

Job Analysis Ergonomic Risk Assessment Report

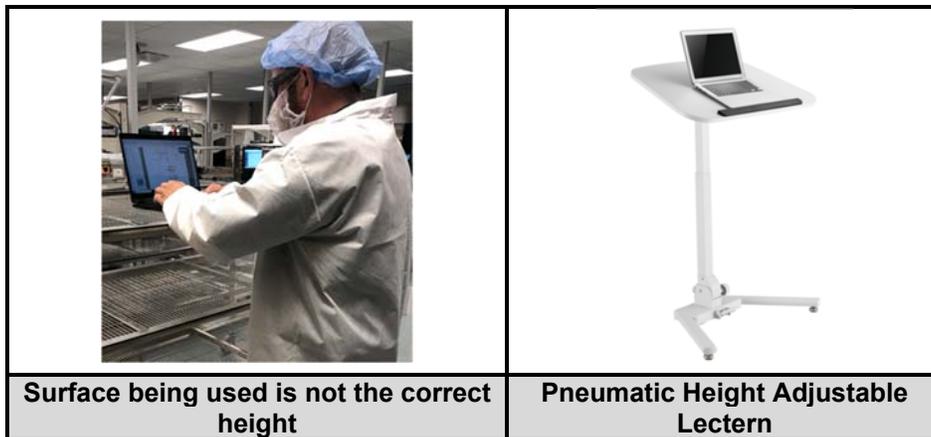
Company: Location:

Job Title: Field Service Representative

Area	Task	Root Cause	Risk Factors	Recommendation
Hospital and Surgeon Center Sterilization Rooms	Employee is required perform administrative tasks on a company provided laptop computer	Body Mechanics	<ul style="list-style-type: none"> Employee may not always have an area to set up the laptop Surfaces used may be too high Awkward upper extremity body postures Wrist, elbow, and shoulder MSDs 	Provide employees with a height adjustable lectern

Solution:

Height adjustable lecterns can be adjusted to accommodate a wide variety of statures to allow employees to complete administrative tasks using more neutral body postures. The foldable lecterns can be transported with their tools using a hand truck. Given the work environment, the employee may not always have access to a table, causing employees to improvise. Ensuring employees have access to a height adjustable lectern reduces the amount of time the employees spend in risky positions. This, in turn, reduces the risk of developing wrist, elbow, and shoulder MSDs.

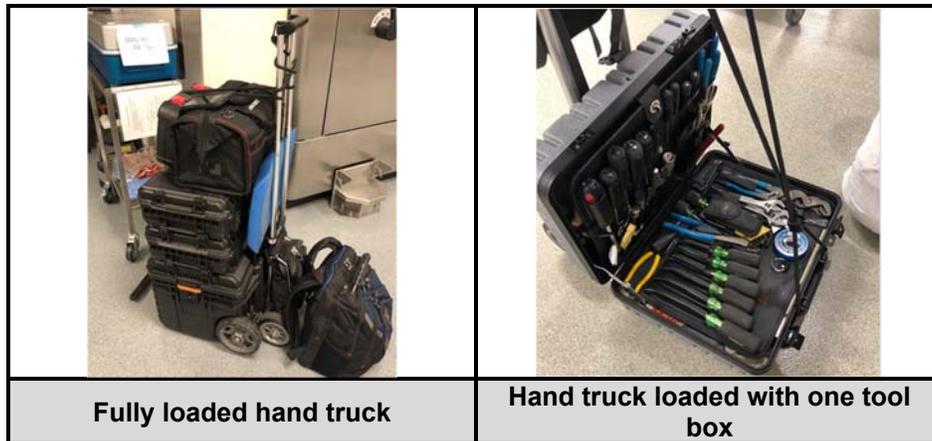


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Area	Task	Root Cause	Risk Factors	Recommendation
Hospital and Surgeon Center Sterilization Rooms	Employee is required to push and pull hand trucks loaded with tool boxes.	Body Mechanics	<ul style="list-style-type: none"> • Increased push and pull forces for distances over 500 ft. • Muscle fatigue • Development of wrist, elbow, and shoulder pain or discomfort 	<ul style="list-style-type: none"> • Only transport tools necessary to complete the scheduled job. • Use two hand to push the hand truck

Solution:

Minimizing loads transported with the hand truck can significantly reduce the amount of push and pull force required to transport tools to the job site. Both hands should be used to push (as oppose to pull) the hand truck as this allows the employee to evenly distribute forces to both upper extremities. Reducing the amount of force and overall effort reduces the risk of developing wrist, elbow, and shoulder discomfort and muscular fatigue.



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Area	Task	Root Cause	Risk Factors	Recommendation
Hospital and Surgeon Center Sterilization Rooms	Employee is required to push and pull on basic hand tools while performing job tasks.	Body Mechanics	<ul style="list-style-type: none"> • Repetitive gripping, handling, pushing, and pulling • Pushing and pulling outside of the primary zone (waist height) • Upper back, shoulder, elbow, wrist, and hand MSDs 	<ul style="list-style-type: none"> • Use both hands to push and pull on tools when possible • Avoid pushing and pulling below knee height or above shoulder height by utilizing step stools and ladders

Solution:

When applying forces to objects, a greater amount of exertion is required of one upper extremity to loosen and tighten hardware compared to the amount of exertion required if both upper extremities were used. When possible, employees should use both hands to push and pull down on tool handles since minimizing forces is key to reducing the overall risk associated with repetitive gripping and handling tasks. Another method that can be used to reduce risk is utilizing ladders and step stool to eliminate or reduce the total amount of time spent working above shoulder height. Exerting forces above the shoulders and below the knees increase the risk of injury.



Employee is shown using both hands

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Area	Task	Root Cause	Risk Factors	Recommendation
Hospital and Surgeon Center Sterilization Rooms	Employee is required to use various types of hand tools while performing job tasks.	Tools/ Equipment	<ul style="list-style-type: none"> • Frequent handling and use of upper extremities • Muscular fatigue • Frequent push and pull forces • Upper back, shoulder, elbow, wrist, and hand MSDs 	<ul style="list-style-type: none"> • Ensure the proper tools are used to complete job tasks • Utilize tools with the proper handle lengths • Utilize tools with padded handles • Utilize battery powered tools with bit extensions when possible

Solution:

For tasks that require more force, such as torquing screws and nuts, tools with larger handle diameters should to be used. Larger handles allow fingers to wrap comfortably around the tool using a power grip. This prevents slippage and reduces stress and impact on hands, fingers and wrists. Utilizing tools with padded handles is another way to reduce the risk of slippage and injury. Cushioned handles are more comfortable and allow employees to grasp handles with a firmer grip. It is also recommended that employees use battery powered tools when possible to reduce grip, push, and pull forces as well as muscular fatigue. Bit extensions are available and can be used to complete tasks in small, hard to reach areas.

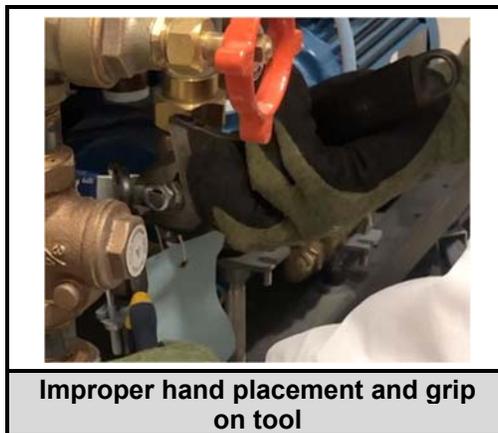
		
Multi-Tool Handle Grip	Right Angle Drill	Bit Extension

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Area	Task	Root Cause	Risk Factors	Recommendation
Hospital and Surgeon Center Sterilization Rooms	Employee is required to perform preventative and corrective maintenance tasks on sterilization equipment using basic hand tools.	Body Mechanics	<ul style="list-style-type: none"> • Improper use of tools • Poor body mechanics • Shoulder, elbow, wrist, and hand MSDs 	<ul style="list-style-type: none"> • Consideration of training program reassessment to ensure proper tool utilization and best known methods fundamentals.

Solution:

During the Job Analysis data collection process, employees were observed using risky body mechanics. In the photo provided below, an employee is shown utilizing improper hand placement and the type of grip on the tool handle. Both grip and placement of hand can impact force exertion, making it more difficult to tighten and loosen hardware. Hands should be placed near the distal end of tool handles and employees should utilize power grips if the handle diameter allows it. It is recommended that current training programs are reassessed to ensure proper utilization of tools and mechanics to reduce shoulder, elbow, wrist, and hand MSDs.



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Area	Task	Root Cause	Risk Factors	Recommendation
Hospital and Surgeon Center Sterilization Rooms	Employee is required to wear hand protection while using hand tools to complete job tasks.	Tools/ Equipment	<ul style="list-style-type: none"> • Increased grip and pinch forces required to complete task • Muscular fatigue • Hand and wrist MSDs 	<ul style="list-style-type: none"> • Complete a glove assessment to determine the most effective and appropriate type of hand protection.

Solution:

When employees wear hand protection, an increase in grip effort is required. The thicker the glove, the greater reduction in grip hand strength. This, in turn, can cause the muscles of the hand to fatigue at quicker rates. A glove assessment, conducted by a third party, can provide information that will allow Company to determine the most effective and efficient form of hand protection.





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Summary

Currently, employees are at high risk for developing shoulder and upper extremity musculoskeletal disorders. Employees are also subject to muscular fatigue due to the frequent use of hand tools and the nature of current job tasks. By addressing these ergonomic risk factors, both muscular fatigue and risk of musculoskeletal injuries will be greatly reduced. A reduction in effort and muscular fatigue will lead to an increase in productivity.

Links to Equipment Recommendation Sites

NOTE: The following list of equipment are recommendations based on information collected during the Job Analysis data collection process. Links have been provided along with equipment descriptions and details. It is our customer's responsibility to ensure equipment meets company standards and is appropriate for the identified job task before purchasing equipment.

Pneumatic Height Adjustable Lectern: http://www.techorbts.com/rolling-carts-workstations/techorbts-mobile-standing-desk-laptop-and-computer-stand-height-adjustable-lectern-folding-computer-table-pneumatic-sit-stand-rolling-stand-up-cart-workstation/?CATARGETID=120155060000107967&CADevice=c&gclid=Cj0KCQiAk7TuBRDQARIsAMRrfUbc6zQnyN2ZI9Q1fLLuRyZHRpXbl9pwxxB3pXlu5RkLLCkQEqOlxjMaAm8fEALw_wcB

Multi-Tool Handle Grip:

https://www.homedepot.com/p/RE-GRIP-7-in-Multi-Tool-Handle-Grip-PN44-7/203614660?mtc=Shopping-B-F_D25T-G-D25T-25_1_HAND_TOOLS-Multi-NA-Feed-PLA-NA-NA-HandTools_PLA&cm_mmc=Shopping-B-F_D25T-G-D25T-25_1_HAND_TOOLS-Multi-NA-Feed-PLA-NA-NA-HandTools_PLA-71700000034127224-58700003933021546-92700049573927173&qclsrc=aw.ds&&gclid=Cj0KCQiAoIPvBRDgARIsAHsCw08sf4ad8YOIAVq_6-H23QOZkYtiXDc8VldfjyLyFMsw_d4ILOX8StUaAsj4EALw_wcB

Right Angle Drill

https://www.homedepot.com/p/Milwaukee-M12-12-Volt-Lithium-Ion-Cordless-3-8-in-Right-Angle-Drill-Tool-Only-2415-20/202196520?q_store=441&mtc=Shopping-B-F_D25T-G-D25T-25_9_PORTABLE_POWER-Multi-NA-Feed-LIA-NA-NA-PortablePower_LIA&cm_mmc=Shopping-B-F_D25T-G-D25T-25_9_PORTABLE_POWER-Multi-NA-Feed-LIA-NA-NA-PortablePower_LIA-



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Drill Bit Extensions

https://www.amazon.com/Jonerytime/Christmas-Drill-Holder-Connecting-Link/dp/B07KPT79NR/ref=asc_df_B07KPT79NR/?tag=hyprod-20&linkCode=df0&hvadid=330443528285&hvpos=1o1&hvnetw=g&hvrnd=17053452119764835083&hvppone=&hvptwo=&hvqmt=&hvdev=c&hvdvcmdl=&hvlocint=&hvlocphy=9030163&hvtargid=pla-629812940073&psc=1