3 B's for Preventing Soft-Tissue Injuries

The 3 B's are effective watchpoints for moving and working stronger, safer, and more in control.

By Robert Pater | Apr 01, 2017

As a lifelong practitioner of the martial arts, I've learned that when it comes to defending yourself, skill triumphs over just "will." No matter how determined you may be, having the practical tools ultimately makes the difference between being safe or getting injured. Similarly, ensuring personal safety requires acquiring the right self-defense skills. Take all-too-common soft-tissue injuries—do you know anyone who hasn't sometime experienced a strain or sprain? Employing the right methods often makes the difference between being minimally affected or greatly hampered, between feeling slightly sore or severely hurt, between experiencing slight tweaks or suffering a disabling injury.

Soft-tissue injuries are also frustrating for many. Strains and sprains to the back, neck, wrist, shoulders, knees, and ankles are at the top of numerous workers' compensation cost leader boards. However, many are still stuck with these injuries, especially with an aging workforce, or have workers who perform tasks outdoors, exposed to the elements, or have thinned-down workforces where employees have to do more than when they were younger. Consequently, though many companies attempt a wide range of "cures" for these pervasive injuries, they remain stymied, apparently stuck at a soft-tissue injury plateau. Not surprisingly, because there are many contributing factors to these cumulative, straw-that-broke-the-camel's-back injuries, there are many possible ways to address these.

Making ergonomic machine and tool changes are a reasonable way to begin to address these injuries—especially when there are clear-cut existing problems with design and access. But changing out tools and equipment will only typically take you so far. As the National Ergonomics Director of a Fortune 100 company confided, "We've only picked off our low-hanging fruit." After initially getting positive
returns from their equipment modifications and changeouts, they, like many other companies, became plateaued.

And, no surprise, equipment and tool improvements aren't always possible to implement. Some of them are prohibitively expensive for every needed location. Others just can't be practically put into place, either because lines can't be shut down, older plant are obstacles to changing workstations' layout, can't redesign out weather for those working outdoors, can't change clients' tools or turf, nor can companies redesign or retool their workers' homes (but where they still suffer cumulative trauma buildup). And more.

Another approach that's ideally complementary to tool/workstation improvement is to help workers work, well, more "ergonomically." But here, several companies emphasize "paying attention," where what they really mean is "Try harder!" Or use posters and videos to communicate better "body mechanics," typically showing irrelevant examples or demonstrating "ideal" procedures that are next to impossible to follow in the real world. Or make little sense. Or don't spark interest in most workers.

In our 30+ years' experience of seeing remarkable results in reducing soft-tissue problems, we've consistently found that skills are key. No matter how "motivated" persons are to work safely, they have to know effective methods and then be reinforced to actually incorporate these into their daily tasks. Companies that have attained 50 percent (and much higher!) reductions in strains and sprains transfer many mental and physical methods to their employees. While it's not possible to list them all—nor will words alone convey their power—there are three critical keys for preventing these injuries:

1. **Balance.** And I'm not just talking about preventing slips, trips, and falls where balance is "lost" and there's hard contact with the ground. Balance can become even slightly compromised by leaning forward or back or sideways, where weight of the upper body isn't squarely over the lower body. This quickly translates into greater whole-body tension due to muscles firing more than they'd otherwise have to to resist gravity's pull. This tension often accumulates, potentially building into microtears in ligaments (sprains) or muscles and tendons (strains.)

   We've relied on making adaptations from select internal balance-based martial arts principles for injury prevention, and we know how effective this can be. But involvement in any activity that specifically teaches better balance while moving and working can help to prevent soft-tissue injuries. People of pretty much any age or condition can learn to boost their balance relatively quickly. Oh yes, for best balance, the weight of our standing body should fall through our arches, not over
our heels or balls of feet, and certainly not the toes. Most everyone can quickly learn this feeling kinesthetically.

2. **Breath.** I've found it amazing how many people hold their breath while doing tasks. Try bending over (as if you're tying a shoe or picking up something light off the ground)—did you tense up and stop breath flow? Holding the breath builds up cumulative tension; it also reduces our "buffer area." Sudden unexpected changes result in forces entering the body (for every action there's an equal opposite reaction) that can be safely absorbed if there's enough slack in the body—or, if not, alternately build toward soft-tissue injuries when tension increases. There are many simple, easy-to-do breathing practices that can both increase soft-tissue safety while also elevating awareness and clearheaded decision-making. So because in real life things don't always go according to plan—objects shift or hands momentarily lose grip—exhaling on exertion can sizably help protect us from soft-tissue injuries.

3. **Bearing.** How people hold themselves in space—whether when sitting stationary, standing, or moving—clearly changes the amount and direction of forces entering the body. Bearing is much more than just the shape of the spine. This refers to how every joint (ankles, knees, hips, neck, shoulder, elbows, wrists), aligns to transfer forces transfer in the body. Hint: Be sure to sit and stand with the head directly over the neck and shoulders, not jutting forward or with the nose up in the air.

The 3 B's are effective watchpoints for moving and working stronger, safer, and more in control. And because it feels better to have strong balance, relaxed breath, and solid bearing, practicing these methods is both self-reinforcing and prevents soft-tissue injuries.

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**About the Author**

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