



Soft Tissue Injury Prevention Tool

Tip Sheets

Trade: Healthcare
Job Task: Pipetting

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| <p>General Tasks</p> <ul style="list-style-type: none"> ➤ Manual filling of vials and tubes and dishes | <p>Common Tools</p> <ul style="list-style-type: none"> ➤ Foot Holds, Hand Holds |
| <p>Potential Risk Factors</p> <p><i>Risk Factors can lead to increased risk for Work Related Musculoskeletal Disorders (WMSD's)</i></p> <p>Placement of Hand Holds</p> <ul style="list-style-type: none"> • The design and force requirements used in pipetting can lead to carpal tunnel and cubital tunnel symptoms. This is caused by using the hands in a manner that does not allow for natural neutral postures of the wrist and hand <p>Placement of Lower Body</p> <ul style="list-style-type: none"> • Laboratory work benches are often fixed height and without proper clearance to allow for the lower body and legs to be full under the work bench. This leads to increased stress and tension on the upper and lower back due to forward leaning postures. Increased stress and increased reach requirements to be able to access the work bench area is created when there is not sufficient room for the lower body to get closer to the work. <p>Placement of Equipment on Bench</p> <p>When the work bench is one size fits all it makes it difficult to be able to arrange work equipment or computer equipment to be in the proper positions for those working there. This leads to increased issues of repetitive stress on the arms, hands and wrists while doing this work.</p> | <p>Possible Solutions</p> <p>Placement of Hand Holds</p> <ul style="list-style-type: none"> • When using pipettes that have been designed to allow the hand and wrist to be in a natural neutral posture you allow for greater relaxed postures and significant reduction in static posture of the hand <p>Body Placement Solutions:</p> <ul style="list-style-type: none"> • Provide for height adjustable laboratory desk that allows those working at this bench to adjust the height of the bench to the proper working height based on a person's stature. <p>Placement of Equipment on Bench:</p> <ul style="list-style-type: none"> • Equipment and height of the bench should be adjusted to the person's working at the station. As shifts change and new workers come on shift bench top height can be adjusted for the new workers. • If there are computers used on these benches as well height adjustable monitor arms can be used to place the monitors screens at the proper height to enhance neutral relaxed postures. <p>Potential Benefits</p> <ul style="list-style-type: none"> ✓ Reduces reach requirements that can lead to strain or sprain related incidence ✓ Reduces exertion and forward leaning of lower back. ✓ Allows for relaxed neutral wrist and arm postures ✓ Allows for relaxed neck, shoulder and upper back postures |
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Feasibility

- Engineer Control
- Work Practice Control
- Administrative Control

Estimated Cost of Intervention

- \$300-\$1000 for ergonomically enhanced pipettes

<https://www.pipettes.com/products/biohit-eline-electronic-pipette-01-5-ul>

<http://vistalab.com/ProductResults.asp?Product=Electronic Single Channel&Support=Ovation ES>