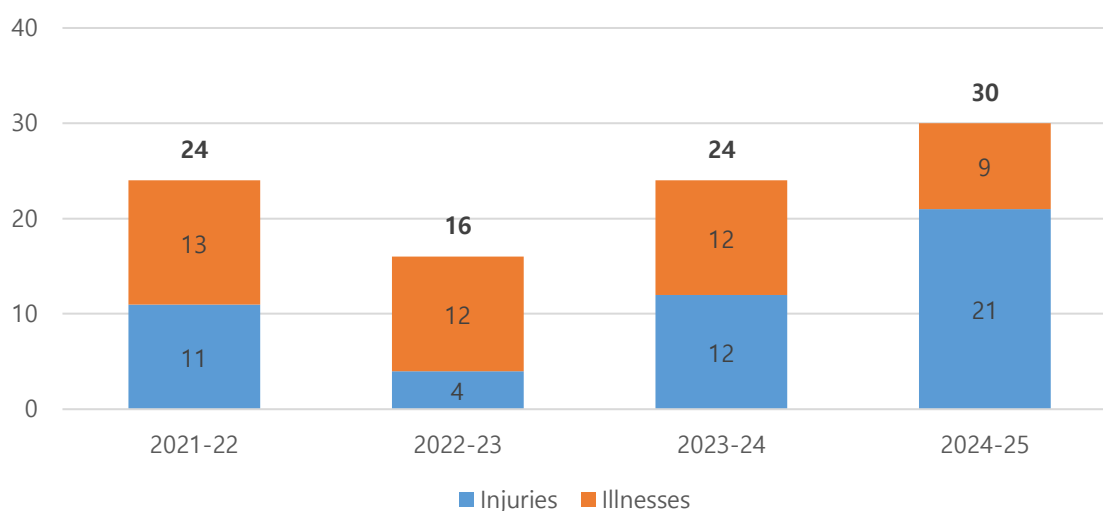Figure 8 illustrates the number of reported cases over the past four seasons.



*Figure 8. Reported cases of injury and illness from the 2021/22 to 2024/25 seasons*

## 3.2. Injury

### 3.2.1. Demography of injuries

Figure 9,10 and Table 12 illustrate the demography of injuries by age groups and gender.
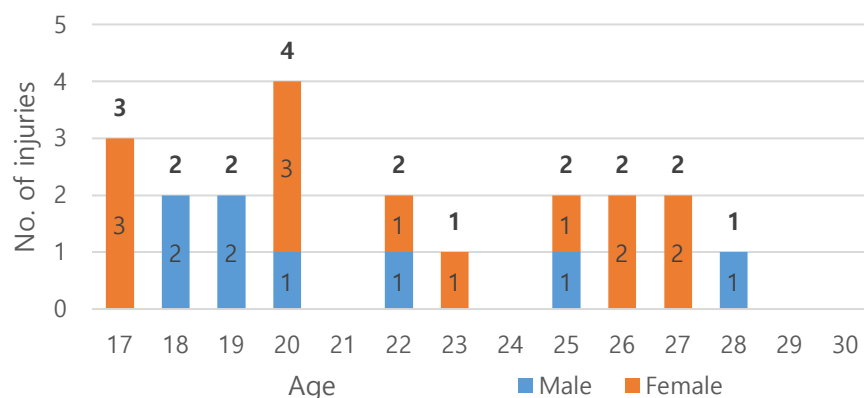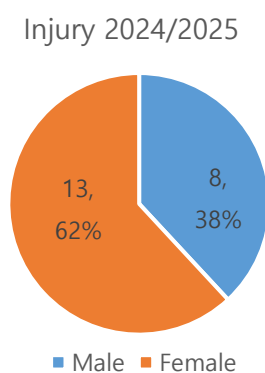


Figure 9. Demography by age



Figure 10. Demography by gender

Table 12. Proportion of each age group

| Gender / Age group | Proportion, % (95% Confidence Interval) | | |
| --- | --- | --- | --- |
| | **Male** | **Female** | **All** |
| Under 20 | 50.0 (15.4 - 84.6) | 23.1 (0.2 - 46.0) | 33.3 (13.2 - 53.5) |
| 20 - 24 | 25.0 (0 - 55.0) | 38.5 (12.0 - 64.9) | 33.3 (13.2 - 53.5) |
| 25 - 29 | 25.0 (0 - 55.0) | 38.5 (12.0 - 64.9) | 33.3 (13.2 - 53.5) |
| 30 and above | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |
| Not Recorded | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |

There were no statistically significant differences between genders or age groups.

### Incident Rate and Injury Proportion of SS

**In the 2024/2025 season, the Incident Rate (IR) was 1.49 - 2.08, and the Injury Proportion (IP) was 0.5% in SS.**

### 3.2.2. Regions of body parts

Table 13 illustrates the main and sub regions (body parts) of injuries.

*Table 13. Regions of injuries*

| Body parts (Main/Sub) | Proportion, % (95% Confidence Interval) | | | |
|---|---|---|---|---|
| | **Male** | **Female** | **U20** | **All** |
| **Head/neck** | **0.0 ( - )** | **12.5 (0 - 28.7)** | **25.0 (0 - 55.0)** | **8.3 (0 - 19.4)** |
| Head | 0.0 ( - ) | 12.5 (0 - 28.7) | 25.0 (0 - 55.0) | 8.3 (0 - 19.4) |
| Face | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |
| Neck | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |
| **Upper limbs** | **0.0 ( - )** | **12.5 (0 - 28.7)** | **12.5 (0 - 35.4)** | **8.3 (0 - 19.4)** |
| Shoulder/clavicle/upper arm | 0.0 ( - ) | 6.3 (0 - 18.1) | 0.0 ( - ) | 4.2 (0 - 12.2) |
| Sternum/ribs | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |
| Elbow/forearm | 0.0 ( - ) | 6.3 (0 - 18.1) | 12.5 (0 - 35.4) | 4.2 (0 - 12.2) |
| Wrist/hand/fingers | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |
| **Trunk** | **12.5 (0 - 35.4)** | **25.0 (3.8 - 46.2)** | **12.5 (0 - 35.4)** | **20.8 (4.6 - 37.1)** |
| Abdomen/pelvis/buttock | 12.5 (0 - 35.4) | 6.3 (0 - 18.1) | 0.0 ( - ) | 8.3 (0 - 19.4) |
| Lower back | 0.0 ( - ) | 18.8 (0 - 37.9) | 12.5 (0 - 35.4) | 12.5 (0 - 25.7) |
| **Lower limbs** | **87.5 (64.6 - 100)** | **50.0 (25.5 - 74.5)** | **50.0 (15.4 - 84.6)** | **62.5 (43.1 - 81.9)** |
| Hip/groin | 37.5 (4.0 - 71.0) | 18.8 (0 - 37.9) | 12.5 (0 - 35.4) | <span style="color:red">25.0 (7.7 - 42.3)</span> |
| Thigh | 25.0 (0 - 55.0) | 0.0 ( - ) | 25.0 (0 - 55.0) | 8.3 (0 - 19.4) |
| Knee | 0.0 ( - ) | 6.3 (0 - 18.1) | 0.0 ( - ) | 4.2 (0 - 12.2) |
| Lower leg/Achilles tendon | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |
| Ankle/foot | 25.0 (0 - 55.0) | 25.0 (3.8 - 46.2) | 12.5 (0 - 35.4) | <span style="color:red">25.0 (7.7 - 42.3)</span> |
| **Not Recorded/Other** | **0.0 ( - )** | **0.0 ( - )** | **0.0 ( - )** | **0.0 ( - )** |

Overall, **lower limbs (Hip/groin and Ankle/foot)** injuries were the most commonly injured regions across all groups. There were no statistically significant differences between regions or groups.

In 2023/2024 season, Trunk and Lower limbs (Lower back, Lower leg/Achilles tendon and Ankle/foot) were the major injury regions, and the trend continued into the 2024/2025 season.

### 3.2.3. Types of injuries

Table 14 illustrates the proportion of main and sub types of injuries.

*Table 14. Reported types of injuries*

| Diagnosis | Proportion, % (95% Confidence Interval) | | | |
|---|---|---|---|---|
| | **Male** | **Female** | **U20** | **All** |
| **Brain/nerve** | **0.0 ( - )** | **14.3 (0 - 32.6)** | **22.2 (0 - 49.4)** | **8.7 (0 - 20.2)** |
| Concussion | 0.0 ( - ) | 14.3 (0 - 32.6) | 22.2 (0 - 49.4) | 8.7 (0 - 20.2) |
| Nerve/spinal chord | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |
| **Bone** | **0.0 ( - )** | **7.1 (0 - 20.6)** | **0.0 ( - )** | **4.3 (0 - 12.7)** |
| Fracture | 0.0 ( - ) | 7.1 (0 - 20.6) | 0.0 ( - ) | 4.3 (0 - 12.7) |
| Stress fracture | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |
| **Joint/ligament** | **33.3 (2.5 - 64.1)** | **14.3 (0 - 32.6)** | **11.1 (0 - 31.6)** | **21.7 (4.9 -38.6)** |
| Dislocation, subluxation | 0.0 ( - ) | 7.1 (0 - 20.6) | 0.0 ( - ) | 4.3 (0 - 12.7) |
| Lesion of meniscus/cartilage | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |
| Ligaments (sprain) | 33.3 (2.5 - 64.1) | 7.1 (0 - 20.6) | 11.1 (0 - 31.6) | 17.4 (1.9 - 32.9) |
| Arthritis/synovitis/bursitis | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |
| **Muscle/tendon** | **55.6 (23.1 - 88.0)** | **35.7 (10.6 - 60.8)** | **55.6 (23.1 - 88.0)** | **43.5 (23.2 - 63.7)** |
| Muscle strain/tear | 55.6 (23.1 - 88.0) | 21.4 (0 - 42.9) | 44.4 (12.0 - 76.9) | <span style="color:red">34.8 (15.3 - 54.2)</span> |
| Tendon rupture | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |
| Contusion/bruise | 0.0 ( - ) | 7.1 (0 - 20.6) | 11.1 (0 - 31.6) | 4.3 (0 - 12.7) |
| Chronic tendinopathy | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |
| Muscle cramp/spasm | 0.0 ( - ) | 14.3 (0 - 32.6) | 0.0 ( - ) | 8.7 (0 - 20.2) |
| **Skin** | **11.1 (0 - 31.6)** | **7.1 (0 - 20.6)** | **0.0 ( - )** | **8.7 (0 - 20.2)** |
| Laceration/abrasion | 11.1 (0 - 31.6) | 7.1 (0 - 20.6) | 0.0 ( - ) | 8.7 (0 - 20.2) |
| **Other** | **0.0 ( - )** | **0.0 ( - )** | **0.0 ( - )** | **0.0 ( - )** |
| **Not Recorded** | **0.0 ( - )** | **14.3 (0 - 32.6)** | **11.1 (0 - 31.6)** | **8.7 (0 - 20.2)** |

There were no statistically significant differences between types or groups.
**Muscle strain/tear** injuries were the most common across all groups, which also followed the same trend as in the 2023/2024 season.

### 3.2.4. Causes of injuries

Table 15 illustrates the causes of injuries.

*Table 15. Causes of injuries*

| Contact with: | Proportion, % (95% Confidence Interval) | | | |
|---|---|---|---|---|
| | **Male** | **Female** | **U20** | **All** |
| Equipment | 12.5 (0 - 35.4) | 6.3 (0 - 18.1) | 0.0 ( - ) | 8.3 (0 - 19.4) |
| Ice | 0.0 ( - ) | 18.8 (0 - 37.9) | 12.5 (0 - 35.4) | 12.5 (0-25.7) |
| Boards/Pads | 0.0 ( - ) | 18.8 (0 - 37.9) | 0.0 ( - ) | 12.5 (0-25.7) |
| Person | 0.0 ( - ) | 6.3 (0 - 18.1) | 12.5 (0 - 35.4) | 4.2 (0 - 12.2) |
| Non-Contact | 87.5 (64.6 - 100) | 50.0 (25.5 - 74.5) | 75.0 (45.0 - 100) | 62.5 (43.1 - 81.9) |
| Not-Recorded/Other | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |

Overall, **non-contact injuries** were significantly higher than the other causes.
Further study might be need **for females, who showed a relatively higher rate of contact injuries**, which could have contributed to a higher rate of head/neck or upper limbs injuries.

### 3.2.5. Characteristics of injuries

Table 16 illustrates the characteristics of injuries by acute, recurrent or chronic.

*Table 16. Characteristics of injuries*

| Characteristics | Proportion, % (95% Confidence Interval) | | | |
|---|---|---|---|---|
| | **Male** | **Female** | **U20** | **All** |
| Acute (new onset) | 87.5 (64.6 - 100) | 69.2 (44.1 - 94.3) | 85.7 (59.8 - 100) | 76.2 (58.0 - 94.4) |
| Recurrent (upon previous injury) | 12.5 (0 - 35.4) | 15.4 (0 - 35.0) | 14.3 (0 - 40.2) | 14.3 (0 - 29.3) |
| Chronic | 0.0 ( - ) | 15.4 (0 - 35.0) | 0.0 ( - ) | 9.5 (0 - 22.1) |
| Not Recorded | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |

Acute injuries were significantly higher than the other characteristics.

## 3.2.6. Time of injury occurrence

Table 17 illustrates the time of injury occurrence.

*Table 17. Time of injury occurrence*

| Time of injury occurrence | Proportion, % (95% Confidence Interval) | | | |
|---|---|---|---|---|
| | **Male** | **Female** | **U20** | **All** |
| Practice/Training | 12.5 (0 - 35.4) | 53.8 (26.7 - 80.9) | 42.9 (6.2 - 79.5) | 38.1 (17.3 - 58.9) |
| Competition | 62.5 (29.0 - 96.0) | 46.2 (19.1 - 73.3) | 42.9 (6.2 - 79.5) | 52.4 (31.0 - 73.7) |
| Other (specify) | 12.5 (0 - 35.4) | 0.0 ( - ) | 0.0 ( - ) | 4.8 (0 - 13.9) |
| Not Recorded | 12.5 (0 - 35.4) | 0.0 ( - ) | 14.3 (0 - 40.2) | 4.8 (0 - 13.9) |

Overall, injuries occurring **during the competition** were higher than during practice/training. The trend was stronger in male.

## 3.2.7. Injury incidence by event during competition

Figure 11 illustrates the number of reported injuries during competition by event in the 2024/2025 season. A total of 11 injuries were reported.
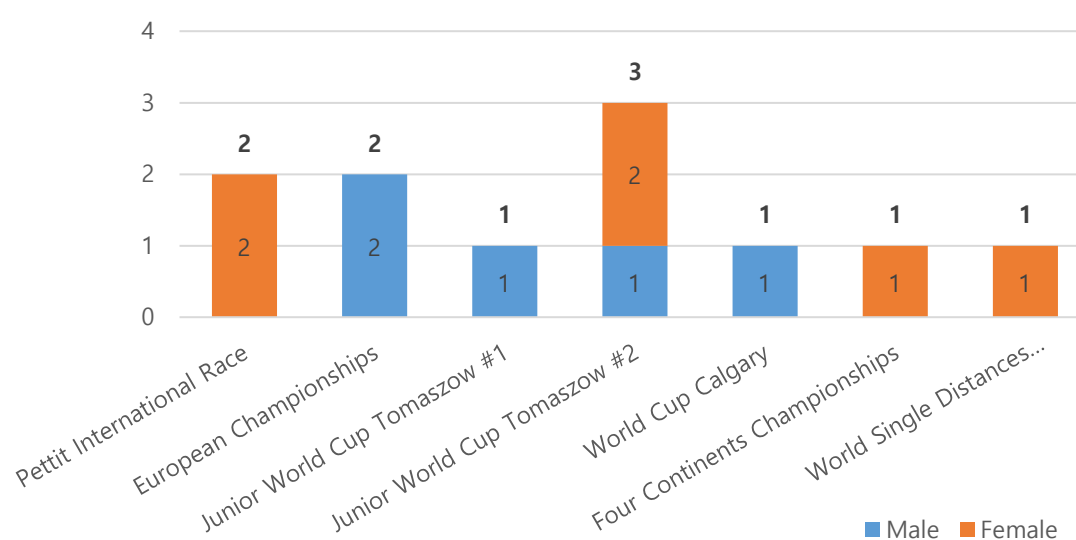


*Figure 11. Reported injuries by events 2024/2025*

### 3.2.8.  Severity of injuries

Table 18 and 19 illustrate the severity of injuries from disposition and lay-off time after injury.

*Table 18. Disposition after injury*

| Disposition | Proportion, % (95% Confidence Interval) | | | |
|---|---|---|---|---|
| | **Male** | **Female** | **U20** | **All** |
| Resumed activity | 25.0 (0 - 55.0) | 30.8 (5.7 - 55.9) | 28.6 (0 - 62.0) | 28.6 (9.2 - 47.9) |
| Unable to train/compete | 75.0 (45.0 - 100) | 53.8 (26.7 - 80.9) | 57.1 (20.5 - 93.8) | 61.9 (41.1 - 82.7) |
| Transport to hospital | 0.0 ( - ) | 15.4 (0 - 35.0) | 14.3 (0 - 40.2) | 9.5 (0 - 22.1) |
| Not Recorded | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |

*Table 19. Lay-off time after injury*

| Lay-off time | Proportion, % (95% Confidence Interval) | | | |
|---|---|---|---|---|
| | **Male** | **Female** | **U20** | **All** |
| Less than 1 day | 0.0 ( - ) | 7.7 (0 - 22.2) | 0.0 ( - ) | 4.8 (0 - 13.9) |
| 1 to 3 days | 37.5 (4.0 - 71.0) | 53.8 (26.7 - 80.9) | 28.6 (0 - 62.0) | 47.6 (26.3 - 69.0) |
| 4 to 7 days | 37.5 (4.0 - 71.0) | 7.7 (0 - 22.2) | 28.6 (0 - 62.0) | 19.0 (2.3 - 35.8) |
| Greater than 7 days | 25.0 (0 - 55.0) | 30.8 (5.7 - 55.9) | 42.9 (6.2 - 79.5) | 28.6 (9.2 - 47.9) |
| Not Recorded | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |

There were no statistically significant differences in disposition and lay-off time after injuries, however, the tables suggest **U20 skaters may have sustained more severe injuries**.

## 3.3. Illness

### 3.3.1. Illnesses during events

Figure 12 illustrates the number of reported illnesses by event in the 2024/2025 season. A total of 8 illnesses were reported.
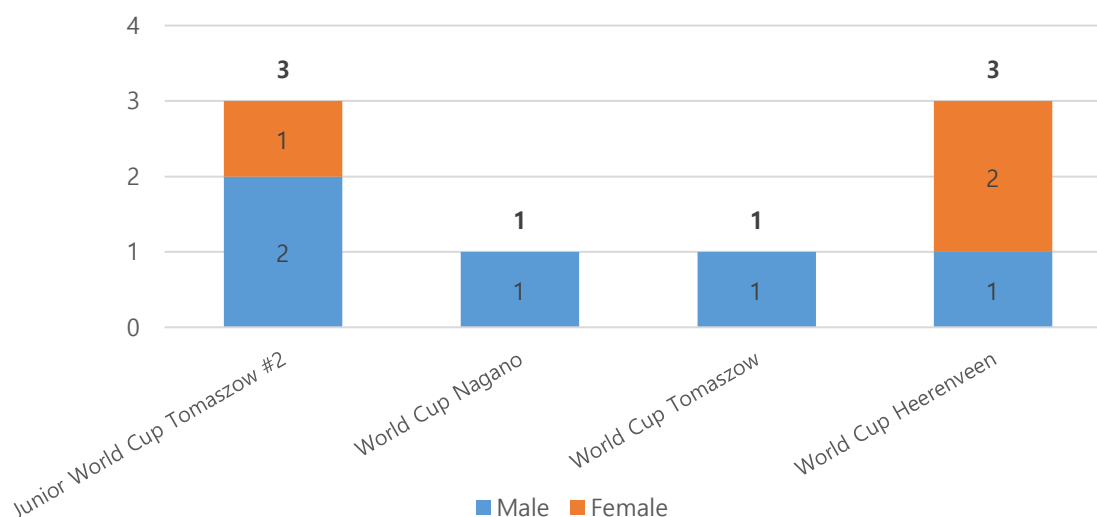


*Figure 12. Reported illnesses by events 2024/2025*

### 3.3.2. Main symptoms and causes

Figure 13 illustrates the main symptoms and supposed causes of the illnesses.
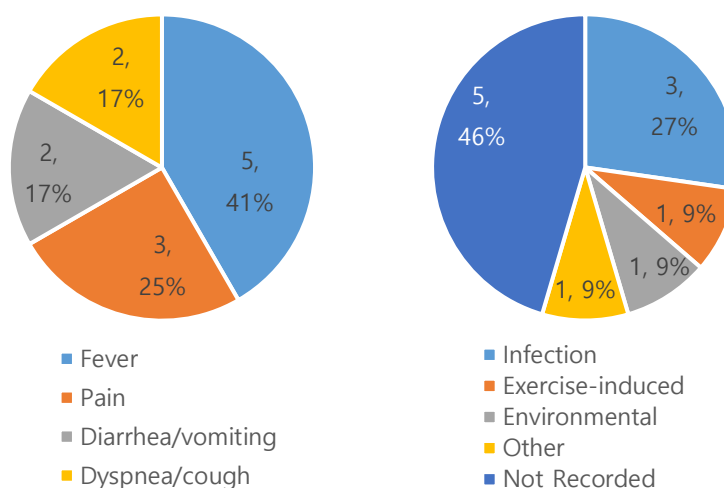


*Figure 13. Main symptoms and supposed causes*

No notable cases of illness were identified through the survey in SS.

## 3.4. Summary

Similar to the past seasons, the number of reported injuries and the number of serious injuries were smaller than in the other disciplines. Although there were no statistically significant differences, several differences in injured regions and injury types between genders were observed.

# 4. Short Track (ST)

## 4.1.    Overview

Table 20 illustrates the total number of reported injuries and illnesses in and out of the competitions in ST during 2024/2025 season.

*Table 20. Reported cases and frequencies*

|  | All | Male | Female | U20 |
|---|---|---|---|---|
| Injuries | 38 | 22 | 16 | 9 |
| Illnesses | 10 | 9 | 1 | 3 |
| **Total Cases** | **48** | **31** | **17** | **12** |

Male skaters reported more injuries and illnesses. Besides, U20 reported 24% of injuries and 30% of illnesses.

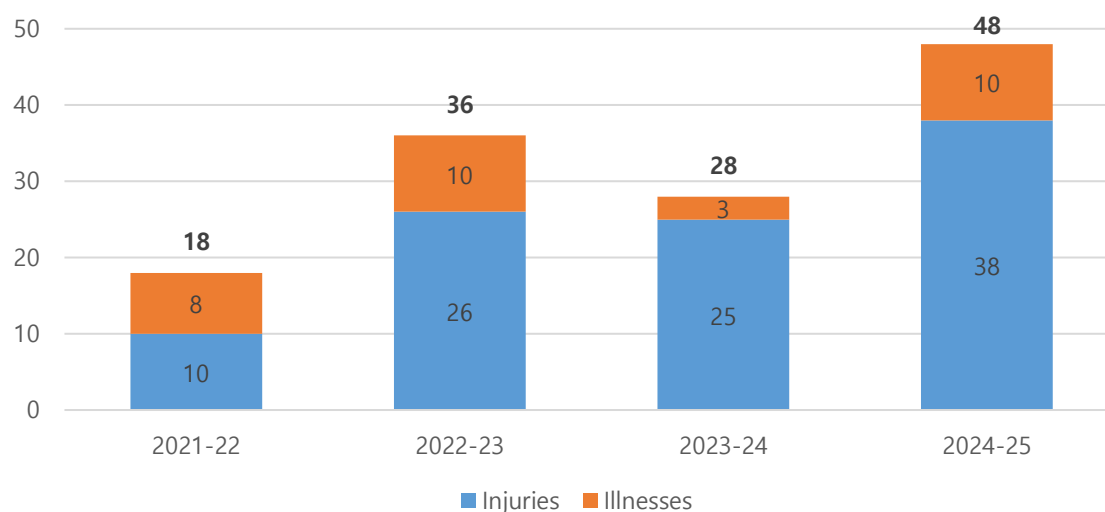Figure 14 illustrates the number of reported cases over the past four seasons.



*Figure 14. Reported cases of injury and illness from the 2021/22 to 2024/25 seasons*

## 4.2. Injury

### 4.2.1. Demography of injuries

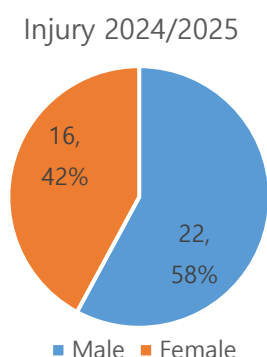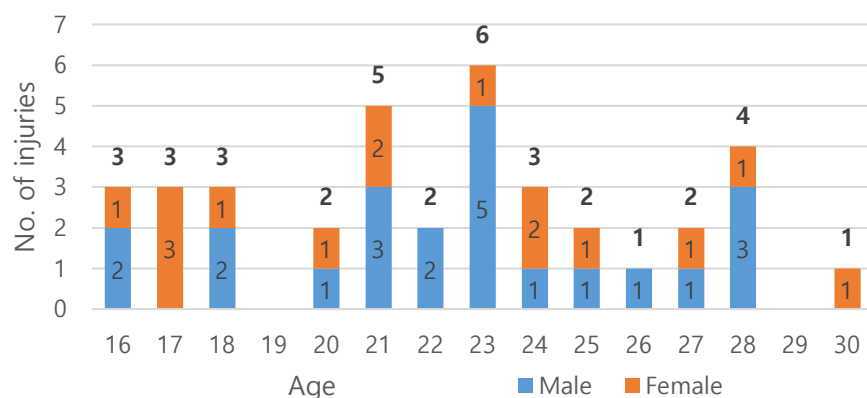Figure 15,16 and Table 21 illustrate the demography of injuries by age groups and gender.



*Figure 15. Demography by age*



*Figure 16. Demography by gender*

*Table 21. Proportion of each age group*

| Gender / Age group | Proportion, % (95% Confidence Interval) | | |
|---|---|---|---|
| | **Male** | **Female** | **All** |
| Under 20 | 18.2 (2.1 - 34.3) | 31.3 (8.5 - 54.0) | 23.7 (5.9 - 41.4) |
| 20 - 24 | 54.5 (33.7 - 75.4) | 37.5 (13.8 - 61.2) | 47.4 (26.5 - 68.2) |
| 25 - 29 | 27.3 (8.7 - 45.9) | 18.8 (0 - 37.9) | 23.7 (5.9 - 41.4) |
| 30 and above | 0 ( - ) | 6.3 (0 - 18.1) | 2.6 (0 - 9.3) |
| Not Recorded | 0 ( - ) | 6.3 (0 - 18.1) | 2.6 (0 - 9.3) |

There were no statistically significant differences between genders or age groups. However, the table suggested that **U20 female skaters may be at a higher risk of injury** than U20 male.

### Incident Rate and Injury Proportion of ST

In the 2024/2025 season, **the Incident Rate (IR) was 1.86 - 2.26, and the Injury Proportion (IP) was 1.3% in ST.**

## 4.2.2.  Regions of body parts

Table 22 illustrates the main and sub regions (body parts) of injuries.

*Table 22. Regions of injuries*

| Body parts (Main/Sub) | Proportion, % (95% Confidence Interval) | | | |
| --- | --- | --- | --- | --- |
| | **Male** | **Female** | **U20** | **All** |
| **Head/neck** | **22.7 (5.2 - 40.2)** | **38.9 (16.4 - 61.4)** | **22.2 (0 - 49.4)** | **30.0 (15.8 - 44.2)** |
| Head | 9.1 (0 - 21.1) | 16.7 (0 - 33.9) | 0.0 ( - ) | 12.5 (2.3 - 22.7) |
| Face | 13.6 (0 - 28.0) | 22.2 (3.0 - 41.4) | 22.2 (0 - 49.4) | 17.5 (5.7 - 29.3) |
| Neck | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |
| **Upper limbs** | **27.3 (8.7 - 45.9)** | **22.2 (3.0 - 41.4)** | **33.3 (2.5 - 64.1)** | **22.5 (9.6 - 35.4)** |
| Shoulder/clavicle/upper arm | 13.6 (0-28.0) | 11.1 (0 - 25.6) | 11.1 (0 - 31.6) | 12.5 (2.3 - 22.7) |
| Sternum/ribs | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |
| Elbow/forearm | 9.1 (0 - 21.1) | 0.0 ( - ) | 11.1 (0 - 31.6) | 2.5 (0 - 7.3) |
| Wrist/hand/fingers | 4.5 (0 - 13.2) | 11.1 (0 - 25.6) | 11.1 (0 - 31.6) | 7.5 (0 - 15.7) |
| **Trunk** | **9.1 (0 - 21.1)** | **11.1 (0 - 25.6)** | **0.0 ( - )** | **17.5 (5.7 - 29.3)** |
| Abdomen/pelvis/buttock | 4.5 (0 - 13.2) | 0.0 ( - ) | 0.0 ( - ) | 10.0 (0.7 - 19.3) |
| Lower back | 4.5 (0 - 13.2) | 11.1 (0 - 25.6) | 0.0 ( - ) | 7.5 (0 - 15.7) |
| **Lower limbs** | **40.9 (20.4 - 61.5)** | **27.8 (7.1 - 48.5)** | **44.4 (12.0 - 76.9)** | **30.0 (15.8 - 44.2)** |
| Hip/groin | 9.1 (0 - 21.1) | 0.0 ( - ) | 0.0 ( - ) | 5.0 (0 - 11.8) |
| Thigh | 4.5 (0 - 13.2) | 5.6 (0 - 16.1) | 11.1 (0 - 31.6) | 5.0 (0 - 11.8) |
| Knee | 9.1 (0 - 21.1) | 11.1 (0 - 25.6) | 11.1 (0 - 31.6) | 10.0 (0.7 - 19.3) |
| Lower leg/Achilles tendon | 9.1 (0 - 21.1) | 0.0 ( - ) | 11.1 (0 - 31.6) | 5.0 (0 - 11.8) |
| Ankle/foot | 9.1 (0 - 21.1) | 11.1 (0 - 25.6) | 11.1 (0 - 31.6) | 5.0 (0 - 11.8) |
| **Not Recorded/Other** | **0.0 ( - )** | **0.0 ( - )** | **0.0 ( - )** | **0.0 ( - )** |

There were no statistically significant differences between regions or groups.
**Whilst Lower limbs injuries were the most reported main region amongst male (40.9%) and U20 (44.4%), Head/neck injuries were the highest amongst female (38.9%).**
When focusing on the sub regions, **face injuries (17.5%) were the most common** across all groups, followed by head (12.5%) and shoulder/clavicle/upper arm (12.5%).

In 2023/2024 season, Ankle/foot (21.4%) and Lower leg/Achilles tendon (14.3%) were the two most commonly injured regions. There were no statistically significant differences, however, **the injury trend in 2024/2025 season may have shifted to upper regions** (above shoulder).

## 4.2.3. Types of injuries

Table 23 illustrates the proportion of main and sub types of injuries.

*Table 23. Reported types of injuries*

| Diagnosis | Proportion, % (95% Confidence Interval) | | | |
|---|---|---|---|---|
| | **Male** | **Female** | **U20** | **All** |
| **Brain/nerve** | **7.7 (0 - 17.9)** | **15.0 (0 - 30.6)** | **0.0 ( - )** | **10.9 (1.9 - 19.9)** |
| Concussion | 7.7 (0 - 17.9) | 15.0 (0 - 30.6) | 0.0 ( - ) | 10.9 (1.9 - 19.9) |
| Nerve/spinal chord | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |
| **Bone** | **0.0 ( - )** | **0.0 ( - )** | **0.0 ( - )** | **0.0 ( - )** |
| Fracture | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |
| Stress fracture | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |
| **Joint/ligament** | **30.8 (13.0 - 48.5)** | **20.0 (2.5 - 37.5)** | **40.0 (9.6 - 70.4)** | **26.1 (13.4 - 38.8)** |
| Dislocation, subluxation | 7.7 (0 - 17.9) | 10.0 (0 - 23.1) | 0.0 ( - ) | 8.7 (0.6 - 16.8) |
| Lesion of meniscus/cartilage | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |
| Ligaments (sprain) | 19.2 (4.1 - 34.4) | 10.0 (0 - 23.1) | 40.0 (9.6 -70.4) | 15.2 (4.8 - 25.6) |
| Arthritis/synovitis/bursitis | 3.8 (0 - 11.2) | 0.0 ( - ) | 0.0 ( - ) | 2.2 (0 - 6.4) |
| **Muscle/tendon** | **38.5 (19.8 - 57.2)** | **30.0 (9.9 - 50.1)** | **20.0 (0 - 44.8)** | **34.8 (21.0 - 48.5)** |
| Muscle strain/tear | 0.0 ( - ) | 10.0 (0 - 23.1) | 10.0 (0 - 28.6) | 4.3 (0 - 10.2) |
| Tendon rupture | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |
| Contusion/bruise | 34.6 (16.3 - 52.9) | 15.0 (0 - 30.6) | 10.0 (0 - 28.6) | 26.1 (13.4 - 38.8) |
| Chronic tendinopathy | 3.8 (0 - 11.2) | 0.0 ( - ) | 0.0 ( - ) | 2.2 (0 - 6.4) |
| Muscle cramp/spasm | 0.0 ( - ) | 5.0 (0 - 14.6) | 0.0 ( - ) | 2.2 (0 - 6.4) |
| **Skin** | **15.4 (1.5 - 29.3)** | **25.0 (6.0 - 44.0)** | **20.0 (0 - 44.8)** | **19.6 (8.1 - 31.0)** |
| Laceration/abrasion | 15.4 (1.5 - 29.3) | 25.0 (6.0 - 44.0) | 20.0 (0 - 44.8) | 19.6 (8.1 - 31.0) |
| **Other** | **7.7 (0 - 17.9)** | **10.0 (0 - 23.1)** | **20.0 (0 - 44.8)** | **8.7 (0.6 - 16.8)** |
| **Not Recorded** | **0.0 ( - )** | **0.0 ( - )** | **0.0 ( - )** | **0.0 ( - )** |

*Other: Nose bleeding, numbness in hands and feet

There were no statistically significant differences between types or groups.
**Muscle/tendon injuries were the most common main injury type amongst male and female, whilst joint/ligament injuries were the most common amongst U20.**

Compared to the 2023/2024 season, contusion/bruise remained the most common sub type of injury (26.7% and 26.1% respectively). There were no statistically significant differences, however, **the report of concussion decreased (23.3%→10.9%) whilst laceration/abrasion injuries increased (6.7%→19.6%).**

### 4.2.4. Causes of injuries

Table 24 illustrates the causes of injuries.

*Table 24. Causes of injuries*

| Contact with: | Proportion, % (95% Confidence Interval) | | | |
|---|---|---|---|---|
| | **Male** | **Female** | **U20** | **All** |
| Equipment | 14.3 (1.3 - 27.2) | 23.8 (5.6 - 42.0) | 8.3 (0 - 24.0) | 18.4 (7.5 - 29.2) |
| Ice | 21.4 (6.2 - 36.6) | 19.0 (2.3 - 35.8) | 33.3 (6.7 - 60.0) | 20.4 (9.1 - 31.7) |
| Boards/Pads | 25.0 (9.0 - 41.0) | 9.5 (0 - 22.1) | 16.7 (0 - 37.8) | 18.4 (7.5 - 29.2) |
| Person | 32.1 (14.8 - 49.4) | 33.3 (13.2 - 53.5) | 25.0 (0.5 - 49.5) | 32.7 (19.5 - 45.8) |
| Non-Contact | 7.1 (0 - 16.7) | 14.3 (0 - 29.3) | 16.7 (0 - 37.8) | 10.2 (1.7 - 18.7) |
| Not-Recorded/Other | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |

Overall, injuries caused by **contact with person** were the most common, and were significantly higher than Non-contact injuries. However, amongst U20, contact with Ice was even higher.

### 4.2.5. Characteristics of injuries

Table 25 illustrates the characteristics of injuries by acute, recurrent or chronic.

*Table 25. Characteristics of injuries*

| Characteristics | Proportion, % (95% Confidence Interval) | | | |
|---|---|---|---|---|
| | **Male** | **Female** | **U20** | **All** |
| Acute (new onset) | 86.4 (72.0 - 100) | 75.0 (53.8 - 96.2) | 66.7 (35.9 - 97.5) | 81.6 (69.3 - 93.9) |
| Recurrent (upon previous injury) | 9.1 (0 - 21.1) | 18.8 (0 - 37.9) | 33.3 (2.5 - 64.1) | 13.2 (2.4 - 23.9) |
| Chronic | 4.5 (0 - 13.2) | 0.0 ( - ) | 0.0 ( - ) | 2.6 (0 - 7.7) |
| Not Recorded | 0.0 ( - ) | 6.3 (0 - 18.1) | 0.0 ( - ) | 2.6 (0 - 7.7) |

**Acute injuries were most common across all groups**, and were significantly higher than the other characteristics except amongst U20. Amongst U20, **Recurrent injuries were relatively higher than the other groups**.

### 4.2.6. Time of injury occurrence

Table 26 illustrates the time of injury occurrence.

*Table 26. Time of injury occurrence*

| Time of injury occurrence | Proportion, % (95% Confidence Interval) | | | |
|---|---|---|---|---|
| | **Male** | **Female** | **U20** | **All** |
| Practice/Training | 13.6 (0 - 28.0) | 12.5 (0 - 28.7) | 11.1 (0 - 31.6) | 13.2 (2.4 - 23.9) |
| Competition | 86.4 (72.0 - 100) | 87.5 (71.3 - 100) | 88.9 (68.4 - 100) | 86.8 (76.1 - 97.6) |
| Other (specify) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |
| Not Recorded | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |

Similar to past seasons, injuries occurring **during the competition** were significantly higher than those during practice/training across all groups in ST.

### 4.2.7. Injury incidence by event during competition

Figure 17 illustrates the number of reported injuries during competition by event in the 2024/2025 season. A total of 33 injuries were reported.
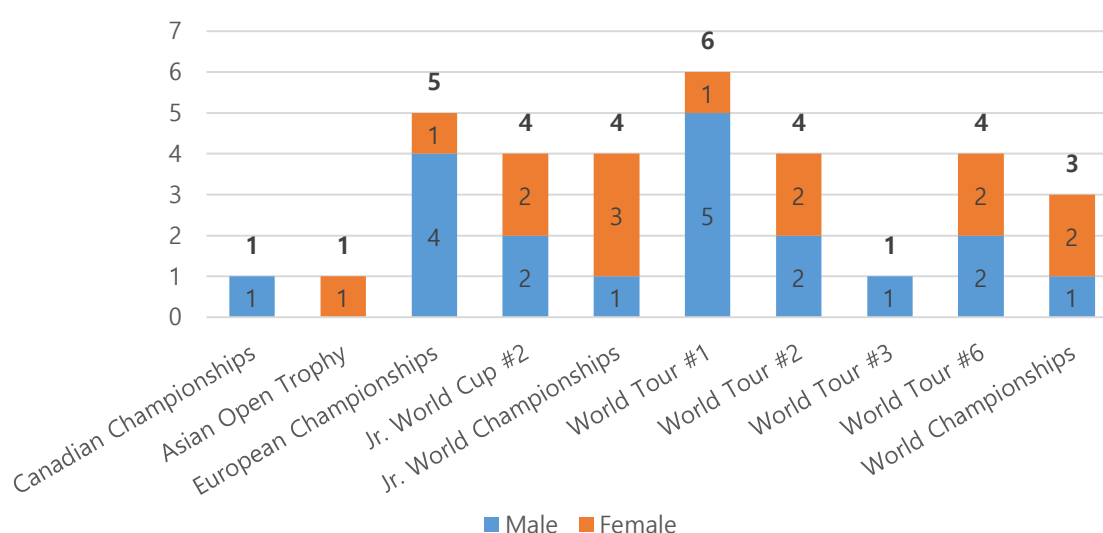


*Figure 17. Reported injuries by events 2024/2025*

### 4.2.8. Severity of injuries

Table 27 and 28 illustrate the severity of injuries from disposition and lay-off time after injury.

*Table 27. Disposition after injury*

| Disposition | Proportion, % (95% Confidence Interval) | | | |
|---|---|---|---|---|
| | **Male** | **Female** | **U20** | **All** |
| Resumed activity | 40.9 (20.4 - 61.5) | 62.5 (38.8 - 86.2) | 55.6 (23.1 - 88.0) | 50.0 (34.1 - 65.9) |
| Unable to train/compete | 50.0 (29.1 - 70.9) | 18.8 (0 - 37.9) | 22.2 (0 - 49.4) | 36.8 (21.5 - 52.2) |
| Transport to hospital | 9.1 (0 - 21.1) | 18.8 (0 - 37.9) | 22.2 (0 - 49.4) | 13.2 (2.4 - 23.9) |
| Not Recorded | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |

*Table 28. Lay-off time after injury*

| Lay-off time | Proportion, % (95% Confidence Interval) | | | |
|---|---|---|---|---|
| | **Male** | **Female** | **U20** | **All** |
| Less than 1 day | 31.8 (12.4 - 51.3) | 56.3 (31.9 - 80.6) | 55.6 (23.1 - 88.0) | 42.1 (26.4 - 57.8) |
| 1 to 3 days | 27.3 (8.7 - 45.9) | 12.5 (0 - 28.7) | 11.1 (0 - 31.6) | 21.1 (8.1 - 34.0) |
| 4 to 7 days | 18.2 (2.1 - 34.3) | 12.5 (0 - 28.7) | 33.3 (2.5 - 64.1) | 15.8 (4.2 - 27.4) |
| Greater than 7 days | 22.7 (5.2 - 40.2) | 18.8 (0 - 37.9) | 0.0 ( - ) | 21.1 (8.1 - 34.0) |
| Not Recorded | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) | 0.0 ( - ) |

There were no statistically significant differences in disposition and lay-off time after injuries, however, the tables suggest male skaters may have sustained more severe injuries.

Compared to the 2023/2024 season, although there were no statistically significant differences, **severe injuries that involved a lay-off time of greater than 7 days decreased (48.0%→21.1%),** whilst combined proportion of less than 1day and 1 to 3 days increased (32.0%→63.2%).

## 4.3. Illness

### 4.3.1. Illnesses during events

Figure 18 illustrates the number of reported illnesses by event in the 2024/2025 season. A total of 10 illnesses were reported.
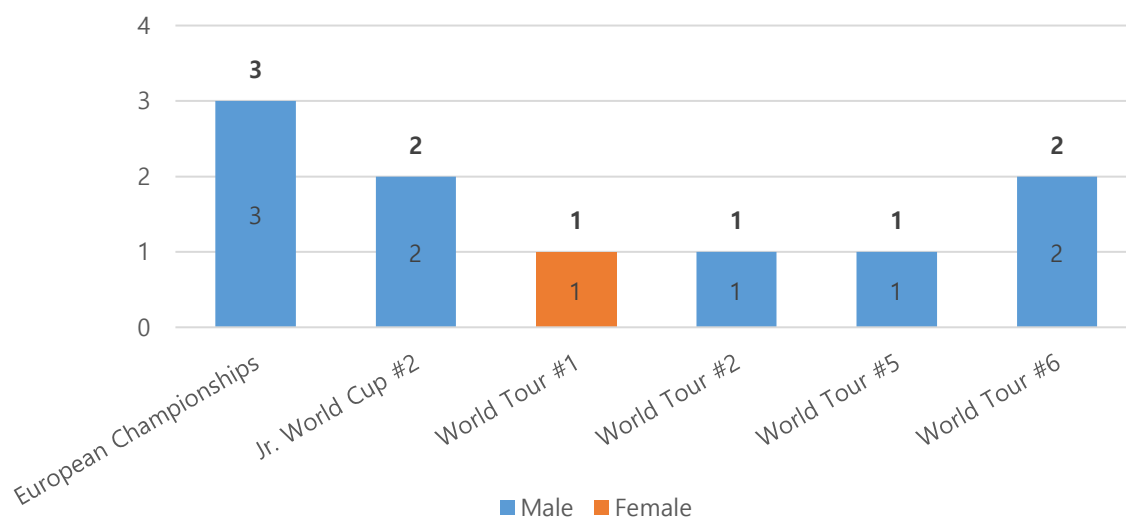


*Figure 18. Reported illnesses by events 2024/2025*

### 4.3.2. Main symptoms and causes

Figure 19 illustrates the main symptoms and supposed causes of the illnesses.
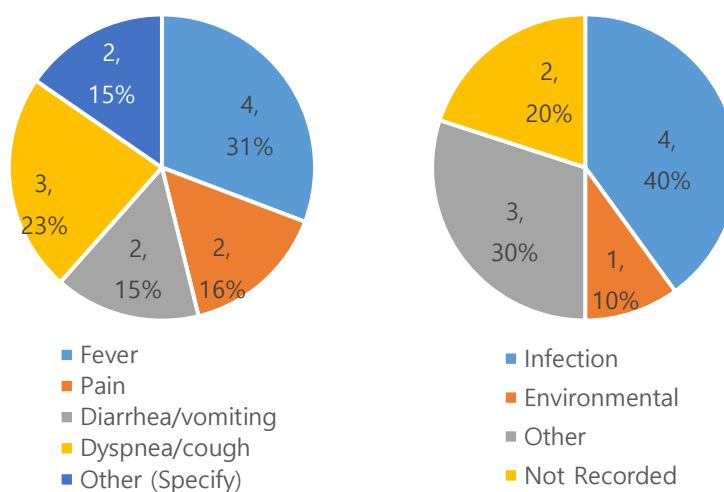


*Figure 19. Main symptoms and supposed causes*

No notable cases of illness were identified through the survey in ST.

## 4.4.   Summary

As in the previous seasons, contact injuries remain by far the most common cause in ST. The survey results from the 2024/2025 season indicate potential shift in the most affected regions, from lower limbs to upper regions (above shoulder). Although the severity of the injuries appeared to decrease compared to the 2023/2024 season, continued attention is necessary as particularly head/face/neck injuries can be significantly serious.
No notable cases of illness were identified.

# 5. Synchronized Skating (SYS)

## 5.1.  Overview

Table 29 illustrates the total number of reported injuries and illnesses in and out of the competitions in SYS during 2024/2025 season.

*Table 29. Reported cases and frequencies*

|  | All | Male | Female | U20 |
|---|---|---|---|---|
| Injuries | 7 | 0 | 7 | 6 |
| Illnesses | 0 | 0 | 0 | 0 |
| **Total Cases** | **7** | **0** | **7** | **6** |

They were Trunk or Lower limbs injuries (Lower back: 1, Thigh: 1, Knee: 2, Lower leg/Achilles tendon: 1, Ankle/foot: 2). All of them occurred during practice/training, and six of them did not involve any lay-off time (less than 1 day).

No further analysis on SYS was conducted.

# 6. Overall Summary

1. Demographically, younger age groups reported more injuries amongst both male and female in FS. Particularly among females, injuries reported by U20 were significantly higher than in the other age groups. There were no statistically significant differences between genders or age groups in SS and ST.

2. Table 30 illustrates the IR, IP and the proportion of reported injuries during competition of each discipline. ST showed the highest numbers across all indicators.

*Table 30. IR, IP and proportion of injuries during competition*

|  | IR | IP | % of Injuries during Competitions |
|---|---|---|---|
| FS | 1.33 - 1.93 | 0.3% | 16.7% |
| SS | 1.49 - 2.08 | 0.5% | 52.4% |
| ST | 1.86 - 2.26 | 1.3% | 86.8% |

3. The most commonly injured regions were the ankle/foot in FS, Hip/groin and Ankle/foot in SS, with both disciplines basically following the same trend as in the 2023/2024 season. In contrast, in ST in 2024/2025 season, Face, Head/neck and Shoulder/clavicle/upper arm were the common injured regions, a possible shift from Lower limbs in 2023/2024 season.

4. The most common types of injury were Ligaments (sprain) and Muscle strain/tear in FS, particularly amongst males. However, Fracture was more common amongst females and U20. Muscle strain/tear injuries were the most common across all groups in SS, whilst different trends between groups were observed in ST. Although there were no statistically significant differences, the most common type was contusion/bruise amongst male, laceration/abrasion amongst female and ligaments (sprain) amongst U20.

5. Non-contact injuries were significantly higher in FS and SS, similar to the past seasons, whilst contact injuries, particularly contact with person, was significantly higher in ST.

6. Serious injuries with a lay-off time of greater than 7 days were significantly higher amongst U20 in FS. Similarly, severe injuries were relatively higher amongst U20 in SS. There were no statistically significant differences between groups in ST, and the percentage of severe injuries has decreased compared to the 2023/2024 season (48.0%→21.1%).

7. Ankle/foot injuries amongst U20 singles skaters in FS are key issues that warrant further attention, as they showed significant prevalence across other disciples.