

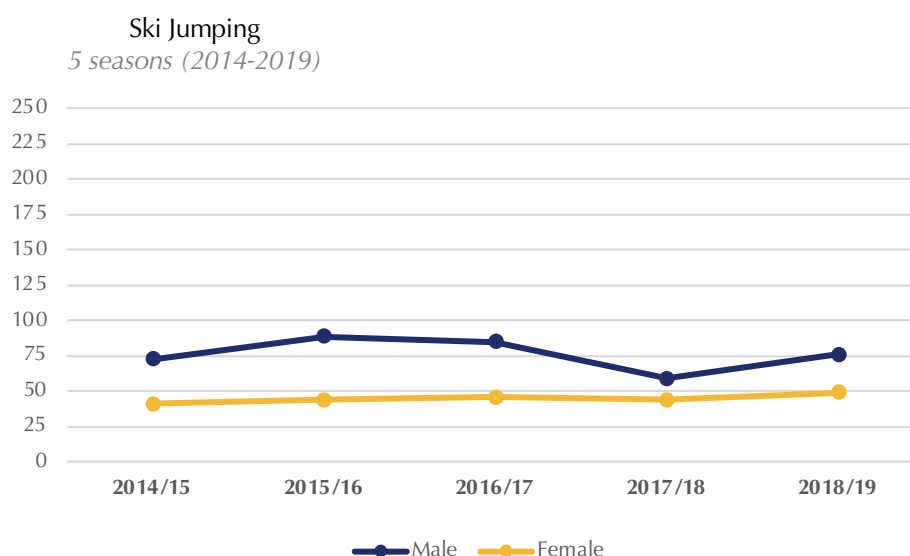
FIS Injury Surveillance System

Ski Jumping Injury Profile (2014-2019)

Injury Profile (n = 89 injuries)

Key injury pattern: Lower-extremity emphasis, particularly knee and ankle. The highest joint/ligament proportion of any discipline.

The ski jumping data covers **five seasons only** (2014–2019), with 616 athlete-seasons interviewed (382 male, 224 female). While the sample size limits statistical precision, consistent patterns emerge.



Injury Location

The **knee accounts for 41.6% of injuries**. What distinguishes ski jumping is the **ankle injury rate at 14.6%**. Hip and groin injuries are proportionally more common in ski jumping (9.0%), whereas no hand or finger injuries were recorded.

Injury Severity

The severity profile is notably different from other disciplines. Ski jumping has the **highest "no absence" rate at 30.3%**. However, when injuries do cause absence, the profile shifts: **29.2%** of injuries are **severe** (>28 days), and the **8–28 day** category is relatively small at **16.9%**.

Body Region	No Absence	1-3 Days	4-7 Days	8-28 Days	> 28 Days*
Head/Face	0.00%	12.50%	50.00%	25.00%	12.50%
Neck/Cervical	0.00%	0.00%	0.00%	100.00%	0.00%
Shoulder/Clavicle	33.30%	0.00%	33.30%	0.00%	33.30%
Upper Arm	0.00%	0.00%	0.00%	0.00%	0.00%
Elbow	0.00%	100.00%	0.00%	0.00%	0.00%
Forearm	0.00%	100.00%	0.00%	0.00%	0.00%
Wrist	33.30%	0.00%	0.00%	33.30%	33.30%
Hand/Finger	0.00%	0.00%	0.00%	0.00%	0.00%
Chest/Ribs	0.00%	0.00%	0.00%	100.00%	0.00%
Abdomen	0.00%	0.00%	0.00%	0.00%	0.00%
Back/Pelvis	37.50%	0.00%	25.00%	0.00%	37.50%
Hip/Groin	37.50%	0.00%	25.00%	25.00%	12.50%
Thigh	0.00%	0.00%	0.00%	0.00%	0.00%
Knee	29.70%	10.80%	0.00%	16.20%	43.20%
Lower Leg/Achilles	100.00%	0.00%	0.00%	0.00%	0.00%
Ankle	23.10%	30.80%	7.70%	15.40%	23.10%
Foot/Toe	100.00%	0.00%	0.00%	0.00%	0.00%
TOTAL	30.3%	12.4%	11.2%	16.9%	29.2%

* >28 days: Severe injury

Of 37 **knee injuries**, 16 (**43.2%**) result in **more than 28 days absence**, and a **high proportion of knee injuries with no absence** (11 of 37, 29.7%). Despite the small numbers of severe injuries, this warrants caution.

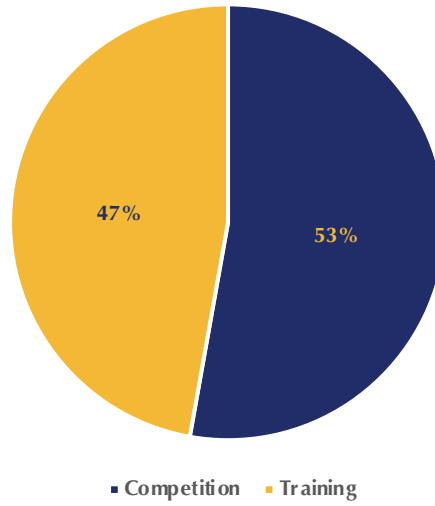
Injury Type

The rate of **joint and ligament damage is the highest of all disciplines at 49.4%**. The elevated **muscle/tendon injury rate (19.1%)** is also notable. and may reflect the specific muscular demands of jumping technique. Interestingly, ski jumping shows the **lowest fracture rate at 12.4%**.

Injury Type	Count	Percentage
Joint/Ligament	44	49.4%
Fracture/Bone Stress	17	19.1%
Muscle/Tendon	11	12.4%
Concussion/Nervous System	6	6.8%
Contusion	6	6.8%
Skin/Laceration	44	49.4%

Injury Circumstances

The circumstance distribution is relatively **balanced between training and competition.**



Key Takeaways for Prevention Focus

- Knee (42%) and ankle (15%) emphasis within a smaller dataset. The **high ankle injury rate** may point to the flexibility required in **jumping boots for flight aerodynamics**, which may trade ankle protection for performance.
- The **highest joint/ligament injury proportion** (49%) may indicate **complex articular and ligamentous trauma** when ski jumpers are injured.
- The **elevated hip/groin rate** (9%) may warrant specific attention in conditioning programmes, which may relate to the specific demands of the inrun crouch and flight position. Boot design and landing technique remain central to injury prevention efforts.
- The **30.3% of non-absence injuries** may suggest that many ski jumping injuries require medical attention but do not prevent continued participation. Moreover, when injuries do cause absence (29.2% and 16.9% of severe and moderate injuries), the profile shifts towards a **bimodal pattern**: injuries tend to be either minor (allowing immediate return) or severe (requiring extended absence), with fewer in the moderate (8-28 days of absence) category.