**TITLE:** Prevention and Management of Heterotopic Ossification in Patients with Acquired Brain Injury: Guidelines

**DATE:** 28 July 2016

**RESEARCH QUESTION**

What are the evidence-based guidelines for the prevention or management of heterotopic ossification in patients with acquired brain injury?

**KEY FINDINGS**

One evidence-based guideline was identified regarding the prevention or management of heterotopic ossification in patients with acquired brain injury.

**METHODS**

A limited literature search was conducted on key resources including PubMed, The Cochrane Library, University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. No methodological filters were applied to limit retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2011 and July 19, 2016. Internet links were provided, where available.

The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.

**SELECTION CRITERIA**

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.
### Table 1: Selection Criteria

<table>
<thead>
<tr>
<th><strong>Population</strong></th>
<th>Children or adults with acquired brain injury (ABI) who are at risk for or who are experiencing heterotopic ossification following the brain injury</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intervention</strong></td>
<td>Management or prevention of heterotopic ossification (also known as myositis ossificans, ectopic ossification, ectopic bone formation)</td>
</tr>
<tr>
<td><strong>Comparator</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Outcomes</strong></td>
<td>Guidelines for prevention or management of heterotopic ossification</td>
</tr>
<tr>
<td><strong>Study Designs</strong></td>
<td>Health technology assessments, systematic reviews, meta-analyses, evidence-based guidelines</td>
</tr>
</tbody>
</table>

### RESULTS

Rapid Response reports are normally organized so that the higher quality evidence is presented first; however, reports primarily interested in evidence-based guidelines will only include this evidence-type in the main body of the report. Therefore, if identified, health technology assessment reports, systematic reviews, and meta-analyses are presented in the appendix.

One evidence-based guideline was identified regarding the prevention or management of heterotopic ossification in patients with acquired brain injury.

Additional references of potential interest are provided in the appendix.

### OVERALL SUMMARY OF FINDINGS

One evidence-based guideline\(^1\) was identified regarding the treatment and management of heterotopic ossification (HO) in patients with acquired brain injury. The guideline suggests the necessary use of x-rays to provide diagnosis and guide treatment. Nevertheless, the guideline advises that the most sensitive radiological study includes a three-phase bone scan (and/or gallium scan), magnetic resonance imaging, and colour Doppler ultrasound to provide diagnosis and guide treatment. The guideline states optimal treatments for HO include early diagnosis, range-of-motion exercise, and the use of disodium etidronate (prevents mineralization). Other treatments for HO may include nonsteroidal anti-inflammatory drugs, radiation, and surgery.
REFERENCES SUMMARIZED

Guidelines and Recommendations

   See: Heterotopic Ossification (HO)

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APPENDIX – FURTHER INFORMATION:

Systematic Reviews and Meta-analyses


Non-Randomized Studies
