

## **Dr. Gregory H. Doerr: FICS Masterclass Functional Taping**

Hello, I'm Dr. Greg Doerr. This class is going to be associated with more modern taping procedures. What our goal is with this is we're going to review, basically, a lot of different types of techniques from kinesiology taping to strapping techniques and things along those lines. In particular, we're going to go through a whole lot of pre-assessment to determine what type of taping technique we're going to use. We're going to conceptualize why it is that we're taping, and critically go through everything from the standpoint of how we apply tape, what's the current research associated with it. We're going to spend a decent amount of time on that because that's one of the things that is a frustration for me. It's everybody said, "Well, there's nothing to validate taping."

However, I love it when people say there's nothing to validate taping, but they won't actually say, "By the way, the research articles that were done on taping are not very well performed." Their methods are of poor design. We're going to go through at least what is the current literature analysis, which I've been fortunate enough to be in some way, shape, or form involved in two of the ones that I'm aware of. I don't know if there are any more out there at this point. One was done by Dr. Mike Schneider, and one was done by Dr. Phil Page. We're going to go through everything from that perspective of pretesting associated with different techniques, the theology behind why taping works, as well as showing some hands-on oriented as much as we can via video methods on the application of a few different techniques as we're going through all of this.

Again, I can be contacted at my email, which is there. The classes that I developed associated with taping is called Functional Taping for Musculoskeletal Injuries. I don't want to make it sound like that's the end all be all. I've taken almost every taping class that I possibly have ever been able to get my hands on. Because quite frankly, my feeling is knowledge is always power. The more you learn from others, the better you get, the more you evolve. We're going to go through it, basically, a gambit of what a lot of different people have done. As I've said before, if you've seen the instrument-assisted class that I did, very few things we've ever done is unique. A lot of it is evolution of things that we've learned from other people. Or somebody else may have done it, we just never saw them do it before. We're going to go through a lot. Taping's been around for a lot of years. Quite frankly, we've had a lot of evolutions in taping over the last couple of decades in particular.

Looking at this, there is a ton of different types of taping techniques. We have everything from kinesiology taping and all the different varieties that have come from here, as well as a whole ton of different strapping methods. If we look at kinesiology taping, where it really started was Kenzo Kase with Kinesio tape. He was basically the granddaddy of it all. He started that process back in the '70s. It really created the first format upon which we could learn how to apply taping. It is one of the taping I've done their certification three times. It is one of the classes I will openly admit that allows for the greatest amount of taping. You keep a lot of different structures associated with it. You do get a lot of hands on experience.

However, we evolved a bit with Kevin Jardine, who first of all, in my opinion, created some of the greatest educational component as to the true theory as to why taping is effective. Probably, his greatest attribute to the taping wasn't necessarily the techniques he did. It was really the science behind and the philosophy behind what we're doing with taping, which I've adopted into almost every aspect of my life, whether it was soft tissue, whether it was taping rehab, manipulation, mobilization, and modalities, and so on and so forth. His methodology or his theology upon how he was applying tape, I adapted and moved it into almost everything that I do clinically. He was also one of the first people to develop these pre-cuts. We see now almost every company has some form of pre-cuts, whether it's a strip that just rips off. You don't have to cut it, or pre-cut corners, or whether it was Spider Tech. With Kevin, initially who did a shoulder one, a knee one, an ankle one, an elbow one, a posture one, a low back one, an ITB one. He had a bunch of pre-cuts

## **Dr. Gregory H. Doerr: FICS Masterclass Functional Taping**

made. Some of them actually worked out really nicely. Some of them were okay. The reality was is it was an evolution in the taping world to something you no longer had to cut, you just had to know how to apply it.

Then, we also had RockTape came along. They looked at things very differently than what a lot of other people did. Now, we might have been doing it clinically, but they actually start putting it into a format of "Hey, by the way, we're looking at movement rather than how to tape for rhomboids, which was very Kinesio tape-oriented. Here's your rhomboid tape job. Here's your mid trap tape. Here's your upper trap tape job. Here's your gastroc and your soleus one." RockTape looked at it and said, "Well, that's not really the body works. The body works in movement." Most of us as clinicians were already doing that, but they were one of the first companies to truly put it into an educational format, which was extremely valuable. My class, really, from an evolutionary standpoint, really just the biggest thing that they did is they added in all the techniques, as well as adding in pretesting to not guess your tape job of work. If your pretest don't come across positive, your taping is not going to be. We'll get into that aspect in a brief minute.

We also had a ton of strapping methods. Now, you always had general, everyday athletic taping. I mean, that's been around since the dawn of time. Unfortunately, the literature doesn't really support a lot of it, especially from the standpoint of most of it is rigid taping. They found, especially if you're still using white athletic tape, its effectiveness was about 20 minutes in length. There's some other people on this list who you may or may not have heard from before.

Jana McConnell to me is the grandmommy of it all. All right. She is probably the most literature-oriented of her taping techniques. She's gone out of her way to disprove her own theories, which I was not aware of, but apparently she was highly criticized for. My respect for her went through the roof when I found out that she actually was testing her own theology. Because just because something is disproven the way you think it's working, it doesn't mean it doesn't work. It just means your thought process was wrong. You just have to go back to the drawing board. In particular, she was somebody who tested one of great example is patellar tracking disorders. What she did is she said, "Well, I think what I'm doing with my tape job is I'm putting it back into place." She took X-rays pre and post to see how much did the patella move while the tape was on. It was really indiscernible, so she was like, "Great. I didn't move the patella so why is it working? Okay, fine."

She later in life decided, "Well, maybe the X-ray wasn't sensitive enough. Let's do an MRI." She did the MRI. They tested, I believe, it was eight different positions of the patella, and only two of them showed a change and both of those didn't show a significant change. Again, she disproved the fact that she mechanically was changing the position of the patella, which was creating the improvement. That didn't mean her patella tracking taping didn't work. It just meant the mechanical thought process wasn't. When you eliminate mechanical thought process, the easiest one to go back to is a neurologic thought process, okay? When you start thinking neurologically with taping, it may drastically change the way you apply your tape to begin with.

Mulligan, for those of you who may have been lucky enough to take some of the Mulligan mobilization classes, which were phenomenal, they also did taping techniques to help to support some of those movement processes that they fix with their mobilization techniques. Some of those I use, actually, within my class itself. I just added a little bit more pretesting to it to make sure that that tape job actually is effective.

## **Dr. Gregory H. Doerr: FICS Masterclass Functional Taping**

Tim Brown's SPRT has been one of my biggest. For those of you who are not aware of who Tim Brown is, he's a chiropractor, who actually now is a physiatrist and a chiropractor in California. Absolutely brilliant. Probably is the greatest influence on me from a taping perspective. Hands down. I have, with great permission from him, stolen so much of his knowledge and evolved and applied it in as many different ways as I possibly can. If it wasn't for his base material, which if there's somebody who evolves faster than anything, it's Tim. Tim is very, very quick. If you ever get a chance to watch him teach, you go and see him any time. His SPRT, Specific Proprioceptive Response Taping, is by far one of the biggest bangs you can get in the taping world. It turns 8 out of 10 pain into 0 out of 10 pain, or 1 out of 10 pain in the blink of an eye. He used a variety of different tapes. That's one of the great things. He's constantly evolving into what it is that he does and how he performs it.

Then, we also have Gray Cook with Functional Movement Taping. He used his movement assessments to assist in creating a tape job to hopefully maintain what was achieved after doing your movement assessment. He actually started looking at pre and post as well. One of my simple examples that I'd like to do with him is somebody who had a mobility issue on a squat. The talus was anterior, they couldn't get into good dorsiflexion. What did he do? He go and he do his joint mobility with the talus posterior again, then he would apply his tape to theoretically block the talus from becoming superior again, thereby maintaining his mobilization technique. Then, once weight bearing created improvement in a functional movement pattern. That's what Gray Cook did with functional movement taping.

Again, since then, there's been countless. You have dynamic tape that has come on the scene as well. They've been there for quite some time, where their tape, instead of having unilateral stretches, is now stretching in multiple directions kind of like the way our tissues do, and have had some interesting thing. I love using their tape for deceleration type of injuries like a foot slap on TIB posterior. I like using their methodologies associated with that. All of these tape jobs, all of them have a role in our office, which is why I always say if you take one tape job or one class, you've probably missed a lot. There's very few tape classes that actually give you a gambit of different material. I don't want to, but I think mine might be one of the only ones that actually includes so many different types of tape with so many different types of methodology. Again, it's just, to me, taping should be an inclusive thing, not a unilateral "This is what we use." It should be a lot of different techniques because there's so many great ones out there.

Now, when we look at the different applications of taping, this goes right to Kevin Jardine's theology. He did believe there was a neurosensory, a structural, and a microcirculatory aspect of applying tape. Neurosensory speaks for itself. Structural, those were much more mechanical oriented in their taping. Then you had your microcirculatory, which were considered, again, anti-inflammatory. The anti-inflammatory applications, as we've gone through literature, are the ones that are the hardest to hold up to the full theology of what they thought. That doesn't mean they don't have a place, but we had to change the way as to why we think we're using them or why we're applying them. We'll get through a lot of that literature as well.

Starting with neurosensory, the goal there was simple. Improve afferent efferent communication. For those of you who may have taken the instrument-assisted class through fix, it's a Ctrl+Alt+Delete. It's rebooting the system, okay? What we're trying to do is normalize the tone of the tissue. One of the things that was always interesting in our Kinesio tape certifications that I've taken is they go through facilitation relaxation. Tape is not that smart. Just because you placed it from one side to the other and one side to the other, it doesn't mean your tissue is going to say, "Oh, my God. You went from the origin to insertion. I'm going to facilitate the tissue." "Oh, I went from insertion to origin. I'm going to relax the tissue." That's not what's happening. You got to remember no matter what, we're stimulating the sensory receptors within the skin.

## **Dr. Gregory H. Doerr: FICS Masterclass Functional Taping**

It's those sensory receptors, those A-beta fibers that are getting stimulated, reflexively looping within the central nervous system, coming back and changing the tone of the tissue. We're applying that afferent stimulation. We're stimulating those A-beta fibers or those receptors. We're not the ones who facilitate and inhibit based on the orientation of the tape. We'll get through some of that as literature reviews go through as well.

Structural applications, again, our goal here is much more mechanical. It's to block injurious range of motions, it's to improve adaptive postures, getting the shoulders back and down, so that this is a normal posture for us. It's a biofeedback mechanism, so that we learn that this is where we should be, not here. It also assists us in stabilizing either laxities or instabilities. It could be an anterior translating shoulder or a dislocation. It could be an ankle sprain. It could be a dislocated elbow or something along those lines. All of these instabilities or laxities, we can correct using taping techniques. Interestingly enough, some of them are mechanical, but some of them are actually neurologic fixes as well.

Then our last application is doing things like anti-inflammatory. Those are our microcirculatory applications. Now, the theology between this, and understand, we're going to talk about theology, but then we're also going to talk about reality as well. The goal within a microcirculatory application was to promote the movement of stagnant superficial fluid. Thank God, Kevin actually said superficial fluid, okay? Because the reality is how superficial it is is extremely superficial. It helps to remove that stagnant edema of bruising. It assists in removing those chemical irritants and improve oxygenation to injured tissue. Now, here's where we're getting into .How deep does that blood perfusion go that were affecting injured tissue? Not too much, okay? That's where we're starting to see differences. Now, we can remove chemical irritants, but that's going to be at a superficial level. It's not going to be deep. Can we reduce the edema and bruising? Yes, we can at the superficial layer, not at depth, okay? As we go through our literature, we'll discover a lot more of this as we go along.

Now, what taping techniques can be used for each application? Look. Within neurosensory taping, kinesiology tapes, strapping tapes, there's a lot of different varieties of tapes that are going to have a neurologic impact. Why is that? It's on the skin. It doesn't matter what tape you used, it touched the skin. As soon as it's touched the skin, you now have a neurologic stimulation. All right. This is going to become very critical when we start looking at the literature as to what we're using as controls. If it has touched the skin, it has stimulated the neurology. The variety of different kinesiology tapes obviously work wonderful. There are SPRT methods, specific proprioceptive response taping. Again, that's Tim Brown's method that have huge neurologic implications. As I said to an extent, every tape job has a neurosensory component because it has been applied to the skin, which means it has stimulated A-beta fibers, okay? There's no way around that.

Within the structural aspect, those, again, more rigid mechanical type of tape jobs. We can use SPRT like we will demonstrate associated with ankle sprains. McConnell tape jobs that we've used for, one of the ones that I use in my class all the time is this fibular head one. A braid posterior fibula mobilizes it anteriorly, uses the tape to keep it in place. McConnell's tapings, patellar tracking disorder, she's done them for impingement. Again, her techniques are pretty valuable. They've all use strapping tapes, things like Leukotape. Kinesiology tape, when we stretch it over 50%, we start getting a little bit away from the neurologic component of what we're trying to do, and bring it into more of a mechanical support. We can use those with postural disorders, disc disorders, and things along those lines.

## **Dr. Gregory H. Doerr: FICS Masterclass Functional Taping**

As I said before, functional movement taping, the example I gave with that anterior talus that cooked it. Again, he used strapping tapes in order to achieve that block of an anterior moving talus. Then again, all of our standard athletic taping, our white tape, our strapping tapes, our Cobans, our Elastikons. Elastikon is elastic. Don't get me wrong. I used to use that a lot prior to my knowledge of kinesiology tape for very simple, similar methodologies. It's always wonderful how people go down the same pathways just for different reasons. The only problem is Elastikon is very thick and it's very adhesive. It's got a much more brutal adhesive. You don't really want to put it directly on the skin a lot, although you can. It tends to be irritating if you leave it on too long. Obviously, the evolution to kinesiology tape saved a lot of skin. Then lastly, we have our microcirculatory tapings. Now, the reality is for what we're looking to accomplish, it seems to be much more effective. Basically, the only ones I use for that are kinesiology tapes.

Now, the functional taping for musculoskeletal injuries, again, I call it FTMI. The concept that I'm proud of having developed within taping is more of a concept of evaluation to determine what type of taping technique that's going to be used. One of the things that always frustrates me, and I'm sure all of you who are taking this class have heard it before. Otherwise, you probably didn't jump on this one. "Oh, it doesn't work for me." "Oh, yes, that taping stuff doesn't have anything to back it up. There's no literature to back it up."

In fact, I once did a 1-hour podcast with a very prominent, for lack of a better way, fitness coach, of putting it in him. He's not an exercise physiologist, but he is a very prominent personal trainer, fitness trainer. He was one of those guys that came into me and said, "Yes, that taping stuff doesn't work for me." I said, "That's because whoever taped you didn't know what they were doing." That's not to be insulting. It just means all they did was mimic what somebody taught you. It doesn't mean it's going to work. You just mimic the tape job that somebody taught you in a class. What I did with him was a very specific line of pretesting. I applied the tape based on that pretesting. All of a sudden... By the way, this was a SLAP tear. It's a deep internal arrangement injury. He gets up and goes, "What the heck did you just do?" I said, "I don't know." He goes, "I felt great after the soft tissue. But now I feel like my shoulder has put total mechanical support. I got full range of motion. I've got nothing pitching. I got nothing like this." I said, "Well, we apply tape the way it's supposed to be applied for your particular problem," which was a combination by the way of an SPRT method and a kinesiology taping method. The two of them together created a massive reduction in pain, and basically, smooth mechanics.

Now, of course, as I said, this is an internal arrangement. It's purely neurological on how we apply it. We'll go through those as we get through our concepts, and I'll show some examples as we get to the end of the presentation. Now, through that pretesting, as I said, it determines which taping technique is most effective. Are we using a strapping tape? Are we using kinesiology tape? Are we using a mechanical advantage taping or are we doing a neurologic style of tape? Most importantly to me is, which I hope I never stopped learning, it emphasizes every type of existing taping theory that I have had the pleasure of exposing myself to. With any luck, will continue to expose myself through the rest of my clinical career, hopefully life. It'll utilize, again, strapping tape. It'll utilize kinesiology taping. But our emphasis will revolve around kinesiology taping and some SPRT theology, which I have found to be, again, probably the most powerful methodology in all of taping.

Now, to me, as I said before, the one of the most frustrating things to me is, "Oh, that taping stuff didn't work for me." Look. I got to be honest. If I'm taping somebody, I already know it's going to work. That's not to say every now and then I have somebody who I want to experiment on. An experimentation should be a one to two visit thing. It should not last for hours or weeks and weeks and weeks and weeks of taping



## **Dr. Gregory H. Doerr: FICS Masterclass Functional Taping**

somebody, thinking you're going to get a better response. That's not going to happen. My Concept 1 is actually don't tape.

Now, let me demonstrate this, you do an evaluation. Again, I'm going to use a tennis elbow, because it's the darn easiest one for me to show on this video. I'm sitting here, I'm doing my lovely test for manual muscle test for lateral epicondylitis and I go, "Ouch, that hurts me." What I'm going to do next is I'm going to reproduce that same test. Now, again, I don't have three hands. Understand my two hands are doing the testing. I don't have to and one of my hands is getting tested here. I'm losing one, so "Ouch, ouch, ouch." I'm going to start doing skin pulls. If it's a tennis elbow, right over that tendon region. Notice how much pressure I'm doing here. It grabs the skin and tug. I'm not crushing and pulling. It's gentle. This is neurologic. All we're trying to do is stimulate those A-beta fibres. It grabs the skin and gently tug it in a direction superiorly, inferiorly, lateral immediately.

Then we can try diagonals. Now, why am I going to go to a diagonal? It's simple. "Ouch, ouch, ouch." That's your 10, okay? I test again and I pulled it, medial. The patient goes, "Oh, it's like a 7 now." That's not good enough for me. It's got to be a 5 or below. Do it again. "Ouch, ouch, ouch." I go lateral. "Whoa, that's dropped to a 5. That's a lot better than it was before." "Good. Okay, 5 is good, but I'd love to see a drop more than that." I go superiorly, test again. No good. I go inferiorly, test again. No good. "I'm out of 5." Not great. I'm not happy about that. What I'm going to do, I'm going to do my soft tissue treatment over that region because I was going to do it anyway. It's part of that care. I do my instruments for my hidden stretch or my cross friction. I go through that, I treat. I get to my tendon. I retest, patient goes, "Oh, Well, I'm still like an 8." I'm going, "That's not good enough."

I've done my skin pulls and I can't get greater than a 50% reduction. I've done my soft tissue region over that area and I don't get greater than a 50% reduction. What makes you think applying tape to the region, which is stimulating the same exact receptors that you already tested, is going to make a difference? It's a waste of your time. It's a waste of your patient's time, and a waste of everybody's money. Again, you do an evaluation, there's no skin pull, no fascial pull that makes a change. The soft tissue treatment over the involved tissue does not make a difference. Don't tape it.

Now, let's do something interesting. Let's just say I do all that soft tissue treatment over here, test it, now, it's an 8. However, I go and I treat the soft tissue here, retest it, and it goes, so I go to the flexure component, I treat there. I test again for that lateral, "Oh, that's like a 2." I'm going to tape the flexors. I'm not going to tape what I already tested and it didn't work. This is where it works. Is this the direct connection to the epicondyle for lateral epicondylitis? No, but it's the other end of the seesaw. Maybe this is driving this, okay? That's an example of what we might do, but it goes back to Concept 1. Concept 1, don't tape. I do a soft tissue treatment, it doesn't do anything. I do a fascial pull, it doesn't do anything. Tape is not effective on that region. It might be effective somewhere else, but not there. It helps you eliminate that. Rule number one, don't tape.

Rule number two, I've already described it. We do that evaluation. "Ouch, ouch, ouch." I take my instrument. I do my soft tissue treatment over the region. By the way, let's stop that and pull back again. "Ouch, ouch, ouch." I do my skin pulls, it doesn't make a difference. I don't get a greater than 5 reduction. However, I do my soft tissue treatment, retest them again. Now they go, "Oh, that's dropped to a 2." Well, then all I'm going to do is I'm going to take my kinesiology tape and I'm going to cover a soft tissue treatment right over that region, okay? I could take out my scissors. I'm just going to do a small strip of this. It would be over the entire area that you worked. Maybe I'm just going to apply my nice little tape right over that

## Dr. Gregory H. Doerr: FICS Masterclass Functional Taping

same region. That is just treated because the tape is going to continue to neurologically stimulate the same receptors that I just treated during my soft tissue treatment. All right? That is one of our big things. If this, then that. Everything we want to do has a reason. If an evaluation produces pain, no skin pulls make a difference. I do the soft tissue treatment over those structures, and all of a sudden, there's a greater than 50% reduction, neurosensory tape job right over the tissue that you just treated, okay? Concept 2.

Concept 3, this is what I like to call the big bangs. We do our evaluation. "Ouch, ouch, ouch." I go in and I do a skin pull again. I pull lateral to medial, I retest it. We'll do this one. Lateral to medial, retest. "Holy cow. If it was a 10 before, I'm going to drop that down to 2 just by pulling on the skin this way." All right? As soon as I get those, and by the way, your SPRT, especially these neurosensory ones where you're just doing these skin pulls, these are your big bangs. You're going to notice drastic change with these type of fascial pulls.

Now, here's the interesting thing. Fascial pulls are not unique. Every company that I've ever taken a class from all has a fascial full technique. Kinesio tape had three or four different ones for the fascial correction. Rock Tape has tweak taping. SPRT has tab taping, which we'll demonstrate very shortly. All of them have these fascial pulls. The difference is I like to use Tim Brown's SPRT methodology because it uses strapping tape. It does not release easily. If you use kinesiology tape to create these fascial corrections, they release much quicker because the skin is elastic and the tape is elastic. It tends to release a lot faster. You might get 6 to 12 hours out of it. In SPRT taping, you can get three to five days out of it.

They are very powerful, and we're going to go through all that methodology quick. Right now, we want to get our concept set up. Concept 1, don't tape. Concept 2, neurosensory. When we do a soft tissue treatment over the region and it makes it feel better, drops it from a 10 below 5, we do a neurosensory, no fascial pull makes it better. When we do Concept 3, "Ouch, ouch, ouch." I pull the skin in a certain direction, and all of a sudden, I dropped from a 10 to a 2, again below 50%. I'm going to use my fascial full methodology and SPRT tab pull.

Concept 4, now, this goes into our fascial sling style of taping. This is all based on Thomas Myers's work. The interesting thing with fascial sling taping, it's a lot of tape and it's a lot of tissue. If you're going to be doing fascial sling taping, you better know it's going to work. The ideology of taping an entire lateral line of the lower extremity, that's going from your ankle and foot all the way up to your hip. That's just the lower extremity. That's a boatload to tape. It's very expensive to do these things.

In particular, when we're looking at Concept 4, which is fascial sling taping, we're going to have an evaluation, Most likely, it's going to be associated with some kind of a movement assessment or athletic activity that produces a pain or a dysfunction. When we do a fascial pull on any part of that fascial line that may be involved, we are not getting a great reduction in symptoms. Again, a 10 to a 5, those skin pulls that we were talking about. We do a soft tissue treatment over a section or the entire fascial plane, and we get a very positive result. We go from a 10, all of a sudden, it drops below 50%. Again, from a 10 below to 5. If that is the case, that is a reason to do fascial sling taping. However, here's the thing. If you've treated the entire fascial sling, is it the entire fascial sling that was dysfunctional or was it just a section of the fascial sling? As a simple example, we'll go back to this concept. I'm going to come back to the slide in a second.

I want to give you a visualization. Here's one right from the RockTape seminar, where you can see where we have some lateral line taping on that lower extremity. Okay? We also have a whole ton of taping on the upper extremity. That's a lot of tape. How do I know that that person needs all of that tape? What I do is I

## **Dr. Gregory H. Doerr: FICS Masterclass Functional Taping**

start going back to my soft tissue methodology. I will treat a section of that fascial sling, one section at a time. In other words, if I'm doing that lateral line on the lower extremity, I might go from buttock to knee, knee to malleolus, malleolus down to the foot. I'm going to assess. Based on my soft tissue treatments, I will keep redoing my evaluation test that was provocative.

In other words, let's just say they squat and they get pain. I'm going to treat, soft tissue-wise, from hip to knee. "Does it make a difference?" "No, I still have it." I'm going to treat from knee to malleolus. "Does it change?" "No." I treat from malleolus towards the foot, that lateral line deficit. "Does that make a change?" "No." Well, guess what? If I actually have done that entire fascial line and I still don't get a response, why would I take it? However, what if I to hip to knee, no change; knee to malleolus, no change; malleolus to the foot region, and all of a sudden, they get good. All of a sudden, that dysfunction that they showed in their movement assessment no longer exists or it has improved greatly.

Again, if it's pain, it's easy to say if it was 10 before it's 5. But if you can look at somebody and say, "Holy cow. You just went from squatting at 45 degrees. Now, you're actually dropping all the way into the hole. You're breaking parallel." I'm looking at saying, "Impressive. Something we did." Now, here's the question since we broke this up into sections, was it doing the entire lateral line of the lower extremity that created the neurologic response or was it just that foot section, malleolus to the foot? Now, I'm saying to myself, "Okay. Well, I know it worked, so I'm going to tape that lateral line." However, the next visit, I'm doing it in reverse. I'm going to do the soft tissue treatment from foot to malleolus first and see if that's all I needed. In other words, I do foot to malleolus, they do their squat again, and all of a sudden, it looks perfect. Guess what? I'm only doing the lateral line at the malleolus to the foot. However, if I said, "Oh, no. It's still not good.", then I go malleolus to the knee, knee up to the hip, and all of a sudden, it looks good. Guess what? It's an entire lateral line deficit. But it is so much better to find that all you needed to do was treat a small section than the entire section.

Now, your fascial sling taping becomes a section of the fascial sling that needs to be supported or neurologically stimulated. That is what will save us a boatload of time and money when we're doing fascial sling taping. I don't find a lot of fascial sling taping to be my big bangs because, again, a lot of neurology and I get it, it's the way we move. But usually, it's a section of our movement pattern or kinetic chain that is dysfunctional, not the entire section. A lot of times we can save a lot of time, both from a soft tissue perspective, as well as a taping perspective, by limiting or normalizing the area that needs to be normalized and rehabbing the entire lateral line. We've shown that taping.

Again, fascial sling taping is really based largely on Thomas Myers's work, *Anatomy Trains*. In particular, RockTape talked about it. It's really the central nervous system that's dictating movement, not the muscles. You're taping movement patterns, more than literally just a singular muscle. It improves that continuity of how the body moves using the fascial system rather than an individual muscle system in taping processes.

Now, it's not unusual that these Thomas Myer lines seem to be very similar to acupuncture lines, meridians, which seem to be very similar to the lines that fascial manipulation uses the Stecco work. Luigi Stecco, Antonio and Carlo Stecco have developed in soft tissue treatment. It's amazing how these all overlap with each other. I don't think that's a coincidence. I just think they're evolutions through time as we're seeing this stuff. We look more and more at how somebody moves.

The next picture is a perfect example, again, of going through fascial sling taping. Here's this guy, again, right from the RockTape presentations, where they have somebody go into a squat, and that right shoulder



## **Dr. Gregory H. Doerr: FICS Masterclass Functional Taping**

is dipping in. The assumption is that there's an oblique line deficit in the back going from shoulder to hip. We're going to support that and bring it back again, so that now that when they squat, they come straight down rather than dipping in. Here is my question. I've had a problem with this always. I looked at this and I said, "First of all, how do you know it's the whole line?"

We've already talked about that. What am I going to do here? I'm going to treat from shoulder to scapula, scapula to spine, spine to the opposite hip. That's what I'm going to look at when I'm doing this. If I find only one section, let's say I'm treating from shoulder to scap, and all of a sudden, the squat looks beautiful. Well, I'm only taping over the shoulder to the scap. Again, it didn't work, I go from scap to spine. That didn't work, I go from spine to the opposite hip. If all of a sudden, now it kicked in, I'm going to tape the whole line the first time. The second time, we're going to work in reverse, hip to spine, spine to scap, scap to shoulder. This way we find out whether it's just the hip to the spine section that was involved or whether the whole fascial sling has to be taped.

Now, here's something more interesting. We're looking at this saying it's the backline that's involved. It's that posterior oblique line that we have to support. Really? How do we know it's not the anterior line? How do we know it's not going from shoulder to hip in the front? Once again, we want to pretest to know this is going to be effective. If I've done that whole back line and it doesn't do anything, guess what I'm going to do next. I'm going to try the front line, that front oblique line. Now, all of a sudden, if that makes a difference and the squat looks beautiful, I'm taping the front line, not the backline. That being said, we also have to understand. I just said tape the frontline. We have to understand the sensitivity about the tape. The front is always more sensitive than the back and the upper above the waist is always more sensitive than below the waist. You have to have that in consideration when you're applying tape, especially if you're somebody who does pregnancy taping.

That's how we're going to assess specifically, again, our Concept 4, fascial sling taping. First of all, understanding that fascial pull doesn't make a difference. We tug on things and it doesn't change it. But when we do a soft tissue treatment over the course of that fascial line... Now, understanding, we're not doing individual muscles, we're actually working a line deficit. Is it a section or the entire line that is dysfunctional? Is it the one that looks dysfunctional or is it the other end of the seesaw? Is it the lateral line or is it the medial line? Instead of the back oblique line, is it an anterior oblique line? This is why we need to use soft tissue treatments that simulate the same neurology to determine what is actually purposeful when we're applying our tape.

Our last concept is concept five. These are our more mechanical ones. These are postural tapings, instability, and laxity tapings. In particular, we're going to say we're moving into a particular range of motion or position that increases dysfunction. This could be something as simple as, I put my foot into the plantar flexion and inversion, I strain my lateral ankle ligaments and I go "Ouch!". However, if I move it up into the dorsiflexion inversion, passively, the person says, "Yes, I don't feel my ankle hurt so much anymore." Well, guess what? The ankle strapping is going to be good, not only from the standpoint of protecting the ligaments but also preventing pain on the ligaments.

Let's take another example. Let's just say it's somebody who says "I have a lumbar disc herniation. When I bend forward, I get radiating pain down on my leg." If I come out of that flexion just a little bit, let's just say it was 40 degrees, I get radiating pain. I come up in 30 degrees, I don't get any pain in my leg anymore. I'm applying tape on the lower back, so every single time they hit 30 degrees, the tape is going to pull

## **Dr. Gregory H. Doerr: FICS Masterclass Functional Taping**

saying, "If I go any further, I'm increasing intradiscal pressure and I'm going to create radiation." It is a biofeedback mechanism to ensure that they don't get into those bad postures.

Somebody who's at their computer all day long, upper-crossed patterns like this, what we're going to do is tape them back into depression and retraction so that their head gets back, they stop putting pressure on the discs, pressure on the joints, all the soft tissue function associated, which can also lead to things to thoracic outlet syndrome. Here's one time where you probably don't want them to tape into this kind of posture, TOS. They get back and hearing, you hold them there for a few seconds and their hand goes numb, you probably don't want to tape them there because their hand is going to be numb all day long. In that case, you got to do some soft tissue release before you start taping them into a more dramatic posture. Maybe you tape them into a lesser posture so that the numbness is gone but it is better "posturally" for them so that they're learning to get into good posture.

Again, when we apply tape associated with these types of Concept 5 structural applications, we have to understand two things. We can use kinesiology tape or we can use strapping tapes. If we're using kinesiology tape, our tape is going to be stretched over 50%. We're going to be at 50% or more because that's when we change from more of a neurologist focus with taping, kinesiology taping to more of a mechanical focus with kinesiology taping. We could also use our strapping techniques. SPRT technique that we talk about for neurologic impulse, we can also use the same impulse to take pressure off the ligament. In other words, shorten it up, hold it in a biomechanical position that takes the stress off of those ligaments, like an ankle strapping that we'll show later in this presentation. That assists us in holding a proper posture or proper position to take pressure off in the tissues.

Reiterating again, we have Concept 1, which is don't tape. You have no pretest that tells you that taping is going to be effective on that body part. You have Concept 2. Concept 2 is the neurosensory one. We have skin pulls that don't make a change, but when we do a soft tissue treatment, all of a sudden, the person goes from, if it was a 10 before, it drops to 5 or below. Then, we can do our neurosensory tape job. We have Concept 3. We find the skin pull that reduces symptoms from a 10 to a 5 or below, and we're going to do a skin pull using a tab taping, which I will demonstrate shortly, and pull it into that direction. Concept 4 is our fascial sling taping. Again, either we are taping part of a fascial line or an entire fascial line based on our soft tissue responses to a movement assessment, as well as not only testing the line that looks dysfunctional, but the opposite end of that seesaw, that may be what we think is over-dominant, and making sure we treat that one as well to make sure everything gets balanced out, and then taping whichever part of the fascial line that is dysfunctional or the entire fascial line that's dysfunctional once we know that I can improve it using my soft tissue methodology against stimulating those A-beta fibres and normalize the tone of tissue. Lastly, we have Concept 5, which again is our postural tapings, our disc tapings or instabilities, or laxity tapings.

I want to take some time to actually describe Tim Brown's work. Because again, this is, to me, one of the greatest evolutions within taping. Dr Tim Brown is from California, he uses every tape under the sun. Leukotape which, by the way, I'm just going to show this really quick. Leukotape is our classic strapping tape. To me, it's the best strapping tape on the market, but this is our brown rigid strapping tape. It does not stretch, is very sticky, and won't stretch pretty much in any direction. This is rigid strapping.

We have things like Coverall, which is a white cloth tape. Coverall comes in two and four-inch varieties. It has the backing split in the middle. It's a very, very thin tape. It's very sticky, but it's also a very hypoallergenic tape. We put this a lot over if somebody has a wound, maybe we use a gauze pad. We'll put

## Dr. Gregory H. Doerr: FICS Masterclass Functional Taping

this over the gauze pad to hold it to the skin, so it's very hypoallergenic. It also sticks really well. Again, it does not really stretch lengthwise. However, Coverall does have a unique ability that it does stretch widthwise. That's going to become effective when we show our ankle strapping, and we do a couple of techniques with orange Coverall that helped give us a little more mechanical support to our ankle strapping tape job.

Now, Tim utilizes, again, all of those different tapes. Kinesiology tape, we've already shown. His big thing is he created something that he called the AC tab, the Approximation Compression Tab. To me, it's my going joke in every single taping class I ever do. On the seventh day, the clouds spread, the sun came down, and it shined on the AC tab and it was good. The AC tab is one of the most powerful things we have in the taping world. It is so much more powerful than just tugging on the skin using a kinesiology tape, like the tweak taping or the fascial corrections that we've done in Kinesio tape classes. This has a much longer-lasting effect because of the type of tape that's used. It does not have the elasticity. It holds the pull much longer than your kinesiology tapes do, or the elasticity of your skin, which will release. It is basically a neuro-proprioceptive technique. However, it can be exceptionally mechanical as well. It does assist in, as we've talked about, when you stimulate the neurology, it can correct muscular motor patterns.

Now, why is that AC tab so important? Tim used to use these all the time. This is a little different from what Tim demonstrated to me when I first learned it from him. God knows where he's evolved himself at this point. I have not had the pleasure of watching him lecture for a few years now, especially since COVID. In that same aspect, he evolved so fast. I'd never be able to keep up with him. However, that AC tab, he would put it on the skin and pull the tab in different directions to find out which vector created the greatest improvement in somebody's problem. I went a little bit further. I said, "Why am I putting the tape on the skin first? I want to know where I'm putting the tape." I did it with my fingers. I would grab the skin and tug in different directions during a slew of different activities to find out which one made them feel better.

He put it on the tape, he put it on the skin, and just pulled it and said, "Which way feels better for you?" I tend to do it a little bit more mechanical, not mechanical, but using more mechanical positions or muscle tests or things along those lines while doing the skinfold. Very, very effective at actually getting a true vector that's going to give you a big bang. Again, his taping techniques are invaluable at reducing pain and restoring proper function. It was tab straight that vector pull of relief. It gives you much, much, better pain relief and movement patterns during injury. Again, because it is a strapping tape, it tends to be really supportive.

Here's a video on how to make an AC tab, although I got a feeling I'm going to be doing it visually through the webcam anyway. Here is our taping. Now, I'm going to do it along with the video. I'm using that Leukotape, and I'm cutting about, four to six inches. This is about 4 inches. The larger the body part, the bigger your tab is going to be. The smaller the body part, the smaller your tab will be. When we're ripping, what I'm demonstrating there, you want to make sure that you squeeze your fingers together and pull apart. When you twist, it tends to kink on itself, and then it's hard to rip it. When you're making your tab, stick the tape on your finger, have the adhesive facing away from you. You're going to place your hand palm up. Place the non-sticky part of the tape on your fingers, fold it in half, and then you're going to squeeze with your thumb. Then, you got a tab.

As I'm placing it here, you can see I'm putting the tab on the skin. What the biggest problem that most people do with tabs is they tend to want to really tug on it so hard. Not about that. You really want to just make sure that you're giving a light pullover it. The easiest way of creating the greatest amount of skin pull

## **Dr. Gregory H. Doerr: FICS Masterclass Functional Taping**

is you're going to catch the tab, just like I'm showing there. And then, I'm going to put my finger, and I'm going to put it into the skin. I'm going to push down into the skin, and then just gently pull the tab over my finger. You can see just by doing that what kind of a convolution you will develop within the skin. The key there is not overpulling on the tab, but by literally creating that gentle tug that's going to be the neurology that resets that firing pattern of those tissues and restore its proper function.

Now, when you're doing a neurosensory style of application with an AC tab, again, our purpose here would then be to restore proper motor function, improve range of motion, improve the ability to move. It's through that AC tab that we're able to create that vector. It's the fascial pull that stimulates the neurology. While you're still using a strapping tape, the important thing to understand here is if you've applied it correctly, it will not limit the range of motion. Fascial pulls for a neurologic application should not limit the range of motion. If it's a structural application where we're trying to limit a range of motion using SPRT methodologies, they will have a limited range of motion. We'll show examples of that as we go along.

Now, with the structural applications, again, that's used to block an injurious range of motion. You determine the point of pain or dysfunction when it gets created. What you're doing is, then, creating a hard end feel to remind the patient, "Don't go past this. I'm going to hurt myself." I use the disc herniation example earlier. You have pain and radiation, in my slide here, I say at 35 degrees of standing with bending. I bring the patient back to 30 degrees, just to the point where that radiation stops, that's when I apply my tape. Again, it's also used to enhance posture. It assists in the retraining of posture patterns. It's that hard end feels in more severe cases, so a patient knows, "I can't get past it." It blocks them a little bit more. Whereas kinesiology tape, they'll have a soft end feel, they'll be able to bounce through it. It's just a biofeedback mechanism that brings them back.

Now, when we're clinically applying tape, there are a lot of different cuts that we can go through. We have "I" cuts, "Y" cuts, X-cuts, "Fan" cuts. Trust me, this is just the tip of the iceberg. Your creativity is, what, bottlenecks, diamond cuts, and everything under the sun. You're basically going to cut your take based on what you need to do. I'm not going to use a big two-inch strip on a toe. I might cut part of that tape down to one inch. We call it the bottleneck cut, which I'll just quickly demonstrate for you. A bottleneck cut, what we're doing is making a bottle. This is the neck of the bottle, which will fit on a toe, and then the rest of this will fit on the foot. We do this for a thumb as well. When you're doing something like a De Quervain's, you might use a bottleneck.

Your cutting is largely going to be based, at least to some extent, on your creativity, understanding you don't want to get too ridiculous. We'll show some examples of that when we're going through some of the literature. I don't use fan cuts too much anymore. I tend to use more, what I call lantern cuts. When you do a fan cut, there are a lot of tails. There are four of them. When you have that fan cut, it allows for more surface area or clothing or something to rub against it, and therefore pull it off. What I've switched to is doing more lantern cuts because now we have one two-inch base, granted I round the corners, and another one, which gives less little surface area things that I can catch on. It's more adhesive. It's stuck to the skin better. However, I can create my tails in the middle. You can see there are four tails with this one using a lantern cut. I might put that over an elbow or a knee. Again, this just increases some of the surface areas that you're able to hit at one time with still keeping the tape in contact with the skin. Also, it can be used for anti-inflammatory tape jobs.

When you're applying kinesiology tape, the main thing to remember is you're always going to try and move that joint through its range of motion, unless you are doing structural applications, postural corrections.

## **Dr. Gregory H. Doerr: FICS Masterclass Functional Taping**

Again, as I say, you're going to move the joint through its full range of motion and then complete the taping application on the skin for neurosensory and those anti-inflammatory applications. The, X, the Y, the I, and the fan cuts are most commonly used in the taping world. I tend to use I cuts and Y cuts the most. Hands down. Third would be my lantern cuts and bottleneck cuts.

However, we can do diamond holes as well. Just to give you an example of what that looks like, a diamond cut is literally creating a small little hole within the tape that you might want to put a digit through. I only did one here, but let's just say you wanted to put a digit through this little hole right here. I'll use a scissor because that will actually demonstrate it. I can now take a digit right through that hole and apply it to my body. I don't use a lot of diamond cuts because a lot of the time, whether you're putting kinesiology tape on the palm or on the foot, guess what? It tends to come off pretty easily. The bottom of the foot sweats a lot, palms sweat a lot. They don't stick nearly as well. I try and avoid those areas other than for plantar fascia taping for the bottom of the foot. Otherwise, I try and keep things off those highly sweaty areas. Again, there are stickier tapes than others that sometimes do.

When we look at taping width, Leukotape tends to be an inch and a half, although you can find this stuff in two inches. Kinesiology tape is I've seen in everything from one-inch, one and a half inch, two-inch, three-inch, and four-inch, so it's been the gambit of the market. I tend to use two-inch and four-inch. Coverall as well, comes in two-inch and four-inch. Four-inch, I tend to use for very limited things, whether it be kinesiology tape or Coverall, but they are extremely valuable when we do use them.

When we're applying the tape, the biggest thing, and again, somebody like myself who does a lot of instrument-assisted soft tissue work, we've got to make sure that the patient's cleaned off. I remember having an associate once, who used to say, "I only use RockTape, largely because it's the only one that seems to stick." I'm going, "I use RockTape as well, but I don't use it every day on every single patient for every single thing. It's the person that's going to do a triathlon and I'm going to stick RockTape on because I know it's never coming off." He was never cleaning the patient off. He was literally using a dry towel and wiping off the sweat, and the tape would come right off. You obviously need to make sure it's dry. I use rubbing alcohol to clean off my sweat. The skin should be free of oils and dry. If a person is one of those people who literally come in smelling like roses and they had all the rose lotion on their skin, you might want to clean it off first.

Secondly, after you've applied it, you got to rub the tape. When you rub the tape, whenever you feel the heat on your fingers, that's going to tell you right away you've activated the heat. An interesting thing with the backings of the kinesiology tape, one side is wax covered and the other side is not. You take the wax cover side and you can go over the edges of the kinesiology tape and you won't peel it off. If you're trying to create some of that friction, the worst thing in the world is when you go like this, and all of a sudden, you come back and, "Oh, I got one of the tails. It's coming off already."

When you use the backing and you go backward, it won't do that. It holds pretty nicely. From that perspective, using the backing to rub, or when you get to an edge, just rub it in one direction. Once you have felt that heat, the adhesive has been activated and it will stick better to the skin. If you don't rub it, it may come off easier. When you're taping in more moist areas, like we talked about, a palm, back of the foot or bottom of the foot, I should say, sidelines if you're working sporting events, you may want to use more water-resistant style of tapes.



## **Dr. Gregory H. Doerr: FICS Masterclass Functional Taping**

Bluntly I've used a lot of different companies. My day-to-day tapes are very, very different to what I'm describing. I don't use a lot of those heavily sticky tapes in my day-to-day taping for one major reason. I don't need somebody to get irritated. If I'm taking it off to do a soft tissue treatment in 2 days, I don't need to rip off three layers of their skin either. I tend to use tapes that lasts really well for three to five days. I use my really sticky tapes for people who are going into athletic environments, or they're going to be gone on vacation for a long period of time, or they're getting into pools, triathlons, Ironman, things like that. That's when I used my stickier tapes.

My day-to-day tapes. I want them to be able to come off within three to five days without me feeling like I got to rip off half their skin. I also have Tuf-Skin. If I'm working sidelines, I will use Tuf-Skin almost all the time, because just because they came off the sideline doesn't mean they stopped sweating. I don't care what the tape is, if they're sweating profusely, it's not going to stick. We have to look at that in some aspect. In my office, if you literally walked into my treatment rooms, you would probably see four to five different varieties of tape because each one of them has a valuable situation for me.

The critical aspect of taping is most of our taping classes have taught us to tape where the area of pain is. My honest taping methodology, I tend not to necessarily tape the area of pain, especially when I'm using kinesiology tapes or things like that. Unless I'm doing like a strapping technique, where a disc herniation, or an ankle sprain or something along those lines. A lot of times I'm trying to neurologically improve the mechanics or the firing of the group of muscles controlling a joint, so that they actually move better. A lot of the times, if it's a patellar tendon pain, I might not even tape the patellar tendon. I might be taping towards tibial torsion. You got to learn what's the cause of the pain, which is why all these evaluation techniques become so critical. As I said, every single tape job that I teach always has a pretest associated with it.

When we're doing structural applications with kinesiology tape, just remember theory. It's a continuous biofeedback mechanism. It's always telling you, "Oh, I'm in bad posture. I'm in bad posture." It assists in protecting those injured tissues. It allows them to have greater healing time. It also helps block the adaptation of poor astrocytes. When we're doing structural applications, remember that the tissue is not being stretched. For instance, I might put somebody into a biomechanically good position, and then apply my tape rather than stretch the tissue and apply the tape.

Just remember this, the more stretch you put in the tape, the less motion is going to occur. The less stress you put on the tape, the more motion will occur. Myself, as a chiropractor, if I'm going to tape myself for postural correction, I need to do less stretch on the tape because I need to be able to protract my shoulders during the course of my adjustments, my soft tissue treatment, and generally, what I do with the patient over the course of the day. I still want to get some of that mechanical correction, but I want it to be less supportive and more biofeedback. Remember, the more you stretch the tape, the more likelihood that you will get your rotation, especially if you stretch at either end of the tape, that's where you tend to see the most irritation.

The application for neurosensory tape depends with kinesiology tape, actually with all tapes, is to stimulate the Merkel cell. Now, the Merkel cell is one of our, A-beta fibers, one of our sensory organs within the skin and the superficial fascia. The reason that the Merkel cell is the one that we, so to speak, discuss the most with taping is because it's slow adapting. All of our other ones, our Pacinian, our Meissner, our Ruffini, all of those types of nerve endings are fast adapting. They'll actually stop firing very quickly, so that you're not constantly getting a bombardment of information in the central nervous system. However, the Merkel cell continues to bombard the central nervous system with stimulation. It is a slow-adapting organ.

## **Dr. Gregory H. Doerr: FICS Masterclass Functional Taping**

Remember, the Merkel cell is an A-beta fiber, meaning it's a myelinated large-diameter nerve, and it helps disrupt the stimulus of A-delta and C-fibers. Some of that information is also newer and the way we thought the A-beta fiber was working might be different than one that's really working. Newer information comes out every day. We'll talk about that in a slide or two. It also assists in restoring our proper afferent/efferent communication. Again, that's most of what we're trying to do is restore proper afferent/efferent communication. Within taping soft tissue, we're trying to reset nerve pathways.

Here again, here's our example of some of those, A-beta fibers, we have a Merkel cell, our Meissner, our Pacinian, free nerve endings, and Ruffini. All, but the Merkel there are those fast adapting as we taught. It used to be thought that because the A-beta fiber is a larger axon and it's myelinated, that it's faster acting or it travels much faster than the unmyelinated small-diameter nerve endings. There is some research nowadays that does tend to make contrary statements. In other words, they get to the same place pretty quickly. It's about the same. It's no longer like "Oh, the A-beta fiber got there first and it closed down a bridge. Now, the A-delta and your C-fibers are no longer able to create stimulus."

The speed upon which it's happening might not be correct. However, that doesn't deter from the fact of what the A-beta fibers are doing. It still stimulates inhibitory neurons that block A-delta and C-fibers. The A-beta fiber is still firing off. It's still hitting the inhibitory neurons, and that inhibitory neuron is still blocking our A-delta and C-fibers from getting to their endpoint. It's still doing the same thing we theorized it was doing, which is blocking the transmission of A-delta and C-fibers. We just used to assume it was happening because it got there first. That's not necessarily true. It's just still hitting the inhibitory neuron that's helping to block those pain cycles. Theories might change, the effect is still the same.

Now, when you're applying a kinesiology tape, just remember that you're going to put that tissue through a stretch and then apply the tape. Most tape brands are applied at about a 10% stretch on the backing. Some other brands are at 0%. Now, that's going to come into play in a little while when we talk about what's the appropriate type of stretch based on an injury. That's a good question. We'll try and answer that a little bit later. Again, where, when, what might you stretch the tape a little bit more than just tape are off. Let's say, you can't move a tissue like a frozen shoulder. You might apply a little bit more stretch to that tape.

Microcirculatory applications, now this is where the theology of taping has really taken a nosedive. The theory was that these convolutions on the skin create areas of high and low pressure systems, that create almost like rivers to move fluid from point A to point B. The reality is this might not be a hundred percent correct. The truth of the matter is, and we'll get to the science. We'll go through it and I'll be able to fly through it a little bit quicker, is that a lot of this is happening really at the skin level only. The anti-inflammatory application, this decreased pressure, this fluid stasis removal, it only happens at the skin level. At least, that's what we're finding currently within the literature. It will be interesting to see as we're better able to test these things going forward, if maybe we find effects deeper.

The greatest interesting thing that I've seen associated with the skin level thing is the duration for which this actually occurs. I have on my back, an anti-inflammatory tape, meaning the kinesiology tape was on there with a failed methodology. I happened to be taking my dry needling and cupping class. We applied cups over an area. I'd taken the tape off. We applied cuffs over the same area that I had the anti-inflammatory taping on. When the session was over, we took the cuff off and the bruise was underneath the cuff, except for where the tails were. I saw, literally, even though the tape had been taken off, it's still created a hatch work over the area the cuff was applied. To me, it's saying, "Well, how long is that change in fluid removal or that viscosity of that tissue? How long does that change for?" I don't have an answer for that yet, but it

## **Dr. Gregory H. Doerr: FICS Masterclass Functional Taping**

was really fascinating to me to see that still occurs even when the tape has been taken off. I just don't know how long that's going to last yet. We are able to affect these things at the same level. Don't discount that just because you're stimulating the skin level, it's not having a drastic effect somewhere else. We just don't know all that information yet.

Again, we're looking at this, this is the Accordion Effect that they theorized was the important aspect of fluid removal. It is not so important. Our microcirculatory applications, here is one thing. They definitely work. How deep their working is our speculation. It is not necessarily validated by our research at this point. We do know that we want to stretch the tissue and the tape when we apply it. However, if you want to get these skin reactions, these skin effects of reducing bruising and swelling at the superficial levels, tapes got to be on for about twelve hours. You can't just put it on and five minutes later, take it off. Just remember, all of that bruising that happens under the tape that gets removed and that fluid movement that happens under the tape, it's at the skin level. It is no longer theorized that it's actually happening at a deeper area. Understanding the fluid, the lymphatic drainage points, nice to know, but I got to be blunt. I don't know anybody who tapes into the armpit. If you're applying for a tape job for fluid reduction and you're moving it all the way to the armpit, yes, nobody does that.

The reality is as long as the lymph system is intact, all you need is to apply the tape to get that fluid moving. The lymphatic system will know where to put it. All you need to do is remove stagnation. The tape helps you do that at the superficial level. Here's a picture of exactly what will happen to the bruise. Obviously, everything you're seeing that's a little bit more skin color, that's where the tape was, where the bruise still exists, where the tape wasn't. It does work.

We do have limitations with taping. One of the biggest ones, obviously, body hair. You don't have to make somebody bawl with kinesiology tape. However, my joke with my patients is, "Look. I can either buzz you now, or I can wax you later. Which do you want to do?" Because when you take that tape off, you're probably taking some hair with it. Most of my patients were like, "Oh, don't worry. Just put it on." By the second visit, they're going "Please cut me down first". I say, "I'm not doing it. You're doing it. I don't have time to buzz everybody's hair. Either you do it at home, or when you come in here, I'm handing you my buzzer. You're clipping your own hair. I'm going to go treat somebody else. I'll be back in five or ten minutes."

Another big aspect is I tend to teach a lot of my patients how to tape themselves. I think it's pretty easy to do. I don't want to discount that taping isn't a massive art because trust me, man. I see some people who are just really bad tapers. I look at that as an art form. However, it's amazing when I teach some of my people how to tape, that they go and they play their sport and they come up to me because I used to be a doctor for a volleyball league before I actually retired, when I started having children from my volleyball career. They come up to me in the middle of the games and go like, "Doc, I don't get it, man. Every single time you tape me, it lasts my whole matches. Every single time I taped myself, it comes off." I go, "When did you tape yourself?" "Oh, I just did it before I got on the court." I'm going "You need to give some time for that adhesive to adhere." I don't care what the tape is. You start sweating immediately, it's coming off a lot quicker than you want, especially when you start doing ballistic movements. My rule of thumb is you want to take forty-five minutes before an activity. If you're taping during activity, you may need the sprays like we talked about.

Now, the other big one is the willingness of certain people to wear tape. now, TMJ? Yes, good luck. Nobody in the US is going to want to wear TMJ tape. SDM, same thing. Let's just say if somebody who's doing

## **Dr. Gregory H. Doerr: FICS Masterclass Functional Taping**

sales or something like that, they're getting in front of people. They want them to listen to what's coming out of their mouth, not look at what's on their neck. These things. I'll give you another wonderful example, more in the athletics or performance areas. I have taken care of high-end musicians. I have taken care of high-end dancers. The reality is everybody's got an understudy. I don't want to say it otherwise, but black swan kind of really does exist. I don't mean that somebody is really trying to kill somebody, but the reality is everybody's got an understudy. There's always the next person up and nobody wants to show signs of weakness because that's a lot in the water, sharks are circling. There are some people who do not want tape on their bodies because they're afraid of it being visible.

I've had dancers saying, "Hey, I just sprained my ankle. I've got to do an audition in a week." I said "All right. We'll get rid of the swelling. Hopefully, you'll be able to put enough pressure on it so you can do what you need to do. I'll have you taped up, so you won't have to worry about you spraining your ankle again." She goes, "Oh no, no. You can't tape my ankle." I was like, "It's your best chance of getting through this?" She goes, "You don't understand. If I go in there taped, they're going to look at me as damaged goods. They're not going to hire me." I literally said to him, I was like, "Let's get out of the box here for a second. You need the tape job. Can you wear black stockings?" "Yes." "Can you wear legwarmers?" "Yes." "That's what you're doing. I don't care if it's 85 degrees out, you're just going to cover up what's taped, so they can't see it." Simple as that.

Methodology-wise, that's what you have to be worried about. Some people are not willing to have it visible in public. Athletes are used to it. There's always next man up in sports, but sports people are used to being taped and still performing, so you don't really see it too much in an athletic world, that it's a problem. With the amount of tape that people want, a football player wants a lot more tape on their ankle than a soccer player or a runner. Football players were like "Yes, just give me a suit of armor." Soccer players are like, "I want to feel the ball. I want to feel the ball through my boot," which is why their boots are so tight too.

Now, when we look at the indications or the initial difficulties associated with taping, obviously, over-pulling, because that's really an athletic taping world. You over-pull the tape a bit. Needing to treat both the pain and correct what's causing the pain, I got to be honest with you. A lot of people are great at taping pain, but they're not really great at taping the mechanics associated with why it's happening. That comes down to understanding what's the injury diagnosis and how to actually take care of it. Proper and muscle evaluation is critical. You got to be able to look at movement patterns. You need to know the lymphatic system, not necessarily from the standpoint that you're draining it, but you want to know that somebody has got a lymphatic system intact to assist with draining.

The other thing is man, oh, man. I come up with a new tape job every single week. It's only based on those five concepts. Oh, four concepts. The first one says, don't tape. You need to unlearn what you think tape can be used for because if you're going through your proper evaluation, you're going to find like "Holy cow. That worked? Amazing." It's shocking that you will come up with a different methodology of taping the same injury you've been taking forever, just based on those four concepts.

Now, we're going to spend a little time. I'm just going to try and do it as quickly as I can through here because I want to show as many examples of taping as I can. We've got about fifteen minutes left. I want to make sure that we have a good understanding of where our current literature is in taping because sadly, it's not very good. Again, this is with the permission of Phil Page, who allowed me to use a lot of his presentation on this, as to those other companies as well that I've given credit for their slides. Phil Page is one of the brightest guys that I know. Obviously, as you can see, has more degrees than any of us really

## **Dr. Gregory H. Doerr: FICS Masterclass Functional Taping**

want to know. However, he did a miraculous job on coming up with this meta-analysis on taping as did Dr. Mike Schneider as well.

In the process of this, they reviewed thirty-one websites on kinesiology taping. Again, most of it, if you're getting your knowledge from a website on taping, oh, boy, that's salesmanship, that's not knowledge. Most of them are anecdotal. It's almost like on Wikipedia to write the paper. It's not going to be the greatest information in the world. They're usually of poor quality. They're usually with an advertising, misleading kind of statement. They use literature freely to benefit themselves, rather than critically to actually give yourselves a base as to why you're performing things.

I also am not a big fan of saying, "Well, it's not on literature, therefore don't use it." My statement to every single person is this. "Well, there's nothing on the literature that says that works. I say, "Show me in the literature whether there's something that says it doesn't work." You can't use literature as a weapon unless you're willing to accept it on the contrary. Quite frankly, most people that I see use literature as a weapon tend not to use it the other way. In other words, they'll say, "Oh, there's nothing that say it works." "Yes. Where's the literature that says it doesn't work?" They're willing to criticize, but not accept. In those situations, my statement to all of those people is to show me it doesn't work. Then, tell me the literature that shows me it doesn't work if you're going to tell me the literature says it doesn't work. It's a contrary statement. You have to look at it in both ways. You have to be on scrutinize literature as much as you're going to use it as a weapon.

One of the things that, of course, we talked about was convolutions. The kinesiology tape really lift the skin. Well, they've done it in both animal studies, and they've done it as well in human studies. Basically, there is no research at this point that supports lifting the skin is a benefit, or that lifting the skin occurs when tape is applied. In particular, in this one, they use an ultrasound analysis to look at the difference between skin level and patella. It just didn't find to make any kind of statistical change.

Does kinesiology tape increase blood flow? Again, through the studies that were done here, they're showing that only passive ex-- They used rabbits to measure lymphatic flow finding only passive exercise with tape increased lymphatic flow. Tape alone wasn't effective. At the skin level, we are seeing changes in blood flow. However, not at the muscular level. The superficiality of its effect is what it is. It is not a deep effect. We have to consider that if we're trying to use tape associated with blood flow. Taping alone is not effective.

Do the convolutions matter? The interesting thing is when they tested this, they put convolutions down, and want to see does blood flow makes a difference whether there are convolutions or non-convolutions. They did it over a three-day study. They basically found convolutions have no difference whatsoever in changing the blood flow. This is the study that I struggled with because if you look at those pictures a little closer. It may be hard for you to see on a small screen, but if you're looking at this on the computer, you'll notice that this is a tape that's looking at the bruise. With that bruise, they're trying to determine whether or not you actually get rid of the bruising by applying the tape.

Now, if you look at this. There are four strips of kinesiology tape that were laid right next to each other. One does not allow for a proper pressure gradient between skin that is taped and skin that is not taped. You're not creating an effect of, again, using the word weaver, even if it's at the skin level. I challenge the study a bit because of its methodology, not because it's basically discounting everything. I think this is a test that needs to be done, and barely not to mention the thickness of the tape isn't very good either. It's a little too thick to apply. I think the study, methodology-wise, is a little bit poorly done, it could be better



## **Dr. Gregory H. Doerr: FICS Masterclass Functional Taping**

because I see bruising change all the time on the skin. However, do the convolutions matter in reducing that? Based on the results that have been found at this point, the convolutions generate no change in blood flow versus non-convolutions.

Now, one of the other things that we like to look at is, well, patterns, tension, and direction. Does tape application really produce a specific effect? These are pretty colors by the way. Love it. Very visual, great, looks cool, but here are some more of the pretty pictures. I look at some of these and I'm going like it would take me 30 minutes to cut these applications. I got to treat a person in 15. There's no way I'm doing a lot of these tapes jobs. Some of them are just ridiculous. The fine one in the upper corner there... First of all, a TMJ one is nobody in North America that's wanting that. I look at the scapular one, I'm like, "Wow. That's a lot of cutting." I'm really good at cutting the tape to save time, but that to me looks like we're going to have some trouble. Does it matter? If it's really pretty, but it's 100% effective, "Oh, God. Yes, I'm jumping on. Absolutely."

Do the patterns matter? Well, there's not any research to really support the type of pattern as to what's the critical aspect of the result. Hence, if we look at it, these are all tape jobs from research studies done on the shoulder. This is in the literature. Notice how all of them are different. Not a single one of them is exactly the same. Some will look similar, but even from that aspect, they're all applied differently. We have no standardization as to the effect of the kinesiology tape because we didn't take this is the way it was applied. This versus this or this plus this is a variable versus control of just tape or just rehab or just swap tissue to actually see what's the benefit. We're not using good controls with a lot of it. Does it make a difference? We don't really know well.

Does tension make a difference? Now, this is an interesting one. 0%, 10%, 25%, 50%, 80%, 100%. What are we supposed to do? Not a lot of great research at this point to support that one tension is better than another. The only thing we can seem to agree upon is that the greatest amount of studies done at this point to create a neurologic change is somewhere between zero and 25%. But then again, looking at a neurologic outcome, it used to be somewhere between zero and 50%. It's what most people in studies have been applying tape at. To me, that's a big variable, zero to 50%, even at zero to 25%, that's an enormous variable in trying to determine what kind of tension. I tend to be paper off tension, meaning I don't stretch the tape very much if I'm applying a pure neurosensory style of tape jobs, mainly because of skin irritation. The more stretch the more likely you are to irritate. From that perspective, that's how I look at this.

Muscle activation. Do we really get a change in effect associated with muscle activation? Well, there are 19 studies that were done. However, they compared kinesiology taping to a 'sham' application. Wow, do we not understand how taping is applied? If you applied it to the skin, it stimulated the nerve receptor. There is no such real thing as 'sham' taping. If it's applied to the same region, even though instead of this way, you went this way, across and instead of up and down, it's still stimulating neurology. It may not stimulate as much neurology, but it's still stimulating neurology, which then can give you not enough specific change or a change in specificity, the RP rating that actually make it different. No significant difference was associated with the tape jobs. What we're saying, again, is kinesiology tape does not affect muscle activation in healthy subjects. Another problem with a lot of these studies is they're done with all healthy individuals.

Can the direction of application inhibit or facilitate? Once again, this was one I remember taking my kinesiology taping and asking our instructor, and our instructor is going like, "No, it doesn't make a difference." I'm going, "I think it really subjective." Direction at this point has not been shown to have an

## **Dr. Gregory H. Doerr: FICS Masterclass Functional Taping**

effect on muscle activation. That doesn't mean somebody might not respond better going from insertion to origin, or origin to insertion, but it's not based on muscle activation. Can a direction facilitate or inhibit a muscle? Again, no effect on that muscle activation as we just said.

Lymphedema, has taping been effective? Yes. There is some evidence that shows that there is an effect. However, we got mixed results, and no matter what, it's not as effective as doing our old circular bandage wrapping associated with lymphedema. It's got a benefit, but it's nowhere near as beneficial as what we've seen already in the literature.

Again, we have does tape convolutions lift the skin and increase blood flow? Does direction of application influences activation? Do tensions provide specific outcomes? Are specific patterns required for specific injuries? As Phil would say, this one's got myth-busted. All of these at this point, with the current literature, are inconclusive at best. Again, understanding the literature itself is not very good in its methods. Take it with a grain of salt. Don't think that just because the literature isn't supporting what you think it does... The methodology for most of these studies is very poorly designed.

If we take a look at the mega-review of the clinical effectiveness of kinesiology tape, again, this was done by wonderful authors right there. They did 17 reviews studies included in this. What they discovered, more than anything, is that pain probably has the greatest benefit with kinesiology taping, and that is a short-term benefit at around. There are a number of studies that have shown benefits. However, within the rest of those things, strength, range of motion (ROM), EMG, proprioception, swelling, mechanical function, all of these aspects did not get great conclusive evidence in reviewing.

Pain disability has definitely had some kind of an effect. Likely through, pain inhibition. In other words, we're blocking A-delta and C-fiber stimulations through inhibitory interneurons. Placebo effect. Look, I love it. When everybody's like, "Oh, that's just a placebo. Why is everybody on the planet talking, at least a clinician, a knowledgeable clinician talking about the psychosocial things, but then, we just go, "Oh, it's just placebo." Well, if the psychosocial is such a huge aspect of what we're doing, why do we discount the placebo? Look, I am the placebo. If you happen to figure that out in the last hour and 25 minutes, I'm upbeat. I'm energetic, I'm smiling. I love what I do. I'm passionate about it. That is the placebo. People like to be around me. I didn't do anything physically to them to make them better. I'm just happy and energetic.

That's the placebo. Don't discount it. Enjoy it, embrace it. Be the freaking placebo. Love it. That doesn't mean the rest of what you do is useless, it just means you are beneficial to the psychosocial of what we do. That's not a bad thing. Who wants to be vulnerable? The grumpy doctor who's putting their hands on it all the time and, "Oh, I hate being here today." "Oh, man. You feel awful." That's not how you're going to go about doing things. You want to be happy. "Hey, look at that change." "Look at how much more you can move now." "Oh, I know that was tender, but how does it feel now?" "Oh, yes. Well, that's great." Placebo, man. It's a good thing.

Pain outcomes. Again, we look at pain perception, visual analog scale, numerical pain index. There are trivial benefits to short-term pain relief. That's what we're getting out of this. Again, you could see also in that left lower hand corner, you can see all the different areas that they did these studies on. Pain outcomes or everything from TMJ stuff, Oral/ Maxillofacial surgeries to spinal cord injuries, dystonia, and so on and so forth. There are a lot of things that are happening within this one.

Muscle support outcomes. Again, 14 studies, trivial improvements. Joint support outcomes, trivial improvements. Neurological outcomes, proprioception, balance/postural stability, spasticity, things like

## **Dr. Gregory H. Doerr: FICS Masterclass Functional Taping**

that. 11 studies, the bottom line needed a lot more research to make this conclusive. Circulatory outcomes, are unclear, very little evidence, except we know that it has happened at the skin level. That's about it. Functional outcomes, functional mobility, performance, disability. Some evidence of improved function. Not a lot of great because a lot of times, again, we're looking at healthy individuals. It's a challenge from where it is, that we, as clinicians, want to use evidence to assist us in making decisions. Unfortunately, it's not really there for us to use as a weapon of power. However, I also don't think it's there to be a weapon of negativity because the methodology is so poor in these studies.

Does kinesiology tape reduce swelling? It increases the skin's blood flow. That's why we see the changes in bruising. Does the tape reduce swelling? We just talked about that. The research is inconclusive. It does have mixed results. There is a benefit. The only problem is that it's not just as beneficial as the methodologies that had been currently used, like spiral wrap for lymphedema. Just take that into a bit of an account.

Does it reduce swelling? Post ankle acute swelling. It may not have as much benefit on acute swelling as I used to think. Now, I used to use this all the time, but I never used it as a stand-alone. Luckily, I used to use it after I did my assessment of the swelling. Nowadays, I don't do a lot of acute ankle edema reduction. I go right to my ankle strapping to support the ligament so it doesn't re-swell, and I'll use my NormaTec to help push that swelling more back into the lymphatic system rather than using the taping methodology.

Again, does it reduce lymphedema? It's a benefit, just not as good as other methodologies. There is some reduction in lymphedema, but bandaging is better. Looking at kinesiology taping with certain injuries, like the shoulder impingement. Yes, we've shown intermediate relief, less night pain. Is it more effective than a placebo tape job. There we go again. Placebo tape job, sham tape job, no such thing. You don't understand how taping works if you're using taping as your control. All right. There is no sham tape job. It's a really bad methodology. We need to get a better methodology of our research studies in order to improve our outcomes as to why we use tape.

Can kinesiology tape be useful? Hell, yes. It's useful for a lot of things. In the research, we've seen it beneficial for TMJ, whiplash, shoulder impingement, elbow pain, low back pain. I know, I hate those methods. Those are not really diagnosed as this is to me either, I get it. But these are just the way they were described. Anterior knee pain, obviously, patellar tendon thing. ACL reconstructions, knee osteoarthritis. Oh, boy, do I have a great knee osteoarthritis tape job. Total knee replacement, plantar fasciitis. My God. it's brilliant. Spinal cord injuries, well, I don't do a lot of spinal cord injuries, so I can't comment clinically on those myself. Lymphedema, I don't do a lot of lymphedema work myself. I send that out to physios who do that on a daily basis. I'll take care of some of the scar tissues, soft tissues, things along those lines. Radiation fibrosis that might develop, that's more my wheelhouse. I don't do lymphedema. I send that out myself. Again, there's a list of other things, dystonia. All of these methodologies had shown that there is a benefit, it's just important that your studies are great.

Now, let's look at how do we handle the tape. Obviously, number one, you want to measure and cut it. You want to cut it to the sides and shape up what you're trying to accomplish. You're going to remove part of the backing, for taking our little tape job here. We can remove the backing. When I remove the backing, I remember when I took my first kinesiology taping class, they're like pulling back. I'm like, "What the heck. I'll sit here all day long." Break the backing, peel it off, we're going to apply the tape right to the joint, and then I keep the backing on as long as I can. And then, all I do is peel from here. Then, I can get my taping on my thumb that way. Okay?

## **Dr. Gregory H. Doerr: FICS Masterclass Functional Taping**

First of all, remove the backing. There are two anchors, obviously, a starting point where you want no stretch, and an ending where you want no stretch. I intend to be paper off tensions, so I don't have a lot of stretches for the neurosensory style of tape jobs. It lessens the amount of irritations I get. Again, apply. Are you're doing astral taping with more tension or are you doing... Don't forget to rub the tape to increase the adhesive activation and the amount of tension that you're using. To me, it's paper off tension for most things. Unless I'm doing structural tape jobs, then I'll go over 50%. Some taping companies have little hexagons built-in to the width. I always love to say everybody's got a gimmick. These tapes got all these freaking patterns. Everybody's got colors or something cool or whatever. Gimmicks, gimmicks. I don't care. I just want outcomes. All right. For me, the tape is important for matching an athletes' uniform. But past that, all the other gimmicks are like, yes, cool, whatever.

Aftercare is critical. It can be used for up to five days. Some people... Trust me, I'm one of those guys. I keep the tape on my body for like 10 days without problems. Be cautious with tape that stretches over 50%. I always say this, if your symptoms get worse or your skin gets very, very itchy, then you need to take off the tape. Do not rip the tape off like a bandage. You want to peel it off slowly. Now, I'm going to do this right now. That tape that we put on before, I already cut that edge when I was rubbing back intentionally. I can show you. What you want to do when you're doing a tape removal is slowly, I take the skin with one finger and pull it in the opposite direction. With the other, now granted if I have two hands, I have one hand that's pulling in the opposite direction. You're going to slowly pull it back, it pulls off the hair much less, and it's a lot more comfortable for the patient as you're doing it.

However, one thing I always try and caution my patients on, do not to let your spouse take off your tape because, I promise, they're going to wax you. I don't know what it is in the spouses' genome, and it doesn't matter if it's male or female, they love to rip that stuff off like a bandage. It just makes them feel happy by the way they take this. Be cautious when taking off tapes. It should be done slowly. I always say, "Let me take it off. I'm a lot nicer than your partner.

You pull the skin in the opposite direction of the tape removal. Do not take the tape off against the grain. In other words, your hair is going down towards your wrist, don't pull it off this way, that's waxing. Down, you'll save a lot more hair. You can shower and swim with the tape. When you're drying it, dry it with a towel. Just gently on a towel. Don't use a hairdryer. It then becomes a second skin. Remember, it's heat activated. If you use a hot hairdryer on your tape, it's going to stick a whole lot more. You got to be a little more cautious with that. Also, make sure not to pull the tape too hard in any one direction, otherwise lots of problems.

Now, limitations on kinesiology taping research, obviously, I talked about this. Phil has been instrumental in the understanding the literature. Again, I'm a clinician. I am not a researcher, but he and Mike Schneider stood out at my brain forever. Poor quality and design of the studies, they're just extremely poorly done. I don't blame the researchers. They didn't know any better. Nowadays, we know better. All right. We shouldn't be doing conduction of studies on healthy individuals or using sham taping as a control. It's not going to work. Patients, as I said, versus healthy subjects.

Taping application is often based on opinion, not on science. I would love to use patient selection. Like I said, my methodology is using pretest. If we did a study on meniscal tears, we have a confirmed test that does a meniscal tear. Our patient selection is if we correct tibial torsion, does it make them feel better? If it doesn't, why are you taping them, to begin with, that way? I would like to use patient selection in order to create a proper study of intervention x with tape versus intervention x, as long as we've done proper patient

## Dr. Gregory H. Doerr: FICS Masterclass Functional Taping

selection. That's number one. There's obviously lack of mechanistic benchmarks. Again, we created most of our taping based on theory, not on science, at this point. However, I try and base mine on an "if this and that" pretest and the post-test to know that what I did at least affected pain or at least improved range of motion and function.

Kinesiology tape works, but it might have some placebo. Probably, and I agree with this, as much as I have done tape jobs, which by the way, I could put it on and you're going like, "What did you do to me? I'm feeling great." To me, it is still not a stand-alone intervention. It is something that you might use as a band-aid in a quick moment, but it should be part of your methodology of treating not the end-all, be-all through the methodology.

It does not inhibit or facilitate. All we do is stimulate nerve receptors and the body normalizes the tissue. It's the central nervous system that figures out how to do that, not the tape. It does not improve performance or function, at least, to the best of our ability of research at this time. No evidence that it lifts the skin or increases blood flow below the skin. It may reduce swelling, but there are better options out there. Convolutions, patterns, and direction application may not matter. We just don't know because everybody does different patterns and it's like we varied. We don't have research to assure that one way or the other at this point. Some tension might be important, but the problem is, right now, our range is so drastic. We don't know exactly where we need to fall.

The final thoughts as we would say, pain only, placebo effect, specific application probably doesn't matter. Let's take at least the last 20 minutes of what we have going on. I'm going to go through a few tape jobs based on the concepts that we've just talked about. Now, you're going to see the concepts in actual action. For the first, what we're doing is, remember, I skipped Concept 1. Why? Because Concept 1 is don't tape. I don't have a pre and a post. Just remember, your pretest did not show you that you should tape. I didn't get a 50% reduction, I didn't even bother.

**Concept 2**, reiterating, is an evaluation procedure that creates the dysfunction or pain, no fascial pull makes if it feel better. What we'll do is a soft tissue treatment over the involved area or in the above area. It drops by grading in 50%. In that case, we use that basic neurosensory style of the tape job. I'm giving an example here of using an extensor/flexor tendinopathy. We have pain in the region. A manual muscle testing increases the pain, a fascial pull does not relieve it. However, when I do my soft tissue treatment, the manual muscle test reduces pain by at least 50%. Those are basic.

These are pictures. I'm going to show a video as well, so it's going to be better to see. Here, you can see the tape, I started at the wrist and moved up. Why? Because if I go long, I'm going long into the upper arm rather than going long into the hand and fingers. However, if you measured it properly, it usually doesn't go too long either way.

Let's watch this video, and I'll talk you through it. In this situation, we're going to do our tendinopathy. We're just using kinesiology tape. This is Concept 2. We did a muscle test that's painful, but it doesn't improve with the fascial pull. I'm pulling on that skin, it's not making a difference. However, when I do that soft tissue treatment over the area, I get a significant reduction of a thing. What we're measuring is from the elbow down to the wrist. We're going to make that cut. We're going to break the backing off. It's about two-inch box. We're going to start at the wrist, and now, we're going to slowly apply the tape. Watch this. Notice, I haven't taken the backing off the entire tape. What we're doing is stretching that tissue, and then



## Dr. Gregory H. Doerr: FICS Masterclass Functional Taping

just gently paper off tension right off all to the lateral epicondylopathy. There's a perfect example of a simple neurosensory tape job associated with epicondylopathy.

Now, if I can do this for every muscle in the body, or in every compartment in the body... I don't like using muscle. I don't tape muscles. I tape compartments at times, but if I can't find a mechanical or a fascial pull that makes something better, I'll do a compartment. But, oh, my God, to say it's an individual muscle, we're smarter than that. It's not individual muscles. It rarely is an individual muscles. It's not the way the body works, to begin with.

**Concept 3**, my favorite one. Tim Brown, God bless you, man. An evaluation produces a dysfunction. We do a fascial pull that improves the symptoms. We use that SPRT neurosensory tape job in that direction. If I pull the tape this way, I'm taking the skin and pulling it in that direction in order to create my improvement. It's based on the evaluation. Whatever position you pulled in, that's what creates it.

I'm going to give an example of manual force closures. This isn't really a skin pull. It's almost a joint pull, but these are manual force closures. This is similar to the work that was done with Diane Lee, as well as professor Andrei Fleming. They've both have done manual force closures associated with the side joint. I do mine manually. Professor Fleming actually said, "I couldn't do weight-bearing," because he has side joint lacks in places, but it's been working well for the last 15 years. You might say that, but I don't think you're right. Again, I don't it's mechanical I think it's neurologic. I did his methodology which is a non-weight bearing force closure and compared it to mine, and by the way, they're exactly the same. The results were exactly the same. If one comes up positive that way, it comes up positive in my methodology as well. Again, it goes back to how much of this is mechanical and how much of this is neurologic.

Here's your pretest. You have a rotational problems at the SI joint. I just rub it this way, in the chiropractic world, we love to say like a left PI ilium or something like that. It doesn't matter. It's not what's PI and what's AS. It's just a rotational imbalance. Supine to Sit Test, I'm not necessarily going for verbal description/ I'm going to try and see if we show it a little bit on the video, in the evaluation, or an active straight leg raise test. We're going to do Supine manual force closures or standing manual force closures to determine if the SI is the critical component to that person's pain.

Let's go through that evaluation a little bit here. We're going to start with the Supine to Sit Test. Now, with this methodology, Supine to Sit Test, it's basically taking the pelvis, understanding the acetabulum position as well as doing the *[inaudible]* position as well the SI joint itself in the rotation. If something rotates back, you know you're going to have the acetabulum raise superiorly. If something rotates anteriorly, the *[inaudible]* is going to drop down.

This one, however, we're going to start with an active straight leg raise. Now, the SI joint. Again, Professor Fleming was instability. We, as manual therapists, tend not to do the instability, we tend to do it with imbalances in laxities. Let's just say that, in this case, we have pain on one of the active straight leg raises that was just down there. We're going to do a Supine Manuel Force Closure. We're standing at the left posterior ilium, which means to the right anterior. On the left side, I'm grabbing the PSIS. On the right side, I'm grabbing the ASIS. What I'm doing is counter-rotating. They're going to reproduce the active straight leg raise. What we're looking for is either the leg comes up significantly higher, either functionally, or the pain starts higher, or the pain reduces again by at least 50%.

The second part is the Supine to Sit Test. Now, if you're active straight leg raise test doesn't composite, it doesn't mean you shouldn't do the Supine to Sit Test. I find active straight leg raise only in the more severe

## **Dr. Gregory H. Doerr: FICS Masterclass Functional Taping**

cases. A Supine to Sit Test is a screen and your Manual Force Closures weight-bearing are much more effective.

What we're looking is we're looking for a leg length. We're going to say it's a left short leg. What she's going to do is eventually comes to a seated position. And then, what she's going to do, she's going to use her hands to prop herself up to take all muscle activation out of this. I use the go, 1, 2, 3 to come to seated. Now, she's going to prop herself up on her hands, and I'm looking to see did that leg, yet no tension don't pull or tug on the legs. You're just looking to see what happens as you come to that seated position. In her situation, the left leg got longer. What we're thinking is, if the pelvis is posterior on the left side, the acetabulum has raised up, which is going to give the appearance of the short leg. As the opposite side has gone anterior, which is going to drop the acetabulum down and it's going to make it longer.

As she comes to a seated position, remember the normal biomechanics at the SI Joint as you go into flexion is the posterior rotation of the ilium. Since this one is already posterior, there are only a few degrees that occur. It's not going to go more back, however, this anterior side is going to go to its normal biomechanics, giving the appearance that that short leg, which isn't moving, is actually getting longer as this long leg is going... It's shortening because it's going through its normal biomechanics as the acetabulum raises up.

That's basically the whole theology of Supine to Sit Test. However, it's a screen. It is so easy to get screwed up, which is why we got to go to Manual Force Closures weight-bearing plus it to be anatomical for a short leg, it could be a surgery, a fracture, or other things along those lines. I see this all time with replacements, knee; joint replacements, knee, or hip. What the short leg is, it's actually incorrect. When you do Supine to Sit Test, that left leg looks like it is short, when you go to weight-bearing, it's actually an anatomical and it really is anterior. Because if the short, to start with, when you go weight-bearing, it was anterior to drop the leg down to come in contact with the floor. That again, is why it's so important to go to a weight-bearing standing correction.

In this situation, we're going to bring the patient to standing. We're going to have her go through a lumbar range of motions. Most of SI joint problems have a lumbar range of motion that creates pain. In most situations, I see extensions and side flexion or the ones that create the most amount of pain, but it could be any of them. It could be flexion, rotation, or could be anything. What you're going to do is test a range of motion that are painful. Once you know the range of motions that are painful, you tell the patient that's to 10. What you are going to do now is your manual force closures. You're going to hold up... The biggest thing when you do your manual force closures weight-bearing is don't push across. You have to think of it as going off like a pyramid. You're pushing to a point at a period. One on the PSIS, one on the ASIS, and you're going to push up correcting that rotational problem. Again, pushing towards the top of the pyramid.

You can see me setting myself up. As I hold that manual force closures, now she's going reproduce her extension and she's going to reproduce the motions that are painful. I'm going to say, "If it was a 10 before, what is it now?" Okay? In this situation, when the SI joint is the primary problem, you're going to drop from a 10 to a 2 in a blink of an eye. These are massive big bang tape jobs. They take a great amount of pain away from a patient and drastically improve the range of motion.

If we look at some of our other methodologies here, there are some pictures on this. I'm going to try and get through a video now on applying this tape. What we're doing is we're going to do our tape job. Again, this is a left posterior. We're going to measure from sacrum to lateral hip. I'm using kinesiology tape as my

## **Dr. Gregory H. Doerr: FICS Masterclass Functional Taping**

under tape rather than Coverall, largely because this is an area that moves a lot. Sit to stand, side to side, getting in and out of the car, not to mention your clothing is right there.

The kinesiology tape seems a little more elastic that can move with the body a little bit better. We're going to measure again, sacrum to lateral hip. We're going to need two of those cuts. We'll apply one at a time. Break the base, apply at the sacrum to start with. This is going to go right over the SI joint, and we're going along the iliac crests, no tension on the tape, and you're just going to lay it down to the lateral lumbar region.

Now, what we're going to do is make a tab. Now, we're going to make our tab. The tab is going to be placed near the SI joint. Remember, this is neurologic. It's not mechanical. We're not actually pulling the pelvis forward. All you're doing is neurologically stimulating that fascial direction. We apply that tab near the PSIS. Now, we're going to get our second strip of Leukotape. First, we're going to catch the tab. We're going to apply that at the sacral level. We're going to catch the tab. Once, we catch the tab, we're going to go forward. Remember, you're going to push into the skin, pull over your finger and right in the picture there or that video, you can see the convolutions that developed. That's the neurologic stimulation. We're going to do the same thing on the other side, but use a different vector. This one was the PI side, which we're trying to get as we go forward. The other side, we're doing the AS side. We needed this to come backward.

What I like to do is I apply kinesiology tape over the first strip of tape, so it covers up one end of it. Then this again, sacrum going up to the lateral lumbar. We're going to place a tab again right near that sacroiliac joint, except this time we're going to catch the tab and pull towards the sacrum. The second strip to Leukotape starts laterally now. Grabs the tab, and now, we're going to pull right over our finger again, get that convolution in the skin, rip the tape, and now this is our correction for rotational imbalance in the pelvis. I have used this with pregnancy to a ridiculous level. Interesting enough, I see this a lot with deadlifters, especially when they have underhand/overhand grips. The last thing we want to do with this tape job is take a small strip of Coverall and cover right at the edge of that tape. It just protects it, so pants don't catch it as they're going up and down or just in movement.

The next thing that I want to show, also using that same methodology, we're going to show a Squat Test Eval. In particular, the section that we really want to look at, which I may escape for just a second here. On this one, we're going to show the tibial torsion that we're looking for. These are all the different tape jobs that I do on the knees that's why I'm skipping ahead a little bit here.

Here we go with our tibial torsion one. This works great with any kind of torsional mechanical problem at the knee. This could be somebody who's a pronator with running. This could be a meniscal tear. It could be any of those different aspects. Sorry. I froze there a second. All right. What I'm doing here is I'm taking one hand on the tibia, and I'm pulling on the skin into external rotation, and on the superior one-- Oops, sorry. One second here. I'm just going to pause.

Let's go back to this one just for a second. Sorry about that little flub. We're doing an external rotation here. We're doing an internal rotation at the top. Again, you're doing this with your skin. Okay? It doesn't seem to matter what type of meniscal tear it is. It's been ridiculously effective at decreasing the pressure. Because remember, meniscal tears are flexion, rotation, compression injuries. This is just taking the torsion out of it, helping to take stress off that meniscus. That's been one of the more effective ones to me. On the squat test, it's, again, de-rotating on the tibial point. You need external rotation on the femur going into internal rotation. That, to me, has always been a very, very powerful technique.

## Dr. Gregory H. Doerr: FICS Masterclass Functional Taping

Here are the pictures of the way we're going to apply the kinesiology tape, almost like a band pulled around your thigh. We put a tab one medial. As you could see, that tab is actually on the calf. Then we do one at the superior on the thigh. That one's going to move more towards the lateral aspect of the squat. We're going to pull across each of the tabs, pulling the tab into external rotation at the tibia and into internal rotation at the thigh. That's our torsion tape job. This one is a huge big bang, whether it's a meniscal tear or whether it's just purely a mechanical problem, because you got a runner who's a pronator, and the tibia is falling into internal rotation because of the pronation.

This will change a lot of your knee injuries. It's one of the most important ones that I do, and we'll show now the video just on how to tape it. For this tape job, I am going to do non-weight bearing. We're going to put the person from medial to lateral. What I'm going to do with this one is halfway around the thigh, halfway around the calf. We're going to lay down that tape one section at a time. Again, these are going halfway around. Make sure you do not go all the way around the thigh. We don't want to create any kind of constriction that creates a blood vascular problem. From here, we're going to do our tabs. You're going to have one tab that's going to sit on that medial aspect of the calf, and one that's going to be on the lateral aspect of the squat. This first one is the lateral aspect of the squat, and we're going to grab that tab and pull it from lateral to medial. Again, you're going to push your finger into the skin and pull that tab right over your finger.

Now, we're going to do the same thing on the lower part, except instead of going from lateral to medial, now we're going medial to lateral. You place your tab right on that middle below the calf, grab the tab, and now, we're going to go pull that tab into external rotation. A lot of the time, on these tape jobs, I'll actually put Coverall on the edges. Again, not because my tape is ineffective at sticking, but as soon as you put that on, you got a window of opportunity where that tape job can get pulled off so easily. It's one of those things where I'll cover off the edges because when they put their clothes back on, pants or whatever it might be, it can catch the tape and quickly peel it off. Not to mention, it's still on squat aspect so going upstairs, crossing legs, things along those lines, it's just a little extra protection to make sure that the tape job will last longer.

That basically takes here at Concept 2, Concept 3.

**Concept 4**, this goes to our fascial sling taping. This is one of the least common ones that I do. I don't do a ton of fascial sling taping. I don't find it to be as effective for my patients as I'd like it to be. Theoretically, it sounds great. I just don't find it to be quite as beneficial as I would like it to be. There is one or two that I have used quite often. I'm going to show you an upper cross tape job that incorporates postural correction as well as stability and diaphragm altogether.

With an upper crossed taping, what we're looking for is, number one, a flare from the ribs when they're breathing. There are rounded shoulders. They tend to have a forward head carriage. Usually, when they do a wall angel, when they squeeze down, they can't do it. Literally, once they get down, they can't even breathe. They can't breathe into their abdomen, or you'll notice their arms are coming forward, they can't even keep it on the wall, or they overarch in their back or at their head. A lot of those things will happen. You'll see their hyper lordotic in the cervical spine, hyper lordotic in the lumbar spine, hyper lordotic in the thoracic spine. Again, if you're an *[inaudible]* person, you're going to notice that with multi-segmental extension, you're either going to be dysfunctional non-painful or dysfunctional painful.

If we're doing this tape job, it's going to be a combination of doing our postural correction tape job, as well as the diaphragm tape job. This one, it does require a lot of tape which can be problematic. This is not one

## **Dr. Gregory H. Doerr: FICS Masterclass Functional Taping**

that you're going to use on everybody unless you see everything going that way. Not to mention you're probably going to have to do some soft tissue work on the diaphragm, and once you notice they breathe better with that, you'll know this is going to be effective.

Our measurement for this is going to go from one shoulder to the opposite scapula, and then from the scapula around the rib cage to the front. I'll demonstrate that in just a second. Again, our measurements, shoulder, the scapula, opposite side, and now, we're going to come all the way around the front, midline, along the ribs. Now, that you have that one measurement, you're going to fold it in half. In other words, just measure two of them out, and now, you're just going to cut one cut. Now, I'm rounding the corners on this one, and you'll see one of the cool things if you have this all folded in half if you're around the corners there. You round the corners with that one, it's actually going to get to a point where you'll cut the tape into two strips. Forgive me. This is just going to just go through a little bit.

Hold on one second. I'm going to just get us to where we need to be here. Okay. The first thing we're doing is getting them into that good anatomical position. From there, we're going to take the backing off that tape. Don't put any tension on the tape until you clear the shoulder. You're going to come down with about anywhere between the 25 to 75% stretch, depending on how much correction you need to do, to the inferior angle of the scapula, and from there, you stop. You can let the patient relax, you rub the tape just to get its adhesive to activate, and you're going to do the second one. We're going to do the same exact same thing. Put the person in a good anatomical position, apply it to the front of the shoulder, you're going to peel off some of that backing, no stretching until you clear the upper trap, then again, 25 to 75% stretch the interior angle, and now, we're going to get into the diaphragm. I'm rubbing right where the tape over crosses itself, because that's where it actually doesn't stick quite as well.

Now, we're going to turn them around, putting the arms up overhead, which they're going to put a little more stretch on the ribs, as well as the diaphragm. Now, we're going to have to lean back to create more stretch. Now, paper off tension, you're going to follow the lower rib cage all the way around to the front, and we're going to do the same thing on the opposite side. Now, every single time this person is doing a rib flare breathing, that tape is going to stretch, which probably mechanically gives some kind of a restriction. It tells him to go easy. But more importantly, it's a biofeedback mechanism that tells them, "You're breathing from your ribs, not using your abdominal breathing".

This is, again, a pretty effective tape job that I'd use a lot on what would be my distance runners, marathoners, things along those lines, where they tend to get apical on their breathing, especially if they're lower-level functioning, high school kids. A lot, I'll use this with. But it's a really effective tape job when you need to bring in both posture, as well as diaphragmatic control at the same time. I do a very similar one for lower crossed syndromes, where we bring in TL junction, diaphragm, and anterior pelvis. We're trying to bring it back.

The last of our tape jobs or concepts that we want to show examples where our concepts apply. This is moving into a particular range of motion or position that increases the dysfunction. If possible, test the patient holding the good posture and note if there's changes in symptoms. Again, we're looking for a 50% change. If you have somebody, again, with that sprained ankle, they go into [inaudible], they're saying, "Ouch", you bring them back out, and they say "Well, if it's [inaudible], I'm a zero". Great. If I take the stress off the ligaments, you'll feel better. Applying the tape in the structural application is to help prevent them moving into those dysfunctional range of motions or positions. Again, this is going to be kinesiology tape at a 50% stretch or more or we're going to use strapping tape for a more rigid end feel.



## Dr. Gregory H. Doerr: FICS Masterclass Functional Taping

One of the ones I'm going to demonstrate right now, we're going to show a couple. But, this is a standard postural taping. This is my go-to, whether I'm using kinesiology tape or Coverall with Leukotape. Your pretesting is going to be simple. Poor posture with rounded shoulders, cervical disk with or without radiation, progressive layers depending on the needs. In other words, I'll go with harder or longer stretch depending on what that person does. I tend to start with kinesiology tape and I'll only move into my Leukotape and Coverall if necessary. However, the biggest thing with this is I have my dysfunction, but if I bring it back like this, they're going like "Oh, wow. That feels good. I like the way that feels." Even if it's, "Oh, by the way, when I bring my shoulders back, I go forward before my radiation comes on," or "I can actually go back into cervical extension with significant less pain." Those are all good reasons why you should be applying the tape.

Now, in this situation, I've done two strips of Coverall. I'd used Leukotape as my tape. I'm going to show you the video, which will now show this done using kinesiology tape. Again, we're measuring from anterior shoulder to opposite scapula, and this is my go-to. We've done the measure, we're going to do two cuffs like that. Once we've measured out our two tapes cuts, and again, normally I would just take a strip, double it up, and then I cut it all at once, so I don't have to make so many snips. We're going to break a base about two inches. We're going to apply that to the front of the shoulder. We don't want any stretch on this tape until we clear the upper trap, but we also want to put them back into their good anatomical position of depression and retraction of the scapula. Clear the upper trap.

Once you clear the upper trap, I'm putting my hand on that tape and then stretching it from there, down to the interior angle of the scapula. The more stretch you have, the harder the end feel will be. The less stretch, the less end feel there will be. Now, we're going to do the same exact thing on the opposite side. Once again, clear the upper trap, apply the stretch on the tape, down to the inferior angle, and just paper off tension the rest of the way. All right. That's the application of a good postural taping technique.

Now, the last tape job that I'm really going to go through is one of my big bangs associated with the shoulder. I use it for impingements all the time. It attacks so many different aspects of shoulder problems. It really handles about 80% of shoulder problems that I see. Come into my office, the only times it's really ineffective is when there's postural labral tearing or really severe postural mechanical. Neurologically, it's going to tend to relocate that or the *[inaudible]* posterior into the glenoid. If you have postural dysfunction, that's a problem.

For those of you who are familiar with Mulligan mobilization, we're going to use that methodology to determine that we can reduce painful motions or restricted motions in abduction. We can use a relocation test, or we can also check to see if upon passive internal rotation, they get... What happens is as they're doing passive internal rotation, normally, when you get down really low, you should see some translatory problems at the shoulder. When it's at difficulty, you're going to see the person as they get right about from if they're here, when they hit that 90 degree point, you're going to start seeing the shoulder pop up. As they go a little further, it rolls forward. That is normal when the arm is all the way down. It should not be happening around 90 degrees. We're seeing that on a passive internal rotation or if they have a passive apprehension test.

Again, showing the pictures here aren't quite as easy to visualize as if you're seeing it on the videos, so I'm going to jump right into the video on this one. This is also going to show some of the evaluation with this as well. I'm going to demonstrate a little bit of a Mulligan mobilization not utilizing a mobilization belt. I'm going to use my hands. As I said, relocation test, passive internal rotation limitations, or with severe

## **Dr. Gregory H. Doerr: FICS Masterclass Functional Taping**

translation, or seeing an apprehension test come up positive, all of those are significant for this. I'm currently discussing that passive internal rotation. It's that pop up and over. Passive apprehension, where they just drop away from you. What we're doing with this one, the critical aspect of doing a Mulligan mobilization, whether you're using belts or you're using your hands, is making sure you do not push hard. You are looking for pain or limitation when they do the motion without help. I'm going to cuff my hands. One on the front of the shoulder and one on the inferior angle of the scapula. With a belt, you do this gentle pullback, but I tend to do it with my hands. I like to feel what's going on.

When you overcorrect this, in other words, you just want to gently put your hand on the skin. If you push hard, you're going to notice that it actually hurts them. If you're doing this Mulligan mobilization, they go "Oh, my God. That hurts a lot more," if they don't have the [inaudible], you're pushing too hard while you're doing it. With my inside hand there, I'm actually cuffing the inferior angle of the scapula and I'm assisting in the lateral rotation of the scapula as he's moving. As you go through two or three of these, you start feeling the way the joints are moving and it assists you with your hand positions.

This is not a methodology that if you've never done it before, you're going to get results with. It's something you have to experience a lot, so that you get a little bit better at it, especially if you're just using your hands. Now, from there, I'm showing you now where my thumb position is, associated with that lateral motion of the inferior angle of the scapula while we're going through abduction. Now, this tape job is only going to be two strips of tape and be very, very effective. Normally, what you'll see is they seem to lose a lot of the ratcheting as we're bringing the arm up, or their pain goes away, and they'll get all the way up top.

Now, the two strips of tape that we're going to cut, one is going to be associated with superior translation, and one of them is going to be associated with anterior translation. What we're going to do is first measure the superior translation. We're going to measure from the acromion process, just forward to the acromion process, to about an inch or two passing the inferior angle of the scapula. It's going to be on a diagonal line. We're going to make a lowercase Y with this. We're going to do a Y-cut, but a lowercase Y, about four to six inches on the tails. We're going to tear at the base, a two-inch box, and at the base of each of the tails. And then, we're going to take off the base in the middle. That tape at the middle point is going to be applied at the posterior cuff.

Now, that's our start point. It's the middle of the tape, not at each end. Now, we're going to put that patient back into a good anatomical position, and we're going to take one tail at a time and apply that like a teardrop. Make sure you're not compressing the acromion process. You want to go to either side of it to almost make like a tear that goes around it. If they pop the shoulder up a lot, you might want to stretch it a little bit more. If it's very minor, it's a 25% stretch. Now, from there, we're going to basically make sure they're staying in their good anatomical position, and we're going to do a neurosensory straight down. Maybe add a little tug at that inferior angle to keep it secure against the rib cage, and neurosensory down towards the spine. That will help us with the lower trap as well, which is a critical muscle in the lateral rotation of the scapula. It's assisting with scapular [inaudible].

We get some neurosensory around the posterior cuff, some neurosensory on the lower trap, and we, mechanically, you're preventing the superior translation. Now, from there, we're going to do the anterior translation. So we're going to measure from the anterior shoulder to the medial border of the scapula going around the lateral shoulder. We'll get a two-inch base. We're going to apply it to the front of the shoulder covering up the two tails. Now, the stretch here is only from the anterior aspect of the shoulder to the posterior aspect of the shoulder. The stretch is only from glenoid to glenoid. Now, it's paper off tension the

## Dr. Gregory H. Doerr: FICS Masterclass Functional Taping

rest of the way. Now, if you cut this properly, you end just at the spine. If you cut it too long, you're going to go across the spine. Make sure you rub the tape, especially where the tape overlaps to make sure that it sticks. Now, when you do the abduction again with this patient, you'll notice significant reduction in pain and a much better range of motion as they're doing it.

The last one that I do have in this presentation now is going to a lower extremity. This is my ankle sprain taping. This is for inversion sprains. Obviously, number one, they have a history of an inversion sprain. Two, palpatory tenderness of ligaments. Three, swelling, edema, bruising might be there, and positive ligament stress tests. The other aspect of this is when you take them out of inversion that's painful, and you move them passively into dorsiflexion and the eversion, they feel better.

It is basically three strips of tape. Now, yes. There are overlapping amounts on those three strips, but one is to protect the ATFL. Here, we're putting a tab just in front of the ATFL using Coverall. By the way, Coverall is our under-surface here. Kinesiology tape is not effective. It is too elastic. We want something that does not stretch lengthwise. We're going to grab that tab and pull it into dorsiflex and eversion, and then lay it down as it comes behind the Achilles to the medial malleolus. We're going to do this strip. This is what I like to call the dorsiflexion/eversion assist. It's a diagonal tape job that goes from the medial tibial border, down to the lateral malleolus, underneath the foot to the medial malleolus. This one does not have a tab. We start on the medial aspect of the malleolus from down underneath the foot, and then with a very strong mechanical press, we're going to push the foot into dorsiflexion and eversion using our shoulder. We're going to apply a very hard tension on that tape until we get the anterior aspect of the tibia. And then, we're going to just let the Coverall, I mean the Leukotape, go the rest of the way. It's going to give us a very strong dorsiflexion and eversion position.

The last one is the classic stirrup, but we're going to use much better tape than we used to. We're going to use that Coverall again from two-thirds away up medially to two-thirds away laterally. Place a tab underneath the calcaneal fib ligament. Then, we're going to grab our second strip of Leukotape starting medially, come down underneath the foot, grab that tab, and end it, again, pushing the foot into your eversion and dorsiflexion. End it at two-thirds away up laterally. The last strip is doing what I like to call "the boot". It's a four-inch Coverall. I'm sorry, I have three-inch on that slide, it's actually four-inch Coverall. What we're going to do is place it on the bottom of the foot, and then taking the corners one at a time, we're going to stretch it width-wise around the front of the ankle, and it's going to create a pattern like that in the front, which actually assists in that talus. The talus, it helps prevent it from popping forward. It's a little bit that mechanical aspect of what we're doing because you actually stretch the tape to its fullest.

Let's just show this video. It's a long one, so bear with me. I'm going to talk through it a bit. This is our inversion ankle sprain. The interesting thing with this tape job, and I know I'm going to screw myself over one of these days, but I've actually done this tape job for over twenty-three years. With this tape job on, I've never had anybody sprain an ankle in any sport at any time ever. I hate to be in an absolute, but this baby is a big bang. If you can tape it properly, meaning they can't *[inaudible]* or invert their foot after this tape job is on, it is an extremely powerful tape job to prevent ankle sprains as well as to help people perform, or even just walk with an acute ankle sprain.

Obviously, in these situations, we've eliminated the risk of a fracture. We've already done an x-ray. We know that it's not broken. We're not referring this to the orthopedist, but we're handling an inversion ankle sprain. Our first measurement is going to be from the dorsum at the foot of the toes. Using our Coverall, we're going to come behind the Achilles, and we're going to go to the medial malleolus. That's our first

## Dr. Gregory H. Doerr: FICS Masterclass Functional Taping

strip. Our second strip is measuring from two-thirds the way up on the medial aspect of the tibia. We're going to measure down towards the lateral malleolus under the foot and up to the medial malleolus. That's going to be our second cut. For our last strip, it's going from two-thirds the way up medially to two-thirds the way up laterally. Now, we're going to make that cut. Now, that's our three cuts for the mechanical support.

If you notice, there's a little bit of a curly Q at the end of that. I call it the pigtail. If you fold the tape back on itself, you'll eliminate that pigtail and then you don't have to worry about the Coverall cashing itself, and possibly, the two layers adhering too each other and ruining the tape job. And then, just doing that on that other strip as well.

Now, from here, we're going to start with our first strip. This is for the AFTL, the anterior talofibular ligament. We're going to peel off our backing. Starting at the dorsum of the foot, we're going to come towards the lateral malleolus, behind the Achilles, and end it at the medial malleolus. Remember, the ankle has to be in the dorsiflexed/everted position. If we don't start that way, then this tape job will not be as effective. Now, we're going to make that AC tab. Put it just distal to the ATFL in front of the lateral malleolus. Now, with our second strip of Leukotape, we're going to grab the tab. Once you catch the tab, look at how I use my chest and my shoulder. Pull that tab over and end it at the medial malleolus. Do not put any tension on that Leukotape behind the Achilles. We don't want to crush it.

Now, our second strip. If your patient is struggling with the whole dorsiflex position, you can use a belt to try and let them hold it up for them. It does get in your way sometimes, though. The second strip, we're going to start this. This is the toughest one to apply because we need to start in the middle of this tape job, not at one end or the other. We're going to make sure we got a good line of drive first. We're going to measure right about two-thirds the way up on that medial aspect towards the lateral malleolus. Once you get your line of drive there, you know exactly where it's supposed to be. Let go of that superior portion and just tap down at that lateral malleolus. Just tap it down.

Now, you're going to grab both ends with one hand flattening it out, and one and one hand keeping tension on the tape without it wrinkling. Now, we're going to grab both ends at the bottom and under tension, up to the medial malleolus. If you're seeing tons of wrinkles while you're applying this one, it's literally because you're not putting enough tension on that Coverall. There's no tab on this one, so we're going to start at the medial malleolus, underneath the foot, no tension on the tape at all. Now, once I clear the lateral malleolus or the lateral foot, and I should not be on the [inaudible], now, I'm going to use my shoulder to push that up into dorsiflex and eversion. I'm going to use my thumb to apply a heavy tension on this tape all the way until I get into the anterior aspect of the tibia. I want to be above the ankle mortis joint. Now, you just peel off the rest of the tape and lay it down. All right. That's the second strip, which we call the dorsiflexion/eversion.

The last strip we're doing is going to be our stirrup. This is for the CFL. The calcaneal fib ligament. We're going to take off the backing of the longest strip that we have. We're going to hold both ends at one time. We're going to start underneath the foot. Make sure your tape is in line with the malleolus, and you're just going to tap it at the top and then tap it laterally. Now, you can have one hand that will straighten it out, and now, you're just going to smoothen it out there. I can use both hands to do the same thing on the medial side. Now, once you've done that, you're going to get your second tab and it's going to go inferior to the lateral malleolus with the CFL. All right. Now, from here, we have that tab down. We're going to go from the medial aspect again, starting two-thirds away all the way. You have to be all the way up on that Coverall.

## **Dr. Gregory H. Doerr: FICS Masterclass Functional Taping**

No tension on that, no pull on that Leukotape yet. No tape underneath, no pull underneath the foot. Now, you're going to grab the tab. Now, here's our tension. We're going to, again, force that foot into dorsiflex and eversion, pull it up, and lay down the tape.

Now, this is all the mechanical support you need. However, I like adding in that boot that we talked about. It just holds everything together really nicely. We're going to take our four-inch coverall. We're going to go about a third of the way up medially and laterally on the measurement. What we're going to do is take the backing off. Now, just be careful here. You don't want the tape to fold in on itself because it's four-inch. It's really easy to happen. So you see how I put it over my thigh to make sure that it can't fold in on itself? Now, I'm going to grab both ends, just like we did the stirrup. We're going to bring that foot into dorsiflexion, come underneath, fix the tape, but now with both hands, you're going to stretch across the front of the talus, and the front of the ankle mortis joint, and we're going to do the same thing on that side. Watch how I stretch it. Stretch it width-wise, stretch it across, and that just cinches up your whole tape job.

Now, with this on, the patient will struggle to put that foot into plantarflexion and eversion. There is one minor caveat. If this happens to be a distance runner, you don't want to put them into dorsiflexion and eversion because it's going to create a lot of tibial torsion. If it's a distance runner, you only want them to be dorsiflexion. Don't worry about the eversion component of that. The other major thing is, as you saw on this video, it takes a while to do. It takes me about two and a half minutes to do this tape job. All right. That's from cutting to application. That's talking about the guy who kind of came up with it. All right. The first time you do it, it could take you five to eight minutes to do this tape job. I highly recommend you practice a lot before you put it on a patient. Otherwise, you're going to look a little silly. I love torturing my associates as they first start with me in giving them an ankle strapping, like going to treat a patient literally coming back and seeing the sweat beads off their foreheads as they're still working on that tape job.

That's pretty much the last of our presentations. I hope I gave you a lot of information on the taping, a review of our literature, and application, as well as showing how those concepts that I gave you in the beginning, how they actually work in an application. Again, my email was in that first slide. If anybody has any questions or concerns, feel free to contact me. I hope that this actually gave you some information that says, "Taping isn't useless. The problem is the literature isn't there, because the methodology [inaudible] was done, and we're, unfortunately, not educated well enough in how to select patients that will get the greatest benefit of taping." I'm hoping within this presentation, you got an idea of how you can start applying that to yourself. I'm hoping you enjoyed this. Forgive me for the minor screw-up when I had to redo my video. I'm sure that didn't affect your visualization of the program too badly, but again, I apologize for my failed technology there. I hope you enjoyed this, and I look forward to hopefully getting to see some of you at a class some time in the future. Thanks again.

**[End]**