

## Risk Control

### Ergonomic Risk Factors Grid for the Office Workstation

Risk Factor	Discussion	Examples
Awkward Postures	<p>Our system of muscles and bones is structured to work best in certain positions. Your ability to do work is reduced and your risk for injury is increased if you work in positions that are less than optimal. These positions are called awkward postures and include:</p> <ul style="list-style-type: none"> <li>• <b>Neck</b> – looking up, down or side to side.</li> <li>• <b>Shoulders</b> – Elbows away from sides. Extremely awkward if elbows go behind back or above shoulder height.</li> <li>• <b>Back</b> – Bending forward, twisting and leaning to one side.</li> <li>• <b>Legs</b> – Contact stress to the back of the knees and soft tissue of the legs.</li> <li>• <b>Elbow</b> – Rotating inward or outward.</li> <li>• <b>Wrist</b> – Bending up, down, side to side or twisting.</li> <li>• <b>Hand</b> – Any grip other than with the fingers wrapped around the object. Large or small grip diameters.</li> <li>• <b>Elbows</b> – Rotating the palm of the hand up or down.</li> </ul>	<p><b>Neck</b></p> <ul style="list-style-type: none"> <li>• Looking up at the monitor</li> <li>• Looking down at printed copy</li> <li>• “Cradling” the phone</li> </ul> <p><b>Shoulders</b></p> <ul style="list-style-type: none"> <li>• Reaching while keying</li> <li>• Elbow out to side while using the mouse</li> </ul> <p><b>Back</b></p> <ul style="list-style-type: none"> <li>• Slouching or leaning forward in chair</li> <li>• Dangling the feet</li> </ul> <p><b>Legs</b></p> <ul style="list-style-type: none"> <li>• Seated with the feet dangling</li> <li>• Sitting on one foot or crossing the legs</li> </ul> <p><b>Elbow</b></p> <ul style="list-style-type: none"> <li>• Sorting papers</li> </ul> <p><b>Wrist</b></p> <ul style="list-style-type: none"> <li>• Planting hands on desk</li> <li>• Moving the wrist to move mouse</li> <li>• Bending wrists outward to align to keyboard</li> </ul> <p><b>Hand</b></p> <ul style="list-style-type: none"> <li>• Reaching for keys</li> <li>• Holding stacks of paper</li> </ul> <p><b>Elbows</b></p> <ul style="list-style-type: none"> <li>• Sorting papers</li> <li>• Turning documents from face up to face down</li> </ul>
Static Unsupported Postures	<p>It takes muscle work to support body parts even if they are not moving. And the heart can’t pump blood throughout the body without some muscle movement. This limited circulation impairs your ability to maintain static muscle exertions for extended periods.</p>	<ul style="list-style-type: none"> <li>• Sitting in a chair for extended periods</li> </ul>

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Force	The degree of effort required by any particular muscle or muscle group. Limits for this factor are based on many criteria, including the muscle used, length of time used and surrounding joint angles.	<ul style="list-style-type: none"> <li>• Striking the keys too hard</li> <li>• Hitting a stapler with the fist</li> </ul>
Frequency	The number of times per minute any activity is performed. As frequency increases, the muscles have less time to recover and their capacity for work drops. Typically, this starts to become a concern when an activity is done two or more times in one minute (30-sec. cycle time).	<ul style="list-style-type: none"> <li>• Striking keys or clicking the mouse</li> </ul>
Temperature	Cold temperatures can reduce circulation, thus reducing our capability to work. Hot temperatures can reduce the total amount of energy that can safely be expended in a day.	<ul style="list-style-type: none"> <li>• Ventilation drafts on your hands, neck or shoulders</li> </ul>
Mechanical or Contact Pressure	Circulatory problems can result from small areas of soft tissue being compressed. This is called ischemia.	<ul style="list-style-type: none"> <li>• Resting wrists on desk edge or wrist rest while keying</li> <li>• Resting elbows on the desk surface or hard armrests</li> </ul>

**For more information, visit our website at [travelers.com/riskcontrol](http://travelers.com/riskcontrol), contact your Risk Control consultant or email [Ask-Risk-Control@travelers.com](mailto:Ask-Risk-Control@travelers.com).**



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