



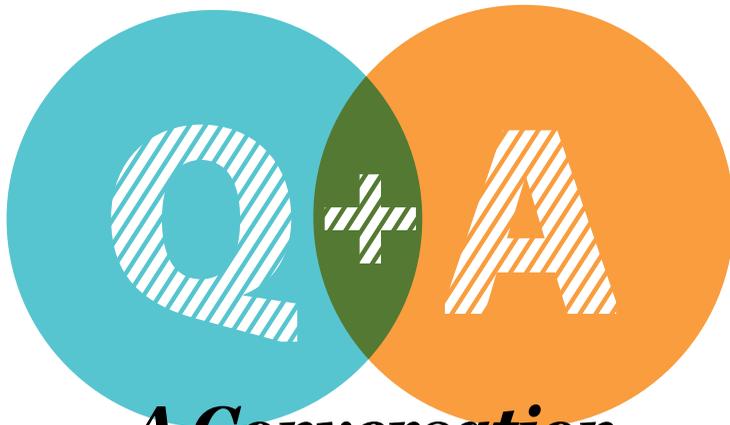
Beyond

THE CHAIR

It's time to rethink ergonomics. Galen Crazz, a leader of the body-conscious design revolution, tells why everything we thought we knew about sitting is wrong.

photograph by **Winni Wintermeyer**





A Conversation With Galen Cranz

by Melissa Dalton

GALEN CRANZ HAS MADE a career out of telling people to stop sitting still. A professor of social architecture at the University of California, Berkeley, and author of *The Chair: Rethinking Culture, Body, and Design* (W.W. Norton & Company, 1998), Cranz argues that the Western tradition of right-angled chairs is harmful to our health. The posture it forces is the C-slumped spine: The chest caves in, the pelvis gets crunched, the lower back collapses, and the neck thrusts our heads forward. As a result, we live with myriad aches and pains, exacerbated by the growing number of hours most of us spend in front of a computer every day. Small wonder why lower back pain is second only to the common cold in causing Americans' sick days. Decades of ergonomics research have helped us to better adapt our work environments to our bodies and tasks, which has, in turn, reduced our pain to some degree. But Cranz believes that these "ergonomic principles just don't go far enough."

Her solution? A concept called "body-conscious design"—a comprehensive approach to creating living and working environments that better support our bodies and their propensity for movement. Recently, Cranz spoke with *Portland Spaces* about body-conscious design and how it could (and should) be incorporated into the workplace. When asked if designers and office-furniture companies are close to realizing this vision, Cranz chuckled, "They haven't caught up with me yet."

- **PORTLAND SPACES:** You're a proponent of body-conscious design. How does that differ from ergonomics?
- **GALEN CRANZ:** Ergonomics is concerned with mechanics and parts of the body. I'm more concerned with total systems, the role of culture and psychology, and making cultural change. We're not just dealing with a mechanical problem about how we're going to be more comfortable. It's a cultural problem.
- **What's our problem?**
- Consumers are not happy. They complain about the chairs. Consumers don't know *why* they're so unhappy with the chair. When pressed, all they can say is, "Well, we know we're supposed to sit up straight." We are confused about our own experience. We're not happy, but we don't have the vocabulary and the analysis to understand why we're unhappy. And that's what I've tried to provide—the analysis to explain why the chair doesn't work—so that we have some language to begin to express our unhappiness, our pains, our sorrows at sitting, and to provide a more articulate consumer base so that designers and manufacturers can move forward.



Better Body Tips

At Work

A 2001 study of desk-bound office workers found that the average person made 53 changes to his or her torso position in an hour. Humans need to move in natural, healthy ways—but they also need to get their work done. These things don't have to be mutually exclusive. Make these body-conscious adjustments wherever you work to rechannel your fidgeting into fitness.

illustrations by
Arthur Mount

CHAIR GUIDE



Variable Balans
(top) designed by Peter Opsvik, manufactured by Variér (www.varierfurniture.com); \$495 from www.backcarebasics.com



BalanceBall
(bottom left) by Gaiam (www.gaiam.com); \$30 at Whole Foods Market, multiple locations

Customize Your Space

Workplace pain is caused by the repetition of awkward postures in an environment that is not properly tailored to your body. So make it your own. Wrists, elbows, neck, and knees should feel as if they were sighing with relief.

▶ REPOSITION YOUR MOUSE

When positioned on the right side of a keyboard, the mouse tilts the wrist at an unnatural angle and can exacerbate repetitive strain injuries like tennis elbow. Try Evoluent's vertical mouse, which promotes a neutral wrist and forearm posture.



◀ GET A HEADSET

Balancing the phone between your ear and shoulder can create neck pain that radiates all the way down your arm. A hands-free device will help keep your neck aligned.

◀ ADJUST YOUR COMPUTER

To prevent eyestrain, position the center of the screen 7 to 10 inches below your horizontal sight line and a little less than an arm's length away. Look away from the screen every 30 minutes and focus on an object about 20 feet away.

▶ FIT YOUR CHAIR TO YOUR BODY—AND TO YOUR TASK

Prolonged sitting is hard on the body. Change the seat's tilt so that your knees are lower than your hips, at about a 100-degree angle. This will maintain the natural lumbar curve in your back.

Make Like Gumby

Changing up your seat periodically, like switching to a kneeling chair or a yoga ball, encourages a greater range in movement and allows you to work different muscle groups.

▶ SIT ON A BALL

Drape yourself over a yoga ball to stretch out your spine. (Just avoid slumping and rounding your spine if you're using it as your primary chair.)



Stretch Your Horizons

Since there are health risks associated with sitting in a static position for too long, take a 1- to 3-minute break every hour to move around.

◀ MAKE TIME TO STRETCH

When you feel your muscles tiring, take a few minutes to stretch them (some helpful desk exercises can be found at www.yoga.about.com).



▶ TAKE FREQUENT STROLLS

Go talk to your co-workers in person instead of e-mailing or calling them.



● Your landmark 1998 book called for a revolution in chair design. What kind of reactions did you get?

● There were protests—first to changing the height of tables and desks. Perching, or sitting with your legs at a 120-degree angle, is better for you anatomically, and to do so you need a higher work surface. So that means you change not only the chair, but also the work surface. You can't change one piece without changing another. Today, a lot of office people have adjustable work surfaces. But years ago, when I was calling for a better system, people said, "That will never happen. Nobody can afford adjustability." But because of repetitive strain injury, suddenly money is no object! A new chair is much cheaper than a medical problem.

● What postures do you think we have unconscious cultural assumptions about?

● Squatting, for example, we think of as very primitive. But children squat very well, and in cultures where people still squat, women don't have problems in labor. So squatting is really healthy. People around the world eat, work, and wait squatting, but the West views that as a sign of poverty and being "less developed." An anthropologist named Gordon Hughes studied postures around the world, and he argued that the West really needed to look at the work postures of other cultures and integrate them into our life. Kneeling, squatting, sitting cross-legged, lounging—these are all perfectly useful positions.

● Why do we need all these postures during the day?

● It's not that it's bad to sit; it's just that it's bad to sit for very long. There is no perfect single position. As a species we're designed for movement and change.

● What office tasks can you do in a lounge position?

● You can do your computing that way. Bring your keyboard on your lap and your monitor on a swinging arm. The lounge position is really good because your head is up. You can have eye contact with the screen or other people. Your feet are elevated too, so that you don't get any unnatural curve in your spine. You distribute gravity in a very different way than you do when you're seated. But the problem is it looks like you're lying down on the job.

● What's your best argument to the senior partners at a law firm that their junior associates should get to recline or lie down on the job?

● Well, there's a lot of research about how cognitive function is improved with movement and diminishes without it. If you want an alert, intellectual work force, you've got to build in movement and that means you need more than one posture. You have to make it OK to cycle through [different postures] six times an hour. That includes the resting position. It's very restorative for your spine and the spinal cord.

● What does the body-conscious workstation of the future look like?

● I can see an environment that has platforms that you could sit cross-legged on, that you could squat on, and that you could lie down on. Within the course of a day you would have a whole choreography of work postures—there would be six positions an hour that you would rotate through over the eight hours that you work. Can you imagine that?

● I'm trying to picture it...

● I'm lying on one right now. I had them custom designed for my office. There's a lot you can do with these platforms, whether they're fixed or mobile. And you can have a floor-based office. There's so much you could do, if you just rethink all the surfaces.



Better Body Tips

At Home

Galen Cranz envisions a future workstation that supports a "choreography" of body postures over the course of each day, including reclining, sitting, squatting, kneeling, and standing. But body-conscious design isn't just for our work environments. As Cranz writes, "Changing your posture means changing your lifestyle." Take another look at your space. Where can you incorporate a choreography of different postures into your life?



CHAIR GUIDE



The Zafu

(bottom left) by Organic Dream Pillows (www.organicdreampillows.com); \$50 (blue, tan, purple/green) at Mirador Community Store, 2106 SE Division St, 503-231-5175, www.miradorcommunitystore.com

Rethink Your Surfaces

From high to low, the surfaces in your home affect the way you move. Once you know how your home environment impacts your body, there are small changes you can make to keep yourself from getting stiff or sore.

PERCH ON A STOOL

The stool's lack of vertical support will train you to sit up straight on your own, which will strengthen your back and abdominal muscles. Make sure to keep your feet flat on the floor.



COUNTER HEIGHT MATTERS

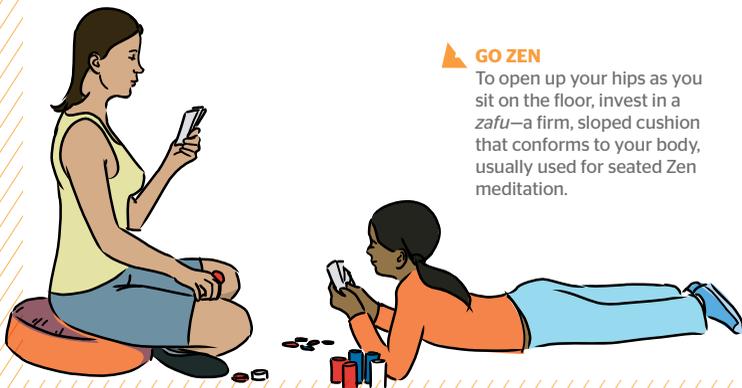
Ideally, the counter surface would be a little lower than your elbow height, allowing your wrists to stay straight while you chop vegetables or do other prep work.

ADJUST THE SETTING

Stooping over a countertop or kitchen sink inevitably leads to an aching back. An easy fix is to open, or remove, the cupboard door down below. Then you can bend your knees and stand closer to the counter, which helps to keep your back straight.

Hit the Deck

The floor isn't just for rug rats anymore. To incorporate new postures into your life, try dining or computing at a low table, or watch TV while sitting cross-legged.



GO ZEN

To open up your hips as you sit on the floor, invest in a *zafu*—a firm, sloped cushion that conforms to your body, usually used for seated Zen meditation.

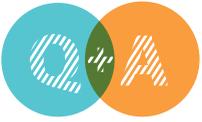
LIE DOWN

Bring your knees up to release the lower back. Try placing your hands on your midsection to open up the shoulder joints, and keep your neck straight so as to avoid any unnecessary strain.



Release the Tension

To relieve (and prevent) lower back pain and muscle fatigue, lie down on a flat, hard surface and breathe deeply for at least 15 minutes a day.



The sky's the limit. Designers have great imagination, if they just free themselves from clichés and convention and think about the multiple uses of all surfaces.

● Why aren't we seeing these changes now?

- You'd think that the furniture industry would love this because it would mean that they'd have a whole new bunch of stuff to sell. But the consumer has to be persuaded, and that's a lot of persuading to do, to get them to replace both the chair and the work surface.

Furniture companies know all this stuff about people needing movement. It's just that they feel the market isn't ready for this. You know the famous Aeron chair that Herman Miller put out? They know that the rounded front rail that allows you to perch is best. But the public still believes in lumbar support, so they put that in this chair—even though if you're perching, your pelvis rolls forward and your lumbar curve is naturally created. But they throw the lumbar [support] in there anyway because that's what people think is required for it to be a scientifically "good" chair.

● The Aeron chair was the designer fetish object of the '90s. Has it been replaced or debunked?

- It has not been replaced yet, and to my mind it has not been adequately debunked. I try to debunk it, publicly and in writing. And in front of the people who designed it. That's why I know that they know better. Everybody knows that one of the secrets of the success of that chair was finding that fabric they called 'pellicle.' That sheer but resistant fabric hit on the right gestalt for where our culture was at.

● Have any furniture manufacturers adopted any conventions that have helped?

- Well, some. Haworth has a really good chair called the Pony. It's backless and it rocks. It puts your body in the same position as when you ride a horse. The best office chair on the market right now is manufactured by the HAG. The model is the Capisco by Peter Opsvik. It also has you in the perch position. The Germans have a chair called the Swopper. I have not yet seen the total [body-conscious] vision put together, but there are fragments.

● If your office burned down today, what new furnishings would you buy for your new one?

- I'd build myself these platforms. Most important, I'd have a surface that goes up and down so I can do standing work. I'd have a rocker—almost all rockers are good because of the movement. I'd have a stack of all those stacking stools. I'd have a couple of Balans chairs. I'd have the Pony. I'd have this ball chair designed by an Alexander teacher called June Ekman. I would replace my Peter Opsvik chairs. He's got a whole raft of them. I'd want something called the Gravity, which I use for my lounge position for my computing. I can't live without the Capisco, the Gravity, and the Corbusier chaise longue.

● Are you still facing resistance to your ideas?

- The one big one is that people have to sit in order to show respect for authority—in schools, and in relationship to supervision in the workplace. And also that you can't lie down to work or be semi-reclined in a lounge chair, because that would look like you weren't working. First, we had this practical problem about the height of the work surface, but now there's a whole other set of less-yielding cultural ideas about how you express respect for authority, how you show productivity and attentiveness. ■



ON THE WEB:

Curious about the challenges of designing an ergonomic seat? Visit www.portlandspaces.net/designdistrict for a discussion with Gretchen Gscheidle, research lead at Herman Miller.

➦ See The List, page 137

Better Body Tips

On the Go

Traveling can be stressful, so be conscious of your body—whether you're moving through airports, driving a car, or sitting on a train.

Point It Out

In the 1990s we had "Nintendo Thumb"; now it's "Text-Messaging Injury," a musculoskeletal disorder that causes pain and inflammation in the thumb.



▶ GIVE YOUR THUMBS A REST

When typing on your PDA, press lightly with your forefingers. On a standard cell phone, hold the device in one hand and type with the other.

Find Support

Plane and train seats are notorious for their flat backs and misplaced contours, which encourage you to adopt the C-slumped spine. Use portable lumbar and neck supports to keep yourself straight.

▶ PROP YOUR LUMBAR

Ball up a blanket and place it at the small of your lower back; this will support its natural curve and combat the urge to slump.

