

Preventing Interference

Shedding New Light on Our Habitual Manner of Use

By Michael Protzel

Facing an Intractable Problem

One lesson 34 years ago sold me on the Alexander Technique. I was 30 years old and in very bad shape. A few years earlier I had given up sports, no longer able to handle the strain. Now, I couldn't get through a day of simple office work without substantial neck pain. I was at the end of my rope, living with foot, knee, hip, and back problems that began before I was 10 years old and were getting progressively worse.

My Alexander Technique teacher told me there was something I could do about it. He explained natural human coordination and showed me how my way of doing things was interfering with it. He said that I could take responsibility for my own well-being and recover my natural coordination. Although I worried that this might be too good to be true, I immediately committed myself to whatever it took to make it happen. I read Alexander's four books, took two to three lessons a week, gave it a lot of present-moment attention, and yet the obstacles were formidable. Years of faulty sensory appreciation had left my body quite damaged, yet numb at the same time. I knew I had a lot of work to do. But I was inspired.

An Unexpected Experience

After two years of private lessons, four years of teacher training, and five years of teaching, my condition was much improved. Then I had an experience that sent me down a path that would dramatically alter my way of thinking about the use of the self and about the Alexander Technique. It happened during a Tai Chi lesson. I was doing a standing Qigong (with ankles under the hip joints) that required generating power through each leg alternately. I found that I had no problem with my right leg, but could generate absolutely no power with my left. This seemed strange. So I checked it out. I observed that my left leg was totally stiff—ankle, knee, and hip joints were locked and I was bearing my weight way back on the outside corner of my heel. I asked myself: "What's going on here?"

I realized that I was not sending my weight straight down to the earth. Instead, it was too far back and to the left. In a flash, my lifetime of injuries beginning with left ankle and knee issues made sense. I realized that nothing but habit was preventing me from sending my body mass straight down through the center of the left ankle, rather than way out to the side. I have been exploring "weight commitment" ever since, with a particular focus on how misdirecting body mass downward affects our head-neck-back relationship.

Expanding our Field of Awareness and our Field of Investigation

F.M. Alexander's years of dedicated self-study yielded insights and teaching methodologies that have helped many thousands of people worldwide. As a pioneer, however, Alexander surely knew he would not have the last word on the subject. In her book, *An Examined Life*, Marjory Barlow confirms this:

"F.M. said that he had 'only scratched the surface of the egg' in his lifetime of work in this new field of investigation. It is up to us, and particularly now to new teachers, to scratch deeper. I would like to suggest that this further development—the real future of the Work—be sought first and foremost in the first person singular."¹

Changing the "habits of a lifetime"—habits that are, at the same time, so close yet so far away—is a demanding, creative process that depends so much on the personal history and motivation of the individual involved. Our work is powerful. Applying it to my own kinesthetic problems—problems that were very different from Alexander's—led me to different observations and understandings. Building on the unparalleled accomplishments of F.M. Alexander, here I offer my perspective on how we interfere with innate coordination.



Infants Uprighting Beautifully



Six-Year Olds, Not So Much

A New Explanation of Habitual Misuse—With Five Aspects

1. Identifying the act of uprighting

“Uprighting”—lifting ourselves into verticality—underlies all of our sitting, standing, and locomotive activities. Even when we do it poorly, we are still uprighting ourselves. Yet, we take this for granted. We don’t even think of it as lifting. We talk instead of maintaining “postural support,”² as if we come pre-lifted. But we aren’t born with ready-made upright posture. We *create* posture—and we must continue to create it moment-by-moment. This requires more than providing “support.” Without lifting, we remain a lump of flesh and bones on the ground.

We all know what it is like to lift an external object. But what about lifting ourselves? In most daily activities, the head is positioned on top of a vertical spine. So, how do the head and spine get lifted up there? What makes for efficient lifting of the head and spine? What makes for inefficient lifting? These are important questions that we Alexander Technique teachers, as self-use professionals, need to be able to answer.

We are all born with the ability to upright with exquisite efficiency. Infants and toddlers figure out how to sit and stand beautifully on their own, without being taught by anyone. I call this *innate* uprighting. Once we start taking it for granted, however, we begin to interfere, and our “means-whereby” of uprighting quickly declines.

Building on F.M. Alexander’s discovery that interference with the head-neck-back relationship is central to our habitual misuse, I suggest that this interference stems specifically from the way we lift ourselves up into verticality. *This* is the particular activity we are interfering with. And this interference affects *everything* we do.

2. Innate uprighting

Human verticality is the product of millions of years of evolution, involving the development of the efficient use of downward-moving body mass as energy to generate an *upward* force. In becoming better able to tap this energy source, emerging species have tended more and more toward the vertical. As *homo sapiens*, we are born with this knowledge of the ages. It is in our DNA. We learn quickly as infants/toddlers that to sit and stand, we need to exploit the force of our body mass.

Building on F.M. Alexander’s idea that it is more important to attend to the “means” of a particular activity rather than to its “end” and that gaining a desired end is best accomplished *indirectly*, I suggest that to “go up” with minimal effort we must “go down” accurately.

3. Recognizing how body mass impacts uprighting

Gravity pulls our body mass *straight* down to earth. Each of us, however, has the power to aim our weight in a direction *other than* straight down. The way we aim our weight determines the direction we *would* fall if we did not stop ourselves by tensing our large skeletal muscles or by leaning against an external object such as a wall or chair back. With gravity a constant on earth, we are *always* “committing body weight.” It is impossible *not* to be doing it. Either we are committing body weight well—in a way that is beneficial to uprighting—or we are doing it poorly.

When we commit our weight straight down through our balance points—the tali in standing, the sit bones in sitting—we get the biggest bang for our buck, bouncing back up, almost trampoline-like. The force of our falling body mass empowers our deepest extensor muscles to lift our skeleton with minimal effort.

Committing body weight in a direction other than straight down interferes with gravity’s straight-down pull towards the center of the earth, setting in motion a momentary loss of balance, to which we must respond with compensatory muscular effort in order to continue uprighting. This can happen while sitting, standing, or walking.³

Most people think of misdirected body weight as “leaning” and consider it no problem. After all, leaning does not keep us from gaining our desired ends. We can still function. We can still sit, stand, and walk. But when leaning becomes habitual, which it invariably does, we end up distorting the skeleton, straining joints, over-working some muscles while under-working others, constricting breathing, squashing internal organs, limiting freedom of movement, wasting energy, and who knows what else.

F.M. Alexander’s work is fundamentally about teaching an individual to establish constructive conscious control. Each of us controls the trajectory on which our individual body mass moves down towards earth, whether or not we are aware of doing so. How we exercise this control significantly influences our use. Our body mass not only has the potential to provide the energy that enables “neck free, head forward and up, back lengthening and widening,” but also the potential to evoke the common misuse patterns familiar to all Alexander Technique teachers.

4. Exposing the cultural conditioning that is the source of our habitual misuse

The routine act of leaning back in chairs/sofas/etc. is damaging and unnatural, yet in Western culture, it is almost impossible to avoid. We learn to “sit-back” subliminally, starting at a very young age as we watch everyone around us doing it. This common behavior has an extremely negative effect on our use. *Through it, we are transformed from infants and toddlers embodying the wisdom of the ages, to six-year-olds slumped in our school chairs or on the couch watching TV.* In doing this repeatedly, we lose the vital link between “how we fall” and “how we lift.” If left unrecognized and unchanged, this conditioning remains in our consciousness. It can last a lifetime, robbing us of our highly evolved ability to easily self-support. Had this behavior not been programmed into us, totally out of our awareness and control, we would never be doing it.

F.M. Alexander pointed to “modern civilization”—and the difficulty human beings have had adapting to it physiologically—as the source of misuse.⁴ I suggest that this specific, culturally-induced, utterly routine behavior is largely responsible for the modern world’s head-neck-back pain epidemic.

5. Appreciating the sensations attendant to our falling and our lifting

One of Alexander’s major ideas, if not *the* major idea, is that faulty sensory appreciation lies at the heart of our misdirection and misconceptions. This is a tremendous insight.

As infants, we give continual attention to the sensations related to movement. This sensitivity enables us to learn to use the power of our body mass to our advantage, as we become expert uprighters—which is our evolutionary destiny as human beings. Later on, as we start leaning back constantly, we become numb to the muscular strain and skeletal distortion resulting from uprighting while mis-committing body weight. Because of the normalcy of sitting-back, the sensations attendant to this habit feel “right” to us, just as Alexander explained.

By age five or six, we have lost the buoyancy that is part of innate uprighting. But we are totally unaware of having lost anything. We continue to upright in one poor manner or another. Alexander called it “end-gaining.”

There is a kinesthetic disconnect at play when we mis-commit our weight and end-gain our uprightness: We have (1) little, if any, awareness of the downward trajectory that we are directing; (2) little, if any, awareness of the sensations emanating from the places where we contact the ground or chair underneath us; and (3) little, if

any, awareness of the compensatory muscular effort we are compelled to employ to continue uprighting. These sensations provide a wealth of information that relates directly to the quality of our head-neck-back relationship. When we do not perceive these sensations, we deprive ourselves of practical tools that can help us create a more constructive, conscious use.

How I Teach This Material in Sitting

I have a two-pronged teaching method. First and most essential: I teach the student to bring into conscious awareness something she’s been doing subconsciously for almost her entire life—falling back. Second: I teach her how to regain the innate uprighting ability she was born with and that she manifested as an infant and toddler.

Prong 1. Witnessing Habit

Early lessons focus on my student doing the wrong thing *on purpose* by witnessing herself again and again in the common act of sitting-back into and coming-forward off of a chair-support. I ask her to sit-back as she did as a child, casually, without thinking about it. Sitting-back without awareness generates certain automatic reactions. To witness these reactions consciously is an essential part of the learning process that will enable her to change how she sits.

Automatic Reactions

(1) As my student starts to move toward the chair-support, she observes her pelvis and lumbar spine moving back and down in space. Verticality of the lower torso is lost.

(2) As the pelvis and lower spine fall backwards, she observes her upper spine flex forwards in compensation so that the head and neck remain functionally vertical. This shortens the torso. The student begins to notice that the further back she falls, the more she shortens. Even when she sits close to the chair-back and moves backwards only a little bit, there is still a collapse of the pelvis/lower torso and a shortening of the spine, but to a lesser degree.

Over a series of lessons, after repeatedly witnessing these skeleton-distorting reactions, the student develops a deeper kinesthetic appreciation of the backward movement of the lower spine and the compensatory forward flexion of the thoracic spine. Through years of habitual sitting, these physiological events have eluded her conscious awareness.

(3) Once the student arrives back against the chair-support, I ask her to notice that most of her body is just taking up space, plopped down into the chair and that the only active part of her is the part above the chair contact.

(4) As already observed, her thoracic spine started flexing forward the moment the pelvis and lower spine started moving backward. This was her “base brain” getting involved to ensure continued head/neck functionality (i.e. a level head). With her torso now *anchored* against the chair-back, head/neck functionality is guaranteed, because there is only so far forwards the head and neck can possibly move. When the neck hangs all the way forwards and down (“depressing the larynx” as F.M called it), she “pulls the head back” to achieve a functional level head.



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



But in Real Life, We Fall Back Like This



(5) The next step is to help the student recognize that she is unable to lift the upper spine in a constructive manner, and that this is why she slumps. I have her perform an activity without reliance on a back-support. She could be sitting at a desk writing, eating, using a computer, or simply sitting on a stool. She soon recognizes that because of years of letting her upper spine hang from a backwards-oriented lower/mid-torso, she does not know how to actually lift the weight of her upper torso, neck, and head. Her upper spine simply collapses or she leans her arms on the table in front of her for support, or both. I point out that she does have a method of supporting her upper torso without slumping or leaning on a table. It's what she did every time her mother told her to "sit up straight."



Look Familiar?

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



Skeletal Distortion in Normal Sitting

With the lower and mid torso falling backwards — whether anchored against the chair-back or held firmly in place by the powerful iliopsoas muscles — the upper spine is left hanging forwards.



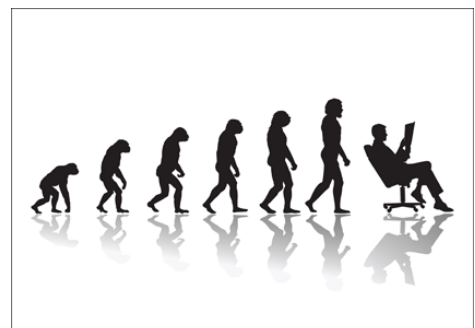
Faulty Sensory Appreciation
Looking Cool, Calm and Collected Despite Significant Mis-Use

Sitting Up Straight

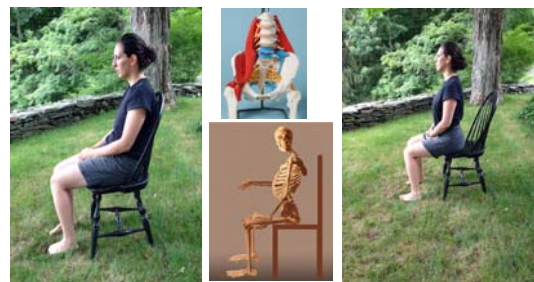
Eons ago the first animals on earth were horizontal sea creatures with no legs. Eventually, they evolved into land animals supported by four legs. These early four-legged land animals gradually turned into two-legged beings, as the front part of the body became the top. Two-legged animals gradually developed the skeletal structure and muscular coordination for lifting up their forward-body-mass. They did this by learning to direct the downward force of their *front* body mass into the hind legs, continually making them stronger. A muscular-skeletal 'contraption' evolved that enables us, as *homo sapiens*, to upright our entire body mass using only the hind legs and deepest back muscles. Powered by our weight, deep, posterior inter-vertebral muscles lift anterior body mass.



Human beings have evolved to lift *forwardly-located-body-mass* using small, deep intrinsic spinal muscles

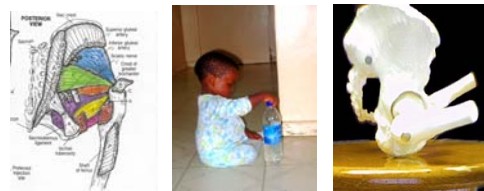


This innately efficient uprighting method is a stark contrast to the technique we modern human beings concoct through repeatedly directing our weight backwards. *In sitting-back again and again and again, we position the bulk of our body mass behind the hip joints. The act of lifting this backwardly positioned body mass is a completely different act than innate uprighting, using different muscles.* In other words, our sitting-back habit has led human beings to an inefficient, indeed self-destructive, means of uprighting. I believe it is important for my student to recognize and experience this inefficient habit in all its gory detail.



In habitual sitting, our body mass becomes *backwardly-located*. To lift it from there requires using muscles not evolved for the task. It is an entirely different, far less efficient activity than innate uprighting.

I ask my student to sit up straight without thinking about it. She yanks herself quickly off the chair-back. She says she didn't notice anything unusual. I ask her to do it again, more slowly this time. Soon she notices how much strenuous muscular activity is required: powerful ilio-psoas muscles, which are hip *flexors*, must be employed to pull her backwardly-positioned body mass to the front ("narrowing the torso") and large erector spinae muscles in the back must be employed to extend her slumped thoracic spine ("lifting the chest").



Innate Sitting

Hip extensors lift the pelvis, both sides working together

This is a far cry from the highly evolved innate uprighting capacity that she was born with and it explains why people cannot sit up straight for very long. We've created a Herculean task out of something we could do near-effortlessly when we were only six months old.

In summary, in the early stages of lessons, I have the student do the wrong thing on purpose, while observing what happens. The student develops greater kinesthetic awareness and a clearer intellectual understanding of what actually happens in normal, habitual sitting.



Man: falling backwards, using chair support.
Woman: falling backwards, using psoas to pull her pelvis and lower spine forwards.

Prong 2. Re-Learning Innate Sitting

I begin teaching my student how innate uprighting works in the first lesson. As she becomes more attuned to committing her weight, focus on this aspect intensifies.

Learning Some Basic Lessons

Sitting according to habit means either (a) allowing the pelvis and lower torso to collapse backwards with the upper torso curving forwards (i.e. slumping) or (b) holding oneself up against this tendency by tensing powerful ilio-psoas and erector spinae muscles.

For a beginning student, it is impossible to give up both of these habits simultaneously. So I ask my student to give up her habit of holding herself up first. Fortunately, this is easy. All she needs to do is give herself permission to slump. This presents a wonderful teaching opportunity. *The student immediately notices that when she stops holding herself up, she starts rocking backwards.* I point out that this is problematic, because her skeletal support is directly underneath and in front of her. There is no skeletal support behind her. She easily understands this and recognizes the need to reverse her backwards fall and come forward. But *how* to do this is not readily apparent. She doesn't want to do it according to habit, pulling herself forwards using the ilio-psoas muscles, while using large back extensors to straighten her over-flexed thoracic curve.

She needs to figure out another way to rock forwards. I suggest pretending someone is pulling her by her hair or pretending she is a bull about to head-butt something. Sometimes I give her a little push. Eventually, she

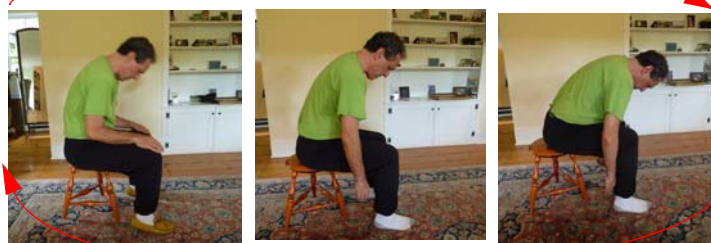
comes forward. With the pelvis and lower torso no longer falling backwards, it becomes obvious that the upper torso, neck, and head are too far forward. I call this over-flexion of the upper spine our “hangover” — from a few too many trips to the back of the chair.

Teaching the student how to lift this hangover constructively is the essence of what I teach. In learning to upright as infants/ toddlers, we did not have the handicap of a lifetime of falling backwards. We had no hangover to deal with. We naturally fell straight down into our balance points. That’s why we could learn to upright in sitting in only six or seven months. As an adult, with a well-crafted hangover, learning to upright innately is much more difficult.

There is something to be learned from the hangover: When she stops falling backwards, the weight of the hangover compels her forwards. The hip joints flex naturally, without the need for any muscular effort. This is her first taste of innate uprighting. In innate uprighting, with body mass moving straight down, *all* joints flex naturally — simply because there is more weight in front of our center-line than behind it. Now, with a significant hangover, there is *much* more weight in front.

Sustaining an Upright Pelvis/Lower Torso

With the student no longer committing weight backwards, I am now working with someone whose pelvis and lower spine are nicely upright, but whose upper spine is way hung-over. This naturally produces a forward rocking of the pelvis, i.e. a flexing of the hip joints. I ask her to allow this forward movement, and to begin to notice what is happening.



Rocking the pelvis forwards on the sit bones as the hip joints flex, readies ankle, knee and hip extensors to rock the pelvis back with a gentle push on the feet requiring minimal muscular effort.

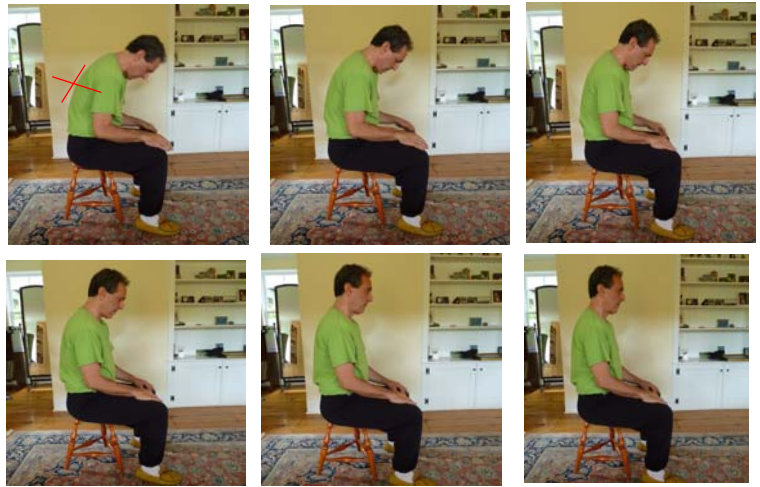
I ask her to specifically observe the shifting ground-contact pressure on the sit-bones, shifting from back to front. I ask her also to observe the build-up of ground-contact pressure on the bones of the feet as she moves forwards. Sensitivity to this pressure enables her to stop the forward movement and reverse it, at any time, by simply extending her legs a little, which requires minimal effort. When she does this, the pelvis begins to rock back on the sit-bones. As she rocks back, I ask her to observe the lessening pressure upon the feet, and the shifting pressure on the sit-bones, shifting from front to back. I ask her to notice the pelvis moving backwards, and to pay particular attention so as not to allow it to move so far back that it goes past vertical. This would send it back and down, which is the habit we are trying to break.

When this student sat as a toddler, the forward rocking stopped at the front of her sit bones and only a small amount of weight fell into her legs. As an adult with a significant hangover, her feet and legs need to be more active at first. As she rocks forward, the hips, knees, and ankles flex, and her deep extensor muscles are primed for action. The act of extending the skeleton starts at the contact points on the bottom of the feet.

I ask the student to play with rocking forward and back on the sit bones and to notice the shifting weight-bearing sensations at sit bones and feet. She is instructed NOT to try to lift her slumped upper spine, but to simply let it hang over. The main objective is for her to notice that her body mass generates force, and that this force can be perceived and “captured” at her ground-contact points. Capturing the force at the sit bones and feet enables her to move her body mass easily. She learns to stop the forward fall at will and to regulate the bounce-back so that it peters out when the pelvis reaches its desired destination (usually, vertical). To aid the student in this process, I often use a mirror or live video so that she can see herself in profile as she learns to gain conscious control. Once this is accomplished, after a number of lessons, it is time to lift the hangover, which works on the same principle.

Lifting the Hangover

We want to start lifting the hangover as soon as the pelvis starts moving up and back—not sooner—so that the lifting is powered by the force of our body mass. Thus we need to wait until just after we have captured this force at our ground-contact points.⁵ As her pelvis rocks forward, the student waits until she reaches her forward-most point. In this early stage, I ask her to let herself rock forwards quite a bit. This extra flexion of the hip joints both stretches deep leg extensors, providing more power for lifting, and also gives her more time on the way back-and-up to pay attention to the specific area of the spine she is lifting.

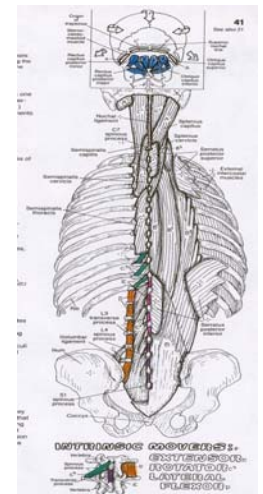


Gradual lifting of the hangover. These images show the fully extended point of each cycle. Unpictured is the fully flexed point of each cycle that comes in between. See previous set of images to see example of fully flexed point.

After the student reaches her forward-most point and begins to rock back, I ask her to lift the hangover just a little bit (a fraction of an inch) at its lowest flexed point (see the “X” in the above photo). She extends the spine this little bit using the energy captured at the feet, the same energy she used when she was only engaging hip extensors to rock the pelvis back and up. Now she is using this energy to empower the deep intrinsic muscles of the spine to slightly extend her over-flexed thoracic vertebrae, which happens simultaneously with the pelvis rocking back and up. Here, again, I have the student use a mirror or live video to monitor what she is doing.

When the up and back movement runs out of steam, the pelvis begins to fall forward again in conjunction with the natural flexing of the hip joints. It is important for the student to also let the thoracic spine flex forward again, rather than to hold it up. I provide manual and verbal assistance to help with this. The goal is for her to become aware of the *extra* pressure created on the feet and on the front of the sit-bones by the re-flexing of the thoracic spine. Over time she gains skill in becoming aware of this ground-contact pressure. *This sensitivity is key.* It allows her to stop the exaggerated flexion sooner each time—lifting two units, dropping one. Gradually, she becomes able to lift the entire spine in this fashion, vertebra by vertebra, without ever having to hold it up.

When the spine is fully extended and all that is needed is to *maintain* uprightnes, she will flex the smallest amount possible. This will allow her to generate energy for the extension, while minimizing the amount of lifting required. The important thing is to keep the movement alive: Drop and lift...flex and extend...drop and lift...flex and extend...ad infinitum.

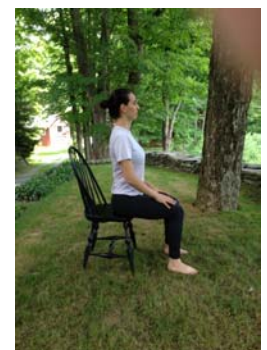


Deep Intrinsic Spinal Muscles
Flanked By Large
Erector Spinae Muscles

Inhibition

Our years of habit run contrary to innate uprighting. This makes learning difficult. Habits are hard to eradicate. They keep showing up. But this can be a good thing. We get to clearly witness them and their impact. And then we can learn to inhibit them.

During extension: When attempting to extend the over-flexed thoracic spine, it is easy for the student to revert to her habitual manner of lifting by tensing ilio-psoas and erector spinae muscles. This tendency needs to be inhibited. This is why I instruct the student to lift only a little bit at a time—so that she focuses on the means, not the end. Even so, this habitual pattern keeps intruding. If the student can notice it, she can let go of the muscular effort, allow herself to slump, and begin the process anew. When she successfully inhibits her habitual means of lifting the spine, yet



comes to upright easily, she is indeed using the deep intrinsic muscles of the spine efficiently.

During flexion: When attempting to let the thoracic spine flex, the student may revert to habit, committing her weight backwards, allowing the pelvis to fall backward instead of letting it flex forwards. In routine sitting, the flexion of the upper spine has always been linked with the falling backwards of the pelvis and lower spine. They now need to be un-linked. She needs to allow both pelvis and thoracic spine to flex forwards. This is where her skeletal structure awaits, ready to receive her weight and convert it to efficient muscular energy for uprighting. When the pelvis falls backwards, no skeletal structure awaits.



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.



Mis-Committing Body Weight Spills Over Into How We Stand and Move

Is This The Alexander Technique?

Our maladaptive habit of leaning back in a chair, sofa, car seat, etc. has numbed our sensory appreciation. We tend not to notice the trajectory of our body mass moving down to earth, the ground-contact sensations that a particular trajectory generates, or the muscular-skeletal reactions that ensue. These are crucial physiological events that reflect the quality of our use. Developing greater awareness of, and control over, these events is an indispensable tool in our quest for neck free, head forward and up, back lengthening and widening

I recognize that these ideas are not part of traditional Alexander Technique thinking. Does this make me a teacher of something other than the Alexander Technique? Not to my mind.

More than 20 years ago, after first noticing myself mis-committing my weight, I embarked on an Alexander

Technique-inspired and Alexander Technique-informed journey of kinesthetic self-exploration. Like Alexander's, this journey has involved a lot of thinking and re-thinking and a lot of experimenting. I continue to apply and teach my students about habit, faulty sensory appreciation, direction, inhibition, lengthening and widening, means-whereby, and end-gaining, the core Alexander concepts.

In my experience, 100% of the people who come for lessons in the Alexander Technique have been subject to the cultural conditioning described in this paper, having grown up routinely committing their body weight backwards in sitting. Based on my own experience and on observing my students learn, I have no doubt that becoming more conscious of weight commitment and its effect on how we upright helps students experience more clearly and understand better how they are interfering with the head-neck-back relationship.

Our body weight is always with us. Using its power to our advantage is far better than misusing its power and making life more difficult for ourselves. In my view, learning the difference should become a standard part of Alexander Technique education.

Endnotes

[1] Barlow, M., & Davies, T.A. (2002). *An Examined Life*. San Francisco, CA: Mornum Time Press, Preface, Page v.

[2] Dimon, Jr., Theodore (2014). "The Organization of Movement. Part 3." *AmSAT Journal*, Spring 2014, Issue 5, pg. 41: "...the relation of the head to the trunk is the main factor organizing postural support..." Nicholls, John (2014). "Explaining the Alexander Technique." *AmSAT Journal*, Spring 2014, Issue 5, pg. 26: "[Muscles] assist in holding us up, giving us postural support in opposition to gravity."

[3] I provide details on uprighting — innate and otherwise — at my website www.uprighting.com. Please visit the Writings page, where most of the articles I have written are accessible. See especially the series of articles entitled, "Learning Conscious Weight Commitment." See also two short essays I have recently written: www.uprighting.com/standingessay.pdf and www.uprighting.com/sittingessay.pdf.

[4] Alexander, F.M. (1910; reprint, 1988). *Man's Supreme Inheritance*. Long Beach, CA: Centerline Press, Page 2.

[5] When we stand on a scale, the force of our body mass is captured at our ground-contact points on the bottom of our feet, and registered as our weight.

Skeletal imagery by Tom Breuer, Mainz, Germany.

Michael Protzel was trained by Tom Lemens and certified to teach in 1986. He was NASTAT Newsletter Editor 1989-1997 for which he received NASTAT's first Distinguished Service Award. He was Chair of AmSAT's Professional Conduct Committee 2001-2009. He maintains a private practice in New York City and northern New Jersey. For more information about his work, see www.uprighting.com.