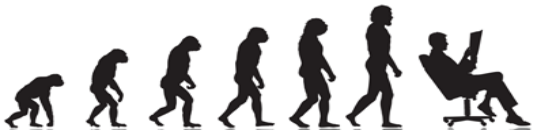
Habitual vs. Innate Sitting — A World of Difference

By Michael Protzel

Uprighting — A Highly Evolved Human Ability

Eons ago we were horizontal creatures. Then, we came out of the sea and developed a body supported by four legs. We evolved into two-legged creatures by learning, species-by-species, over many, many years, how to lift the *front* part of our body mass. Emerging species got better and better at directing their forward body mass backwards, into the hind legs, continually making them stronger. This is how we evolved a muscular-skeletal 'contraption' capable of lifting more and more of our front weight. As *homo sapiens*, we are able to lift our entire body mass using only the hind legs.



In sitting, the 'contraption' that begins our upward movement consists of ground-contact points at the sit bones and feet. With more body mass in front of our center-line than behind it, and with gravity's straight-down influence, vertebral, hip, knee and ankle joints flex slightly; our body mass descends slightly, the energy generated by our descent (our weight) passing directly through our balance points (the sit bones in sitting, the tali in standing); with the flexing of our joints, our skeleton shifts forwards slightly on our rounded sit bones, heels and balls of the big toes; and our deep extensor muscles running the length of the body stretch a little bit, becoming primed for action; upon stopping near-instantly the flexing and forward-shifting, the energy generated is 'captured' at ground contact and transmitted to our deep extensor muscles, which contract to extend/lift us the slight amount we have flexed/descended. The cycle then starts anew.

Innate uprighting is activated when energy from the gravity-compelled, straight down descent of our body mass contacts the ground at skeletal points directly underneath and in front of us.

When we fall backwards, we concoct a far less effective manner of sitting.

This is innate uprighting. Body mass generates the energy to lift itself. Brilliant! It is this process that enables 'neck free, head forward and up, back lengthening and widening.'

Trashing It at a Young Age

Uprighting Beautifully as Infants/Toddlers

Each of us inherits at birth this wonderfully efficient uprighting capacity. It is in our DNA. As infants/toddlers we learn to do it without instruction from anyone else. At the same time, however, we are observing everyone around us sitting back into chairs, sofas, car seats, etc. — constantly. We have no choice but to join in and follow our elders. Before the age of 5, we are sitting-back with staggering repetition, unaware of its impact — hour by hour, day after day, year after year, at school, at home, everywhere.

Doing this traps us in a manner of uprighting far removed from the innate. In sitting-back, we position the bulk of our body mass *behind the hip joints*. The act of lifting ourselves into verticality from this backwards position is a completely different act than innate uprighting which has evolved to lift *front positioned* weight. To lift *back positioned* weight requires the use of different muscles, most particularly, our powerful ilio psoas muscles, which are hip *flexors*, not *extensors*.

At Age 5, Not So Much

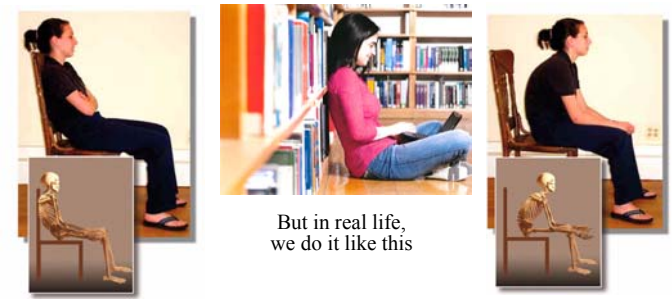
When we are plopped down into a chair or sofa, an external object is supporting most of our body. Hence, not much lifting is required. Only the upper body is unsupported, above chair-contact, somewhere in the

mid-thoracic region. It is this part alone that is active. The head and upper torso — a heavy chunk of body mass — need to be kept functionally vertical. This is a strenuous task for upper back and neck extensors, which are being forced to do their job *in isolation*. This is unnatural. In innate uprighting, by contrast, it is the activity of the *whole self* — from ground to crown — that lifts the head and upper torso. Problem is, we don't notice the extra effort that comes with sitting-back. It feels right to us. This "faulty sensory appreciation" is a feature of habit and end-gaining made absolutely clear by F.M. Alexander.

If We Fell Backwards Without Flexing the Spine, We'd Look Something Like This

Predictable Physiological Outcomes

In the famous "Evolution of a Technique" chapter in *The Use of the Self*, F.M. Alexander writes of his self-observations as he worked to change his habitual manner of use. He observed a number of physiological manifestations: tensing the neck, shortening the stature, pulling the head back, narrowing the torso, lifting the chest. My self-explorations have shown me that all of these mis-use manifestations derive from our subconsciously directed habit of sitting back into — and pulling ourselves up out of — chairs, sofas, etc. This habitual syndrome has wreaked havoc upon our spinal column, and has had deleterious impact on our use generally. (This includes an adverse effect on how we breath and vocalize — since the spine, vocal cords, rib cage and diaphragm are deeply interconnected.)

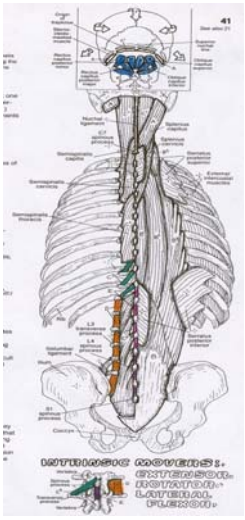


But in real life, we do it like this

Here's some of what happens when we sit back without paying much attention, as we and all of our students have done throughout our childhoods, and beyond:

• To function normally requires a relatively level head. We seriously compromise this by tilting backwards the 'pole' upon which the head rests. The moment we begin to move backwards, immediate head/neck adjustment — "tensing the neck" — is imposed subconsciously so that we maintain a functional level-headedness.

• As we let the pelvis and lower spine roll back and down — collapse — we use ilio psoas muscle effort to regulate our backwards fall, so that we don't slam into the chair-back. This strains the lumbar spine and "narrows the torso." When we fall backwards while on a stool or bench or on the floor — i.e. with nothing to lean against — we must hold this psoas tension to keep from tumbling further backwards.



Deep Intrinsic Spinal Muscles Flanked By Large Erector Spinae Muscles

• There is no way to fall backwards and simultaneously maintain a functionally vertical head/neck without "shortening the stature" (according to Alexander's own definition of "shortening" in CCCI).[1] When we move backwards from the hip joints, somewhere between hips and head, the spine is flexing. The further back we fall, the more we flex. Extreme flexing affects even the cervical spine, resulting in "depressing the larynx."

• Over-flexing the thoracic and cervical spine, in turn, requires additional neck tensing to tilt the face up so that we keep a relatively level sight-line (i.e. "pulling the head back").

• Falling backwards in sitting produces the common 'C-curve' slump, which is most noticeable when we sit without a back-support. Actually, we create *two* slumps to make the "C": a backward lumbar/lower-thoracic slump; and a forward upper-thoracic/cervical slump. In order to 'sit up straight,' we need to pull ourselves out of both of these slumps. This requires rigorous muscular activity.

• To lift our forward-slumping upper spine, we must tense large erector spinae muscles. This muscular effort cannot be sustained for very long. Fatigue soon sets in and we are slumping again, or back against the chair-support (which can mask this slump).

• To lift our backward-slumping lower spine, we must tense the powerful ilio psoas muscles, "narrowing" the lower torso as we pull it forwards. Moreover, so long as we want to remain vertical, this tensing must continue. This is because we are still committing body weight backwards, even though we are not aware of it. As with the tensing of the large erector spinae muscles, our psoas tensing cannot be sustained for very long. When we soon tire, back to the chair-support we go.

• By using the chair-back to support the spine, our deep, intrinsic spinal muscles (interspinalis, intertransversarii, etc.) are denied the opportunity to do their job.

• As we fall into the chair-back, the spinous processes of our thoracic vertebrae are forced to become weight bearing bones, a role for which they are clearly not designed.

• With our thoracic spine now *anchored* to the chair-back, our upper spines are 'free' to simply hang from this anchor. Funcionality is assured. There is no way the over-flexing of the upper spine can pull the bulk of us off of the chair-support. But there is a big downside to this.

• When we need to sit forward in order to eat at a table or write at a desk, we have no clue how to lift the upper spine effectively. All we can do is slump, lean on our arms, or sit bolt upright in a manner that cannot be sustained.

• Due to faulty sensory appreciation and our 'success' in gaining our ends, we are largely in the dark about all of this.

Faulty Sensory Appreciation — Looking At Ease
Despite the Muscular Strain and Skeletal Distortion

Look Familiar? When we need to orient forwards, we have no clue how to efectively lift the upper spine. We slump or lean on our arms, or both.

Mis-Committing Body Weight Spills Over Into How We Stand

Extraordinary Human Performance

Clearly, there are people who demonstrate graceful and powerful movement. Many artists and athletes fit this bill: Michael Jordan, Fred Astaire, Mohammed Ali, to name a few. They have all learned how to maintain amazing efficiency in performance of the activity in which they excel. But what about in day-to-day life?

The above images of Roger Federer, among the greatest tennis players of all time, show the difference between his performance coordination and his habitual, routine coordination.

While he has clearly maintained excellent coordination in his tennis playing, his manner of sitting has been crafted in the same way as everyone else's: by repetitively sitting back into chairs and sofas without thought or awareness. And his body shows it.

Conclusion

Committing body weight backwards makes hard work of sitting — something we could do with virtually no effort when we were only 7-months old. Because responsibility for this lies in our consciousness not in the chair, the problem of mis-committing body weight does not magically disappear when we get up out of a chair. Without our recognition, it spills over into how we stand and move.

To upright with minimal effort requires that we allow gravity to 'do its thing' — to pull our body mass *straight* down to earth. The essential structural mechanisms that convert gravity's energy into efficient, muscular uprighting energy — both in sitting and standing — are directly underneath and in front of us. There is nothing behind us. In directing our body mass backwards, gravity starts working decidedly against us.

Doing this from a young age traps us in a strenuous manner of uprighting that goes against millions of years of evolution. That is why we seek 'support' against the back of a chair, and why doing so seems restful. But it actually is reinforcing a very bad habit. And we lose what was ours at birth — the ability to self-support.

ENDNOTE: CCCI, Part II, Sensory Appreciation in its Relation to Learning and Learning to Do, Illustration, page 71, Centerline Press Edition, 1985

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