Emotional Brain Training: A Scientific Solution to Stress

Laurel Mellin
Associate Clinical Professor of Family and Community Medicine
Director, Center for Emotional Brain Training Research
School of Medicine
University of California, San Francisco

Emotional Brain Training:
Self-directed positive emotional plasticity to rewire self-regulation.

Current paradigm:
Treat the symptoms of stress.

Emerging paradigm:
Rewire the stress response

EBT History
- 1979 Adolescent health training program
- 1987 Family and Community Medicine - Adults
- 1999 Psychiatry - Neuroplasticity
- 2004 Physiology - Stress & Reward
- 2008 Center for Emotional Brain Training Research

Neuroscience Concept #1:
It's not us. It's our wiring.
Homeostatic Circuit
Effective processing - Encode reasonable expectations and adaptive responses - Negative feedback loop - Natural shut-off

Allostatic Circuit
Ineffective processing - Encode unreasonable expectations and maladaptive responses - Positive feedback loop - No natural shut-off

Neuroscience Concept #2:
Wiring triggers brain states.

The Triune Brain

Repeated episodes of stress cause wear and tear (allostatic load).


Recurrent episodes of stress cause wear and tear (allostatic load).


Repetitive episodes of stress cause wear and tear (allostatic load).

The brain adopts a fixed allostatic state.

STRESS

Positive emotional plasticity
- Use-dependent neuropsychology. Two opposing circuits cannot fire at the same time.
- Actively switch from stressed states to balanced states: strengthen effective wiring and weaken ineffective wiring.

Neuroscience Concept #4: We can create new wiring.

Train thinking brain (vmPFC) to rewire the emotional brain

Dyadic Attunement and Regulation.

Many times throughout the day:
- Compassionately observe/stay attuned.
- Appraise emotional state (1 to 5 scale).
- Accept or change state -- to get to Brain State 1.

Self-Attunement and Self-Regulation: Check In Tool

Many times throughout the day:
- Compassionately observe/stay attuned.
- What number am I?
- Accept or change state to get to Brain State 1.
Tools of Self-Regulation

1. Sanctuary Tool
2. Feelings Check Tool
3. Emotional Housecleaning
4. Feelings/Expectations
5. Reassurance

Accept State or Get to 1

Sanctuary Tool
- Deep breaths
- Connect with the sanctuary within
- Feel compassion for myself
- Feel compassion for all living beings
- Speak softly

Feelings Check
- How do I feel?
- What do I need?
- Do I need support?

Emotional Housecleaning
- Honor, heal, comfort
- Feel guided to
- Feel guided by
- Feel guided to: happy, secure, proud

The Cycle Tool
- List the facts
- Feel angry, sad, afraid, guilty
- Unreasonable/Reasonable Expectations
- Grin it (20 times)

Damage Control
- Do not judge (myself or others)
- Example: Name
- Know that I can (try just once)

www.adsb.org

Dyadic-Regulation

1. Loving connection
2. Feelings? Needs?
3. Express Feelings
4. Feelings/Expectations
5. Reassurance

Accept State or Get to 1

Sanctuary Tool
- Deep breaths
- Connect with the sanctuary within
- Feel compassion for myself
- Feel compassion for all living beings
- Speak softly

Feelings Check
- How do I feel?
- What do I need?
- Do I need support?

Emotional Housecleaning
- Honor, heal, comfort
- Feel guided to: happy, secure, proud
- Feel guided by

The Cycle Tool
- List the facts
- Feel angry, sad, afraid, guilty
- Unreasonable/Reasonable Expectations
- Grin it (20 times)

Damage Control
- Do not judge (myself or others)
- Example: Name
- Know that I can (try just once)

www.adsb.org
Stress is a moment of opportunity to rewire circuits.

- Use Cycle Tool during "reconsolidation window."
  
  Vivid awareness of two opposing expectations.

  The brain spontaneously erases one of the circuits.
Rewire Brain State 5 Circuits
false associations ("Survival Circuits")
"I get my safety (x) from ______ (y)."

Rewire Brain State 4 Circuits:
false generalizations
Examples: "I am bad." "I cannot love."

Emerging paradigm:
Rewire the stress response

Survival Circuits

Freedom
"I get my safety from food."
"I get my safety from thinking."
"I get my safety from distancing."

The 7 Core Circuits of Emotional Evolution

EBT Study in Adults:
DEPRESSION
EBT Study in Adults: WEIGHT

EBT Study in Adults:
Diastolic Blood Pressure

EBT Ideas

➢ Joy swamps stress.
➢ Stress is a moment of opportunity.
➢ Everyone goes to Brain State 5!
➢ It’s JUST a wire!

EBT Courses

➢ EBT Basics: Wired for Joy
7 lessons - on line or in small group training. 24-hour access to web-based tools.
Examples:
UCSF student elective, Chancellor’s Council on Faculty Life

➢ Advanced EBT - 6 EBT Kits
6 courses of progressive training to rewire stress circuits. Improve brain’s emotional set point. EBT Providers facilitate small group training.
Examples:
UCSF EBT Groups for faculty and staff for worksite wellness.
Lunchtime EBT and after work EBT.

Acknowledgments

Igor Mitrovic, MD, Scientific Director
Mary Dallman, PhD
Lynda Frassetto, MD
Charles E. Irwin, Jr. MD
Elissa Epel, PhD
Nancy Adler, PhD
Barbara Larise, PhD, MPH, RD
Bruce McEwen, PhD
Judy Zeh, LPC, MHRM
Diedre Taylor, MA
Deanne Hamilton, MS, RD
Brian Niehaus, MD
Justin Ludwig
Kelly McGrath

Mary Croughen, PhD
Amy Levine, EdD
Anna Spiehovogel, MD, PhD
Michelle Malizia-Snyder, MD
Stuart Eisenstadt, MD
Carol Duncan, RD
Tim Carmody, PhD
Marlon Needle, PhD
Mary E. Charleton, MD
Janey Peterson, EdD
Patricia Robertson, MD
El Puterman, PhD
Melanie Thomas, MD

Information on EBT research and training:

ebt.org