

## Guidelines when Purchasing an Ergonomic Chair

<i>Feature</i>	<i>Reason</i>
<i>Seat height adjustability</i>	This allows the user to adjust the chair so that his/her feet are on the floor, or the worksurface or keyboard is at an appropriate height, or preferably both. <b>Pneumatic</b> adjustability is easier to work than <b>mechanical</b> adjustability.
<i>Seat depth adjustability</i>	Achieved either by <b>backrest in-out adjustability</b> or a <b>sliding seat pan</b> , this changes the front-to-back depth of the seat. A shorter seat pan is necessary to allow small people to use the chair's backrest, while a deeper one feels more stable to taller individuals.
<i>Backrest angle adjustability</i>	<p>This refers to changing the angle of the backrest relative to the angle of the seat. Although this often is done with an adjustment mechanism, it can also be achieved through the use of flexing materials or springs in the chair shell.</p> <p>Backrest angle adjustability allows the chair to support different degrees of recline, which in turn transfers some upper-body weight to the chair backrest and lightens the load on the lower back's intervertebral discs. Backrest angle adjustability also increases the angle between the torso and the thighs, which causes the lower back to curve inward. This inward curve, called "lordosis," results in less pressure on the discs than a flat spinal shape.</p>
<i>Chair recline or tilt</i>	<p>This changes the angle of the entire seat relative to the floor. As with backrest angle adjustability, a reclined chair transfers some upper-body weight to the backrest of the chair.</p> <p>There are two main tilt geometries. One is <b>column tilt</b>, in which the chair pivots at the top of the base post and lifts the knees slightly while the back descends. The other is <b>knee tilt</b>, in which the pivot point is forward of the post, nearer the knees. In a knee tilt chair, the knee lift is negligible, but the back (and head) descend more than in a column tilt chair.</p>
<i>Seat pan angle adjustability</i>	This generally refers to changing the forward-back angle of the seat. It consists of a choice of fixed angle, rather than a free-floating recline (above). Often, this feature provides <b>forward tilt</b> , in which the thighs slope downward. The main purpose of forward tilt is to open the angle between the trunk and thighs, inducing lordosis and reducing disc pressure.

<p><b><i>Armrests</i></b></p>	<p>These support the arms, reducing the work of the shoulders and possibly the upper arms. Armrests can, however, be used inappropriately by inhibiting free motion of the arms during activities such as typing.</p>
<p><b><i>Height-adjustable armrests</i></b></p>	<p>These help avoid the problems of too-high armrests, which result in elevated shoulders and pressure on the undersides of the elbows and forearms, and too-low armrests, which require the worker to slump or lean to one side to use them. Height-adjustable armrests also can keep armrests out of the way during typing or other activities requiring free motion.</p>
<p><b><i>Width-adjustable armrests</i></b></p>	<p>This kind of adjustability changes the distance between armrests. Armrests that are close to the body can help avoid splayed elbows, which in turn cause the wrists to bend to the side during activities such as keying. A maintenance-adjustable mechanism requires leaving room for the hips and therefore does not permit the close positions that at-will adjustment allows.</p>
<p><b><i>Padded armrests</i></b></p>	<p>These potentially avoid uncomfortable pressure on the undersides of the forearms and elbows.</p>
<p><b><i>Lumbar support</i></b></p>	<p>This is intended to prevent, to the extent possible, the flattening of the lumbar spine that occurs in most people when seated. Lumbar support is usually done through gentle curves in the backrest shape. <a href="#">Lumbar spine in sitting</a></p>
<p><b><i>Backrest height adjustability</i></b></p>	<p>This refers to a change in height of the lumbar support area of the chair backrest, although this feature is often interpreted to mean a change in height of the entire backrest. This feature accommodates preferences by different workers regarding where and how the lumbar support curve contacts the back.</p>
<p><b><i>Lumbar depth adjustability</i></b></p>	<p>This affects the size and sometimes the firmness of the lumbar support curve in a chair's backrest. Like backrest height adjustability, it accommodates different preferences and body shapes.</p>

Information was provided by Office Ergonomics Training at <http://office-ergo.com/index.html>.