



## Soft Tissue Injury Prevention Tool

### Tip Sheets

**Trade:** Concrete Work

**Job Task:** Concrete Placement - Vibrating

<p><b>General Tasks</b></p> <ul style="list-style-type: none"> <li>➤ Vibration of concrete to settle and eliminate air pockets using backpack vibrator including hand held whip &amp; head.</li> </ul>	<p><b>Common Tools</b></p> <ul style="list-style-type: none"> <li>➤ Backpack Vibrating Unit Including Whip &amp; Head</li> </ul>
<p><b>Potential Risk Factors</b> <i>Risk Factors can lead to increased risk for Work Related Musculoskeletal Disorders (WMSD's)</i></p> <p><b>Moderate Forward Back Bending</b></p> <ul style="list-style-type: none"> <li>• If frequent or sustained forward bending when recessing whip and head deep into column, wall or between rebar during mat pours for extended periods such as for concrete pours of 1000 yards or more.</li> </ul> <p><b>High Hand Grip Force with Repetitive Motion</b></p> <ul style="list-style-type: none"> <li>• If holding vibrating whip &amp; head for extended periods such as for concrete pours of 1000 yards or more.</li> </ul> <p><b>Hand/Arm Vibrations and Whole Body Vibrations</b></p> <ul style="list-style-type: none"> <li>• Higher Risk when holding vibrating whip &amp; head for extended periods such as for concrete pours of 1000 yards or more.</li> </ul>	<p><b>Possible Solutions</b></p> <p><b>Heavy Gripping &amp; Vibration Solutions:</b></p> <ul style="list-style-type: none"> <li>• Exposure may be minimized by:             <ul style="list-style-type: none"> <li>* task rotation at least every two hours;</li> <li>* Using a shoulder strap to help support weight of whip &amp; head;</li> <li>* using the lowest vibratory equipment available;</li> <li>* using anti-vibration gloves or vibration dampening materials such as grip kit material.</li> </ul> </li> </ul> <p><b>Awkward Posture Solutions:</b></p> <ul style="list-style-type: none"> <li>• Exposure may be minimized by rotating to other concrete tasks every 2-4 hours. If possible rotate vibrator work every hour particularly in cold weather conditions.</li> <li>• Stretch frequently, particularly performing back extension stretches.</li> </ul> <p><b>Potential Benefits</b></p> <ul style="list-style-type: none"> <li>✓ Reduces exertion of lower back.</li> <li>✓ Increases blood flow to reduce muscle tension.</li> <li>✓ Reduces strain on arm and hand muscles.</li> <li>✓ Increases productivity.</li> </ul>
	
<p><b>Feasibility</b></p> <ul style="list-style-type: none"> <li>• Engineer Control Anti-vibration Gloves</li> <li>• Engineer Control BackPack Vibrator</li> <li>• Administrative Control</li> <li>• Engineer Control</li> </ul> <p><b>Estimated Cost of Intervention</b></p> <ul style="list-style-type: none"> <li>• \$43.99 for Anti-vibration Gloves</li> <li>• \$1,275.00 for Back Pack Vibrator</li> </ul>	