FOOT AND ANKLE INJURIES IN ICE HOCKEY

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INJURIES IN ICE HOCKEY

- Ice hockey injuries:
  - Sweden 1984
  - Population of 32,000
  - System for tracking acute injuries for accident prevention purposes
  - Estimated 4% acute injuries missed


INJURIES IN ICE HOCKEY

- Ice hockey injuries: Sweden

<table>
<thead>
<tr>
<th>Sport</th>
<th>Participants (n)</th>
<th>Aver. h activity/year</th>
<th>Weeks/year</th>
<th>Injuries/year</th>
<th>Incidence</th>
<th>90% confi. interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ice hockey*</td>
<td>200</td>
<td>1.66</td>
<td>16.9</td>
<td>81</td>
<td>11.8</td>
<td>9.6-14.8</td>
</tr>
<tr>
<td>Horseriding</td>
<td>75</td>
<td>0.90</td>
<td>46.0</td>
<td>4</td>
<td>1.9</td>
<td>0.8-3.9</td>
</tr>
<tr>
<td>Field sport*</td>
<td>200</td>
<td>1.53</td>
<td>26.0</td>
<td>12</td>
<td>4.8</td>
<td>3.1-7.5</td>
</tr>
<tr>
<td>Soccer*</td>
<td>1025</td>
<td>2.35</td>
<td>37.0</td>
<td>139</td>
<td>10.6</td>
<td>9.2-12.6</td>
</tr>
<tr>
<td>Multi-sport*</td>
<td>270</td>
<td>2.29</td>
<td>36.0</td>
<td>14</td>
<td>7.8</td>
<td>5.6-10.1</td>
</tr>
</tbody>
</table>

F&A INJURIES IN ICE HOCKEY

- Injury per body area in Canadian college:
  - Canadian Intercollegiate Sports Injury Registry
  - 1998-1999
  - Tracked by ATCs
  - 6 men (147) and 6 (114) women teams

Injury Rates and Profiles in Female Ice Hockey Players. DM Schick AJSSM 31(1), 2003
F&A INJURIES IN ICE HOCKEY

• Injury per body area in Canadian college

F&A INJURIES IN ICE HOCKEY

• Mean loss of time after an injury
  - Eastern division I college male players
  - Tracked prospectively by their ATCs
  - 14 injuries/exposure in games
  - 2 injuries/exposure in practice
  - Collisions 33%  Pucks/sticks 11%

American Collegiate Men's Ice Hockey An Analysis of Injuries K Flik et al. AJSM 33(2), 2005

F&A INJURIES IN ICE HOCKEY

• Mean loss of time
F&A INJURIES IN ICE HOCKEY

• Skate bite:

F&A INJURIES IN ICE HOCKEY

• Financial consequences in NHL

<table>
<thead>
<tr>
<th>Injury Type</th>
<th>No. of Games</th>
<th>Mean No. of Games</th>
<th>Mean Salary Lost in 2003-2004</th>
<th>Total Lost in Millions of USD</th>
<th>Percentage of Lost Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light</td>
<td>140</td>
<td>1.5 to 1.7</td>
<td>260,300 to 340,000</td>
<td>64.2</td>
<td>44.7</td>
</tr>
<tr>
<td>Moderate</td>
<td>86</td>
<td>2.0 to 2.2</td>
<td>204,000 to 290,000</td>
<td>35.1</td>
<td>23.4</td>
</tr>
<tr>
<td>Severe</td>
<td>188</td>
<td>3.0 to 3.4</td>
<td>268,000 to 368,000</td>
<td>42.8</td>
<td>28.5</td>
</tr>
</tbody>
</table>


ANKLE SYNDESMOSIS INJURIES

• Dallas Stars (1991-2001)
• Minnesota North Stars (1991-1993)
• Saint Louis Blues (1994-2001)

14 ankle syndesmosis sprains
5 ankle lateral ligament complex sprains

ANKLE SYNDESMOSIS INJURIES

Ankle Syndesmosis Sprains in National Hockey League Players. RW Wright AJSSM 32(8), 2004
ANKLE SYNDENOSIS INJURIES

- Ankle syndesmosis:
  - 45 days (6-137)
  - 13 of 14 did not re-injure
  - They were “achy” for the remainder of the season
- Ankle lateral sprains:
  - 1.4 days (0-6 days)

ANKLE SYNDENOSIS INJURIES

- Mechanism of injury:
  - External rotation to the foot (contact)
  - Pain with palpation of AITFL and/or syndesmosis area
  - Inability to do any cutting. Ok in a straight line

ANKLE SYNDENOSIS INJURIES

- Treatment:
  To assess syndesmosis stability is critical

  A. With the scope and assess fibula gaping
  B. Under fluoroscopy and look for medial gutter widening
ANKLE SYNDESMOSIS INJURIES

- Surgical goal: To provide stability to the ankle syndesmosis

ANKLE SYNDESMOSIS INJURIES

- Postoperative course:
  - WBAT from POD#1
  - Strenuous activities in a straight line after 6 weeks
  - No cutting activities/contact for 12 weeks
  - No restrictions after 12 weeks

FOOT AND ANKLE CONTUSIONS

- Puck related impacts:
  - Metatarsals and tarsal bones. Rare toes or calcaneus
FOOT AND ANKLE CONTUSIONS

F&A INJURIES IN ICE HOCKEY
• Summary:
  1. Ice Hockey has one of the highest incidence of injuries
  2. Games generate most of the injuries

F&A INJURIES IN ICE HOCKEY
• Summary:
  3. F&A injuries have one of the longest recovery time
  4. Ankle syndesmosis injuries are a completely different entity than ankle sprains
THANK YOU
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