

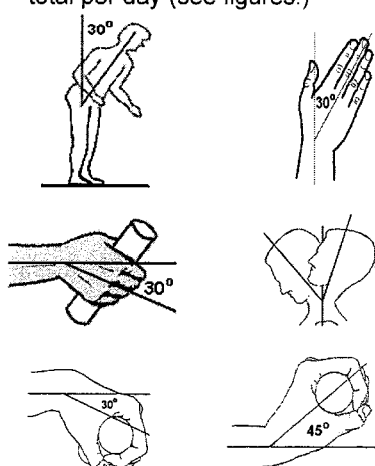
**Table W-1 - Basic Screening Tool**

You need only review risk factors for those areas of the body affected by the MSD incident.

		<b>Body Part Associated With MSD Incident</b>			
<b>Risk Factors This Standard Covers</b>	<b>Performing job or tasks that involve:</b>	<b>Neck/ Shoulder</b>	<b>Hand/ Wrist/ Arm</b>	<b>Back/ Trunk/ Hip</b>	<b>Leg/ knee/ Ankle</b>
<b>Repetition</b>	(1) Repeating the same motions every few seconds or repeating a cycle of motions involving the affected body part more than twice per minute for more than 2 consecutive hours in a workday.	√	√	√	√
	(2) Using an input device, such as a keyboard and/or mouse, in a steady manner for more than 4 hours total in a workday.	√	√		
<b>Force</b>	(3) Lifting more than 75 pounds at any one time; more than 55 pounds more than 10 times per day; or more than 25 pounds below the knees, above the shoulders, or at arms' length more than 25 times per day;	√	√	√	√
	(4) Pushing/pulling with more than 20 pounds of initial force (e.g., equivalent to pushing a 65 pound box across a tile floor or pushing a shopping cart with five 40 pound bags of dog food ) for more than 2 hours total per day;	√	√	√	√
	(5) Pinching an unsupported object weighing 2 or more pounds per hand, or use of an equivalent pinching force (e.g., holding a small binder clip open) for more than 2 hours total per day;		√		
	(6) Gripping an unsupported object weighing 10 pounds or more per hand, or use of an equivalent gripping force (e.g., crushing the sides of an aluminum soda can with one hand), for more than 2 hours total per day.		√		

**Table W-1 - Basic Screening Tool - continued**

You need only review risk factors for those areas of the body affected by the MSD incident.

Risk Factors This Standard Covers	Performing job or tasks that involve:	Body Part Associated With MSD Incident			
		Neck/ Shoulder	Hand/ Wrist/ Arm	Back/ Trunk/ Hip	Leg/ knee/ Ankle
<b>Awkward Postures</b>	(7) Repeatedly raising or working with the hand(s) above the head or the elbow(s) above the shoulder(s) for more than 2 hours total per day;	√	√	√	
	(8) Kneeling or squatting for more than 2 hours total per day;			√	√
	(9) Working with the back, neck or wrists bent or twisted for more than 2 hours total per day (see figures:) 	√	√	√	
<b>Contact Stress</b>	(10) Using the hand or knee as a hammer more than 10 times per hour for more than 2 hours total per day;		√		√
<b>Vibration</b>	(11) Using vibrating tools or equipment that typically have high vibration levels (such as chainsaws, jack hammers, percussive tools, riveting or chipping hammers) for more than 30 minutes total per day;	√	√	√	
	(12) Using tools or equipment that typically have moderate vibration levels (such as jig saws, grinders, or sanders) for more than 2 hours total per day.	√	√		

## Appendix D-2 to §1910.900: VDT Workstation Checklist

Using this checklist is one, but not the only, way an employer can comply with the requirement to identify, analyze and control MSD hazards in VDT tasks. This checklist does not require that employees assume specific working postures in order for the employer to be in compliance. Rather, employers will be judged to be in compliance with paragraph (k) and (m) of OSHA's standard if they provide the employee with a VDT workstation is arranged or designed in a way that would pass this checklist.

**If employee exposure does not meet the levels indicated by the Basic Screening Tool, you may STOP HERE.**

<b>WORKING CONDITIONS</b>		<b>Y</b>	<b>N</b>
<b>The workstation is designed or arranged for doing VDT tasks so it allows the employee's . . .</b>			
<b>A. Head and neck</b> to be about upright (not bent down/back).			
<b>B. Head, neck and trunk</b> to face forward (not twisted).			
<b>C. Trunk</b> to be about perpendicular to floor (not leaning forward/backward).			
<b>D. Shoulders and upper arms</b> to be about perpendicular to floor (not stretched forward) and relaxed (not elevated).			
<b>E. Upper arms and elbows</b> to be close to body (not extended outward).			
<b>F. Forearms, wrists, and hands</b> to be straight and parallel to floor (not pointing up/down).			
<b>G. Wrists and hands</b> to be straight (not bent up/down or sideways toward little finger).			
<b>H. Thighs</b> to be about parallel to floor and <b>lower legs</b> to be about perpendicular to floor.			
<b>I. Feet</b> to rest flat on floor or be supported by a stable footrest.			
<b>J. VDT tasks</b> to be organized in a way that allows employee to vary VDT tasks with other work activities, or to take micro-breaks or recovery pauses while at the VDT workstation.			
<b>SEATING</b>		<b>Y</b>	<b>N</b>
<b>The chair . . .</b>			
<b>1. Backrest</b> provides support for employee's lower back (lumbar area).			
<b>2. Seat width and depth</b> accommodate specific employee (seatpan not too big/small).			
<b>3. Seat front</b> does not press against the back of employee's knees and lower legs (seatpan not too long).			
<b>4. Seat</b> has cushioning and is rounded/ has "waterfall" front (no sharp edge).			
<b>5. Armrests</b> support both forearms while employee performs VDT tasks and do not interfere with movement.			

<b>KEYBOARD/INPUT DEVICE</b>		Y	N
<b>The keyboard/input device is designed or arranged for doing VDT tasks so that . . .</b>			
6. <b>Keyboard/input device platform(s)</b> is stable and large enough to hold keyboard and input device.			
7. <b>Input device</b> (mouse or trackball) is located right next to keyboard so it can be operated without reaching.			
8. <b>Input device</b> is easy to activate and shape/size fits hand of specific employee (not too big/small).			
9. <b>Wrists and hands</b> do not rest on sharp or hard edge.			
<b>MONITOR</b>		Y	N
<b>The monitor is designed or arranged for VDT tasks so that . . .</b>			
10. <b>Top line</b> of screen is at or below eye level so employee is able to read it without bending head or neck down/back. (For employees with bifocals/trifocals, see next item.)			
11. <b>Employee with bifocals/trifocals</b> is able to read screen without bending head or neck backward.			
12. <b>Monitor distance</b> allows employee to read screen without leaning head, neck or trunk forward/backward.			
13. <b>Monitor position</b> is directly in front of employee so employee does not have to twist head or neck.			
14. <b>No glare</b> (e.g., from windows, lights) is present on the screen which might cause employee to assume an awkward posture to read screen.			
<b>WORK AREA</b>		Y	N
<b>The work area is designed or arranged for doing VDT tasks so that . . .</b>			
15. <b>Thighs</b> have clearance space between chair and VDT table/keyboard platform (thighs not trapped).			
16. <b>Legs and feet</b> have clearance space under VDT table so employee is able to get close enough to keyboard/input device.			
<b>ACCESSORIES</b>		Y	N
17. <b>Document holder</b> , if provided, is stable and large enough to hold documents that are used.			
18. <b>Document holder</b> , if provided, is placed at about the same height and distance as monitor screen so there is little head movement when employee looks from document to screen.			
19. <b>Wrist rest</b> , if provided, is padded and free of sharp and square edges.			
20. <b>Wrist rest</b> , if provided, allows employee to keep forearms, wrists and hands straight and parallel to ground when using keyboard/input device.			
21. <b>Telephone</b> can be used with head upright (not bent) and shoulders relaxed (not elevated) if employee does VDT tasks at the same time.			

GENERAL	Y	N
22. Workstation and equipment have sufficient adjustability so that the employee is able to be in a safe working posture and to make occasional changes in posture while performing VDT tasks.		
23. VDT Workstation, equipment and accessories are maintained in serviceable condition and function properly.		
<b>PASSING SCORE = "YES" answer on all "working postures" items (A-J) and no more than two "NO" answers on remainder of checklist (1-23).</b>		

## JOB HAZARD ANALYSIS TOOLS

JOB HAZARD ANALYSIS TOOLS	SOURCE *	RISK FACTORS EVALUATED	AREAS OF BODY ADDRESSED	EXAMPLES OF JOBS TOOL APPLIES TO
<p><b>Job Strain Index</b></p>	<p>“The Strain Index: A Proposed Method to Analyze Jobs For Risk of Distal Upper Extremity Disorders.” Moore, J.S., and Garg, A, 1995; <i>AIHA Journal</i>, 56(5): 443–458.</p> <p>You may obtain a copy from:                      American Industrial Hygienists Association.                      2700 Prosperity Ave                      Suite 250                      Fairfax, VA 22031.                      Phone: (703) 849-8888                      Web site: <a href="http://www.aiha.org/">http://www.aiha.org/</a></p> <p>See also:  <a href="http://sgr-www.satx.disa.mil/hscormo/tools/strain.htm">http://sgr-www.satx.disa.mil/hscormo/tools/strain.htm</a> for a Web-based version of this tool.</p>	<ul style="list-style-type: none"> <li>• Repetition</li> <li>• Force</li> <li>• Awkward postures</li> </ul>	<ul style="list-style-type: none"> <li>• Hands</li> <li>• Wrists</li> </ul>	<ul style="list-style-type: none"> <li>• Small parts assembly</li> <li>• Inspecting</li> <li>• Meatpacking</li> <li>• Sewing</li> <li>• Packaging</li> <li>• Keyboarding</li> <li>• Data Processing</li> <li>• Jobs involving highly repetitive hand motions</li> </ul>

## JOB HAZARD ANALYSIS TOOLS

<p><b>Revised NIOSH Lifting Equation</b></p>	<p><i>Applications Manual for the Revised NIOSH Lifting Equation</i>, Waters, T.R., Putz-Anderson, V., Garg, A., National Institute for Occupational Safety and Health, January 1994 (DHHS, NIOSH Publication No. 94-110).</p> <p>You may obtain a copy from:          U.S. Department of Commerce          Technology Administration          National Technical Information Service (NTIS)          5285 Port Royal Road          Springfield, VA 22161          (NTIS Publication No. PB94-176930)          Phone: (703) 487-4650          Web site: <a href="http://www.cdc.gov/niosh/">http://www.cdc.gov/niosh/</a></p> <p>See also:  <a href="http://www.industrialhygiene.com/calc/lift.html">http://www.industrialhygiene.com/calc/lift.html</a> for a Web-based version of this tool.</p>	<ul style="list-style-type: none"> <li>• Repetition</li> <li>• Force</li> <li>• Awkward postures</li> </ul>	<ul style="list-style-type: none"> <li>• Lower back</li> </ul>	<ul style="list-style-type: none"> <li>• Package sorting, handling</li> <li>• Package delivery</li> <li>• Beverage delivery</li> <li>• Assembly work</li> <li>• Manual handling involving lifting weights &gt;10 Lbs.</li> <li>• Production jobs involving forceful exertions</li> <li>• Stationary lifting</li> </ul>
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## JOB HAZARD ANALYSIS TOOLS

<p><b>Snook Push/Pull Hazard Tables</b></p>	<p>“The Design of Manual Handling Tasks: Revised Tables of Maximum Acceptable Weights and Forces,” Snook, S.H. and Ciriello, V.M., <i>Ergonomics</i>, 1991, 34(9): 1197-1213.</p> <p>You may obtain a copy from: Taylor &amp; Francis Inc. 325 Chestnut Street Suite 800 Philadelphia, PA 19106, USA Phone: (800) 354-1420 Web site: <a href="http://www.tandf.co.uk/journals/">http://www.tandf.co.uk/journals/</a></p>	<ul style="list-style-type: none"> <li>• Repetition</li> <li>• Force</li> <li>• Awkward postures</li> </ul>	<ul style="list-style-type: none"> <li>• Back</li> <li>• Trunk</li> <li>• Shoulders</li> <li>• Legs</li> </ul>	<ul style="list-style-type: none"> <li>• Food service</li> <li>• Laundry</li> <li>• Housekeeping</li> <li>• Janitorial</li> <li>• Package delivery</li> <li>• Garbage collection</li> <li>• Nursing homes</li> <li>• EMT, ambulance</li> <li>• Jobs involving pushing/pulling carts</li> <li>• Jobs involving carrying objects</li> </ul>
<p><b>Rapid Upper Limb Assessment (RULA)</b></p>	<p>“RULA: A Survey Method for the Investigation of Work-Related Upper Limb Disorders,” McAtamney, L. and Corlett, E.N., <i>Applied Ergonomics</i>, 1993, 24(2): 91-99.</p> <p>You may obtain a copy from: Elsevier Science Regional Sales Office Customer Support Department P.O. Box 945 New York, N.Y. 10159 Phone: (212) 633-3730 Web site: <a href="http://www.elsevier.com/">http://www.elsevier.com/</a></p>	<ul style="list-style-type: none"> <li>• Repetition</li> <li>• Force</li> <li>• Awkward postures</li> </ul>	<ul style="list-style-type: none"> <li>• Wrists</li> <li>• Forearms</li> <li>• Elbows</li> <li>• Shoulders</li> <li>• Neck</li> <li>• Trunk</li> </ul>	<ul style="list-style-type: none"> <li>• Assembly work</li> <li>• Production work</li> <li>• Sewing</li> <li>• Janitorial</li> <li>• Maintenance</li> <li>• Meatpacking</li> <li>• Grocery cashier</li> <li>• Telephone operator</li> <li>• Ultrasound technicians</li> <li>• Dentists</li> <li>• Dental technicians</li> </ul>



## JOB HAZARD ANALYSIS TOOLS

<p><b>Rapid Entire Body Assessment (REBA)</b></p>	<p>“Rapid Entire Body Assessment (REBA),” Hignett, S. and McAtamney, L., <i>Applied Ergonomics</i>, 2000, 31: 201-205.</p> <p>You may obtain a copy from: Elsevier Science Regional Sales Office Customer Support Department P.O. Box 945 New York, N.Y. 10159 Phone: (212) 633-3730 Web site: <a href="http://www.elsevier.com/">http://www.elsevier.com/</a></p>	<ul style="list-style-type: none"> <li>• Repetition</li> <li>• Force</li> <li>• Awkward postures</li> </ul>	<ul style="list-style-type: none"> <li>• Wrists</li> <li>• Forearms</li> <li>• Elbows</li> <li>• Shoulders</li> <li>• Neck</li> <li>• Trunk</li> <li>• Back</li> <li>• Legs</li> <li>• Knees</li> </ul>	<ul style="list-style-type: none"> <li>• Patient lifting, transfer</li> <li>• Nurses</li> <li>• Nurses aides</li> <li>• Orderlies</li> <li>• Janitors</li> <li>• Housekeeping</li> <li>• Grocery warehouse</li> <li>• Grocery cashier</li> <li>• Telephone operator</li> <li>• Ultrasound technicians</li> <li>• Dentists</li> <li>• Dental technicians</li> <li>• Veterinarian</li> </ul>
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## JOB HAZARD ANALYSIS TOOLS

<p><b>ACGIH Hand/Arm (Segmental) Vibration TLV</b></p>	<p>1998 Threshold Limit Values for Physical Agents in the Work Environment, 1998 TLVs® and BEIs® <i>Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices</i>, pp. 109-131, American Conference of Governmental Industrial Hygienists. You may obtain a copy from: American Conference of Governmental Industrial Hygienists, Inc. 1330 Kemper Meadow Dr. Suite 600 Cincinnati, OH 45240 Phone: (513) 742-2020 Web site: <a href="http://www.acgih.org/">http://www.acgih.org/</a></p>	<ul style="list-style-type: none"> <li>• Vibration</li> </ul>	<ul style="list-style-type: none"> <li>• Hands</li> <li>• Arms</li> <li>• Shoulders</li> </ul>	<ul style="list-style-type: none"> <li>• Grinding</li> <li>• Sanding</li> <li>• Chipping</li> <li>• Drilling</li> <li>• Sawing</li> <li>• Jigsawing</li> <li>• Chainsawing</li> <li>• Production work using vibrating or power hand tools</li> <li>• Regular use of vibrating hand tools</li> </ul>
<p><b>GM-UAW Risk Factor Checklist</b></p>	<p>“UAW-GM Ergonomics Risk Factor Checklist RFC2,” United Auto Workers-General Motors Center for Human Resources, Health and Safety Center, 1998.</p> <p>You may obtain a copy from: UAW-GM Center for Human Resources Health and Safety Center 1030 Doris Road Auburn Hills, MI 48326</p>	<ul style="list-style-type: none"> <li>• Repetition</li> <li>• Force</li> <li>• Awkward postures</li> <li>• Contact stress</li> <li>• Vibration</li> </ul>	<ul style="list-style-type: none"> <li>• Hands</li> <li>• Wrists</li> <li>• Forearms</li> <li>• Elbows</li> <li>• Shoulders</li> <li>• Neck</li> <li>• Trunk</li> <li>• Back</li> <li>• Legs</li> <li>• Knees</li> </ul>	<ul style="list-style-type: none"> <li>• Assembly work</li> <li>• Production work</li> <li>• Small parts assembly</li> </ul>

## JOB HAZARD ANALYSIS TOOLS

<p><b>Washington State Appendix B</b></p>	<p>WAC 296-62-05174, "Appendix B: Criteria for analyzing and reducing WMSD hazards for employers who choose the Specific Performance Approach," Washington State Department of Labor and Industries, May 2000.</p> <p>You may obtain a copy from: Washington Department of Labor and Industries PO Box 44001 Olympia, Washington 98504 Phone: (360) 902-4200 Web site: <a href="http://www.lni.wa.gov/wisha/">http://www.lni.wa.gov/wisha/</a></p>	<ul style="list-style-type: none"> <li>• Repetition</li> <li>• Force</li> <li>• Awkward postures</li> <li>• Contact stress</li> <li>• Vibration</li> </ul>	<ul style="list-style-type: none"> <li>• Hands</li> <li>• Wrists</li> <li>• Forearms</li> <li>• Elbows</li> <li>• Shoulders</li> <li>• Neck</li> <li>• Trunk</li> <li>• Back</li> <li>• Legs</li> <li>• Knees</li> </ul>	<ul style="list-style-type: none"> <li>• Assembly work</li> <li>• Production work</li> <li>• Sewing</li> <li>• Meatpacking</li> <li>• Keyboarding</li> <li>• Data processing</li> <li>• Small parts assembly</li> <li>• Maintenance</li> <li>• Patient lifting</li> <li>• Package delivery</li> <li>• Package sorting</li> <li>• Garbage collection</li> <li>• Food service</li> <li>• Regular use of vibrating hand tools</li> </ul>
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Appendix D-1 to §1910.900 incorporates the documents in this column by reference. The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. You may inspect a copy of any of these documents at the Occupational Safety and Health Administration, Technical Data Center, Room N2625, 200 Constitution Ave., N.W., Washington, DC, 20210, or at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.