

Learning Conscious Weight Commitment

By Michael Protzel

This series of essays was originally written in 2009, primarily for people who had attended one of my workshops. The essays provided a review of conceptual material covered at the workshop as well as a 'refresher course' in the kinesthetic experiments that were conducted. The essays have also served to provide assistance to random web visitors seeking practical instructions -- with the caveat that it takes diligent study over time to expose weight commitment/uprighting habits and to re-learn innate uprighting.

Nothing in these essays or in my film should be construed as medical advice. I am not a doctor. If you are concerned about a physical problem, you should consult a physician.

Part I of IV — Weight Commitment Theory

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Our falling down to earth is constant. This falling generates tremendous force (as does the falling down to earth of any object weighing 100-200 pounds). Gravity would have us fall straight down toward the center of the earth. But we can override this tendency. We can fall to earth on any trajectory we choose — through an act I call *committing body weight*.

Almost as constant as our falling, at least during our waking hours, is the act of lifting ourselves into verticality - so that we continually maintain a functionally level head, so that we can see and react to the world around us. We upright in all sitting, standing and walking activities. We upright atop tiny balance points — the taluses in standing, the sit bones in sitting. Allowing gravity to take us directly into these balance points enables us to fully capture the force of our descent. Doing so enables us to, in effect, 'bounce' ourselves near-effortlessly, trampoline-like, using our deepest extensor musculature. When we mis-direct our body mass, however, committing our weight away from our balance points, not only do we not use the force of our falling to our advantage, it instead works to our decided disadvantage. Our mis-directed descent drives us off balance, causing us to momentarily topple. If we want to continue to sustain uprightness, we must stop this topple, either by leaning against a secure object (a wall or a chair-back, for example) or by muscularly bracing. We must also muscularly right ourselves to maintain relative centered-ness as we topple.

In Western culture, beginning early in life, we all learn that it is appropriate to commit weight backwards. We learn this implicitly, pre-verbally, simply by watching our elders do it. We are far too young at the time to realize that what we are learning will cost us dearly. We don't even realize *that* we are learning it. Falling backwards is not an appropriate activity for human beings. Yet this is exactly what we do when we lean back in a chair or sofa. We grew up doing this again and again and again, every day for years - at home, at school, in the car, everywhere - with no awareness of its short or long-term impact.



Sitting beautifully at 6 months.

As a result of this deeply ingrained conditioning, we have lost lost sensitivity - and thus control over - the force of our falling. This affects everything we do. But this conditioning can be changed. We can gain a more conscious control of our weight commitment, to our great benefit.



pite of tilted ground, one year old boy has no problem finding vertical, uprighting with ease.



Not so at 5 years.

To regain our innate ability to upright, we need to re-establish a kinesthetic connection with our body weight - to recognize how its downward trajectory affects our functioning moment-by-moment.

(1) *We need to expose our habitual ways of mis-committing weight.* I cannot over-state the importance of this. We have been mis-committing weight our entire lives. But we have not been aware of doing it. And we have not been aware of how it



At five years of age, our ability to stand innately is already dramatically compromised.

has been affecting us. We need to become aware. We need to observe ourselves in habit. We cannot command a new downward trajectory without becoming aware of the trajectory we are now commanding.

(2) ***We need to learn how our innate uprighting system works.*** Isn't it interesting that in this modern era of scientific advancement, science has been unable to clearly describe how our own innate uprighting system works, and how we interfere. Why? I believe it is because all of us — scientists included — have become profoundly, but unknowingly, disoriented by habitually falling backwards in sitting. In my view, it is this disorientation that has left us unable to feel moment-by-moment either the fundamental trajectory of the center of our body mass, or the myriad muscular reactions and skeletal adjustments that are made necessary by that trajectory. Such disorientation and insensitivity has left us unable to understand even the ABCs of innate uprighting.

When we fall straight down through our balance points, we naturally tip *forwards* (simply because we have more weight in front of our central line than behind it). There are skeletal structures on the ground waiting for us as we tip forwards (the front of the heel, and the balls of the feet in standing — the front of the sit bones and the feet in sitting). Our sensitivity to the added pressure that our forward-tipping-weight creates upon these structures, triggers an innate uprighting response, activating our deepest extensor muscles that lift us with minimal effort. (See 'Kinetic Chain' on page 4 of this document.)

In sitting *back*, however, we send our weight in the exact opposite direction it needs to go. We send it *away from* our essential ground-contact in front. This kills innate uprighting. By sitting back habitually, we lose the vital connection between how we go down and how we go up. This negatively affects our standing and walking activities as well as sitting.

Yet, in spite of a lifetime of bad uprighting habits, innate uprighting is deep within our genetic make-up. We all *do* know how to do it — and have all experienced it as infants/toddlers. We have simply superimposed on top of it a far inferior uprighting method. We can restore the innate.

The Three Phenomena of Weight Commitment

In the instructional Sitting, Standing and Walking articles (Parts II thru IV of Learning Conscious Weight Commitment), you will find experiments suggested to help you explore the act of uprighting. These experiments will be most successful when conducted *playfully*. In the years of conducting these experiments on myself and with my students, I have identified three phenomena associated with weight commitment. When we are uprighting, all three are *always* present. They are:

- (1) the specific trajectory on which the center of body mass moves down to earth;
- (2) our 'uprighting reactions' — the neuro-muscular activity that keeps us functionally vertical; and
- (3) our weight bearing sensation.

It is the downward trajectory of our center of body mass that determines both our uprighting reactions and our weight bearing sensations. In simple sitting and standing, this means allowing gravity to take us straight down — the more efficient, and closer to innate, is our uprighting. Falling straight down creates an optimally grounded frame, producing an optimal muscular response. A poorly grounded skeletal structure, on the other hand, interferes with our muscular lifting activity, making it more strenuous, less efficient. It is our weight bearing sensations that 'tell' us what kind of frame we are creating.

An accurate weight commitment allows us to dedicate *all* of our energy and muscular resources to the task of lifting/uprighting ourselves. Falling directly through our balance points enables optimal uprighting reactions. When we mis-direct our falling, however, we must dedicate resources first and foremost to stop our momentary topple. These bracing reactions are absolutely necessary if we want to remain upright. Trouble is, they consume a lot of our energy.

Our moment-by-moment uprighting reactions and weight bearing sensations provide us with valuable kinesthetic 'information' about our falling trajectory. Thus, becoming aware of them is essential to our re-

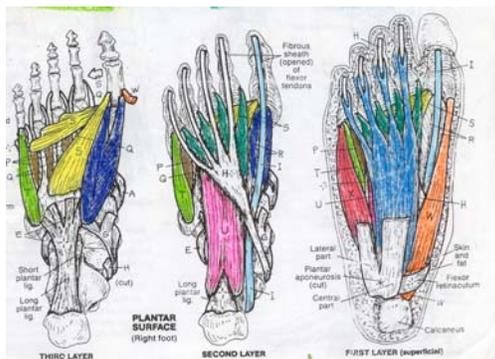
learning innate uprighting. (In this regard, it is important to gradually be able to distinguish weight bearing sensations that are created by the trajectory of our falling alone, from weight bearing sensations that are created by the combination of our falling trajectory and our compensatory reactions that pull us back to a more centered position as we are toppling.)

The Innate Uprighting Cycle

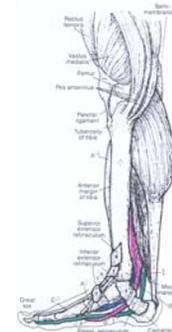
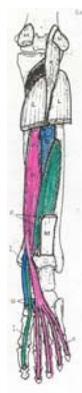
There is a dynamic flex/extend, descend/ascend, rest/work cycle at play in innate uprighting.

At full extension, when we allow gravity to take us straight down, our joints flex. For a split second, our whole body mass descends a tiny bit; we tip forward at the hip joints; and rock forward at our rounded ground contact points — the sit-bones, heel and ball of the big toe. When we stop the forward rocking, we capture the force generated by our slight descent. and feed it to our deep, stretched extensor muscles running the length of the body. These muscles contract and lift us up and back— extending our joints the slight amount they have flexed.

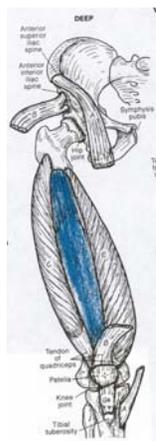
Deep Musculature of the Innate Uprighting System



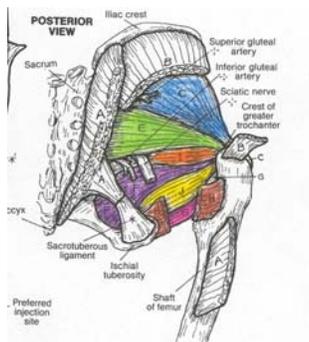
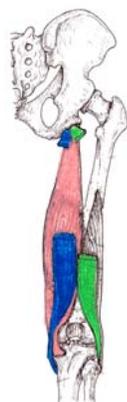
The force of well-directed falling spreads the foot bones, activating powerful plantar muscles that ignite our uprighting response.



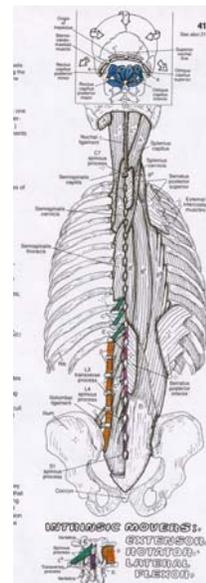
Deep-seated lower leg muscles that pass through the arch of the foot respond to the tensing of the plantar muscles by tensing to lift/extend the lower leg.



Deep thigh muscles tense to lift/extend the thigh in standing; not needed in sitting because we don't lift/extend the thigh.



Due to our natural tendency to tip forward, the pelvis needs to be stabilized so that the deep spinal muscles can lift/extend the spine. The deep lateral hip rotators, both sides working together, serve this function in sitting, the hamstrings in standing.



With the force of our falling well-directed, and with this force captured such that the legs and pelvis are lifted/extended optimally, the deepest of our spinal muscles will have no trouble lifting/extending the spine, and the sub-occipitals the head, lessening the burden on our habitually over-worked erector spinae and neck muscles.