

INTERNATIONAL OLYMPIC COMMITTEE

Roles & Responsibilities during the Olympic Games

Richard Budgett – Lars Engebretsen
IOC Medical and Scientific Department

18 October 2019



1. Preparation and delivery of medical care at Games
2. Prevention and management of injury & illness
3. Prevent and deter doping and support anti-doping programmes

Roles of IOC, IFs,
OCOG Med & Dop, NOCs



IOC Roles during the Olympic Games

- **Governance using Medical Games Group**
- **Support & oversight – not delivery**
- **Framework :**
 - Medical Code
 - Policies and Transfer of Knowledge
 - Anti-Doping Rules
- **Doping Control Programme – ITA**
- **Education**
- **Surveillance**

The IOC role in Surveillance at the Olympic Games: Beijing, Vancouver, London, Sochi, Rio and PyeongChang injury and illness surveillance study

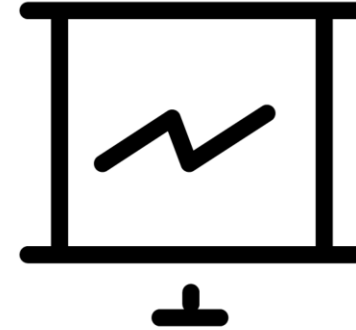


Surveillance



IOC Injury & illnesses surveillance during Olympic Summer and Winter Games:

- 2008 Beijing
- 2010 Vancouver
- 2012 London
- 2014 Sochi
- 2016 Rio
- 2018 PyeongChang
- Doping (or ITA ?)



During Youth Olympic Winter Games

- 2012 Innsbruck
- 2016 Lillehammer

Why is the IOC monitoring the athletes' health ?



- To describe the risk of injury and illnesses occurring during Summer, Winter and Youth Olympic Games
 - Across sports, gender, age
- To compare data between Olympic Games
- To identify high risk/low risk sports and events
 - Can the sport (IOC/IF) learn from these experiences?
 - Injury & illness data assist in prevention strategies

Welcome to PyeongChang 2018 !





Lars Engebretsen



Torbjorn Soligard



Debbie Palmer



Natalia Salmina



Marie-Elaine Grant



Alexandre Lopes



Kathrin Steffen

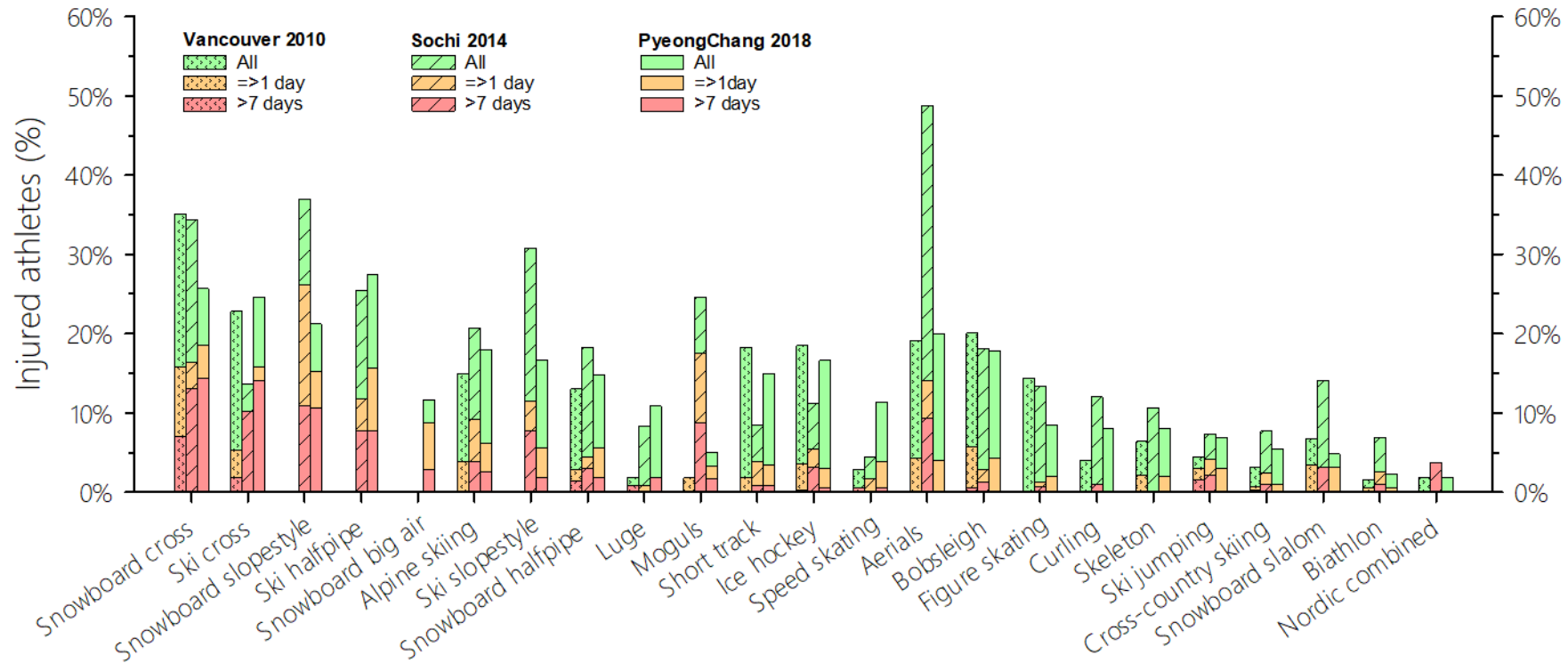
Definition of injury and illness



- **New or recurring** musculoskeletal complaints or concussions (injuries) or illnesses
- Occurring in the period of the Olympic Games
- Medical attention, **regardless of** the consequences with respect to **absence from competition or training**

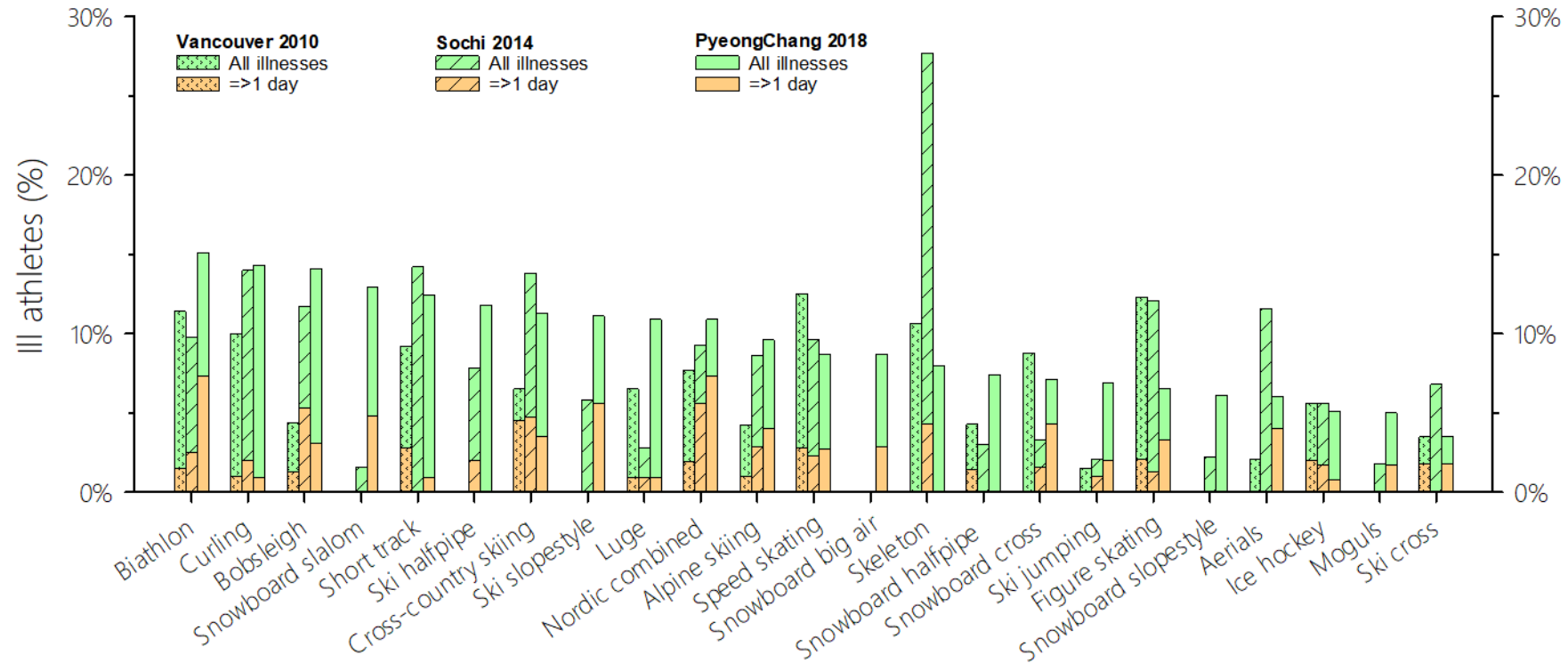
Injured athletes (%) per sport (all)

Vancouver 2010, Sochi 2014 & PyeongChang 2018

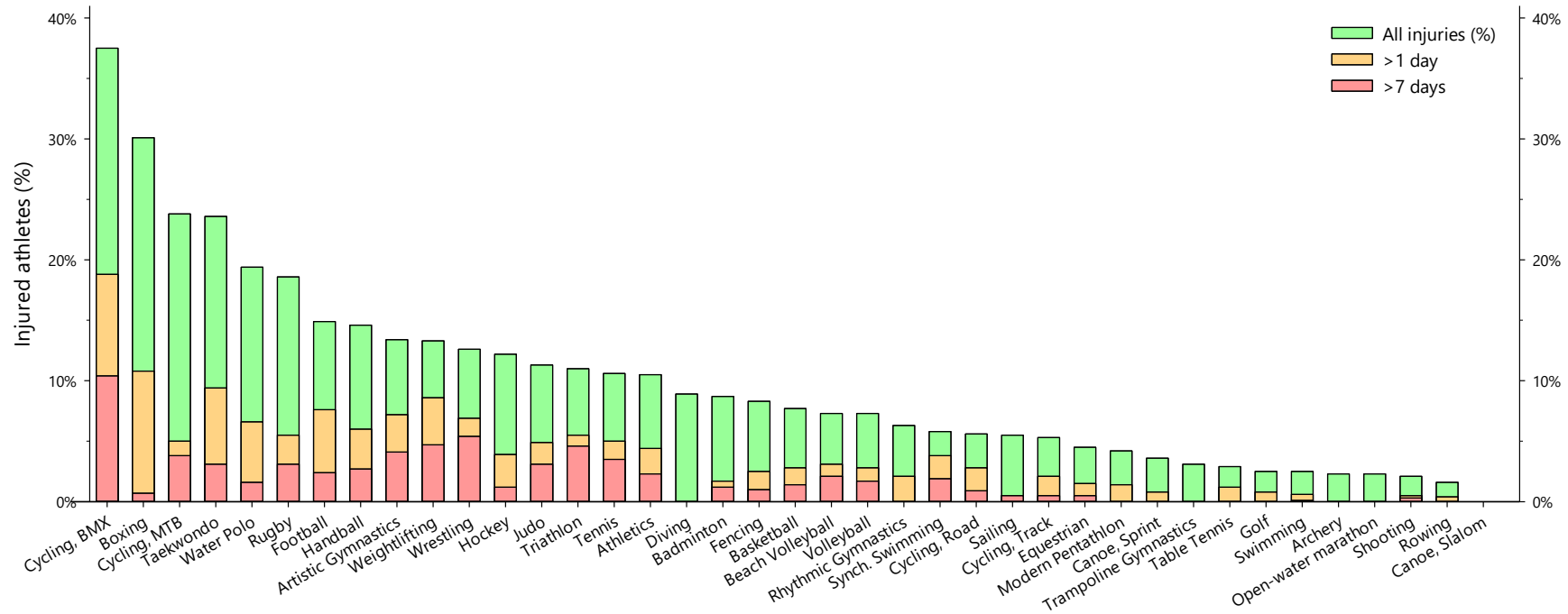


Ill athletes (%) per sport (all)

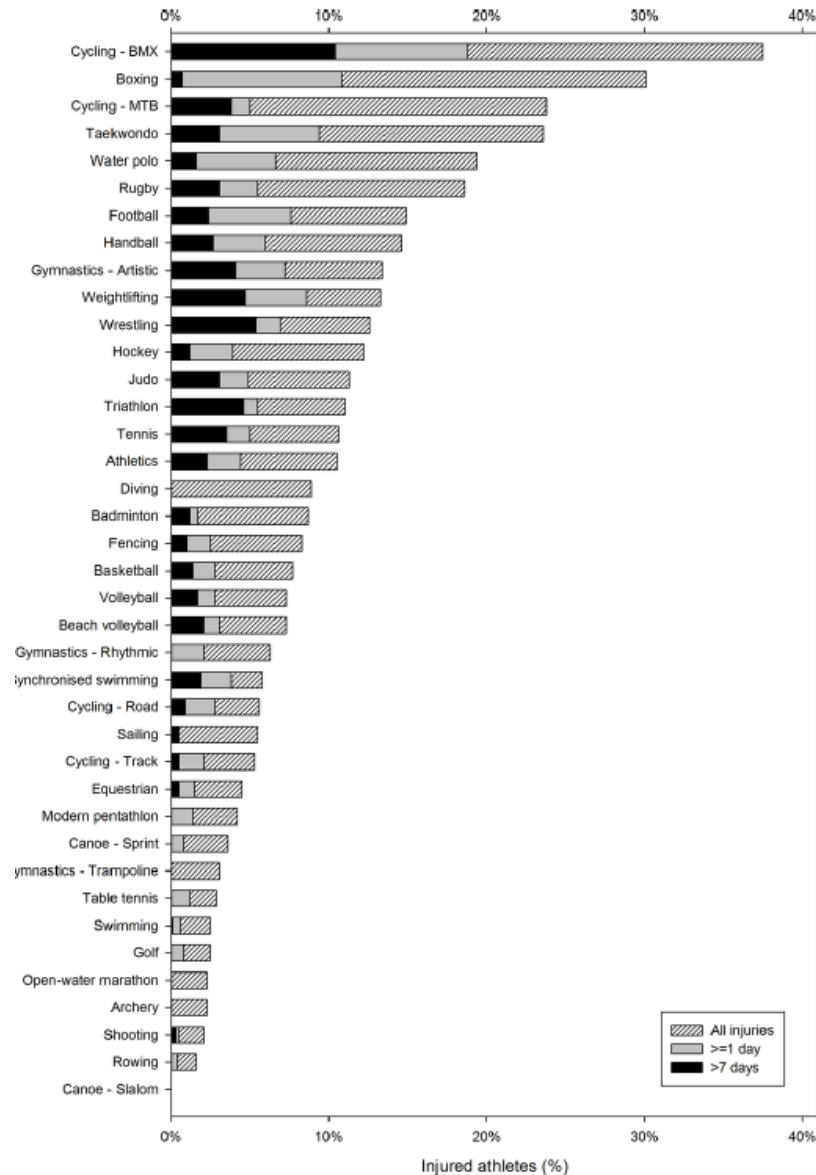
Vancouver 2010, Sochi 2014 & PyeongChang 2018



Injured athletes (%) per sport in Rio 2016



Key data



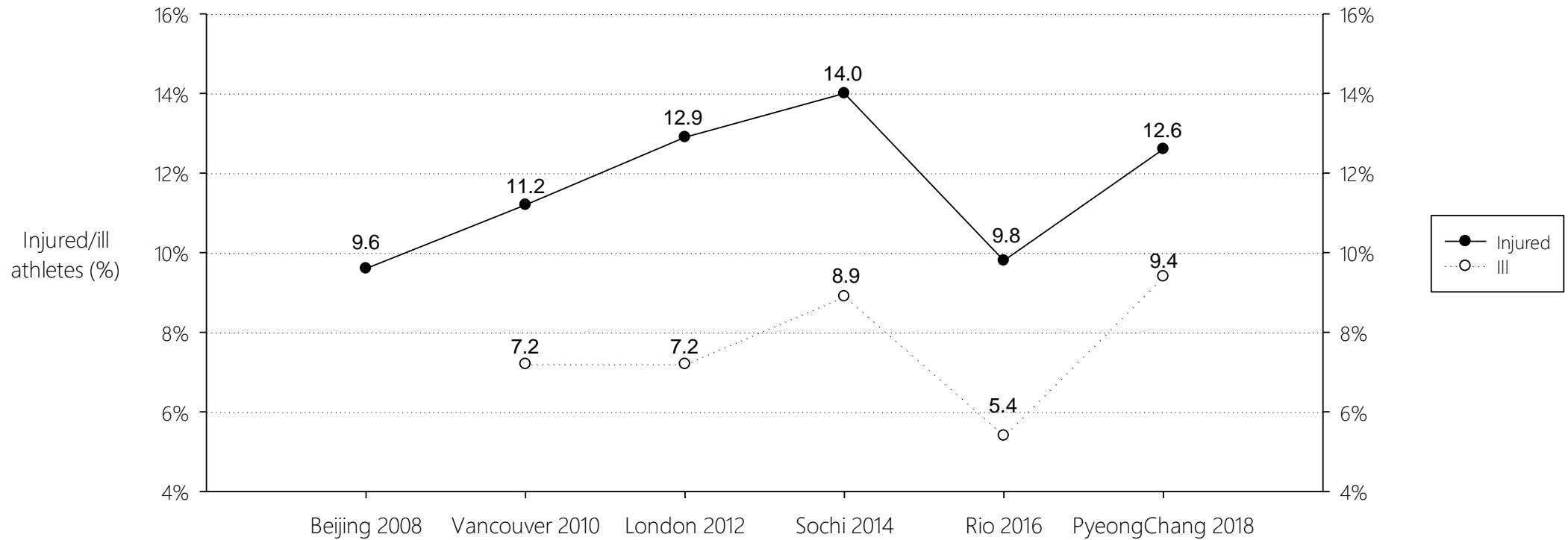
Box 1 Information on the 221 severe injuries (estimated absence >7 days), with the sports with the highest numbers in brackets.

- ▶ 65 muscle strains (33 in athletics, six in football, six in weightlifting)
- ▶ 57 ligament sprains/ruptures (eight in wrestling, six in athletics, six in judo, five in artistic gymnastics, five in weightlifting)
- ▶ 24 fractures (three in hockey, three in rugby, two in boxing, two in artistic gymnastics, two in mountain bike cycling, two in road cycling, two in water polo)
- ▶ 15 dislocations or subluxations (four in wrestling, three in judo, two in boxing)
- ▶ 12 lesions of meniscus or cartilage
- ▶ nine concussions (out of 12 in total: seven in boxing, two in rugby, one each in BMX cycling, mountain bike cycling, and handball)
- ▶ seven stress fractures (three in athletics, two in tennis, one each in boxing and triathlon)
- ▶ six tendon ruptures
- ▶ five contusions, haematomas or bruises
- ▶ five lacerations, abrasions or other skin lesions (three in boxing, two in triathlon)
- ▶ four nerve or spinal cord injuries
- ▶ four tendinopathies (three in athletics)
- ▶ two arthritis, synovitis or bursitis injuries
- ▶ two impingements
- ▶ two 'other bone injuries

Injury type was missing for two of the severe injuries.



Injuries and illnesses in 6 consecutive Olympic Games





Take home message

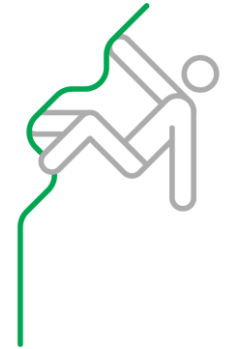


- 10-14% of athletes injured and 7-9% ill during Games
- Injuries and illnesses vary substantially between sports, winter/summer, and gender
- Respiratory track infections are the most common illness
- Little valid knowledge on burden of overuse injury risk

Implications



- Development of preventive measures need to be tailored for each sport
- Incoming sports:
 - Skateboard
 - Surfing
 - Speed climbing
- Continued focus among sport bodies/IFs to institute and further develop injury and illness surveillance systems
 - Not just during the Game, but also up to the Games



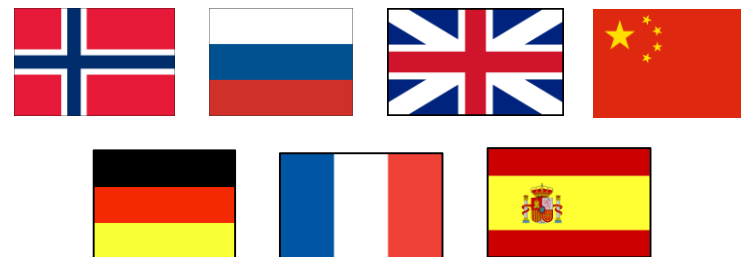
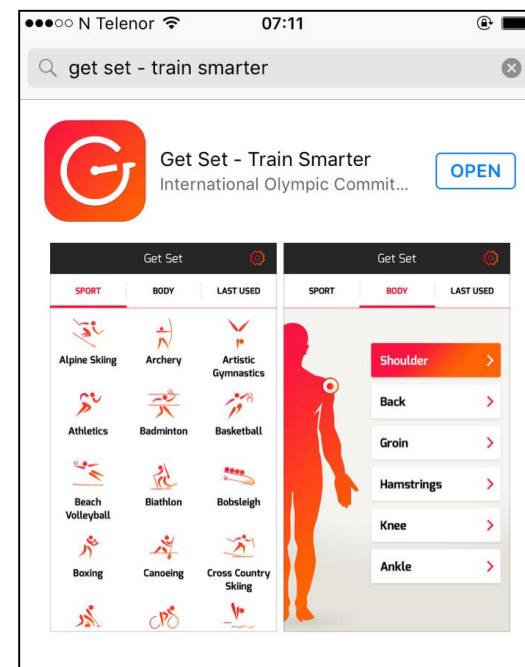
Get Set – Train Smarter is ...



For :

- Coaches
- Athletes
- Parents
- Clinical personnel

Available 7 languages



Get Set – Originally developed for the Youth Olympic Games



Development of Get Set



In close collaboration with :

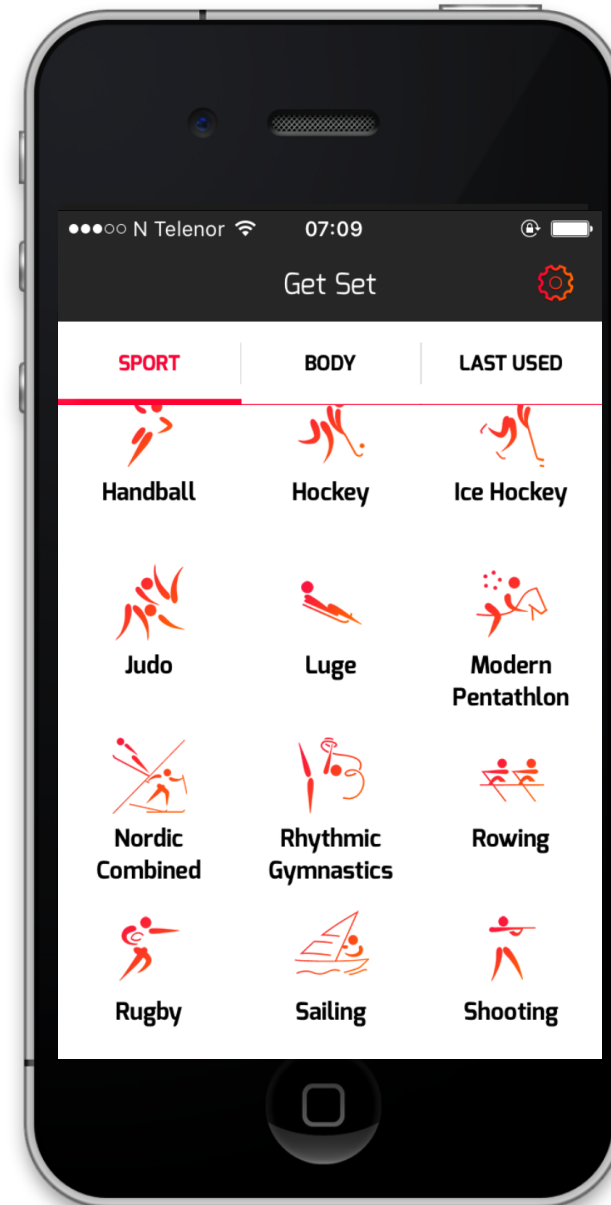
- Oslo Sports Trauma Research Center
- Norwegian Sports Federations
- Norwegian National High Performance Center (Olympiatoppen)
- IOC



2 entries : SPORT and BODY PART

Based on evidence and
“best clinical practice”

Exercise programmes for
51 Olympic summer +
winter sports



Long speed skating jumps



Example from «Freeski»



Example from «Figure Skating»



Get Set – Train Smarter

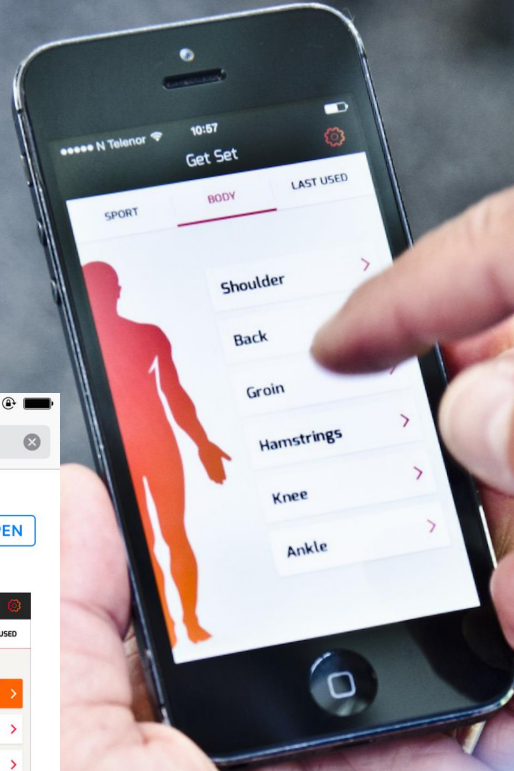
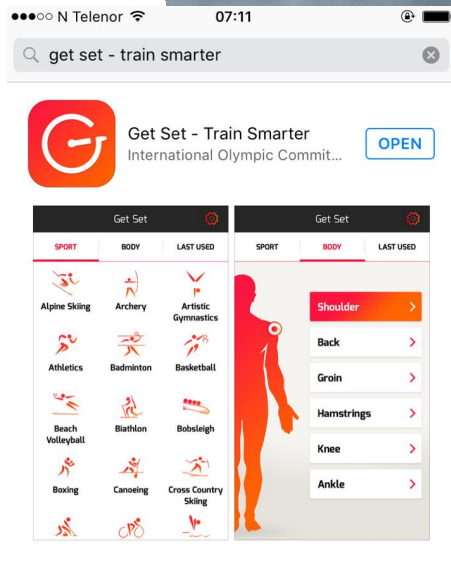


Pre-installed on all athletes' cell phones in PyeongChang





Download today!



GET SET

Train Smarter



RIO 2016
OLYMPIC GAMES

INVITATION

7th EDITION

OLYMPIC ACADEMIC PROGRAM ON SPORT
MEDICINE AND SPORT PHYSIOTHERAPY

4 SYMPOSIA

Rio Olympic Village, Chef de Mission Hall
See inside for exact location, dates and times

FROM TRAINING TO POST-INJURY RETURN
TO PLAY IN VOLLEYBALL

HOW TO ORGANIZE YOUR SPORTS MEDICINE TEAM

UPDATE ON SPORTS-RELATED CONCUSSION

IOC PHYSIOTHERAPY AND SPORT SCIENCE SYMPOSIUM

4 WORKSHOPS

Rio Olympic Village, Polyclinic
See inside for exact location, dates and times

Organised by
the IOC Medical and Scientific Commission



INTERNATIONAL
OLYMPIC
COMMITTEE



Rio2016
OLYMPIC GAMES



ACADEMIC PROGRAMME

| | | |
|--|--|--|
| Thur. 4.8.2016 14:00–17:30 NOC medical team meeting | 1st part (14:00–15:50): Medical & Science 2nd part (16:00–17:30): Anti-doping and other regulations Rio 2016, IOC | Chef de Mission Hall 300* |
| Mon. 8.8.2016 17:00–18:30 PT Workshop | Essential considerations in ACL rehabilitation of the elite athlete Tony Ward | Conference room, Polyclinic 40* |
| Wed. 10.8.2016 15:00–16:35 Symposium | From Training to Post-Injury Return to Play in Volleyball Joao Grangeiro, José Inácio, Roald Bahr, Alexandre Lopes, Julio Nardelli, Ney Pessegueiro | Chef de Mission Hall 300* |
| Fri. 12.8.2016 17:00–18:30 PT Workshop | An Integrated Approach to Evaluation of the Lumbo-Pelvic Complex and Core Stability in Athletes Marie-Elaine Grant | Conference room, Polyclinic 40* |
| Sat. 13.8.2016 15:00–16:50 Symposium | How to organize your sports medicine team Eduardo de Rose, Richard Budgett, Bruce Hamilton, Bob McCormack, Lars Engebretsen, Bernd Wolfarth, Roald Bahr | Chef de Mission Hall 300* |
| Tue. 16.8.2016 17:00–18:30 PT Workshop | Shoulder Injuries and Rehabilitation in Elite Athletes Hilde Fredriksen | Conference room, Polyclinic 40* |
| Wed. 17.8.2016 15:00–16:20 Symposium | Update on Sports-Related Concussion Willem Meeuwisse, Kathryn Schneider | Chef de Mission Hall 300* |
| Thur. 18.8.2016 13:00–15:00 NOC medical team debrief meeting | Debrief of the medical services in the Rio 2016 Olympic Games Rio 2016, IOC, participation from NOC medical team members | Chef de Mission Hall 300* |
| Thur. 18.8.2016 15:00–17:00 Symposium | IOC Physiotherapy and Sport Science Symposium Marie-Elaine Grant, Kathrin Steffen, Lars Engebretsen, Susan Greinig, David Zideman, Fabio Sprada de Menezes, Edsel Bittencourt, Margo Mountjoy, Torbjørn Soligard, Mark Stuart | Chef de Mission Hall 300* |
| Fri. 19.8.2016 17:00–18:30 PT Workshop | Integrative Dry Needling and Manual Medicine Workshop – Techniques to Enhance Athletic Performance and Recovery Edsel Bittencourt, Peter T. Dorsher | Conference room, Polyclinic 40* |

* Capacity

GENERAL INFORMATION

- All symposia and workshops will be in English only.
- Each participant will receive a certificate of attendance.
- Delegates will be awarded CPD hours for attendance at the symposia and workshops.
- Adequate access pass to the residential zone of the Olympic Village required.

ORGANISING COMMITTEE

L. Engebretsen (IOC)
M.-E. Grant (IOC)
K. Steffen (OSTRC)

T. Soligard (IOC)
R. Budgett (IOC)
J. Grangeiro (Rio 2016)



MESSAGE FROM UĞUR ERDENER
IOC MEDICAL & SCIENTIFIC COMMISSION CHAIR



Dear Colleagues,

As you may know, it is a tradition for the IOC Medical and Scientific Commission to organise, during the Olympic Games, several symposia and workshops on sports medicine and sports physiotherapy.

Therefore, this winter, on the occasion of the XXIII Olympic Winter Games, you will have the opportunity to attend four symposia on hot topics in sports medicine, physiotherapy and science. In addition, you will have the opportunity to attend five practical workshops on various topics relevant to the treating clinician.

Our wish is to share with all NOC team doctors, physiotherapists and other healthcare providers the most recent methods and knowledge to provide the most effective medical advice and to ensure the best possible care for their athletes. As a physician, I know how important it is to be informed of the latest research and medical practices and to be able to use these to serve the athlete, whether elite or amateur.

I look forward to your active participation and contribution.

Thank you.

ACADEMIC PROGRAMME

| | | |
|--|---|---------------------------|
| Thur. 8.2.2018 14:00–16:30 NOC medical team meeting | 1st part (14:00–15:05): Medical & Science 2nd part (15:15–16:30): Anti-doping and other regulations PyeongChang 2018, IOC | Chef de Mission Hall 300* |
| Mon. 12.2.2018 17:00–18:30 PT Workshop | Return to Sport following Hamstring injury in Bobsleigh: an evidence based approach Raph Rinald, Tim Allardyce | Mountain Polyclinic 50* |
| Tue. 13.2.2018 15:00–16:30 Symposium | Concussions in ice hockey and practical skills using SCAT5 Lars Engebretsen, Markku Tuominen, Kathryn Schneider, Paul Piccininni | Chef de Mission Hall 300* |
| Wed. 14.2.2018 17:00–18:30 PT Workshop | Year-round physiotherapy care of Olympic cross country skiers; from injury prevention and care to performance support Zuzana Rogers | Mountain Polyclinic 50* |
| Thur. 15.2.2018 17:00–18:30 Symposium | IOC Physiotherapy and Sport Science Symposium Marie-Elaine Grant, Lars Engebretsen, Byong Kyu Yu, Jane Moran, Torbjørn Soligard, Susan Greinig, Kathrin Steffen, Joshua Sung H. You, Mark Stuart, David Zideman | Chef de Mission Hall 300* |
| Fri. 16.2.2018 15:00–16:30 Symposium | Characteristics and management of injuries in snowboarding and freestyle skiing Kyle Wilkens, Tom Hackett, Dave Goltz, Jeff Kutcher | Chef de Mission Hall 300* |
| Mon. 19.2.2018 17:00–18:30 PT Workshop | Athletic low back pain: practical evaluation & rehabilitation strategies to support performance Marie-Elaine Grant | Coastal Polyclinic 50* |
| Tue. 20.2.2018 15:00–16:30 Symposium | Emergency medicine: What to do when an athlete is unconscious on the field of play? David Zideman, Wolfgang Schobersberger, Lars Engebretsen | Chef de Mission Hall 300* |
| Tue. 20.2.2018 17:00–18:30 Ultrasound workshop | Ultrasound for sports injuries Doo-Sup Kim, Hyun-Seok Song, Chan Kang | Mountain Polyclinic 20* |
| Wed. 21.2.2018 17:00–18:30 PT Workshop | The Role of the Physiotherapist in Emergency Care and Sport Safety for Ice Sports Agnes Makowski, Suzanne Leclerc | Coastal Polyclinic 50* |
| Thur. 22.2.2018 13:00–15:00 NOC medical team debrief meeting | Debrief of the medical services and anti-doping in the PyeongChang 2018 Olympic Games PyeongChang 2018, IOC, participation from NOC medical team members | Chef de Mission Hall 300* |



SYMPOSIUM 1

CONCUSSIONS IN ICE HOCKEY AND PRACTICAL SKILLS USING SCAT5

Tuesday 13th February 2018
15:00 – 16:30

Chair: Lars Engebretsen

| | |
|---------------|--|
| 15:00 – 15:05 | Introduction Lars Engebretsen |
| 15:05 – 15:35 | Concussions in ice hockey: incidence, risk factors, mechanisms and treatment Markku Tuominen |
| 15:35 – 15:50 | Rehabilitation in concussion (video) Kathryn Schneider |
| 15:50 – 16:05 | Can mouthguards prevent concussions? Paul Piccininni |
| 16:05 – 16:25 | Practical skills using SCAT5 Markku Tuominen |
| 16:25 – 16:30 | Discussion All |



SYMPOSIUM 2

IOC PHYSIOTHERAPY AND SPORT SCIENCE SYMPOSIUM

Thursday 15th February 2018
17:00 – 18:30

Chairs: Marie-Elaine Grant and Lars Engebretsen

| | |
|---------------|---|
| 17:00 – 17:05 | Introduction Lars Engebretsen |
| 17:05 – 17:20 | IOC Physiotherapy Surveillance & IOC Diploma in Physical Therapies Marie-Elaine Grant |
| 17:20 – 17:35 | The Historical development of Korean Sports Physical Therapy Byong Kyu Yu |
| 17:35 – 17:45 | Skating Boots: Performance vs Injury Jane Moran |
| 17:45 – 17:55 | IOC injury & illness surveillance system Torbjørn Sollgard |
| 17:55 – 18:10 | Refreshments and Networking |
| 18:10 – 18:25 | IOC Educational Tools & Safeguarding and Welfare of athletes Susan Greinig |
| 18:25 – 18:35 | Get Set-Train Smarter – a free IOC app on injury prevention Kathrin Steffen |
| 18:35 – 18:45 | Frontier and cutting edge robotic-assisted locomotor recovery technology in Physical Therapy Joshua (Sung) H. You |
| 18:45 – 18:55 | Use of Anti-inflammatory Drugs in Soft Tissue Injury Mark Stuart |
| 18:55 – 19:10 | IOC Emergency Management at the Field of Play – multi-disciplinary team David Zideman |
| 19:10 – 19:15 | Q & A All |



SYMPOSIUM 3

CHARACTERISTICS AND MANAGEMENT OF INJURIES IN SNOWBOARDING AND FREESTYLE SKIING

Friday 16th February 2018
15:00 – 16:30

Chair: Kyle Wilkens



| | |
|---------------|--|
| 15:00 – 15:05 | Introduction Kyle Wilkens |
| 15:05 – 15:20 | US Ski and Snowboard Injury Data Kyle Wilkens |
| 15:20 – 15:35 | Snowboard Injuries and Future Prevention Strategies Tom Hackett |
| 15:35 – 15:50 | Mogul Knee injuries and the Lateral Compartment Dave Goltz |
| 15:50 – 16:05 | Secondary Injuries and Return to Snow Guidelines Kyle Wilkens |
| 16:05 – 16:20 | Concussion in Freestyle and Snowboarding, The Concussion Pre-Participation Exam Jeff Kutcher |
| 16:20 – 16:30 | Discussion All |



SYMPOSIUM 4

EMERGENCY MEDICINE: WHAT TO DO WHEN AN ATHLETE IS UNCONSCIOUS ON THE FIELD OF PLAY?

Tuesday 20th February 2018
15:00 – 16:30

Chairs: David Zideman
and Wolfgang Schobersberger

| | |
|---------------|---|
| 15:00 – 15:05 | Introduction Wolfgang Schobersberger |
| 15:05 – 15:20 | Difficult cases from the Olympic Games Lars Engebretsen |
| 15:20 – 16:20 | How to react in theory and in practice David Zideman |
| 16:20 – 16:30 | Discussion All |



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T. Soligard (IOC)

R. Budgett (IOC)

Y.-H. Lee (PyeongChang 2016)





IF Roles during the Olympic Games





Roles of IF Medical Commissions

- Preparation for Games
- Sports specific rules & regulations
 - Withdraws and substitutions
 - FoP access
 - Equipment, ambulances
 - Medical teams
- Venue medical meeting
- Anti-doping : work with ITA & OCOG
- Games debrief



OCOG Roles during the Olympic Games



Delivery of all services !

- Polyclinic
- Ambulances
- Venues
- FoP teams (AMS and spectators)
- Infrastructure
- Equipment and medication

**OCOG Roles
during the
Olympic Games**



OCOg Roles

- Consistency across venues
 - Same bags
 - Same policies and procedures (extraction training)
 - Same uniforms
- Delivery anti-doping programme, overseen by ITA
- DCS equipment
- Chaperones, DCOs, BCOs
- Logistics and analysis
- Games debrief





NOC Roles during the Olympic Games





NOC Medical teams' Roles during the Olympic Games

- Deliver 50% medical care at Games
 - Know team
 - Know the sports
- Proactive
 - Preparation and prevention
 - Education & team policies
 - Central to athlete health
- Games Debrief



NOC Medical teams' Roles



- Register
 - Prescribe & order tests
 - Medical Code
 - WADA online course
- At Games
 - MDT in medical rooms
 - Use Polyclinic
 - Work with OCOGs and IFs in venues
 - Attend pre event meetings
 - Attend IOC meeting and education

Issues and Questions



- Overlapping roles and responsibilities :
 - How define ?
 - How best work together ?
 - Who has authority ?
 - Who has responsibility ?
 - Is this different pre Games and in Olympic village, venues and overall ?
- Change in roles with ITA (greater role than IOC had)



INTERNATIONAL OLYMPIC COMMITTEE

Thank you

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