Treating Trauma Master Series

How to Work with the Limbic System to Reverse the Physiological Imprint of Trauma

the Main Session with
Ruth Buczynski, PhD; Bessel van der Kolk, MD; Pat Ogden, PhD;
Peter Levine, PhD; and Ruth Lanius, MD, PhD

National Institute for the Clinical Application of Behavioral Medicine

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Treating Trauma Master Series: Main Session #5

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Dr. Ogden: I always think of this picture that Onno van der Hart sent me of a World War I soldier, and he had this posture of terror and of fear.

And I thought, all the cognitive work in the world, talk therapy, it's not going to directly help him learn how to relax his shoulders, let his eyes drop back to resolve the effects of the trauma in his body.

The problem is that this kind of posture pre-disposes you to be afraid. When you take on this posture, the world starts looking differently.

Dr. Buczynski: Once you've experienced trauma, you realize that it can happen again. But here's the thing . . .

It's not only the brain that learns this lesson – it's the body and nervous system as well.

Beyond that, the way we hold ourselves and the way we feel inside our body, can color our perspective of the world. When we feel tense, it can heighten our perception of danger.

The inverse is also true – when we're physically relaxed, we're often psychologically at ease as well.

So for many of our clients, their body and nervous system are still at work. What are they doing? They're vigilantly trying to prevent trauma from happening to them again, even if the danger is long past them.

"Her body had developed these habits of expecting more trauma and, therefore, dysregulation."

Dr. Ogden: "I know I'm safe, but my body has just gone amuck," one client said. Cognitively, she knew that her abuser wasn't even alive. She was safe in this world in the here and now, but her body had developed these habits of expecting more trauma and, therefore, dysregulation.

Trauma, first and foremost, does affect the body. And talk therapy might not have that hoped-for trickle-down effect to the subcortical brain where the responses to trauma in the body can be resolved.

Dr. Buczynski: Here's what we need to understand – trauma doesn't just affect the thinking brain, it affects the emotional brain and the survival brain as well.

Hi, I'm Dr. Ruth Buczynski, a licensed psychologist in the state of Connecticut and the President of NICABM.

Today, we're going to look at how we can work more effectively with clients who are stuck - or whose bodies are stuck - in a trauma response.

Beyond that, we'll get into when talk therapy is helpful, and when it could be the very thing that's keeping our clients stuck in trauma.

We'll cover how we can best integrate more cognitive approaches with approaches that focus on the body and limbic system. That's so we're working both from the top down *and* the bottom up.

Now, when we talk about working with the body, you might remember the old idea of having a patient hit a pillow. If anything, that often made things worse.

But that's not what we're going to be getting into here. In fact, we'll tell you the key difference between effectively working with the body, and just hitting a pillow.

We'll also look at the types of movement that can help the body unlearn its adaptation to trauma.

Finally, we'll get into limbic system therapy – what it is and how it can help resolve trauma that's held in both the brain and the body.

So let's get started with the basics. What exactly is happening in the body when someone is traumatized?

What's Happening in the Body During Trauma

Dr. van der Kolk: Our body is basically a signal of "it feels good" or "it doesn't feel good." Life is lived out in the theater of the body.

So we like to be with certain people, because our bodies feel good with them. And with certain other people, we don't like to be with them. And that's because it gives us the creeps. And so we live with the sensation in our bodies that tells us what's good and what's not good.

> "When you are traumatized, you start developing heartache and gut wrench as it gets expressed somewhere in the midline of your body."

When you are traumatized, abused, neglected, you start developing heartache and gut wrench as it gets expressed somewhere in the midline of your body. That's where trauma is experienced.

So for hyperaroused people (as it is typical for traumatized people to be), they're continuously plagued by gut-wrenching and heart-breaking sensations in their bodies.

If you have these sensations as an adult, you try to do something to make it go away. You may take Prozac or you may go to the gym, or you may get drunk, or you may have sex with a stranger – something to manage those bodily systems.

Dr. Buczynski: That was Dr. Bessel van der Kolk. He's a psychiatrist who is the founder and Medical Director of the Trauma Center at Justice Resource Institute.

After trauma, our patients may be plagued by distressing sensations in their bodies. They may use all sorts of different coping strategies to try to numb these sensations.

But that's for adults who've experienced trauma, abuse, or neglect. What about kids?

One Common Coping Mechanism for Childhood Trauma

Dr. van der Kolk: When you're a kid and you're being abused, neglected, hounded by your own caregivers, you don't have the option of going to a psychopharmacologist, your drug dealer, or your local liquor store. So you need to find ways of dealing with these overwhelming sensations in your body.

Anybody who works with traumatized kids, a school teacher for example, they see these kids being unable to sit still. They're constantly hyperaroused or shut down because their bodies gave them the signal, "I'm in danger" and then they don't get help. So if there's a chronic issue for kids, what they learn is to shut down their bodies.

It's interesting that people like Peter Levine and Pat Ogden have been talking about this for a long time. But it's astounding to what degree in psychology people think that trauma is expressed somewhere in the minds or its constructs.

Really, most clinicians are not aware to what degree, if you have a childhood trauma, abandonment, neglect history, you may not feel your pelvis. You may not feel danger signals. You may not feel panic. You may not feel like when somebody does something nasty, like "I better get out of here and protect myself,"

"If you have a childhood trauma, you may not feel your pelvis. You may not feel danger signals. You may not feel panic."

because their bodily registration of goodness and badness tends to get very damaged. And people are not going to get better until they start having bodies that actually notice things.

Dr. Buczynski: So when a person has experienced trauma, they may lose touch with their body's ability to register what's good and what's bad. Their body might not sense danger in the same way that a healthy person's body would.

This matters because it can hurt their ability to protect themselves from future trauma.

How then can we help our clients begin to notice what's going on in their body?

> "Rather than saying, ***Tell me more,*** I say, ***Where do you notice it in your body?*** "

Dr. van der Kolk: When I work with somebody and they start telling their story, I'll say, "Where do you notice that?"

The story is not so interesting. What's interesting is what is being portrayed as happening inside.

Rather than saying, "Tell me more," I say, "So where do you notice it in your body? And what comes up when you pay attention to that?"

Dr. Buczynski: For Bessel, a key part of trauma work is to stay with the client's internal experience. Rather than putting the focus on their story, he asks clients to focus inward on their own body.

So how does he guide clients who aren't used to focusing inward in this way?

How to Help Traumatized Clients Become More Comfortable with Focusing Inward

Dr. van der Kolk: When people are reluctant, I'll say, "Just maybe put your hand over here. And what's it like to think about it when you put your hand over here? And let's see what it's like for you to remember what it's like when your dad would get so drunk and so angry. And what happens in your body? What do you notice inside?"

People oftentimes, they'll start weeping or becoming very angry or upset. And I say, "Let's take a deep breath and notice what happens next and what comes up now." So we really stay with the internal body experience

at all times.

Dr. Buczynski: Our clients might naturally want to numb the painful sensations in their bodies, but instead this approach puts the spotlight on those sensations.

It can be painful and upsetting, but it can also be the first step in helping clients grow aware of what's happening in their bodies. It can begin to help a person retune that internal sense of good and bad that can get lost with trauma.

Dr. Pat Ogden also focuses heavily on the body when she sees a client with a trauma history. It can be especially useful to take this approach when your client can't verbalize the trauma.

Working with the Story the Body Is Telling

(Somatic Narrative)

Dr. Ogden: This is a real advantage for body psychotherapy because we do not need the words. A way to conceptualize that is that whatever happened in the past, your body holds the culmination of all those things.

> "An advantage of body psychotherapy is we do not need the words."

When we learn to read the body and track its language, I call that the somatic narrative, the narrative of the body, which is telling a story. The verbal story is secondary to the somatic narrative, because the body really speaks and can't be deceived by minds. Like the client who said, "I know I'm safe, but my body doesn't know that."

So we look for the story that the body is telling. I've had so many clients who've had preverbal trauma. They don't remember what happened because their hippocampus isn't developed yet. But the body remembers. The body records everything.

> "The body remembers.
> The body records everything."

Dr. Buczynski: Pat just mentioned the idea of the somatic narrative. That's the story that the body tells. Or another way to say it is it's what we can gain from looking at a person's body and its movements. It could mean posture, how a person walks, how they hold themselves.

There's a lot we can learn both from the movements a client makes as well as the movements a client

doesn't make.

But let's stay with this idea of working with the body in the present. You see for Pat, her focus is on how the client is feeling the effects of trauma in their body right now. To do this, you don't necessarily have to know the details of the past.

But hearing the person's story can still be important.

When Hearing a Client's Trauma Story Is Helpful

Dr. Ogden: The story is important in order to develop a rapport with the patient. Patients often need to tell their story to you, and they need to know that you can handle it, that you're not going to freak out along with them, and know that you can hold it for them, and that you can help them with it. So they often need to tell it.

"Hearing the person's story can still be important."

But I don't need to know it because the effects of what happened are going to show up in everything that they say and do.

They could be talking about the drive to work this morning, and you'll see their bodies respond in all kinds of different ways. And that's what's important.

So we tend to use the body as an access route into the past — but not the content of the past, the effects of the past.

Dr. Buczynski: That's an important distinction that Pat just made. The body can be a window into how the past is affecting our client today, even though it doesn't tell us the details of the trauma story.

"The body can be a window into how the past is affecting our client today."

It reminds me a little of the story of the Stradivarius violin. Scientists and music lovers alike have done tests to try to analyze what gives these violins their famously expressive sound quality. A lot of people think the key is the wood that was used to make them.

Experts have made guesses about the history of the trees that the wood came from. They've talked about everything from a drought to a mini Ice Age.

But the history of the wood isn't really the most important thing here. The key thing that matters is the way this history still lives in the present, how it changes the sound quality of the violin.

Similarly with Pat's approach, she is working with how past trauma affects the person's body right now.

It's not so much about uncovering the story, although that does happen. It's more about focusing on the effect that can still be seen and observed in the present.

Now, Pat gave a great example of why you might want to hear a client's trauma story. That's because it can help your client know that you can handle hearing their story, and that you are there for them.

But let's take that idea a step further. When else might telling the story be healing, and when is it counterproductive? Well, there's one key thing that can make a difference.

How to Tell Whether the Telling of a Trauma Story Is Helpful or Harmful

Dr. van der Kolk: It depends on how much secrecy there is. Like after a car accident or after 9/11, telling that story one more time is probably not all that helpful because we all know what happened, and there are no secrets and nobody is blaming anybody for anything.

But if you grew up in a household where your loyalty toward your caregivers prevents you from telling the truth, being able to say what really happened back then and find words for what this little kid was experiencing is incredibly powerful.

To give words to that experience does give you a sense of, "Yes, this happened to me." It gives you a sense of time.

So I think oftentimes my work gets misinterpreted. I don't believe that talking is useful. I think talking is everything and nothing.

Same thing with the relationship. Relationship is terribly important and yet, it's not the whole thing.

So being able to say what happened, "This is what happened to me, and I was that old, and that was what it was like for me," is a fantastic thing.

I very much believe in liberating the facts of language and finding words for secrets and forbidden

experiences.

Dr. Buczynski: So when the trauma was a secret, it can be very healing for a person to speak the truth of what happened.

That's especially true if the trauma was perpetrated by someone the client trusted and had a relationship with.

But if the facts of the trauma are already well known, like in the case of a car accident, then telling and retelling the story can begin to have the opposite effect.

Dr. van der Kolk: At some point, the story often becomes an alibi. For many traumatized people, they tell the same story over and over again.

Instead of feeling things very deeply, they go through a recital of misery, which is not the same thing as psychotherapy. It's going through recital of misery, basically. It's different.

Dr. Buczynski: Instead of helping people tune in to their emotions, retelling the story can almost become a way of tuning out. It doesn't necessarily help them make progress to tell it one more time.

Beyond that, Bessel questions how effective it is to use *only* cognitive-based approaches when we're working with trauma.

Dr. van der Kolk: There is definite room for language, but we don't know this because nobody has ever studied this and nobody can get money to study it — we don't know to what degree being able to put these deep internal experiences into words will change these brain patterns that get set by trauma.

Do we get to see it change in the periaqueductal gray? Do people become less chronically prepared for danger? Are people able to filter out dangerous stimuli better? We don't know at this point. My hunch is, not so much or only to a limited degree.

That's why I think that what I call very simple trauma — namely a car accident or a rape in a healthy adult — is very easy to treat with EMDR. But early or long-term trauma requires multimodal treatments, including real attention to body and oftentimes neurofeedback to rewire those attentional systems.

Dr. Buczynski: Bessel makes an important distinction between single event and complex trauma.

When it's a single traumatic event with a healthy adult, the treatment looks different than if the trauma

happened to someone who's been traumatized before – particularly if a person grew up with poor attachment.

If your client grew up with a long history of trauma, neglect, and unhealthy relationships, you most likely need to think about multiple approaches to address mind, body, and nervous system.

So there's an important place for talk therapy. But it's probably not going to be enough. It's clearly also important to find out the body's story as well.

Now sometimes the two are in agreement. The body reinforces the verbal narrative. But there are also times when one story contradicts the other.

What to Do When a Client's Somatic Narrative and Verbal Narrative Don't Match Up

Dr. Ogden: When people learn to track the body, they often hear a story that might add to the verbal narrative or it might be saying something opposite.

For instance, a client might be talking about their childhood and what a great and wonderful childhood it was. But in the meantime, the body is tightening up and they're saying, "My parents are great. They were wonderful."

You can see their bodies getting tighter and tighter, so you know there's a discrepancy there. It's not verbal narrative, but what's the body telling?

Maybe it's saying that "I was abused," or "I had to be tough," or, "They yelled at me." We don't know what the body is saying, but that's what we want to find out.

Other times, the body corroborates the narrative. A sexual abuse survivor is talking about the abuse, and as she's talking, her body just starts to collapse and lose energy, and you know you can surmise that she probably went into some kind of collapse and shutdown when the abuse was happening.

So we track for the way that the somatic narrative agrees with the story and the way that it's telling a

> "We track for the way that the somatic narrative agrees with the story and the way that it's telling a different story."

different story.

Dr. Buczynski: As we just heard, the body's story can either corroborate or contradict what the person is telling us verbally.

For instance – I had a really great night last night. I met some friends, had a nice dinner, drank some wine, and attended an opera.

See? My body is in complete corroboration with this story.

Now, if I were to say . . . oh . . . I really don't like to go out socially and would rather just lie on the couch in front of the TV all night. . . well my body would obviously contradict that.

So, it's important to always look at the story that the body might be telling.

Here's another way to think about what Pat's saying: it's as if we're reading a storybook. The body is like the illustration, while the details the client tells you are like the words on the page.

So we need to ask ourselves, is the story congruent with the pictures, or is it out of sync with what we're seeing?

Now, if you remember from earlier, one of the critical ways the body tells its story is through posture.

So what can we learn from looking at posture?

How to Read a Client's Trauma Story Through Their Posture

Dr. Levine: Well, the posture is really the story of the person's whole life. The posture, the facial expressions, I consider that as part of the posture and the autonomic activity.

> "Posture is really the story of the person's whole life."

That is telling you where a person's life got stuck, got stopped. This is such valuable information and this is something that I think probably most mental health professionals are not trained in.

They're trained in mostly the verbal discussions and verbal memory, explicit memory, rather than these postural shifts.

Dr. Buczynski: That's Dr. Peter Levine. He's a pioneer in working with the body to resolve trauma.

And it's true – this isn't something many of us learned in grad school. So what kinds of things are we looking for when we think about posture?

Now when Peter talks about posture, it goes beyond the position of the spine. He's looking at the face as well and any signs in the body that can reveal the state of a person's nervous system.

Dr. Levine: So, for example it could be one shoulder higher than another. It could be a twist. More subtlety, there could be a difference in the facial planes. One side of the face can actually be slightly higher than the other or forward and back. You'll see the person holding their breath or hyperventilating. You'll notice color changes in the hands, in the face, and so forth.

This is giving you an autonomic window.

How to Use the "Autonomic Window" to Get a Reading on a Client's Nervous System

Dr. Buczynski: When Peter says "autonomic window," he's talking about how we can get a reading on a client's nervous system. We can track how trauma is impacting the nervous system by looking at several things in particular:

One - the client's posture and movement. Two – their tone of voice and vocal patterns. Three – their breathing patterns. And four – the coloring in their face and hands.

These subtle (or at times not-so-subtle) cues from the body can give us a clearer picture of what's happening on the inside, particularly with the nervous system.

And this matters, because when the nervous system is stuck in a trauma response, it can be very difficult for a person to heal, despite the very best talk therapy.

Now let's get into the case that Dr. Pat Ogden mentioned at the beginning of this session. Pat had a client who would say things like:

Dr. Ogden: "I know I'm safe, but my body has just gone amuck."

Dr. Buczynski: Now this client was prone to dissociation and self-harm. She'd hurt herself or cut herself when she was angry, and she even tried to kill herself.

So how would you work with someone who is in that place? Someone who knows she's safe cognitively, but her body doesn't seem to know it at all?

Working with a Client Who Is Prone to Self-Harm – A Case Study

Dr. Ogden: So the way I conceptualized it with this client was that all the sexual abuse she'd had as a child, she wanted to strike out and fight back. But if she did, she said the abuse would just get worse – her father would torture her if she put up any fight at all.

So when we see the impulse of anger in the body, we want to help that impulse be directed outward. What's important there is that we're not working with getting angry at her father because that didn't work back then, and that's not what's important.

What we're really working with are the procedurally learned habits of response that are developed after trauma. So we're never really working with the memory. We're always working with the effects.

> "We're never really working with the memory. We're always working with the effects."

Dr. Buczynski: So we aim to work with the current pain, tension, or other trouble that trauma is causing in the body.

Remember in session 3 when we talked about procedural memory? That's a way of describing how the trauma is manifesting itself in the present.

So how does your client experience the effect of trauma in their body? Well with Pat's client . . .

Dr. Ogden: She felt the anger in her arm, and she felt that that was what happened when she self-harmed. But as I helped her just stay with her body, she'd feel an impulse to go outward instead of inward.

So for her and for many traumatized patients — if not almost all — the act of triumph has to do with being able to protect yourself in some way so that the trauma doesn't happen to you.

Dr. Buczynski: Pat just mentioned the act of triumph. That's an idea that belonged to Pierre Janet. He was a contemporary of Sigmund Freud.

An act of triumph is an empowering action, like fighting back or running away. It's physically protecting yourself from trauma.

Now let's get back to Pat's story and how that action played out for her client.

Dr. Ogden: So for this client, making that motion was profound for her. Her whole body started to shift because we can imagine that action wanted to happen when she was a little girl being abused, but it was kind of stuck.

And when it happened, she laughed. It brought joy, and it helped her experientially feel that protective action was possible.

Dr. Buczynski: So making a protective motion was helpful for this client. Finding a physical way to express her needs was healing.

Yet, you've probably heard of patients back in the 1960s who beat pillows, and beat them to death, but it didn't seem to help. At the time, we thought that it would help people to release their anger, frustration, and pent up emotion. But it had almost the opposite effect.

So what's missing there? How is Pat's approach different from what we did in the 1960s?

The Key Ingredient That Makes Body-Oriented Approaches So Effective

Dr. Ogden: What's missing there is mindfulness and awareness. In the '60s when I was learning to be a psychotherapist, beating pillows with those batakas, people would lose all awareness.

They would scream and beat these pillows. And to my way of thinking, that doesn't integrate the brain. A person is dissociating into just that part of themselves which is not integrative. They're playing out their subcortical impulses, but it's not integrated with the cortex.

So mindfulness is very important because it does stimulate the frontal lobes and the cortex. So when this person was striking out and hitting out, she was reporting to me what she felt inside. She could access her

thinking brain. It wasn't a dissociative, just-emotional gesture.

Dr. Buczynski: That concept is absolutely critical. When we're working effectively with the body, it's bringing different parts of the brain together. It's not a time when the client cognitively checks out.

When Pat was working with her client, the client was reporting back to her what she was feeling. Both her emotional brain and her thinking brain were online *while* she was making a protective action.

This gets back to the idea of vertical integration that we talked about in the very first session.

That's the key difference between what Pat's doing and the old idea of beating the pillows. In one, the brain is integrated and fully online, while the other can feel more like dissociation.

Now let's go a bit deeper into how movement can be such a critical part of healing.

Why Movement Is Such a Critical Part of Healing in the Treatment of Trauma

Dr. van der Kolk: We are moving creatures. Only psychologists are people who live sitting on their asses. Everybody else in the world moves. We have brains. The function of the brain is to move.

> "We are moving creatures. Only psychologists are people who live sitting on their asses."

Roger Sperry says in his 1981 Nobel Prize speech that the brain is the organ that makes the muscles move and has a few other secondary functions, but the most important function is to go move to get your mate and to get your food, and to get your shelter. So it's all about moving.

And trauma is all about being unable to move and being helpless. So in order to become a capable person, you need to learn to move and to get what you need. And for that, you need to move your body.

Dr. Buczynski: Now you'll remember that a key feature of trauma is that feeling of total paralysis. That could be part of why movement is a key part of reversing the effect of trauma.

Dr. van der Kolk: So when people are traumatized, certain movements have become associated, unconsciously, with danger or with failure. So when you live in the world of sensory integration, you see that most traumatized people get very frozen in their bodies, like, "I shouldn't move because if I move, terrible

things will happen to me."

Up here, your brain is much deeper, much deeper assumption perception. So in order to become a capable person, you need to actually move and learn that you can move your body in order to feel stuff. There's no shortcut. There are no shortcuts for this.

Dr. Buczynski: Certain gestures and movements can get connected with danger or failure. But generally speaking, what types of movement are useful for our clients? What can change the patterns that the body learns during trauma?

Specific Types of Movement That Can Be Most Useful for Clients Who Have Experienced Trauma

Dr. van der Kolk: It depends on the availability in your own community. It depends on who's around. It depends on your personal preferences.

Some people love qigong, like me. Some people like tai chi, not me — very good for other people. Some people love yoga. I do. Some people love Peter Levine's work. I do. Some people love Pat Ogden's work. I do also.

> "It's about really opening up your awareness of your body movements and how you can calm yourself down by moving and how you occupy space."

It's about really opening up your awareness of your body movements and how you can calm yourself down by moving and how you occupy space.

Dr. Buczynski: Bessel just gave us a lot of ideas there, but let's zero in on one for now: yoga.

Now, a big part of yoga is moving with your breath. It helps you to stay fully present in your body, which can be a challenge for trauma survivors.

When you think about it, it has some major similarities with mindfulness meditation. However, when it comes to people with a history of trauma, they tend to yield very different results.

Why Yoga Can Be Especially Healing for Clients with a History of Trauma

Dr. van der Kolk: We got into yoga and eventually the first real study of yoga for PTSD via trying to explore how we can calm down the brainstem and calm down the back of the brain. We did discover that yoga does change heart rate variability and does change, basically, organization of the brainstem.

Meditation was always intriguing to me in that clearly meditation is very good to help you to come into your body and to notice what goes on with you, but I used to send my patients to Jon Kabat-Zinn's program down the street here in Worcester, and they would all flunk out.

> "For many traumatized people, sitting still and noticing things is too overwhelming."

Why did they flunk out? Because for my traumatized people, to sit still and to notice things was too overwhelming.

So if you don't have a container for your feelings, just sitting still can become very frightening because that's where the trauma sits. It sits inside of you, and you spend all your time not trying to feel. And then when you sit still and you don't have any distractions, it starts coming up.

But I think the advantage of yoga is it doesn't force you to think about yourself because you're working too hard to reach that toe or to stay in that position.

So you still activate these interoceptive pathways but it's more organized, and it gives you a safe way of getting into yourself without opening up Pandora's box. Although, Pandora's box gets opened even in the simplest yoga positions sometimes if you're traumatized enough.

Dr. Buczynski: For someone who's experienced trauma, the stillness of meditation, as well as the space it creates for introspection, might feel dangerous or triggering.

Yoga can feel a lot safer for some clients. So how effective is yoga for helping people who've experienced trauma?

Dr. van der Kolk: I'm thinking about somebody who used to mutilate herself all the time. Again, with a lot of these people, like so many traumatized people who try to dissociate from their body, and when they start feeling something, they cut themselves and do something like take drugs to make those feelings go away.

So we have 60 people enrolled in our studies of yoga right now, and I know all of them. I know that by sitting in a chair, feeling their neck, safely feeling their bodies being about to slowly start doing hip opening poses, very scary, they start owning that part of their bodies, and they don't need to run away from it.

Slowly, as time goes on, they start having sensations in their bodies. They know from the yoga practice that sensations come and go. And they are no longer scared of it. They give up the self-mutilation practices because they know it's safe to feel feelings in your body.

So our yoga studies — we have done three published studies now — show that yoga is more effective than any medication that has ever been studied for PTSD. This has strangely not resulted in psychopharm clinics being turned into yoga studios. I don't know why.

Dr. Buczynski: Through yoga, these patients are very slowly reconnecting with their body, with parts that may have seemed unsafe to feel and move after trauma.

So this therapy is undoing the feeling of paralysis that can accompany unresolved trauma. It's helping people experience for themselves how sensations can come and go. It's teaching them that their bodily sensations are tolerable because they're not permanent.

Now a few minutes ago, we talked about how after trauma, certain gestures and movements can get connected with danger or failure. For example, Bessel talked about how yoga poses that open up the hips can be terrifying for some of our clients.

So when we're thinking about movement, there's a lot we can learn both from the movements that a client does make, as well as the ones that feel impossible for them to make. This gets us into what Pat Ogden calls a client's "movement vocabulary."

What to Look for in a Traumatized Client's "Movement Vocabulary"

Dr. Buczynski: This is a person's repertoire of movements and gestures that they use to express themselves. So what kinds of things are we looking for?

Dr. Ogden: When they greet you, do they lean forward and reach out to shake your hand, or do they pull away and look at you askance and maybe reach out very tentatively to shake your hand? Or aggressively to shake your hand?

When we think of movement vocabulary, Pierre Janet would say, "Look at movements that are familiar for the client and movements that are unfamiliar."

So if we look at reaching, reaching out, seeking proximity... If your client had a decent, good-enough attachment relationship, they're probably going to be able to make connection with you, seek proximity, reach to you for help and advice, etc.

But if a client didn't, they might be skeptical. Their reaching out may be truncated or weak or aggressive because those proximity-seeking actions are so much related with attachment.

Dr. Buczynski: Pat gave a few examples just now, like reaching out and seeking proximity, but there are many other actions to look for. For instance, can a client grasp something that they want and hold on to it? Or beyond that, can they draw that object close?

You see, there was one client Pat worked with who struggled with one movement in particular.

Dr. Ogden: There was something he really wanted. And there was an object that represented that something that I held for him, and I said, "Well, see if you could just reach out and take it."

He reached out, and he grabbed it, but he could not pull it toward him. And he said, "Well, they're just going to take it away, so I'm not going to take that risk of being disappointed."

So he couldn't really take what he wanted for himself. And so he lost a lot of pleasure and joy because that had been his experience. “If I take something that really means something to me, it's going to get taken away.”

Dr. Buczynski: So this movement that he couldn’t make clearly had some deeper significance. Now that you have the basic idea, let’s focus in a bit more. What movements are particularly relevant when we’re talking about trauma?

Dr. Ogden: The pushing motion or the defensive motion is abandoned for many trauma survivors because it was overpowered. It wasn't successful. And wisely, we will abandon those actions that aren't successful.

The problem is that our bodies don't catch up when the times have changed. And I feel like that's really why clients come to therapy is because they're still rooted in the past – what Onno van der Hart calls trauma time. They're still living in trauma time as if the danger is right here right now when it's not.

“The pushing motion or the defensive motion is abandoned for many trauma survivors because it was overpowered.”

We see that in the body. We see it in reaching, grasping, pulling motions, defensive motions, and most

importantly, the ability to yield, or what Bonnie Bainbridge Cohen would call yielding – to relax and let down. So many trauma survivors have trouble letting down and just yielding and resting and relaxing.

So when we look at the somatic narrative, we're looking at that vocabulary of movement and actions that are easy and familiar, and actions that are not. And we want to help clients expand their movement vocabulary, because if you can't reach out to somebody, the richness of your life is diminished.

"When we look at the somatic narrative, we're looking at that vocabulary of movement and actions that are easy and familiar, and actions that are not."

If you can't pull toward you what you love or what you want, the richness of your life is diminished. If you can't hold on to something that you want for yourself, that also diminishes the quality of your life.

Dr. Buczynski: When a client's movements are restricted, that can be an indicator of larger restrictions in their life as well.

Let's consider a client who can't reach out. How exactly would you work with someone like that?

Working with a Client's Movement Vocabulary – A Case Study

Dr. Buczynski: Well, there was a client Pat worked with – a young man in a relationship. He loved his girlfriend, and she wanted to get engaged. But he didn't feel comfortable with that, and he didn't know why. After all, he really did want to be with her.

Dr. Ogden: As he talked about her, you could see this conflict in his body. He would talk about her and he would lean forward a little bit. Sometimes his hand would open up, but then he would also tighten up and pull back when he talked about her wanting to get married.

So there was something in that somatic narrative that his body was telling us. So it was very simple to choose a proximity-seeking action of just reaching out. I didn't connect it to his girlfriend or to me. I just said, "What happens when you just reach out?"

And the first thing he said was, "This is really hard." And he had difficulty even reaching. He was a very smart young man, and he said, "There's something going on with this."

And he would try to reach out, and then childhood memories would come about people wanting him to be independent, his parents wanting him to be independent. That was the message that he got. Not really welcoming his need or his desire for connection. They were very busy, working people, and he got the message that he should just do it on his own.

So it did connect with his childhood history, but that was not paramount. What was paramount was what his body was doing with this reaching out. And then he realized, "Oh, I'm doing the same thing with my girlfriend. I'm afraid of marriage because I'm supposed to be independent, and if I'm really joined with her, maybe that will damage my independence."

So we just kept exploring that reaching out and working with all the roadblocks to it — all the beliefs and the way his body wanted to pull back, and just exploring it until he could comfortably reach out. And now he's married and expecting his second child.

Dr. Buczynski: For Pat's client, working with movement unlocked deeper insights into his fears about marriage.

But sometimes, a client doesn't necessarily need to figure something out cognitively to begin healing.

They need experiences that contradict the messages they're getting from their body. The reason goes back to an idea that's come up again and again in these sessions.

Trauma doesn't just impact the thinking brain. It can potentially impact every level of the brain, along with the nervous system and body as well.

How to Target the Limbic System to Reverse Trauma's Impact on the Body

Dr. van der Kolk: There's a metaphor I like to use in that so much of trauma is in the limbic system, or what people used to call the limbic system. And that all these areas of the brain having to do with danger, safety, perception of the world get changed. So basically, most of the therapies that I'm advocating here is limbic system therapy.

It's not about understanding or figuring things out because that's not really where the trauma sits. Trauma

sits in your automatic reactions and your dispositions and how you interpret the world.

So in order to really rewire those automatic perceptions, you need to have deep experiences that, for your survival brain, contradicts how you are now disposed to think.

Dr. Buczynski: Bessel just mentioned the limbic system. Broadly speaking, it's the emotional part of the brain. It contains both the hippocampus and the amygdala. The hippocampus is associated with memory, and the amygdala is involved in detecting threat (see also, Session One).

Now, you might have noticed that he said "what people used to call the limbic system." That's because there's some question about whether or not it's still useful to think of all the parts of the brain that make up the limbic system as a unified system.

However, what's important to take away here is this – trauma doesn't necessarily live in the part of the brain that's concerned with reason and insight. It inhabits the parts that shape our temperament, the way we understand the world, and our automatic reactions.

So when we target the part of the brain that's feeling and reacting automatically – when we create a new experience that contradicts the lesson that part of the brain has learned from trauma – *that* can change the way a person with a trauma history is wired to respond.

So what does it look like to have an experience like that – one that rewires the brain?

Dr. van der Kolk: For example, if you grow up thinking that you're helpless and that anybody can do anything to you unless you yell at them, that becomes your disposition.

But if you take a martial arts course and you get to deeply feel like, "Wow, I can kick anybody in the groin at any time that I feel like it, and I can protect myself." If you have experienced that, of becoming a martial artist, then this feeling of "I'm always helpless," will dramatically change.

You cannot do that abstractly, so you need to have experiences that directly contradict how your body is disposed.

The US Army understands this best, and they learned it from the Dutch Army, who learned it from the Roman Army over 2,000 years. If you want to take a bunch of young recruits, who were usually not the cream of the crop but tend to be fairly good-for-nothing 17- and 18-year-olds, the best way to get them to do things is to do basic training.

In basic training, you march, and you climb, and you crawl through the mud, and every night you go to bed and say, "Oh, my god. I'm amazing. I survived this. I thought I could never do this, but I can."

By the end of 12 weeks, these kids are transformed because they have experiences that run them to the maximum of new challenges. And we should have experiences like that in every mental health center. That is limbic system therapy.

Dr. Buczynski: So to change the way a client's body reacts after trauma, we need physical experiences that directly contradict what the body has learned.

Now, there's a little more to this type of intervention. We're going to need to tease apart our neuroanatomy a bit further. Because the limbic parts of the brain don't function in isolation – they're connected to other parts of the brain as well.

How to Reconnect the Upper and Lower Parts of the Brain After Trauma

Dr. Lanius: I think when we think about intervening with the limbic system, we also need to think about the lower part of the brain, the midbrain, and specifically the periaqueductal gray because the two brain regions really work in tandem.

So, as we know from the work by Panksepp and others, the midbrain is responsible for all major emotional systems.

> "When we think about intervening with the limbic system, we also need to think about the lower part of the brain."

Dr. Buczynski: That's Dr. Ruth Lanius. She's Professor of Psychiatry and the director of the posttraumatic stress disorder research unit at the University of Western Ontario.

Dr. Lanius: One can't be seen in isolation without the other, in my opinion. Some people would probably disagree with that. Also, it's the midbrain that's involved in the defensive responses, and when we talk about limbic system therapies, working with defensive responses, working with very basic emotional responses is very much a part of these therapies. So, I would call them a midbrain limbic system therapy.

Dr. Buczynski: The brain is deeply interconnected. It's hard to talk about any one part in isolation. So really,

when you take a step back, it's about integration.

But what does this mean for our work with patients?

Well, in trauma the upper and lower parts of the brain can get disconnected. So when a client has emotional, defensive responses, the upper part of the brain is no longer in control. It's not regulating that person's responses.

Dr. Lanius: The key question is, "How can we help connect the lower brain structures with the upper brain structures that are involved in logic, in awareness, and helping us plan?"

I think the midbrain limbic system therapies are a great way of really helping the brain be organized from bottom-up. So, the way this would work is if you reorganize the lower parts of the brain, and they start firing differently, this affects all layers of the brain because they're all connected.

> "By working with the very low parts of the brain, we're actually reorganizing the whole brain."

If a person wasn't able to defend themselves, and now they can defend themselves, this reregulates all areas of the brain to the point where they now think, "OK, I'm no longer helpless. I can defend myself." They can experience joy now because they can do that. So, by working with the very low parts of the brain, we're actually reorganizing the whole brain.

Dr. Buczynski: So limbic system therapies are about creating an experience for the client – usually a physical one. That new experience is designed to override the lessons the body and nervous system learned during trauma.

But it's not only about working with the lower and middle parts of the brain, because again, integration is key. It's about reorganizing the brain from the bottom up, and reconnecting the higher and lower parts of the brain.

Now that we have the concept of limbic and midbrain therapy, let's look at a case to see how to apply it with a specific client.

Limbic System Therapy in Clinical Practice – A Case Study

Dr. Buczynski: Ruth had a client who worked in a jewelry store. One day a man walked in and started chatting with her. What she didn't know was that he was later going to rob her, and this crime would leave a profound imprint on her nervous system.

Dr. Lanius: He went to the store three times before the robbery, really talked to the sales representative, shared his marital difficulties, and the difficulties with his children. So, she actually had a relationship with this person.

Then one day he came in and they again had a conversation. All of a sudden, he grabbed a piece of jewelry from her, harmed her, and ran out of the jewelry store.

Dr. Buczynski: In that moment, the woman froze. Now remember, this isn't a cognitive decision – it's something the nervous system decides in the moment.

Because of her freeze response, this woman couldn't protect herself during the robbery. This made her afraid she wouldn't be able to protect herself in the future.

Dr. Lanius: Her biggest fear was that if she were to see him again, which she thought she would, she would not be able to protect herself because of this freezing response. She also had no memory of his face. So, she thought she would be at further risk because she wouldn't recognize him.

Dr. Buczynski: So this woman couldn't remember the robber's face after the robbery, and this was a big part of her fear. To help this client, Ruth took a bottom-up approach and targeted the midbrain and limbic system.

> "When we think about intervening with the limbic system, we also need to think about the lower part of the brain."

Dr. Lanius: Because she froze, she wasn't able to engage in an active defensive response. So, I got her to bring up the image of the robber and she couldn't see the face yet, but she just brought up whatever she could while engaging in an active defensive response and saying, "No!"

Over time, what happened was that she completed the action that she couldn't complete at the time of the trauma, which was defending herself. But as she completed that action, also what happened was that the face filled in for her. So, she now was able to remember his face.

This was fascinating to me because at the same time we were studying these brain connections and it's

actually the midbrain periaqueductal gray that connects directly to the fusiform gyrus that helps us to recognize faces.

Dr. Buczynski: Ruth just mentioned the periaqueductal gray. Now, you'll remember from our first session that this is a very primitive part of the brain. It plays a big role in detecting danger, and it lights up when someone's experiencing trauma.

Beyond that, Ruth just pointed out that the periaqueductal gray is connected to the part of the brain that helps us recognize faces.

Dr. Lanius: So, the two are directly connected and so once she was able to complete that active defensive response and have his face come online, she now no longer had the fear that she could not protect herself if she were to see him again.

As it happened, three weeks later, after we had done this piece of work, she actually saw him in the parking lot. She didn't have an anxiety response, she felt very calm. She felt a real sense of mastery because she had done the work and she was no longer triggered by him, so she felt very pleased about that.

But I think that's a form of treatment where you really work with lower regions of the brain, helping to engage in these defensive responses, completing the action that the person wasn't able to complete at the trauma. That reorganized her entire brain. She now had a feeling of safety, she felt reconnected with her body, her sense of self had changed.

So, you've really organized the brain from a bottom-up approach and really affected all parts of the brain.

Dr. Buczynski: Completing the defensive action rewired this client's brain from the bottom up.

When we can integrate the brain from the bottom up, there are a lot of positive outcomes. It can help them feel more safe, it can help them reconnect with their body, and it can even change their sense of self.

About NICABM . . .

Ruth Buczynski, PhD has been combining her commitment to mind/body medicine with a savvy business model since 1989. As the founder and president of the *National Institute for the Clinical Application of Behavioral Medicine*, she's been a leader in bringing innovative training and professional development programs to thousands of health and mental health care practitioners throughout the world.

Ruth has successfully sponsored distance-learning programs, teleseminars, and annual conferences for over 20 years. Now she's expanded into the 'cloud,' where she's developed intelligent and thoughtfully researched webinars that continue to grow exponentially.

The National Institute for the Clinical Application of Behavioral Medicine is a pioneer and leader in the field of mind-body-spirit medicine. As a provider of continuing education for health and mental health care professionals for over 20 years, NICABM is at the forefront of developing and delivering programs with "take home" ideas, immediately adaptable for practitioners to use with their patients.

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