



Figure 1 Relate's Body Adaptive Control pivots with you.

Spotlight on

Relate™ Pivoting Backrest

Chairs that Relate to You

The Relate family of office chairs unites multiple technologies to achieve ergonomically advanced seating—with a focus on individual comfort and control.

Pivotal Advantage

A unique pivoting backrest is key to the comfort and advanced ergonomic design of Relate work chairs. This innovative feature, in concert with a syncro tilt mechanism, allows Relate chairs to deliver truly effortless, adaptive, and balanced back support through a wide range of working positions and movements. Together, we call these partnered features Body Adaptive Control™ (Figure 1).

Facts About Backs

A normal lower spine has an inward lumbar curve, called the lordotic curve. Formed with the largest vertebrae and thickest discs, this natural arch provides a strong, flexible foundation for supporting the rest of the spinal column (and, through it, the weight and movement of the upper torso). However, in a seated position the lumbar arch tends to flatten, throwing the system off balance and creating stress in shoulders, upper back, lower back, and pelvis (Figure 2). To counteract this, most modern

office chairs provide some level of lumbar support.

People don't sit still. (And they shouldn't.)

A seated worker is seldom motionless. Workers are constantly moving: reaching, stretching, bending, turning, and reclining—if their chairs will let them. This is good. Sitting still for a length of time is not a healthy thing. Movement aids circulation and reduces fatigue. In fact, movement is the body's way to get nutrients to vertebral discs, which have no internal blood supply. However, effectively supporting the body in motion has eluded most office chair designs.

Solution: Dynamic, Adaptive Back Support

How it Works.

- *Spontaneous, Effortless Operation.* Both pivoting backrest and tilt mechanism self-adjust in response to the movement and pressure of the user, adapting spontaneously to the impulse to lean back while seated or return to an upright position. Neither feature requires thinking or manual effort.
- *Ideal Pivot Point.* The backrest pivots from a position slightly below the center of the lumbar arch in most people. Thus the user's back



Figure 2 Demonstration of correct lumbar lordosis in seated position (left), and incorrect lumbar kyphosis (slouched back) in right image.



Figure 3 Relate's backrest pivot point allows the backrest to support the lumbar and pelvis.



Figure 4 Relate's backrest can be custom-fit to the shape of the user's back.



Figure 5 Relate's pivot action helps keep eyes level.

first contacts the backrest above the pivot, pushing the lower part of the backrest forward to support the natural lordotic curve of the lumbar area and also the pelvis (Figure 3).

- *Adjustable Ergonomic Shape.* Relate's backrest, designed to conform to the lumbar curve, can be custom-fit to the shape of the user's back with an easy manual control (Figure 4).

How it Helps

- *Constant Contact; Balanced Support.* The pivoting backrest maintains contact with the back at all times, spreading support evenly and eliminating localized pressure. Users experience a comfortable natural feeling during movement and recline.
- *Never a Static Position.* Even with the tilt mechanism locked upright or in full recline, a healthy range of supported forward and backward spinal motion is possible.
- *Uninterrupted Work Targeting.* The pivot action helps keep eyes level with the work as the user reclines or leans forward (Figure 5).
- *Long-lasting Comfort.* Ergonomically supported movement means more comfort to begin with, and less fatigue throughout the day. (Our research reveals statistically significantly less lumbar disc compression among users of pivoting backrests.) A tensile mesh backrest option enhances form-fitting characteristics and promotes heat dispersion.

A Better Idea

Relate's ingenious body-adaptive pivoting backrest delivers a variety of ergonomic benefits to users, allowing them to maintain a healthy and effective posture throughout the day as they change positions. Its form-following support operates smoothly, silently, spontaneously, and so naturally that the user is only aware of continuous comfort.

Ergonomics at Allsteel

Our ergonomics team studies workers: who they are, the way they work, and what they need to be comfortable and healthy. These insights are built into every product we make. Our commitment to ergonomics is clearly reflected in innovations like Relate's Body Adaptive Control with pivoting backrest.

For more information

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