Driving Recommendations After Orthopedic Surgery

Driving ability: measured by ability and time to perform an emergency stop

Break Reaction Time affected by:

- Driver age, gender, level of fatigue, use of alcohol and drugs, traffic, brake lights, task complexity, surgical procedure, post-operative weight restrictions, immobilization, post-op pain, patient medical co-morbidities

Casts and Splints:

- Regardless of type of immobilization (removable knee cast, ankle splint, cast), all have been found to affect driving safety and time to brake (TTB) under simulated and real driving conditions
- Only left BKC in automatic transmission is considered safe
- Waton et al. (2011):
  - RLE immobilization: increased immobilization results in increased braking time.
- Orr et al. (2010):
  - RLE immobilization: results in significantly unsafe driving. No driving with BKA, CAM, LFA

Complex Lower Limb Trauma & Ankle Surgery

- Egol et al. (2008):
  - Comparison of TTB in simulated driving test in 2 groups
    - A: diaphyseal fx right femur/right tibia treated by IM nailing (NWB 6 weeks)
    - B: intra-articular fx RLE treated by ORIF (NWB 12 weeks)
  - Results: TTB decreased to normal values compared to controls 6 weeks after weight bearing was resumed on the affected limb
  - Conclusion: Patients may resume driving **6 weeks** after initiating full WB on RLE
    - 12 weeks after sx for extra-articular fx
    - 18 weeks after sx for intra-articular injury
- Kane et al. (2003): Right ankle fracture, surgical versus non-surgical treatment
  - Results:
    - Surgical group: after cast removal, wait **4 weeks** before driving
    - Non-surgical group: after cast removal, wait **2 weeks** before driving

Foot Surgery:

- Driving not recommended until **6 weeks** after 1st metatarsal osteotomy for right sided HAV, hammertoe, and claw toe correction. Holt et al. (2008): 1st metatarsal osteotomy: safe to drive 6 weeks after surgery

Legal Concerns/Conclusions:

- The US National Highway Traffic Safety Administration – recommendations: Patients should not drive with any splint of immobilizing device
- Although doctors may offer patients recommendations regarding safe driving, it is ultimately the patient’s responsibility
- Orthopedic surgery may interfere with a patient’s ability to safely drive a motor vehicle.
- Currently, there are recommendations for safe driving based on studies that investigate brake response Further research needed with more realistic conditions and evidence based guidelines to assist doctor recommendations

Table 1: Resuming motor vehicle driving: Summary of the recommendations for the most frequent situations, depending on the intervention and the affected side

<table>
<thead>
<tr>
<th>Type of Surgery</th>
<th>Left side</th>
<th>Right side</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total hip arthroplasty (THA)</td>
<td>1 week (automatic transmission cars); 6 weeks (manual transmission cars)</td>
<td>6 weeks</td>
</tr>
<tr>
<td>Total knee arthroplasty (TKA)</td>
<td>1 week (automatic transmission cars); 6 weeks (manual transmission cars)</td>
<td>6 weeks</td>
</tr>
<tr>
<td>Simple knee arthroscopy</td>
<td>As pain allows</td>
<td>4 weeks</td>
</tr>
<tr>
<td>ACL reconstruction</td>
<td>As pain allows</td>
<td>4 to 6 weeks</td>
</tr>
<tr>
<td>Casts and splints (upper and lower limbs)</td>
<td>No driving as long as the device is worn (except for left lower limb devices + automatic transmission car)</td>
<td></td>
</tr>
<tr>
<td>Complex lower limb trauma</td>
<td>6 weeks after weight bearing is resumed (12 weeks for femur/tibia nailing; 18 weeks for articular fractures ORIF)</td>
<td></td>
</tr>
<tr>
<td>Ankle ORIF</td>
<td>9 weeks (3 weeks after weight bearing is resumed)</td>
<td></td>
</tr>
<tr>
<td>HV and forefoot surgery (lapidus procedure excluded)</td>
<td>As pain allows</td>
<td>6 weeks</td>
</tr>
<tr>
<td>Lumbar spine surgery (spondylodesis excluded)</td>
<td>1 week, if pain is adequately controlled, without neurologic deficit</td>
<td></td>
</tr>
<tr>
<td>ACL = anterior cruciate ligament. ORIF = open reduction internal fixation. HV = hallux valgus.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

References:


