



## **CalmConnect Seminar**

In today's classrooms, teachers must do much more than simply teach. There are students who are just a step away from becoming dysregulated and those who are dysregulated, those who have very low energy and those of high energy, and students who are anxious, traumatized, or living with a variety of challenges, including ADHD and autism. The challenge for teachers is to help all of their students regulate their nervous system and brain functions in ways that allow them to focus and engage those cognitive processes needed to learn.

This seminar provides educators, specialists and parents with a foundation for understanding the factors that can affect a child's behavior, as well as strategies for self (and co-) regulation, allowing children to navigate their world more effectively, whatever their unique challenges may be.

Chris Bye and Roberta Scherf (creators of CalmConnect) will examine the programs from several different perspectives, addressing their use in multiple settings with a variety of populations, and take an in-depth look at each component as they explain how it works. They will also provide supporting research from various disciplines. This engaging interactive seminar welcomes discussion and participation.

## Seminar Synopsis

Drawing in part from the burgeoning field of relational neuroscience, CalmConnect works on the theory that the human brain is built to operate within a network of caring relationships. When we are isolated or cut off from others our mental, emotional, and physical health suffers.

CalmConnect combines rhythmic music with comforting vocal frequencies and visual patterns, which are synchronized with the expressive features of emotion and the movement of others. This integrated process supports a number of bio-physiological and neurological functions in order to calm the parasympathetic nervous system and build pathways to strengthen social connectivity, resilience, and mental health.

CalmConnect provides the salient aspects of human connection, emotion, and positive social engagement (facial expressions and eye contact, vocal prosody in higher frequencies shared by the female voice, and simple, rhythmically attuned movements – gestures), building a bridge to the social world.

This system is the first program to operationalize and integrate research into the polyvagal theory of trauma, the social pain overlap theory, mirror neurons and emotional contagion, audiovisual synchrony, music, rhythmicity, movement, social connectedness and resilience.

The presenters will introduce the polyvagal theory, and the critical role it plays in our physiological responses to stress, as well as some of the mechanisms for strengthening emotional resilience. In addition, childhood trauma and ACES (Adverse Childhood Experience Score) will be discussed, with a focus on understanding biological embedding, and how to break the cycle of trauma-induced behavior patterns.

Additionally, the role of separation/socialization on learning and behavior and the importance of imitation through the 'brain wide mirroring system' will be addressed.

Finally, the programs' unique individual features – rhythmic elements, music, expressive features of emotion, gestures, shared synchronicity, without speech or language – will be explored.

Utilizing case studies, cutting edge research, recent developments in neurophysiology, and examples of CalmConnect use within multiple schools and clinics, this interactive presentation will provide best practices and techniques for implementing the programs, as well as understanding how and why they work so well for a variety of populations in multiple settings.

## Outline

1. CalmConnect's origins: "where it all began."
2. Description (with video examples) of the varied applications and benefits of CalmConnect.
3. Review the Autonomic Nervous System and the behavior/physiology related to Sympathetic and Parasympathetic states.
4. Discuss CalmConnect's research outcomes in school settings.
5. Overview of the neurological framework as it relates to CalmConnect's physiological mechanisms within the nervous system. Specifically address the polyvagal theory, stress response, safety and affiliation.
6. Discuss ACES (Adverse Childhood Experience Score), along with research supporting the significant effects of trauma throughout the lifespan.
  - a. Address the concept of "biological embedding" as the mechanism linking trauma and physiology.
  - b. Discuss the connection between trauma and telomeres/epigenetics.
  - c. Illustrate techniques to mitigate the effects of childhood trauma.
7. Examine the role of the dACC (dorsal anterior cingulate cortex) and the physical pain of social rejection.
8. Review the 'discovery' of mirror neurons and their important role in socialization and empathy. Highlight the role of dormant mirror neurons in certain conditions, such as autism and trauma.

9. Living in a “synchronized” world – research addressing the concept of Audiovisual Synchrony and its unique role in understanding, assessing, and ameliorating Autism Spectrum Disorder.
10. Music - The Language of the Central Nervous System.
  - a. Discuss the critical role of music on the brain, health, emotions.
  - b. Understand the importance of rhythmicity.
11. Not all Movement is created equal.
  - a. From “Me to We,” the value of shared synchronicity.
12. People, faces, eye contact – the foundation for safety and affiliation.
13. Detailed protocols with "best practices" for implementing CalmConnect in a variety of settings, as well as how to use it incorrectly.
14. Wrap up – Final Videos, Discussion, Questions.

## **CalmConnect Seminar Learning Objectives**

1. Understand the importance that a calm nervous system and body have on learning and social interaction.

### **Content**

- o Discuss the Autonomic Nervous System (ANS) and its role in behavior.
- o Highlight current research/ case studies supporting physiology and behavior.
- o Initiate discussion on long term/ short-term effects of “melt downs” and techniques to strengthen emotional resilience.
- o Lead previous topics into the discussion on physiological mechanisms activating the parasympathetic nervous system, and the overall themes of Safety and Affiliation.

### **Teaching Methods**

- o Classroom Case Studies
- o Supportive Research
- o Video Supplements
- o Supplemental Handouts

2. Have a basic understanding of the polyvagal theory, ACES (Adverse Childhood Experience Scores), the physical pain of social rejection, mirror neurons and Audiovisual Synchrony as they apply to current behavior challenges.

**Content**

- o Review structures of the brain with specific attention to those involving parasympathetic response.
  
- o Connect the polyvagal theory to existing framework(s) for self-regulation, co- regulation, behavior and physiology.
  
- o Provide basic tenets of Porges' polyvagal theory, and illustrate its relationship to stress response and recovery.
  
- o Illustrate the physiological response to stress relative to the Ventral Vagal Complex, Sympathetic Nervous System, and Dorsal Vagal Complex.
  
- o Review the components of ACE scores, and the relationship between ACE scores and physical and physiological challenges throughout the lifespan.
  
- o Illustrate how the dACC processes social pain as well as physical pain, and connect the effects of social pain (high ACE scores) to lifelong social/emotional challenges.
  
- o Relate the recent history of mirror neurons, and their role in building social connection, safety and primary communication.
  
- o Highlight Ami Klin's findings on Audiovisual Synchrony, and how it relates to understanding CalmConnect's role in addressing the unique challenges of those with ASD.

**Teaching Methods**

- o Research reviews
- o Multiple case studies
- o Video examples and Graphic illustrations.
- o Extensive discussion among attendees and leaders.

3. Understand best practices for using CalmConnect in home, school and clinic settings.

**Content**

- o Examine the primary components of CalmConnect (music, rhythmic elements, expressive features of emotion, gestures, movement, patterns, images, shared synchronicity, no speech or language), and the research that supports each element.

- o Demonstrate the importance of rhythmicity, vocal prosody, shared synchronicity, and the significant benefits of eye contact and the expressive features of emotion.

- o Provide examples (video) of CalmConnect's application in a variety of settings to illustrate specific benefits/applications.

- o Demonstrate multiple examples of CalmConnect's use in a variety of settings.

**Teaching Methods**

- o Cumulative research history

- o Supplemental content from outside practitioners o Classroom examples with video

- o Supplemental Handouts