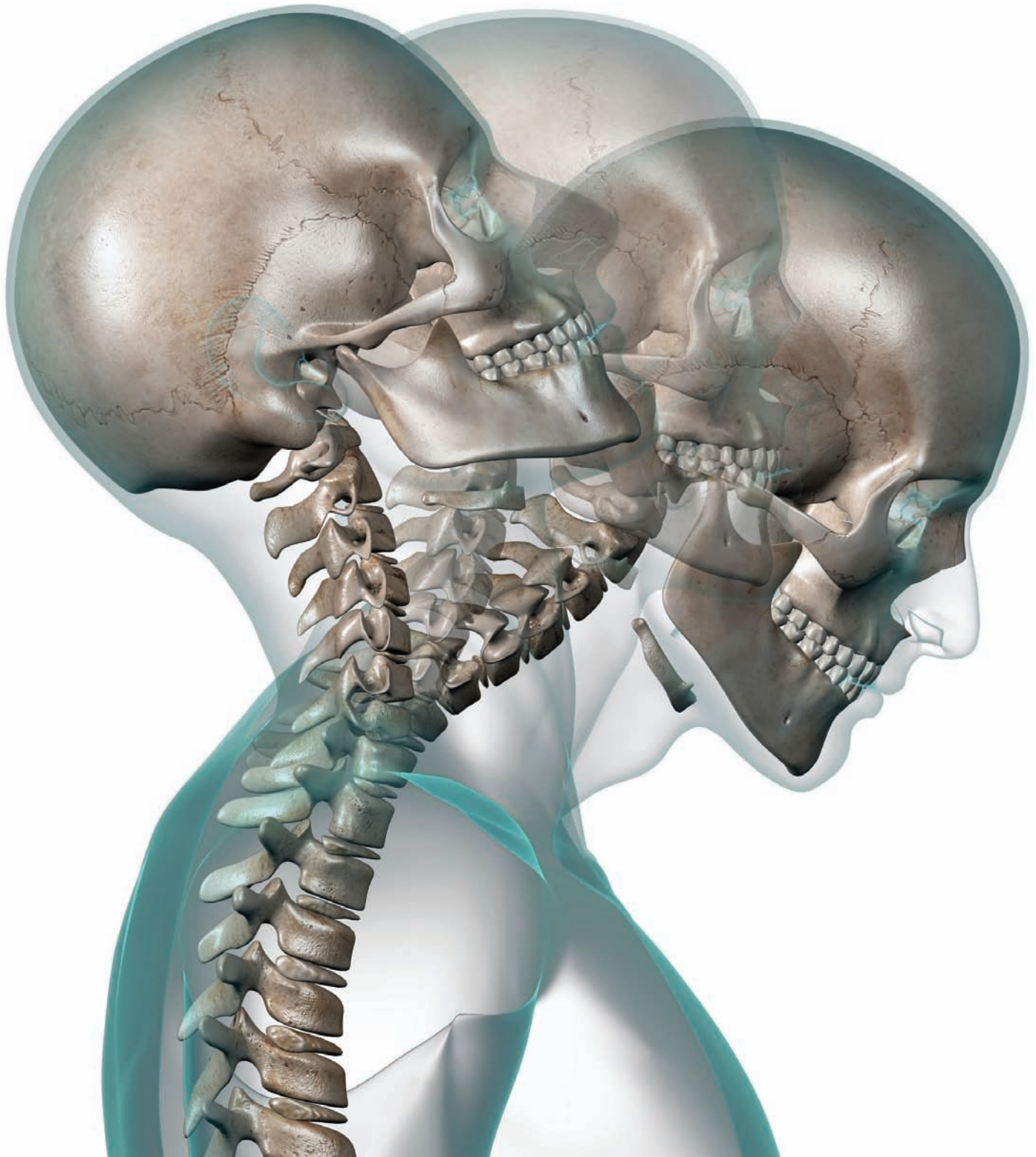


# myofascial techniques

BY TIL LUCHAU

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# WORKING WITH WHIPLASH, PART 1

## Hot Whiplash

For hands-on practitioners, there is good and bad news about whiplash. The bad news first: whiplash injuries puzzle and befuddle manual therapists.

Not only do we regularly hear this from practitioners coming to our Advanced Myofascial Techniques courses, but a 2004 Advanced-Trainings.com survey asked 100 experienced bodyworkers which conditions they would most like to learn more about. The topic most frequently mentioned? Whiplash.

More bad news: whiplash is common. Although estimates vary, several sources cite nearly 2 million new cases of whiplash per year in the United States alone. That means that for each massage therapist in this country, there are up to eight new cases of whiplash every year.<sup>1</sup>

Whiplash is also complicated—sufferers experience a wide array of physical, neurological, and psychobiological symptoms, which may not appear until weeks or months after the original injury. Symptoms can persist for months or years, and for a significant number of sufferers, get worse over time.<sup>2</sup> Although there have been hundreds of studies on whiplash, and more are conducted each year, there is widespread disagreement on diagnosis, treatment, and even terminology<sup>3</sup>; most interventions for whiplash injury are “medically unproven”<sup>4</sup>; and the reasons for whiplash’s intractability are only beginning to be understood.

The psychobiological impact of whiplash has long been recognized, and significant numbers of whiplash sufferers experience anxiety, depression, or symptoms similar to posttraumatic stress.<sup>5</sup> What’s more, whiplash patients can be involved in legal or insurance difficulties, which may complicate and even hinder recovery.<sup>6</sup>

If this wasn’t enough bad news, manual practitioners observe that whiplash symptoms can worsen after bodywork—almost as if their hands-on work had opened a Pandora’s box of pain, soreness, and spasm. The aim of this article is to help you prevent this.

The good news about whiplash? In spite of its complexity, hands-on body therapy can help. Skilled practitioners are getting very good results by using soft-tissue release together with neurologically based approaches. Gentle encouragement of motility, such as that provided by sensitive and competent manual therapy, in combination with moderate activity, is one of the most widely agreed-on conventional treatments for whiplash. (Immobilization and cervical collars, once the most common treatment, are now rarely used, as they have been observed to produce more problems than they resolve.<sup>7</sup>) An increasing understanding of the effects of trauma on the nervous system is expanding massage therapists’ ability to help clients whose symptoms were previously only aggravated by hands-on work.

### THE EFFECTS OF WHIPLASH

The effects of whiplash range from mild to severe, can change over time, and may include any or all of the following:

- Tissue damage at the sites of injury, from local overstretching or micro-tearing of fascia, muscle, or

nerve tissues, typically in the neck, shoulders, and back. Harmonic forces in the body, bracing reactions, and fascial connections can cause tissue injury and inflammation in unexpected, nonlocal areas anywhere in the body, such as the rib cage, limbs, or pelvis.

- Instability or weakness from tissue damage, and from dissociation of the muscle spindle/Golgi postural reflex relationships in the injured muscles, resulting from overstretching.<sup>8</sup>
- Restricted motion as a result of either acute muscle spasticity and splinting reflexes, or from chronically adhered and shortened connective tissues, including the tissues around articulations.
- Pain, anywhere in the body. Causes include direct tissue injury, neurologically referred pain, or autonomically associated pain (e.g., posttraumatic headaches).
- Vertigo (dizziness) and balance impairment. Cervical instability can result in splinting and fixing of the neck and head (especially by the suboccipital muscles), which reduces the adaptive capacity of the vestibular system. Posttraumatic vertigo is also postulated to be related to sympathetic nervous system imbalance.<sup>9</sup>
- Sympathetic (fight or flight) activation of the autonomic nervous system (ANS) from the trauma of the incident itself; from direct injury to sympathetic nerve fibers in the neck (Image 2)<sup>10</sup>; or from ongoing sympathetic stimulation from vestibular and balance impairment. Symptoms can include sleeplessness, headaches, anxiety, or depression. Some of the more severe effects of whiplash, such as prolonged anxiety or depression, obviously necessitate

a referral to a qualified specialist. In particular, clients with vertigo, nausea, or ocular discomfort that worsen with head movement should be referred to a physician for evaluation before any manipulation is performed, as this can indicate vascular, ligament, or spinal cord issues. These examples aside, the majority of whiplash effects are well within our power to ameliorate.

**HOT AND COLD WHIPLASH**

Metaphorically, it can be helpful to think of whiplash as having either “hot” or “cold” qualities. A recent whiplash (less than 3–6 weeks) will tend to show more hot qualities, while cold whiplash is typically older (although older whiplash can also be hot, or can turn hot if reinjured or worked insensitively). The table below summarizes differences between these two phases of the body’s response. Although you can see elements of both hot and cold whiplash in the same client, it is important to differentiate the way you work with each type of symptom, as hot

and cold whiplash can respond very differently to the same interventions.

Hot whiplash is distinguished by being sensitive, fragile, and reactive, as the fight-or-flight responses of the autonomic nervous system are still aroused. The head and neck are typically immobilized by muscular spasm or hypertonus since the postural reflexes recruit muscular tension to provide the inherent structural stability that has been compromised by the injury. Because of tissue damage, inflammation will be a factor in a recent or unresolved whiplash. The tissue in injured areas will feel softer or puffy to your gentle palpation (though not always literally hot). Your client may respond to direct touch with guarding, uneasiness, or pain, which further increases sympathetic activation.

In contrast, cold whiplash is typically older, less autonomically reactive, and restricted at the ligamentous or joint level (as opposed to muscularly spasmed). It is characterized by stubborn, dense, hardened tissue deep around the joints.

Hot whiplash often becomes cold (restricted) once initial tissue damage has begun to heal; cold whiplash can become hot (reactivated) if worked too quickly or aggressively. We’ll focus on hot whiplash in this article and cold whiplash in the next.

**WORKING WITH HOT WHIPLASH**

When working with hot whiplash, our primary goal is to calm our client’s autonomic activation before trying to work with any tissue restrictions. To get a sense of this, imagine that you’re working on an unprotected central nervous system. In a way, you are—after a traumatic event, our ability to filter out or tolerate intense experience decreases, leaving us feeling bare and unshielded. How would you touch a client who was nothing but a bare brain and spinal cord? Hopefully, very delicately and carefully—this is the ideal way to approach a recent or hot whiplash.

Pace your work: because sympathetic reactivation can happen by working either too long, too fast,



	HOT	COLD
TIME SINCE INJURY	Usually recent.	More than 3-6 weeks since injury.
PRESENTING SYMPTOMS	Pain, instability, spasm; guarded or careful movement.	Pain, immobility, inflexibility; restricted or stiff movement.
MOBILITY RESTRICTION	Muscular hyper-tonus (spasm).	Fascial hardening; ligamentous and articular restrictions.
TISSUE QUALITY	Inflamed, puffy, slippery; sometimes soft, sometimes hyper-toned; touch is often painful.	Hard, dense, rigid, especially at deep levels. Can be insensitive to light touch.
GOALS	Calm or soothe any unresolved fight-or-flight activation; encourage subtle motility; broaden client’s focus beyond injury.	Release tissue restrictions; restore lost gross mobility.
STRATEGY	Work primarily with nervous system; work within client’s range of active motility; address myofascial restrictions only away from injured areas.	Work with myofascial restrictions and movement barriers to restore mobility, both locally and globally.
METAPHOR	Imagine working on a bare nervous system: use delicate, slow, gentle touch.	Imagine melting a glacier with the warmth, pressure, and patience of your touch.



YOU CAN SEE THESE TECHNIQUES IN *MASSAGE & BODYWORK'S* DIGITAL EDITION, WHICH FEATURES A VIDEO CLIP FROM ADVANCED-TRAININGS.COM'S ADVANCED MYOFASCIAL TECHNIQUES DVD SERIES. THE LINK IS AVAILABLE AT BOTH [WWW.MASSAGEANDBODYWORK.COM](http://WWW.MASSAGEANDBODYWORK.COM) AND [WWW.ABMP.COM](http://WWW.ABMP.COM).

or too deeply, instead try shorter sessions with small, supportive, calming interventions. Watch to see how your client responds to your work, both within your session and between sessions. Gradually increase duration, scope, or depth as your client is ready. You can always work a little more next time, but it is hard to take back your work, once you've already done too much.

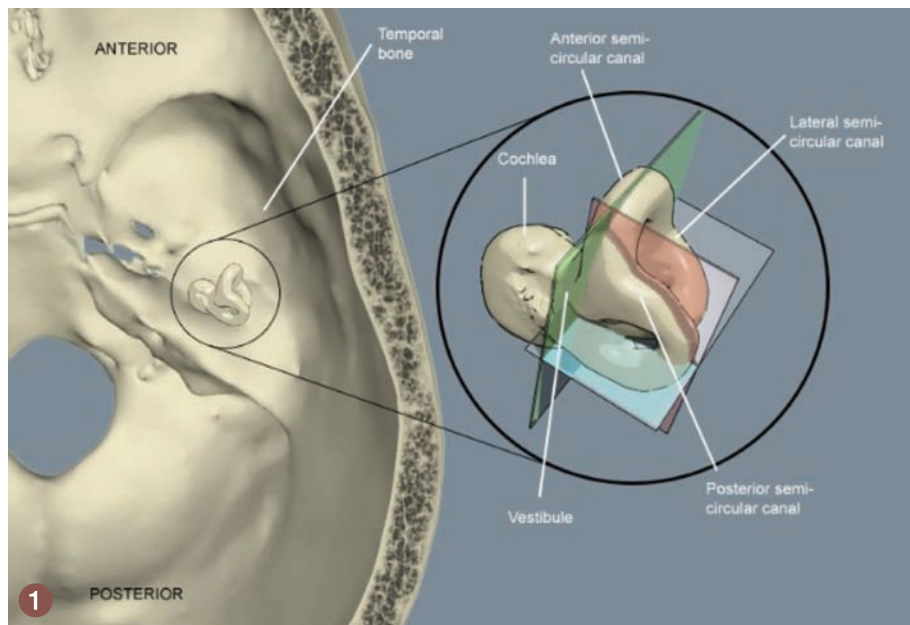
Work elsewhere in the body, before and after approaching any injured or painful areas. This broadens your client's awareness beyond his or her places of injury and pain. Use the metaphor of a tangle of yarn or string: you wouldn't go right to the tightest part of a tangle and start pulling. Instead, work at the periphery, gently and patiently loosening the overall pattern.

Instead of mobilizing the neck, encourage motility. Use your client's gentle active motion (i.e., motility) to restore subtle movement to spastic areas, instead of applying passive manipulation, stretching, or direct release techniques (which do mobilize, but could re-aggravate). Breath, active exploration of range of motion, and even micromovements will help restore disrupted reflexes and prevent tissue adhesion. Direct work with gross movement barriers or tissue restrictions come later, once muscular splinting has subsided and injured tissues are less inflamed.

There are many ways to work that accomplish these goals; much of what you probably already know about relaxing and calming can be extremely effective when applied with the above considerations in mind. A specific technique that incorporates these principles is the Breath Motility Technique.

### BREATH MOTILITY TECHNIQUE

Breath has the power to calm the nervous system, to catalyze lost motility, and to bring proprioceptive



Dizziness and vertigo after whiplash can be exacerbated by loss of adaptability in the neck, limiting the body's ability to position the head and adapt to stimulus from the balance mechanisms of the inner ear. *Image courtesy of Primal Pictures. Used with permission.*

awareness to the otherwise healthy regions that have been eclipsed by the painful areas.

Begin by asking your client to take a normal breath, and look to see where the thorax moves the most with inhalation. Using a soft, receptive touch, “sandwich” that place, front and back, between your two hands, as in Image 3. Whether breath starts in the belly, diaphragm, or chest, ask your client to gently allow the space between your hands to fill with a normal breath. Note that we didn't say, “push the breath between my hands,” or even “breathe here.” Those imperatives will evoke a more efforted response than the invitation simply to “allow” the breath to fill between your hands. Our aims are to calm the autonomic responses, induce gentle active movement in places that have lost it, and increase proprioception. Try it in your own body—a forcibly inhaled breath doesn't accomplish those aims as well as a breath that you simply allow to come in on its own. You'll be able to palpate



It can be helpful when working with hot whiplash to imagine working on a bare nervous system. Hyperextension injury to the cervical portion of the sympathetic trunks of prevertebral ganglia (along the front of the spine in green) is thought to contribute to vertigo and other autonomic symptoms associated with whiplash. *Image courtesy of Primal Pictures. Used with permission.*



## ADDITIONAL READING

Herman, Judith L. 1992.

*Trauma and recovery*. New York: Harper Collins.

Levine, Peter and Ann Frederick. 1997. *Waking the tiger*. Berkeley, California: North Atlantic Books.



The Breath Motility Technique is used when initiating work with hot whiplash, in order to soothe the nervous system, increase motility, and broaden the client's proprioceptive awareness beyond painful areas.

the difference in your client's breath, too. Continue to coach and encourage your client until the breath is effortless, and it is tangibly clear to each of you that the breath is moving in between your hands, both front and back.

Once you both feel the breath in one area, move to a new place nearby, and repeat. Keep the pacing even, and the breath normal. Deep or fast breathing, especially high in the chest, would increase sympathetic activity, rather than calm it. Continue to get agreement about your client's ability to sense the breath in each new spot. Stay encouraging, interested, and focused. If it's difficult for your client to feel the breath in a new place, or if you don't feel it with your hands, return to the last spot where it was clear, and move out gradually from there. Repeat this pattern with the entire thorax and abdomen, on both left and right sides. Take at least 10 minutes for this technique, although allowing even more time would be well spent. This simple technique could be the bulk of an entire session, which would leave your client feeling more settled and relaxed.

Incidentally, if you notice that your client's movement is guarded or painful, you may want to perform

this technique with your client seated, rather than supine. Seated work in general can be very helpful, if the act of lying down is painful or difficult.

These ideas should help you avoid the Pandora's-box effect of making whiplash pain worse with inappropriately deep or direct work. In Part 2, we'll share tips for recognizing and working with the chronic, stubborn patterns typical of cold whiplash, where deep and direct work can be just what is needed. **m&b**

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### NOTES

1. Whiplash/bodyworker ratios are based on an estimated 250,000 bodywork practitioners in the United States. Estimates of whiplash prevalence range from a low of 120,000 new cases annually ("Prevalence and Incidence Statistics for Whiplash," available at [www.wrongdiagnosis.com/w/whiplash/prevalence.htm](http://www.wrongdiagnosis.com/w/whiplash/prevalence.htm) (accessed January 2010)), to a high estimate of 1,990,000 new annual cases (Croft, Arthur C., "Facts Concerning Whiplash Injuries," *Spine Research Institute of San Diego*. Available at [www.thewestclinic.net/pdf/Facts%20Concerning%20Whiplash%20Injuries.pdf](http://www.thewestclinic.net/pdf/Facts%20Concerning%20Whiplash%20Injuries.pdf) (accessed January 2010)).

2. A study published in the *European Spine Journal* found that during the period of time between the first and second years following a motor vehicle accident, more than 20 percent had symptoms worsen (H. Olivegren, N. Jerkvall, Y. Hagstrom, and J. Carlsson, "The Long-Term Prognosis of Whiplash-Associated Disorders (WAD)", *European Spine Journal* 8, no. 5 (1999): 366-70).
3. The term whiplash was first used to describe cervical injuries in 1928 by orthopedic surgeon Harold Crowe, and is subject to some controversy. *Physical medicine texts variously prefer the terms acceleration-deceleration injury, hyperflexion-hyperextension injury, or cervical strain-sprain injury.*
4. "Quebec Task Force Rewrites Whiplash Protocols," *Dynamic Chiropractic* 13, no. 12 (June 5, 1995): 28.
5. In 1961, physician Robert Munro wrote: "In its pure form and when rightly diagnosed, the symptoms of 'whiplash' injury are those of cervical muscular spasm often complicated by neurosis." R. Munro, "Treatment of Fractures and Dislocations of the Cervical Spine," *New England Journal of Medicine* 264, no. 573 (1961).
6. Statistically, whiplash sufferers with workers' compensation claims or lawsuits have significantly worse outcomes than those who do not. In fact, in scientific studies designed to judge the efficacy of interventions, investigators must exclude such patients or report their results separately. (From Brian Grottkau, MD, writing in the *New England Journal of Medicine* (348, no. 14 (April 3, 2003): 1413-14) about Andrew Malleson's Whiplash and Other Useful Illnesses.)
7. Use of immobilization and cervical collars after whiplash injury have been observed to produce temporomandibular dysfunction, joint adhesions, muscle atrophy, and myofascial trigger points. Whitney Lowe, "Assess & Address: Whiplash," *Massage Magazine* 104 (July/August 2003).
8. Rene Cailliet, *Neck and Arm Pain* (Philadelphia: F.A. Davis, 1991), 88.
9. *Ibid.*, 112.
10. *Ibid.*