People with eating disorders frequently struggle with other issues, such as addiction or anxiety. Many have a history of trauma, and some suffer from Post-Traumatic Stress Disorder, or PTSD. In striking recent research, trauma expert Bessel A. van der Kolk, MD and his colleagues conducted a randomized controlled trial to test yoga’s impact on women with chronic, treatment-resistant PTSD. (PTSD is a type of anxiety disorder which may develop after a person is exposed to one or more traumatic events, such as child abuse, sexual assault, war, and/or serious injury.)

Sixty-four women were randomly assigned to participate in one of two groups. One group received weekly one-hour trauma-sensitive yoga classes for 10 weeks. The control group received weekly one-hour supportive women’s health education for 10 weeks. At the conclusion, 52 percent of the women in the yoga group no longer met criteria for PTSD. By comparison, only 21 percent of the women in the control group no longer met PTSD criteria.

The study authors found: “Both groups exhibited significant decreases in PTSD symptoms during the first half of treatment, but these improvements were maintained in the yoga group, while the control group relapsed after its initial improvement.” They concluded that “yoga may improve the functioning of traumatized individuals by helping them to tolerate physical and sensory experiences associated with fear and helplessness and to increase emotional awareness and affect tolerance.”

Experienced Registered Yoga Teacher David Emerson created the yoga model used in the study and oversaw its implementation at the Justice Resource Institute’s Trauma Center in Boston. He is also a co-author of the research study (“Yoga as an Adjunctive Treatment for Posttraumatic Stress Disorder: A Randomized Controlled Trial” by Bessel A. van der Kolk, MD; Laura Stone, MA; Jennifer West, PhD; Alison Rhodes, MSW Med; David Emerson, MA; Michael Suvak, PhD; and Joseph Spinazzola, PhD. in Journal of Clinical Psychiatry, vol. 75, issue 6; June, 2014).

David spoke with co-editor Joe Kelly about the research findings, how he brings yoga to people with severe trauma, and potential insights for treating eating disorders.
Joe Kelly: How does trauma-sensitive yoga influence people with treatment resistant PTSD?

David Emerson: We’re trying to fill a void in treatment for complex trauma, or treatment-resistant PTSD. First, for the context of our conversation, let me be clear that in our program, every person who does Trauma-Sensitive Yoga (TSY) with us is also receiving psychotherapy.

In the big picture, one of the shortcomings of psychodynamic psychotherapy or psychoanalysis has been that the body is pretty much ignored. Almost all of the attention goes to the processes of thinking and talking.

In our view, and in the view of many, the body needs to be part of the treatment process. We have to actively and purposefully engage the body. Over the past 10 to 15 years, we’ve had modalities like sensory motor psychotherapy and somatic experiencing that have added a great deal to the process of bringing the body into treatment. Our model is in that line with sensory and somatic modalities, but there are some pretty important distinctions. The most important distinction being that with TSY, there is no attempt to process trauma. Basically, the mechanism we’re most interested in is interoception.

JK: Can you explain interoception? One reason I ask is because interoceptive awareness is one on the main scales on the Eating Disorder Inventory used to evaluate a client’s eating disorder symptoms.

DE: Interoception, along with exteroception and proprioception, is a concept articulated about a century ago by the neurophysiologist and Nobel laureate, Charles Scott Sherrington. Interoception is our capacity to feel and sense our body’s experience. It’s our sense of the physiological condition or environment of the body, e.g., our perception of sensation and muscle dynamics. In the words of functional neuroanatomist A. D. Craig, interoception is our experience of our “sentient self.”

Exteroception is how we perceive the stuff that’s happening beyond our body in the outside world; things we can hear and see. Proprioception is why we don’t walk into walls more often. It’s our sense of the relative position of our body parts and how we perceive the strength of effort we use in moving those parts.
Because of advances in neuroimaging, we now know that particular parts of the brain which are involved in interoception are under-active in traumatized people. The next step is to figure out what methods and/or treatments might help people reactivate these interoceptive pathways. We think that TSY is one of them.

JK: The research paper suggests that information about one’s internal milieu is a prerequisite for accurate identification of triggered emotional responses, such as fear. Why is that information so important?

DE: One idea among some of us is that identifying triggered emotional responses will help our clients tolerate discomfort, regulate their affect, and engage in less harmful behaviors.

For me, the more important things about TSY revolve around interoception and choice-making. I can understand that affect tolerance happens in TSY because people say things like, “Wow, doing TSY, I notice a level of discomfort in my body that I haven’t felt before. But I also notice that I can take a few breaths or I can stop doing this form altogether and the discomfort goes away.”

This is speculation, but I believe that building the capacity to tolerate affect is more about the present moment experience of relating to your body than it is about thinking about the past and planning for the future. When someone has a flashback and then feels a rapid heartbeat and sweaty palms, their body experience is in the moment. We can learn to experience the moment and let it inform us about our immediate choices. Learning how to be aware of and present with your feelings in the moment actually helps you transform them. Living is always, in part, a present moment endeavor.

Unlike dialectical behavior therapy (DBT) or most mindfulness practices, we’re not giving people skills to take home and practice. We don’t do any homework or encourage any kind of future thinking. We’re trying to help people have a true present moment experience with their body.

If we’re right, and what is happening in TSY is mostly about interoception, then people are essentially rewiring their brain to experience the present moment (what’s happening in the body right now), and then interact with it in some way (breathe or change the form) that can serve to increase affect management.
JK: How does this relate to interoception and accurate identification of the triggered emotional responses?

DE: One formulation of interoception suggests that it starts as “afferent information”—a body sensation transmitted by afferent nerves to the brain. The transmission is followed by our intrinsic attraction or aversion to the resulting emotion—known as emotional valance. Next, we have a behavior in relation to it (i.e. moving toward or away from a stimuli).

In trauma-sensitive yoga, we focus on staying with the visceral afferent information, the body feeling. It’s about one’s capacity to sense one’s body and interact with it just as it is.

As a non-clinician, frankly, I’m not interested in emotions. In the context of treating trauma, that may sound strange. However, after years of doing TSY with people with trauma, I believe it’s primarily about the body experience.

I know how and why clinicians are interested in emotions. But, that’s not what we do in TSY. Of course, as I said earlier, some therapy modalities do actively and purposefully engage the body—for example, sensory motor psychotherapy and somatic experiencing. However, both tend to interpret body experiences through an emotional lens. It is ultimately about the emotional response to your body and how you manage that response.

For TSY, it’s not. The only thing we do is practice feeling our body. By the way, we’re also really honest with clients about the fact that we don’t always feel things—and that feeling something is not required. Choices about what to do with one’s body can be made without any interoceptive experience. The client may say: “I'm just going to lift my arms to my shoulders instead of over my head, even though I don't know exactly why”. That's still a valid choice and a good place to start.

Ultimately, however, we’re hoping for people to connect their body experiences (interoception) with choices they’re making about what they do with their body. The “I feel this, therefore, I’m going to do this” pattern becomes the feedback loop between body sensation and choices.

The feedback loop breaks down in trauma—where the pattern may be something like, “I can’t feel anything, so I just do all these dangerous things.”
For example, almost every youth I’ve worked with has scars on their arms, from cutting or burning themselves regularly and ritualistically. Somewhere along the line, there’s a disconnection between their internal landscape and their behavior; between what they can feel and what they do. In that state, they’re just exploring around, trying to figure out what to feel and what to do.

And, if that’s the case, if we’re just groping around trying to feel something and trying to manage this body that is so foreign and unknowable, then we’re going to get into some seriously dangerous situations—understandably. I’m curious about whether the same thing happens in the eating disorder world.

JK: Well, eating disorder behaviors can certainly be seen as a form of self-harm. Are you saying that it’s enough to have a working feedback loop—learning the body experience and then making an intentional choice?

DE: It’s enough, but, again, I don’t think it stands alone for everyone. In our study, we looked at people who, for three years or more, had been in talk therapy for PTSD. Nevertheless, they still qualified for the diagnosis of PTSD. This persistent diagnosis despite years of therapy is known as “treatment-resistant PTSD”, which can also be characterized as complex trauma. We added 10-weeks of TSY, where these individuals worked to reconnect elements of the interoception feedback loop.

At the end of the study, more than half of the TSY group didn’t have PTSD symptoms anymore at a given assessment point. What we can say is that adding trauma-sensitive yoga to “treatment as usual” had this measurable impact.

That doesn’t mean they’re cured; PTSD doesn’t work that way. Also, I bet you that some people did start talking more about trauma with their therapists, while others didn’t. I hope that someday an intern or grad student can interview the therapists and ask about how the client’s relationship to therapy changed or not while they were doing TSY.

JK: When discussing TSY, you’ve emphasized the importance of the relationships in the healing process. Can you talk about that?
DE: Relationships involve, among other things, power dynamics. As *Trauma and Recovery* author Judith Herman says, trauma itself is largely about power dynamics within relationships. Her suggestion, and one that we take very seriously with TSY, is that trauma *treatment* is also about working out power dynamics within relationships. Herman call’s this *empowerment*. For us, empowerment is about who is in control of this body. We focus on turning over control to the people we’re working with. We do this by giving our students choices, real choices, about what they want to do with their body in a given yoga form.

Yoga forms are wonderful opportunities to experiment with empowerment because they offer so many options; so many opportunities to make choices about what to do. You can put your arm like this, or like that, or over there. Somebody who is new to yoga, and really symptomatic, can do just a couple of choices. When people get a bit more interested in their body and have more curiosity and interoceptive ability, then we can offer more complex options for them to choose from.

This is in contrast to most yoga classes, by the way, which are not very choice-based. They tend to be command oriented. That’s a pitfall that we have to be cautious about—it’s tempting to just tell people what to do, for expediency or our own need to control outcomes. But that command orientation totally undermines the practice of empowerment.

So, in trauma-sensitive yoga, it’s imperative to give the power of choice to the people we work with. We’ve learned this over the years as we’ve refined TSY. In the past, clients wouldn’t come if we didn’t give them consistent choices. Or else, they’d come and then dissociate and double down on their trauma symptoms.

It was quite painful to notice that by telling people what to do with their body—even in the slightest way—we were inadvertently reinforcing the trauma paradigm. Luckily, our clients gave us feedback on their experience, which helped us to learn our choice-based approach and to stick with it.

**JJK:** The reaction you describe makes sense, and I can also understand a teacher’s desire to, in effect, say: “Do this because I know it will help.”

**DE:** I’m sure it’s the same with eating disorders—probably the worst thing you can do is to tell people: “Just stop doing this to your body. You’re hurting yourself, so don’t do it anymore.” It’s obviously insane for anyone trying to treat these complex issues to say things like that! But
nonetheless, it's tempting, because, whether we’re a friend or a treatment professional, we want to help.

It turns out though that telling a person with complicated PTSD what to do is itself traumatic. The way it is experienced by clients is: “You are controlling my body and, just as I suspected, I have no control over this thing; this body is a foreign entity. It doesn’t belong to me. Why bother.”

Our model is about turning over control in a purposeful and a safe way. We work together with the person to find what is the right amount of choice for him or her; what is tolerable. This client-teacher collaboration is another important aspect of relationships.

**JK:** Does the yoga experience need to be integrated with other parts of treatment like individual therapy?

**DE:** As I mentioned earlier, everyone who does TSY with us is also in traditional, talk therapy. We have found that many people, not all but many, need to be able to talk about their TSY experiences with a skilled professional who understands trauma. So we do work as part of a team.

**JK:** Do you mean to say that some people don’t necessarily need to process TSY with their therapist?

**DE:** What typically happens is that people come into the yoga session, and when we do some form, there’s a trauma trigger. The person’s implicit memory is triggered.

At that point, as a TSY facilitator, my job is to keep the experience oriented to the body in the present moment. In other words, we stick with the physical experience in the form, “notice what you feel in these muscles,” and we work with that through choice: We say things like: “would you like to try and change the form a little bit and how does that feel now?”, or “would you like to come out of this form entirely and try something else?”

We want to give people the chance to interact with their actual body experience as it is, and to possibly make some changes to what they are experiencing in their body, based on what they do with their body. That’s the empowerment issue we discussed earlier. Later, if they find it necessary, they can talk with their therapist about any trauma-related content that may have
surfaced during the yoga forms. Talking about that while doing the forms would take away from our goal: getting the person out of his or her mind and into his or her body.

That’s really where we’re coming from in terms of our understanding of trauma. It’s a body thing. It’s a present moment body thing. And, so we teach our clients how to meet the distressing experience or any body experience not by thinking about trauma but by interacting with what is happening in their body. For some people that’s enough and that’s fascinating to me.

JK: So, why is “that’s enough” so fascinating to you?

DE: First of all, because I studied to become a clinical social worker for a little bit, but never really quite “got” talking. During my own experience in therapy, I never really felt like I was getting much from talking. The talk wasn’t comfortable for me. I see people who are good at it, and I don’t mean to say that talk therapy isn't effective; it just wasn’t comfortable for me.

And so the idea that you can do clinically relevant work without talking, without processing, is pretty interesting.

I want to be really clear and say that this approach is not for everybody. There are people who have to process their experiences, and there are also people who don’t. We ought to be cautious about requiring verbalization.

Clinically relevant non-verbal work is a pretty encouraging possibility, especially when we come to complex trauma. Because we know that, in traumatized people, the parts of the brain which let us verbally articulate our experience are compromised or under-active (van der Kolk, 1994, “The Body Keeps the Score”).

Take for example young soldiers and Marines who come back from war. Many are still adolescents—and they are traumatized. They literally can’t talk about their trauma. If talk therapy is the only option, they’re going to be stuck, self-medicating, or worse, until they can figure out words for their trauma, which may or may not ever happen. Or, they can start doing some clinically relevant treatment that doesn’t require words, and does address the PTSD symptoms. I think it’s very encouraging that there’s a possibility for treatment that is not language based.
JK: That's one of the impressive things about the findings, especially because complex trauma seems so intractable.

DE: I agree. And we studied cases of extremely complex trauma. My sense is that people have the same fear of eating disorders that they have of complex trauma. They’re afraid that, because it’s so intractable, there’s nothing we can do.

JK: And understandably so. Many people live with eating disorders for decades and either don’t get help, or periodically get help that does or does not provide some temporary relief, and then they’re back into symptom use again. It involves eating and it’s a body thing, so it’s about body experience, disconnection, disregulation, and power and control, too. Like getting drunk or cutting, a binge or purge can provide temporary numbing. Plus, people with eating disorders often do abuse substances, self-injure, suffer from PTSD, and have other mental illnesses. It's very complicated.

DE: For me, the key response to the complexity is learning from our students. People tell us what they need and what’s happening, and it’s incredible. For instance, it’s common to hear people say: “The reason I’m coming in here is because I can’t let my kids touch me” or “any intimacy with my partner is intolerable.”

JK: Why is that scenario so common?

DE: Because that’s what Complex Trauma is. Bessel van der Kolk does a very good job of articulating this. Trauma is not being able to hold the hand of your lover or snuggle on the couch. It’s not even being able to hold your kids. These are things that humans want the most. We want to be able to be held and to hold. And when we are traumatized these human things become excruciating.

Reckoning with these physical experiences is so important for treating trauma. When a client says: “That’s where my pain is” and the psychotherapist says: “Let’s talk about it,” it can feel like a huge disconnect to the client. People with complex trauma don’t feel safe in their body. Their experience is: “What’s actually happening?” and “I don’t have a body that’s predictable or safe.” We can either talk about that or we can practice interacting with this body that doesn’t feel predictable and safe. What we do with TSY addresses that dilemma in a very concrete way.
JK: It seems clear that trauma sensitive yoga is different than yoga people encounter elsewhere. You have talked about some of those differences, but are there any others?

DE: For starters, we don’t do physical assists. No hands-on touching to assist people. We learned very clearly how destructive it was. Touching by the teacher especially damaged the person’s relationship to themselves, as well as our relationship with them.

In our model, people get to practice being completely in charge of their body. Many times, we heard people in the study say “I don’t know quite why, but now I can let my kids touch me” or “My partner and I started to talk about sex in our couple’s therapy, and that’s really the key issue we’ve never talked about before.”

So, the speculation is that developing a relationship with your own body—a relationship that revolves around interoception and choice—allows people to reach a point where they genuinely believe: “I feel safe enough in my body and, therefore, I can let other people touch me where and when it’s appropriate.”

This kind of response from our clients strengthens my personal sense that interoception and choice are the keys to the effectiveness of TSY. What do I feel? What do I not feel? What can I do? What can I not do? How do I change this? These are the things that make me feel like I can have relationships that aren’t out of control.

JK: Tell us more about the no-touching approach. How did you learn what you learned about physical assists being destructive for people with complex trauma?

DE: The yoga community and teachers in the West are kind of obsessed with touching students and providing physical assists. If you go to a typical yoga class, the teacher will probably touch you or somebody near you and adjust your body in some way. Sometimes teachers ask if they can, other times they don’t ask. That’s a crap shoot. But the idea there is that there’s a lot of touching going on in yoga. The teacher, the person in power, is touching you.

When I say this in the context of trauma, which includes the trauma of physical and sexual abuse, most people cringe.
The people who don’t cringe think that their students need to learn how to be touched in a safe way. They have this idea that, “If they come to yoga class, and I can touch them safely, then they’ll learn to be touched safely, and their trauma will be eased.”

I would suggest that the opposite is happening for people with trauma, because ultimately the most important relationship when dealing with trauma is my relationship to my self, my body. It’s not about me feeling safe with you—the teacher and person in power—touching me. As soon as you place your hands on somebody, it creates a very clear power dynamic: I (the teacher) am in charge of your (the student’s) body.

We learned, through feedback from our clients, that when the teacher touched the student, it wasn’t creating safety. Instead, it was making people feel like they’re doing something wrong, that they couldn’t trust what they were feeling in their own body, that they don’t have any choices, and that they aren’t in charge of their body. A major conflict was created: clients wanted to do a certain thing with their body and the teacher was making them do something else. This took away safety in the relationship. It was disempowering.

I’ve had yoga teachers try to convince me that “I don’t do it that way; I’m very gentle and very caring and a very intuitive person.” And that may all be true, but in this context, when we’re dealing with complex trauma, that’s not how you’re perceived.

People are afraid of you. They are distrustful of you, especially if they like you. They’re horrified of their body and what you think of their body. All that stuff is way more powerful than how nice you think you are.

At first, we didn’t know what we were doing and, like many yoga teachers, we didn’t want people to feel untouchable. We came from a good place, but didn’t yet understand just how touch is experienced dynamically by a person with complex trauma. We were looking at it from the outside, not the inside. For that person with trauma, how gentle or intuitive I think I am is irrelevant. It’s what I do that matters.

JK: What qualities would you most value and be looking for in a yoga teacher when it comes to dealing with complex trauma?

DE: First is some knowledge about what complex trauma is. Someone who is caring enough about the subject to learn what's out there and what the research is. Learn how people
understand the particular affliction you’re dealing with. That knowledge will support yoga teachers quite a bit.

Then, just being open to not having a rigid idea about what yoga is. We have enough inflexibility out there, where some teachers adopt the approach of: “I learned yoga from this particular lineage, and this is how I’m going to do it and teach it. Period.” In light of what you learn about complex trauma, you need the flexibility to adjust some of what you learned about yoga.

I look for a yoga teacher who is willing to listen to people, whether students or colleagues. It needs to be someone who is able to listen and respond appropriately and make changes where appropriate. In short, the same kind of qualities you want in a good therapist.

Ideally, yoga teachers wouldn’t be going it alone on this. I believe TSY should be done as part of a team, where the yoga teacher has regular consultation with clinical people—and vice versa. Ideally, those lines of communication go both ways.

JK: Is this model being replicated anywhere outside of Boston?

DE: A paper was published in 2014 by researcher at the University of Minnesota who studied TSY with women in a domestic violence program. There’s another group we’re consulting with now at Emory University. They’re working with the Atlanta VA Medical Center, doing a feasibility study with women who’ve experienced military sexual trauma. So far, the studies all have female cohorts, which is a limitation. I hope someone can take this work and use it with men, and see what they get. For our part we do trainings for clinicians and yoga teachers and have an annual certification program for yoga teachers in our model.