

## 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>            See also:  <a href="http://sg-www.satx.disa.mil/hscoemo/tools/strain.htm">http://sg-www.satx.disa.mil/hscoemo/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>

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### Revised NIOSH Lifting Equation

*Applications Manual for the Revised NIOSH Lifting Equation*, Waters, T.R., Putz-Anderson, V., Garg, A., National Institute for Occupational Safety and Health, January 1994 (DHHS, NIOSH Publication No. 94-110).

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: <http://www.cdc.gov/niosh/>  
See also:  
<http://www.industrialhygiene.com/calc/lift.html> for a Web-based version of this tool.

- Repetition
- Force
- Awkward postures

- Lower back

- Package sorting, handling
- Package delivery
- Beverage delivery
- Assembly work
- Manual handling involving lifting weights >10 Lbs.
- Production jobs involving forceful exertions
- Stationary lifting

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<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>

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### **Rapid Entire Body Assessment (REBA)**

“Rapid Entire Body Assessment (REBA),” Hignett, S. and McAtamney, L., *Applied Ergonomics*, 2000, 31: 201-205.

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: <http://www.elsevier.com/>

- Repetition
- Force
- Awkward postures

- Wrists
- Forearms
- Elbows
- Shoulders
- Neck
- Trunk
- Back
- Legs
- Knees

- Patient lifting, transfer
- Nurses
- Nurses aides
- Orderlies
- Janitors
- Housekeeping
- Grocery warehouse
- Grocery cashier
- Telephone operator
- Ultrasound technicians
- Dentists
- Dental technicians
- Veterinarian

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<p><b>ACGIH Hand/Arm (Segmental) Vibration TLV</b></p>	<p>1998 Threshold Limit Values for Physical Agents in the Work Environment, <i>1998 TLVs® and BEIs® 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>

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<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.