

Dry Needling for the Chiropractic Tool Box, Part II: Twitch, Shout, Rotate, Piston, and More

By Carol Marleigh Kline, JACA Online editor

David Fishkin, DC, MPH, discusses more of the fine points around dry needling and related chiropractic scope-of-practice issues across the nation. Dr. Fishkin is the founder of the Dry Needling Institute in Rockville, Maryland.

Which muscles do dry needling practitioners work with most?

“In our modern society, the trapezius muscles are the ones most likely to develop trigger points (TrPs). We see a lot of TrPs in the rotator cuff group, as well. In the lower body, it’s the quadratus lumborum—the Q-L is a huge player. Another extremely common and very important area that we needle is around the lateral glutes, the lateral and anterior pelvic area.”

What is the price patients pay ergonomically for living in a white-collar world?

“The scourge of our modern society is sitting. It’s epidemic. I tell patients that even the most expensive chair is primarily holding them up against gravity and their muscles aren’t working at all. The lower back starts to atrophy. And the sitting, the repetitive movements of the mouse, and looking at the screen lead to today’s repetitive and other motion disorders.

“We used to see a lot of blue collar workers, and in some communities, we still do. Mostly, however, we see white collar workers who are suffering from low-amplitude degenerative problems. White collar workers are harder to work with. Blue collar workers are active and have muscle tone. A lot of white collar workers are inactive and deconditioned.

“You have to look at the total picture—issues of occupation, genetics, and lifestyle. We can’t just treat a trigger point. Even when we treat locally,

we still have to look globally. Inefficient movement patterns affect the development of trigger points.

“In the research models, they talk a lot about sudden concentric or eccentric contractions—meaning a load you’re not ready for. But also very important are these low-amplitude repetitive movements—like sitting at the computer or moving that mouse very slowly. All of these patterns definitely lead to trigger point manifestation.”

Would you describe what’s called the “local twitch response” in dry needling?

“The local twitch response (LTR) is an underpinning of the physical therapy model, which follows Travell and Simons.¹ These are all *models*. I wouldn’t say that anything is proven beyond a doubt. I feel more comfortable calling them early theory models.

“The LTR was advocated by Dr. Jennifer Chu.² Chu maintains that in order to deactivate a TrP, you must have an obvious deep contraction. This is based on EMG studies her team did that revealed cessation of end-plate noises associated with the LTR—and the end-plate noise is associated with the neurotoxic ‘soup’ I mentioned in Part I of this article.

“In my experience, saying that you must have that deep contraction to bring about a therapeutic result is extreme. The LTR is an important and positive part of releasing a TrP and achieving resolution. But it’s not the determinant. I think they came to a somewhat erroneous conclusion based on their research. They believe that only with the LTR can you have a positive clinical outcome. I do not agree. If you consider the continuum of pain, the passive points occur

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earlier in that continuum. If we neutralize a passive point, we prevent the development of the active point, which is the most severe manifestation along the pain continuum.

“If you look at the sports arena, where athletes must be kept in fine-tuned shape, do you want to wait until the athlete develops a TrP and its inhibiting function? Or do you see this athlete on a regular basis, find the lesser points, and eradicate them? Certainly with high-performance athletes, we want to preemptively get these passive points out of their systems.”

Does a passive point give an LTR?

“No. You have to remember, for example, with Gunn’s model,³ you’re talking about going two to three inches down into the lumbar spine. We can’t palpate that area. There are many times when you don’t get an LTR—and you still get good clinical outcomes. I think as a clinician on the front line, the research is supportive and the academics behind it are important. But research doesn’t explain everything—and it doesn’t mean that everything else isn’t important. I think we have to keep things in perspective. The focus on the LTR as the holy grail is misplaced.”

What is the “shout response” as a part of the LTR?

“It’s an involuntary cord response, a reflex—like when a leg kicks out after the knee is hit with a rubber hammer. You have to prepare the patient for this response, which is the result of an LTR. It can be a very intense contraction. What’s happening is that the muscle bears down on the needle. Sometimes the reaction is so strong that it will actually bend a straight needle into a slight angle. That’s not a problem. These needles are very flexible. They won’t break. You could literally tie the longer ones into a knot—they’re that flexible. The classic LTR response, however, is that the TrP will cramp up, release, and melt away.”

What is the value of rotating the needles in the patient’s TrPs?

“Author/researcher Helene Langevin has talked about this.^{2,3} Her research uses real-time

ultrasound where they can visualize tissue responding—where the insertion of the needle into the fascia causes a grasping of the needle, which leads to winding of the connective tissue. This creates a tight, mechanical coupling between the needling and the tissue. Even without rotation, patients will sometimes feel the grab.

The research shows that needle rotation causes a measurable change in the architecture of the connective tissue. It appears the collagen bundles assume a straighter, more parallel orientation. In healing, you want to see more parallel fibers.

“Even though the research shows it may have some positive effect, I don’t advocate it in most circumstances for two primary reasons. One reason is that the clinical outcome is excellent without it. The other is that it’s uncomfortable for the patient. So again, I try to follow the rule of *Primo non nocere*—“First, do no harm.” If you can achieve the same clinical outcome without causing undue stress, why do it?

“It’s possible to have a case where you’ve hit the wall. You’re not getting anywhere with that patient and as a last-ditch effort, you give it one good twist. With the shorter needles—a half inch to an inch—you can do that. With the longer needles, if you twist one, it could potentially break—I would not advise torquing a longer needle.”

Dr. Fishkin says dry needling has been reviewed and determined to be within the scope of chiropractic practice by the following boards of examiners: Alabama, Colorado, Connecticut, Delaware, Florida, Illinois, Maryland, New Hampshire, New Mexico, North Carolina, Rhode Island, South Carolina, Texas, Utah, and Virginia.

What about moving the needle up and down, or “pistoning”?

“I don’t encourage that, either. It’s very uncomfortable and it’s also more likely to induce

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a vasovagal response—a patient may feel nauseated or pass out. Why do that to someone if you don't have to? Pistoning is also known as 'peppering'—Practitioners say you have to stab the TrP so it releases. We don't have to do that. It's more comfortable, more tolerable—and just as effective—when we don't.”

What determines the gauge of needle a practitioner should use?

“We always want to use the thinnest gauge possible to accomplish the task. We want to be minimally invasive. But most of the time, it's determined by the length of needle you wish to use. Structurally, you cannot use the thinnest gauge on the longest needle. The thickest needle we use, a 32 gauge, is still thinner by a long shot than any traditional hollow-bore needle. We go down as far as a 38 gauge—a very fine needle—for work on the head in the facial area. The gauge is mostly determined by the body part you are working on, in addition to the length of the needle. In sensitive areas, the thinnest possible gauge is best.”

How many treatments are needed?

“My goal is to achieve resolution or control of the clinical situation as rapidly as possible. But there is no formula, no recipe. Every patient is different. I have some patients who resolve in two or three sessions. Some chronic patients may take weeks or even months. They stabilize and then come back on an as-needed basis.”

How long do the effects of dry needling last?

“If someone comes in with an acute problem, it can be resolved incredibly fast with dry needling. With chronic patients, dry needling is very helpful in managing them so they need less treatment less often. But they're still going to require follow-up periodic care.”

What's the difference between the chiropractic manipulation and dry needling?

“A manipulation is quick. The patient can feel better quickly, too. But it's so fast that the effect is not that long lasting. From what I've seen, by combining the two, you can get a much more sustained effect in general. If you combine them,

you're not working with the patient any longer than you would if you used electrical stimulation. You can actually treat the patient with needling and e-stim at the same time. This does not mean attaching the electrodes to the needles, as in acupuncture, but co-treating. You can set the needles and place the pads and treat them for 8 or 15 minutes.

Are there other risks to dry needling besides the vasovagal response or pneumothorax?

“You can minimize a vasovagal response or pneumothorax by paying attention to how you screen patients and how you approach your work. Any time you treat someone too aggressively without thinking, you can cause a bad reaction. The key is to go slowly and carefully and not be overly aggressive too early. It's important to get patients used to what you are doing so they don't have a negative experience. But there's no other serious problem that can occur. There's a list of things we must be aware of, though. For example, you don't want to needle someone who's phobic—that would be a torture. If someone has a genetic bleeding disorder, you may not want to needle in that case, either.”

“What's neat about dry needling is that there's very little contraindication to it. Patients with osteoporosis, pacemakers, or cancer—there's no contraindication. You can treat them not only daily, but multiple times in a day if you need to. I had a patient with a bad rib problem. She couldn't stay in position long. I needled her three different times over the course of an hour. After that, she was able to walk out, relieved of pain. She reported no further occurrence of the problem.”

What are some other components of successful dry needling?

“They are all the elements that apply to practice in general: rehabilitation, low-velocity mobilization, soft-tissue manipulation, and high-velocity synovial joint manipulation. In my opinion, this technique is the corollary to the chiropractic adjustment, meaning that this is the soft-tissue adjustment. They potentiate each other. I think you get a much better clinical result

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when you do both. From what I've seen, the intended effect of the manipulation lasts longer. It's more comfortable. For me, these two adjustments are inseparable in treatment. This approach will work well for the acute care and the restorative practitioner."

Can a DC with no prior experience in dry needling make the transition fairly easily?

"Yes. Chiropractors' and physical therapists' educational backgrounds make it very easy for them to learn this technique. I would say it's easier to learn dry needling than phlebotomy or even EMG techniques. Of course those who already practice acupuncture can transition into dry needling. For them, it's more a matter of breaking established habits. But for the non-acupuncturist, it's not a problem."

What kind of research has been done on efficacy?

"I haven't seen straight-up dry needling by itself in a large, randomly controlled trial study. It's been used in German acupuncture trials where they compare true needling to sham needling, which is what the Germans think of as dry needling—and they haven't found much of a difference in the effect.

"There are a lot of case reports.^{4,5,6} Another one that's just been started is prospective.⁷ It's about chronic whiplash. We know that whiplash is a terrible problem. The amount of trauma to the soft tissue from whiplash is probably the worst. People who suffer rear-end crashes are usually not aware of the coming impact. They aren't wearing protective helmets against that kind of force like race car drivers and fighter pilots do. The G-force is tremendous on these people. Soft-tissue damage can be huge. The only thing ordinary drivers have going for them is the

design of their vehicles—with head rests ratcheted up as high as possible. With whiplash, drivers can have "ride-up"—their bodies rise off the seat and sometimes the impact forces their heads backward over the top of the head rest. Good vehicle design, defensive driving, and awareness of our surroundings are important.

"The research we do have is pretty good. Money is tight now, but once things improve, hopefully there will be more studies on whiplash and dry needling."

How many states allow chiropractors to practice dry needling?

At the moment, Dr. Fishkin says, 15 states allow it. (See box) He adds, however, that he's faced misunderstanding and bias at the state and national levels. "Problems often boil down to turf wars, particularly with physical therapists and acupuncturists—and other chiropractors who have completed a 200-hour acupuncture certification." Dr. Fishkin says doctors should be aware of both their right to practice and what they need to fight for—including the right to use a tool that helps patients. He adds that he believes eight more states should allow dry needling, based on his review of their statutes.

He says that if dry needling is not allowed in a given state, that is not necessarily the end of the story. "With some states, when I first made phone calls about dry needling, the automatic answer was 'No.' When I challenged them, they turned around and said 'Yes.'" All it takes, he says, is for doctors of chiropractic in such states to educate themselves about dry needling—and to persevere with their state boards. ■

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