Prognostic Factors for Recovery Following Acute Lateral Ankle Ligament Sprain: A Systematic Review

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Background

• **Ankle sprains** are one of the most common musculoskeletal injuries

• **One-third** of individuals have persistent disability due to **pain**, recurrent **sprain**, **functional** or **mechanical instability**

• Synthesising the evidence on prognostic factors could help direct research and provision of care

Objective
To identify evidence of **prognostic factors** associated with **poor recovery** following acute lateral ankle ligament sprain
Methods:

Electronic searches were performed until September 2016

Inclusion Criteria: Acute (≤7 days) ankle sprain
Prospective studies exploring baseline prognostic factors & recovery over time

Quality assessment – Quality In Prognosis Studies tool (Hayden et al., 2013)

Characteristics of studies: 4173 reports -> 36 articles -> 9 included
- The Netherlands = 3; USA = 3; UK = 4; Germany = 1
- Athletic population = 3; General population = 6
- 3 RCTs (2° analyses); 6 cohort studies = 1047 participants
- Median sample size: 33 (range 20-553). Over 50% from 1 study
## Results: Prognostic factors

<table>
<thead>
<tr>
<th>Short term: ≤8 wks</th>
<th>Medium term: ≤4 mths</th>
<th>Long term: &gt;4 mths</th>
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<tbody>
<tr>
<td>- Age</td>
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<tr>
<td>- Swelling</td>
<td>- Wt. bearing ability</td>
<td>- Female</td>
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<tr>
<td>- ROM loss</td>
<td>- Non-inversion injury mech.</td>
<td>- MRI grade of injury, No. of injured ligs. &amp; bone bruise</td>
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<tr>
<td>- <strong>Severity grading</strong></td>
<td>- Medial jt. line pain on palpation</td>
<td>- Re-sprain within 3mths &amp; Pain at rest at 3mths</td>
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<tr>
<td>- Lig. stress test</td>
<td>- 4wk pain on WB with ankle DF</td>
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<tr>
<td>- SF36PF</td>
<td>- Medial jt. line pain</td>
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<tr>
<td>- <strong>AFS ≤35/≤40</strong></td>
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<tr>
<td>- Athletic ability</td>
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<tr>
<td>- Global / Physical fxn</td>
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<tr>
<td>- <strong>Ambulation</strong></td>
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*Key: Risk of Bias*
- Low
- Moderate
- High
Interpretation

• **Poor methodological quality** of studies (n=8)

• **Limited evidence** for symptomatic indicators of recovery

• Measures of **functional ability** seemed more sensitive later in the course of recovery

• Insufficient evidence to recommend any factor as an **independent predictor of outcome**

• Well-conducted studies are needed to establish associations between prognostic factors & poor recovery
Acknowledgements

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