

## Appendix 23- A: Physical Risk Factor Ergonomic Checklist

The Physical Risk Factor Ergonomic Checklist is a tool used in work places to identify and evaluate ergonomic stressors. The checklist can be used for typical work activities, which are a regular and foreseeable part of the job, occurring more than one day per week, and more frequently than one week per year.

For each category determine whether the physical risk factors rate as a “**caution**” or “**hazard**” by placing a check (✓) in the appropriate box. Note if a category is not applicable.

If a work place “**hazard**” exists, it must be reduced below the hazard level or to the degree technologically and economically feasible. Ensure workers exposed to ergonomic stressors at or above the “**hazard**” level receive general ergonomics training.

If the task rates a “**caution,**” then it should be periodically reassessed since changes in the work environment may create new ergonomic stressors. A work activity that is found to be a “**caution or hazard**” can be evaluated further using the Job Requirements and Physical Demands Survey, resources for which are found in appendix C.

Ensure significant contributing physical or personal risk factors are not present. Contributing factors contribute to but do not cause Work-related Musculoskeletal Disorders. Physical contributing factors may include temperature extreme, inadequate recovery time, and stress on the job.



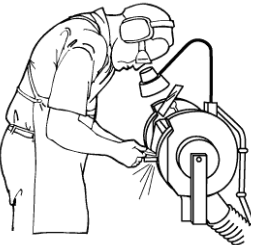
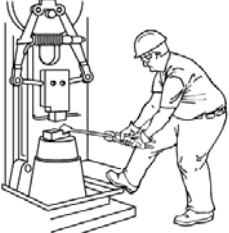
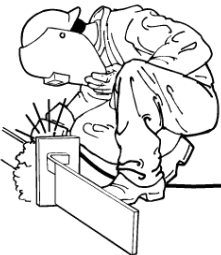

Non-occupational factors (personal contributing factors) may include but are not limited to age, pregnancy, obesity, wrist / knee / ankle strain or fracture, back strain, thyroid disorder, rheumatoid arthritis, hypertension, diabetes, kidney disorders, gout; as well as tendonitis / tenosynovitis, epicondylitis, thoracic outlet syndrome, ganglion cyst, bursitis, trigger finger, and carpal tunnel syndrome. Professional judgment should be used in instances where personal or physical contributing factors are present.

Also, note that the risk of developing a Work-Related Musculoskeletal Disorder increases when ergonomic risk factors occur in combination.

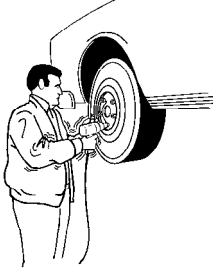

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Evaluator:		Date:	
Department Name:	Location:	POC Name:	Phone Number:
Job Position Evaluated:		Number of employees performing job:	
Follow-up Date:		Email address:	
Job Description / Figures:			
Recommendations:      Caution,      Hazard,      Neither,      Not Applicable (Check One)			
Follow-up:			

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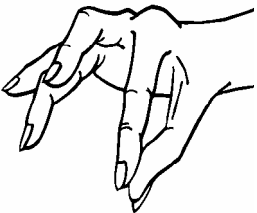
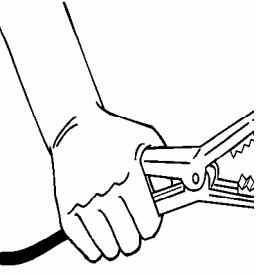
AWKWARD POSTURE			
	Caution	Hazard	Comments
 <p>1. Working with the hand(s) above the head, or the elbow(s) above the shoulders</p>	<input type="checkbox"/> more than 2 hours total per day	<input type="checkbox"/> more than 4 hours total per day	
 <p>2. Repeatedly raising the hand(s) above the head, or the elbow(s) above the shoulder(s) more than once per minute</p>	<input type="checkbox"/> n/a	<input type="checkbox"/> more than 4 hours total per day	
 <p>3. Working with the neck bent (without support and without the ability to vary posture)</p>	<input type="checkbox"/> more than 30 degrees for more than 2 hours total per day	<input type="checkbox"/> More than 30 degrees for more than 4 hours per day <input type="checkbox"/> more than 45 degrees for more than 2 hours total per day	
 <p>4. Working with the back bent forward (without support and without the ability to vary posture)</p>	<input type="checkbox"/> more than 30 degrees for more than 2 hours total per day	<input type="checkbox"/> - more than 30 degrees for more than 4 hours total per day, or <input type="checkbox"/> - more than 45 degrees more than 2 hours total per day	
 <p>5. Squatting</p>	<input type="checkbox"/> more than 2 hours total per day	<input type="checkbox"/> more than 4 hours total per day	
 <p>6. Kneeling</p>	<input type="checkbox"/> more than 2 hours total per day	<input type="checkbox"/> more than 4 hours total per day	

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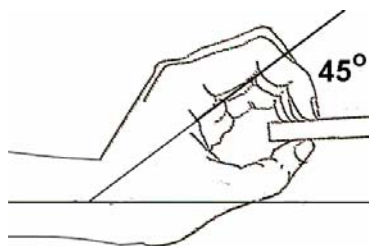
MODERATE TO HIGH HAND- ARM VIBRATION			
	Caution	Hazard	Comments
 <p>7. Using impact or percussive type tools such as impact wrenches, carpet strippers, chain saws, percussive tools (jack hammers, scalers, riveting or chipping hammers) or other tools that typically have high vibration levels</p>	<input type="checkbox"/> more than 30 minutes total per day	<input type="checkbox"/> For exposures that exceed caution level of more than 30 minutes per day, perform analysis using the Hand- Arm Vibration Analysis Tool Guide in the ACGIH TLV guide	
 <p>8. Using grinders, sanders, jigsaws or other hand tools that typically have moderate vibration levels</p>	<input type="checkbox"/> more than 2 hours total per day	<input type="checkbox"/> For exposures that exceed caution level of more than 2 hours per day perform analysis using the Hand- Arm Vibration Analysis Guide in the ACGIH TLV guide	

HIGHLY REPETITIVE MOTION			
	Caution	Hazard	Comments
 <p>9. Repeating the same motion with the neck, shoulders, elbows, wrists, or hands (excluding keying activities) with little or no variation every few seconds</p>	<input type="checkbox"/> more than 2 hours total per day	<input type="checkbox"/> - more than 6 hours per day with no other risk factors, or <input type="checkbox"/> - more than 2 hours per day with wrists bent in flexion ( $> 30^\circ$ ), extension ( $> 45^\circ$ ), or ulnar deviation ( $> 30^\circ$ ) <b>AND</b> high, forceful exertions of the hand(s)	
 <p>10. Performing intensive keying Reference: Appendix 23-B, Computer Workstation Checklist for additional information.</p>	<input type="checkbox"/> more than 4 hours total per day	<input type="checkbox"/> either; <input type="checkbox"/> - more than 7 hours per day with no other risk factors, or <input type="checkbox"/> - more than 4 hours per day with wrists bent in flexion ( $> 30^\circ$ ), extension ( $> 45^\circ$ ), or ulnar deviation ( $> 30^\circ$ )	

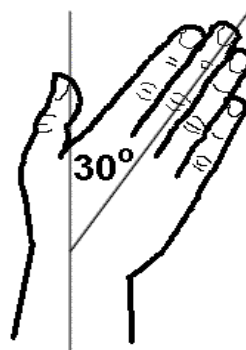
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HIGH HAND FORCE			
	Caution	Hazard	Comments
 <p>11. Pinching an unsupported object(s) weighing 2 or more pounds per hand, or pinching with a force of 4 or more pounds per hand</p>	<input type="checkbox"/> more than 2 hours per day (comparable to pinching half a ream of paper or the force required to open two wooden clothespins)	<input type="checkbox"/> - more than 4 hours per day with no other risk factors, or <input type="checkbox"/> - more than 3 hours day with highly repetitive motion, or <input type="checkbox"/> - more than 3 hours per day with significant wrist deviation in flexion ( $> 30^\circ$ ), extension ( $> 45^\circ$ ), ulnar deviation ( $> 30^\circ$ )	
 <p>12. Gripping an unsupported object(s) weighing 10 or more pounds per hand, or gripping with a force of 10 or more pounds per hand</p>	<input type="checkbox"/> more than 2 hours total per day (comparable to clamping light duty automotive jumper cables onto a battery)	<input type="checkbox"/> - more than 4 hours per day with no other risk factors, or <input type="checkbox"/> - more than 3 hours day with highly repetitive motion, or <input type="checkbox"/> - more than 3 hours per day with significant wrist deviation in flexion ( $> 30^\circ$ ), extension ( $> 45^\circ$ ), flexion, or ulnar deviation ( $> 30^\circ$ )	

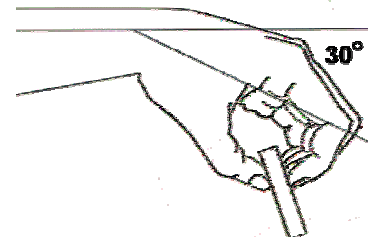
Examples:



Extension

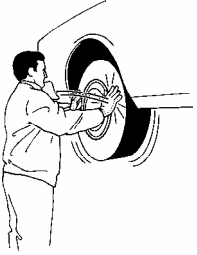




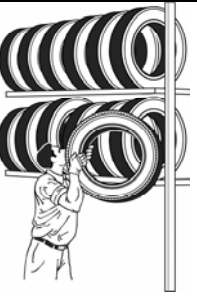
Deviation



Flexion

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REPEATED IMPACT				
		Caution	Hazard	Comments
	13. Using the hand (heel/base of palm) or knee as a hammer	<input type="checkbox"/> more than 10 times per hour more than 2 hours total per day	<input type="checkbox"/> more than once per minute more than 2 hours total per day	

HEAVY, FREQUENT OR AWKWARD LIFTING				
		Caution	Hazard	Comments
	14. Lifting objects...	<input type="checkbox"/> weighing more than 75 pounds once per day <b>Or</b> more than 55 pounds 10 times per day	<input type="checkbox"/> For exposures that exceed caution level perform lift analysis using the NIOSH Lifting Equation or the current Lifting Index in the ACGIH TLV guide	
	15. Lifting objects	<input type="checkbox"/> weighing more than 10 pounds if done more than twice per minute more than 2 hours total per day	<input type="checkbox"/> For exposures that exceed caution level perform Lift analysis using the NIOSH Lifting Equation or the current Lifting Index in the ACGIH TLV guide	
	16. Lifting objects	<input type="checkbox"/> weighing more than 25 pounds above the shoulders, below the knees or at arms length more than 25 times per day	<input type="checkbox"/> For exposures that exceed caution level perform Lift analysis using the NIOSH Lifting Equation or the current Lifting Index in the ACGIH TLV guide	

Drawings / Figures: