

Mindfulness for Stress Management in Children and Adolescents with Epilepsy

BC Epilepsy Society
May 22, 2012

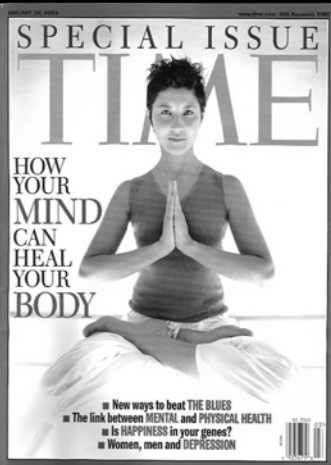
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- BC Epilepsy Society



Welcome and Invitation

- Informational
- Experiential: Mindfulness Practice
- "Beginner's Mind:" Let go of expectations

Enjoy!

**Guided Practice:
Mindfulness of Breathing**



Calligraphy by Thich Nhat Hanh

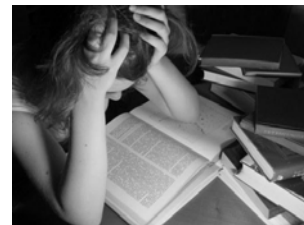
Outline

PART 1: Stress, Health, and Epilepsy

PART 2: Resilience and Mindfulness

**Part I: Stress, Health, and
Epilepsy**

**Are Youth Stressed Out These
Days?**

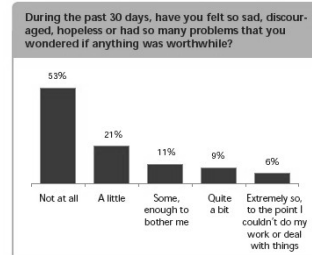


Youth Stress: BC Youth



McCreary Centre Society. A Picture of Health: Highlights from the 2008 BC Adolescent Health Survey

Extreme Stress: BC Youth



“I felt overwhelmed like I have so much on my mind, I can’t take it.”

McCreary Centre Society. A Picture of Health: Highlights from the 2008 BC Adolescent Health Survey

Sources of Youth Stress

- School
- Peer relationships
- Family conflicts
- Chronic Health Conditions
- Poverty, Violence, Racism

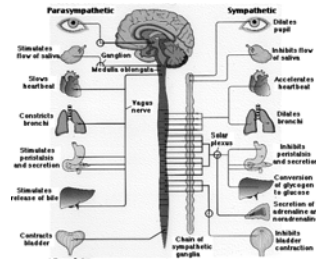
Stress Physiology

- Evolutionarily advantageous:
 - Example of caveperson and saber-tooth tiger
 - Blood get shunted to organs critical for survival (heart, lungs, muscles, brainstem)
 - Blood gets shunted away from organs NOT critical for survival (GI track, reproductive track, immune system, pre-frontal cortex)
 - Allows for “fight, flight or freeze” response

The Stress Response

“Alarm System:”
Fight-Flight-or-Freeze

- Nervous System Activation
- Hormones (Adrenaline)
- Blood flow redistribution
- End organs: Heart, Lungs, Muscles, Digestive System, Brain



<http://www.improve-mental-health.com>

The Reptile Brain



Stress Triggers

- Gets triggered equally by **EXTERNAL** as well as **INTERNAL** events (i.e. negative thoughts)
- Not all events are true threats to survival (but our body doesn't know this!)

Stress & Psychological Functioning

- Increased arousal, alertness, vigilance
 - Everything looks like a potential threat to survival
 - Maximizes ability to stay alive in life-threatening circumstances
- **Chronic:** cycle of negative emotions and distorted perception
 - Anxiety, Depression, PTSD

Epilepsy **Stress**

- **Perception of threat to safety**
- **Managing a chronic health condition**
 - Medications, appointments, hospitalizations
- **Functioning: school, family, driving, employment**
- **Uncertainty and fear around seizures**

Epilepsy **Stress**

- **Worry about stigma, judgments**
- **Family stress**
- **Epilepsy and Depression**
 - Situational
 - Neurologic
 - Pharmacologic

http://bcepilepsy.com/publications_and_resources/information_sheets.aspx,
"Stress Management," "Depression and Epilepsy," "Triggers for Epileptic Seizures"

Stress **Epilepsy**

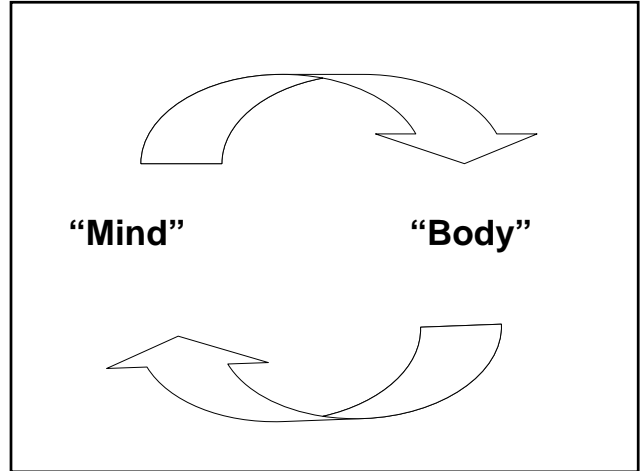
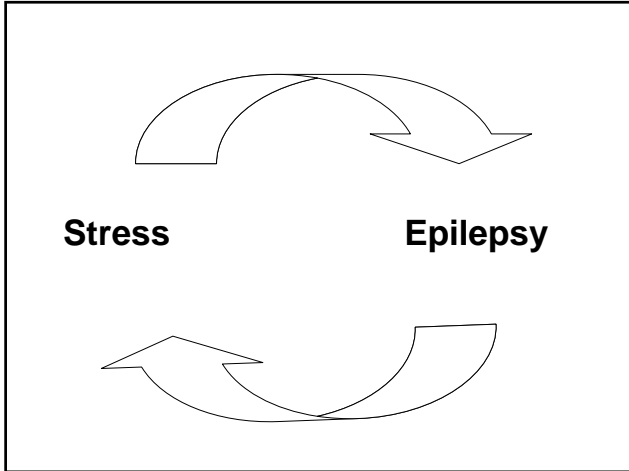
- **Sleep deprivation**
- **Stressful situations as trigger**
- **Respiratory changes**
- **Activating certain brain regions**

http://bcepilepsy.com/publications_and_resources/information_sheets.aspx,
"Stress Management," "Depression and Epilepsy," "Triggers for Epileptic Seizures"

Stress **Epilepsy**

- **Stress hormones**
- **Alcohol and Drugs**
- **Depression**

http://bcepilepsy.com/publications_and_resources/information_sheets.aspx,
"Stress Management," "Depression and Epilepsy," "Triggers for Epileptic Seizures"



Recognizing Possible Signs of Stress

- Change in behavior
- Irritability
- Withdrawal
- Lack of "enjoyment" in activities
- Drug, tobacco, alcohol use
- Change in sleep, appetite, energy
- Somatic symptoms

Asking Your Child About Stress

- Unconditional love
- Deep listening
- Non-judgmental attitude
- "Open the door"
- Role model coping and resilience: What you do is more important than what you say

PART 2: Resilience and Mindfulness

Resilience



Supporting Innate Resilience: Critical First Steps

- **Optimal nutrition**
 - Whole foods, micronutrients, OTFA's
- **“Brain Hygiene”**
 - Healthy Mind Platter

The Healthy Mind Platter



The Healthy Mind Platter, for Optimal Brain Matter

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What is Mindfulness?



Case

- 18 year old female with chronic back pain
- Functional limitations
- Mood symptoms
- Modified Individual Mindfulness-Based Stress Reduction



Calligraphy by Thich Nhat Hanh

What is Mindfulness?

“Paying Attention in a particular way:
On Purpose
in the **Present Moment**
and **Non-Judgmentally”**

- Jon Kabat-Zinn

“As long as you are breathing, there is more right with you than there is wrong with you.”

Why Mindfulness?

- **Being “caught” in the past, future, or in judgments**
- **Living fully by entering the present moment, over and over**
- **Breath as our anchor**
- **You already know how to do this**

Why Mindfulness?

- **“Clear seeing”**
- **Experiencing positive emotions**
- **Handling stress and negative emotions, pain**

What is Mindfulness?

- **A capacity, cultivated through regular and consistent practice**
- **Being fully present in the here and now**
- **Being fully present with all experiences: Positive, Negative, or Neutral**
- **Observing, not judging, what arises**
- **Not “turning away” (denying, resisting, avoiding...)**

Mindful Qualities

- Beginner's Mind (Curiosity)
- Loving-Kindness (Compassion)
- Radical Acceptance
- Non-striving
- Letting Go

Mindfulness Myths

- Having a "blank" or "empty" mind
- Seeking "bliss"
- "Escaping pain"
- Relaxation exercises
- "Zoning out:" Withdrawing from life

Is Mindfulness a Religion??



Formal Mindfulness Practices

- Sitting Meditation
 - Mindful Breathing
 - Physical Sensations
 - Thoughts
 - Emotions
- Walking Meditation
- Body Scan
- Mindful Movements
- SOBER 3-minute Breathing Space

Informal Mindfulness Practices

- Not taking specific time “just” for mindfulness
- Walking
- Eating
- Every day activities
- Mindful STOPping
- Listening and speaking

“The little things? The little moments? They aren’t little.”

- Jon Kabat-Zinn

A Way of Life

- Make the practice your own
- More than just a “technique”
- Invite mindfulness to permeate all moments of your life

How can Mindfulness be Helpful?

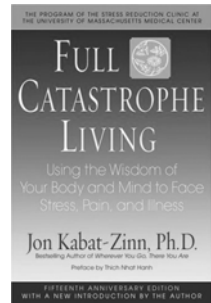
- Increase effective coping across a range of stressors
- Change ruminative cognitive patterns
- Modulates physiological and psychological stress response

Switching “Modes”

Unmindful	Mindful
Autopilot	Mindful
Reacting	Responding
Reflexive	Reflective
Lizard Brain	Human Brain
Rigid	Flexible
Conditioned	Open, Creative
Closed	Receptive
Habit	Intention

MBSR: A History

- Centuries: Eastern meditation traditions
- 1979: Stress Reduction Clinic, University of Massachusetts Medical School
- 2009: Over 240 hospitals and clinics



The MBSR Program

- Eight weekly group sessions, 2.5 hours each; 7-hour daylong retreat
- Psychoeducation
- Skills-based training
- Formal Sitting & Walking Meditation
- Yoga, Tai Chi
- Body Scan
- Daily Homework Exercises (1 h/d)

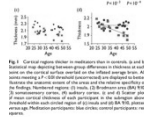
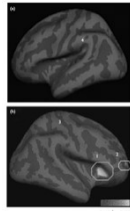
Clinical Trials: MBSR

- Large body of literature
- Improvements in Psychiatric and Medical symptoms
- Outcomes
 - Chronic Pain
 - Anxiety
 - Perceived Stress
 - Medical Sx's
 - Greater Energy
 - Improved sleep

Baer R. *Clinical Psychology: Science and Practice* 2003;10(2):125-143.
Carlson LE. *Brain Behav Immun* 2007;21(8):1038-49.

Mindfulness and the Brain

- N = 20
- Experienced mindfulness meditators vs. matched controls
- Cortical thickness increases
- Attention, interoception, sensory processing
- Correlated with meditation experience



Lazar S. NeuroReport. 2005;16:1893

MBSR: Brain Structure

Increased grey matter in left hippocampus

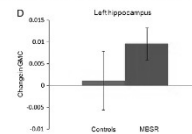
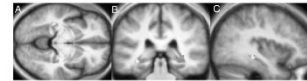


Fig. 3. Increase in grey matter volume in the left hippocampus. MBSR participants (n = 16) (M, n = 16; F, n = 16) and 16 matched controls (n = 16) were scanned for the regions of interest and compared to the controls group. D, Change in grey matter volume (GMV) in the left hippocampus from the Pre to the Post time-point in the MBSR and the control group. Error bars show 95% confidence interval.

Holzel BK. Psychiatry Research: Neuroimaging. 2011;191:36.

Research: Verdict

- Limitations
 - Relatively fewer RCT's
 - “Mechanism” of benefit poorly understood
- Overall:
 - Moderately strong evidence for benefit of mindfulness-based interventions in adults
 - Heterogeneous mood and medical symptoms
 - Emerging: Intriguing findings in neurobiology and epigenetics (telomerase studies)

Case, Part 2

- “I’m fine with having the pain now. What makes me really happy is not being stressed about the pain.”
- “I have more energy now. I didn’t realize how tiring it is to be suffering all the time.”
- “I’m able to see [my pain] in a more positive light. I’m even able to smile to my pain now.”
- Improved family relationships

SOBER 3-Minute Breathing Space

STOP

OBSERVE

BREATHE

EXPAND

RESPOND

Mindful Teens BC



Adolescent Health Stress, Trauma, and Coping

- Health Risk Behaviors
- Chronic Illness
- Chronic Pain
- Mood Disorders
- Trauma

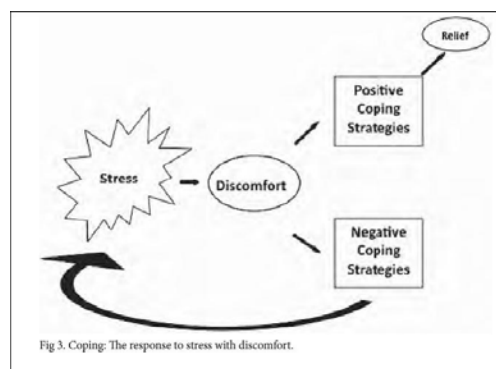


Fig 3. Coping: The response to stress with discomfort.

Mindfulness and Adolescent Development

- Repeated, focused attention: “Change the Mind to Change the Brain”
- Alter trajectory of pruning?
- Promote neural pathways associated with resilience, emotional regulation, and Positive Youth Development?
- Reduce health risk behaviors?
- Provide lifelong skills?

Mindfulness with Children & Adolescents: Clinical Trials

- Preliminary evidence for:
 - Increased attention (ADHD)
 - Blood pressure
 - Psychological symptoms
 - Reduced problem behaviors at school
 - Positive Affect
 - Sleep

Biegel GM. *J Consult Clin Psychol* 2009;77(5):855-66.
Black DS et al. *Pediatrics*. 2009 Sep;124(3):e532-41
Burke C. *J Child Fam Stud* (2010) 19:133-144
Greenberg. *Child Dev Persp*. 2011. ePub

Adapting Mindfulness Teaching for Youth

- Cognitive Development: Concrete language
- Attention: Shorter Practices
- Examples: Relevant
- Social environment: Teen-friendly

BC Children’s Hospital: Individual Mindfulness

- Individual Modified MBSR-T
- Chronic pain
- Chronic stress related to chronic illness
- 8 weeks
- One on one
 - +/- Caregiver, partner

BC Children's Hospital: MARS-A Group

- “Mindful Awareness and Resilience Skills for Adolescents”
- 8-week group mindfulness training
- Adapted from MBSR, MBCT, MBSR-T
- Adolescents with depressive symptoms, +/- chronic illness, chronic pain, somatoform symptoms

Handling Thoughts

- “Thoughts are not facts”
- “Don't believe everything you think”
- Recognizing Rumination
- Cultivate stance of curious, compassionate observer
- Practice: Train of Thoughts
- Practice: Observing Thoughts

Handling Emotions

- “You can't stop the waves, but you can learn to surf”
- “Don't just do something, sit there!”
- Practice: Mindful STOPing
- Practice: Belly breathing, walking meditation
- Practice: Making peace with emotions

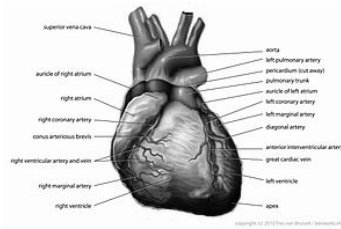
Building Resilience: What can parents do?

What we do to model healthy resilience strategies for our children is more important than anything we say about them.

Kenneth Ginsburg, MD MEd
<http://www.fosteringresilience.com/>

Parental Resilience

The Importance of Self Care



Mindfulness for Parents

- MBRP: Mindfulness-Based Childbirth and Parenting
- Mindful listening and communication
- Self-care
- MBSR

Wrapping Up



Resources: Books

- Kabat-Zinn, J. *Full Catastrophe Living; Wherever You Go, There You Are*
- Kabat-Zinn, J. *Mindfulness for Beginners*
- Biegel G. *The Stress Reduction Workbook for Teens*
- Stahl & Goldstein. *A Mindfulness-Based Stress Reduction Workbook*
- Williard C. *Child's Mind*
- John & Myla Kabat-Zinn. *Everyday Blessings: The Inner Work of Mindful Parenting*

Resources: Online

- **Greater Good Science Center (Univ of Calif, Berkeley), Guide to Mindfulness**
 - [greatergood.berkeley.edu/videos/Mindfulness Guide-Final_1.pdf](http://greatergood.berkeley.edu/videos/Mindfulness%20Guide-Final_1.pdf)
- **www.mindful.org**
- **Kelty Mental Health Resource Centre, BC Children's Hospital**
 - <http://keltymentalhealth.ca/healthy-living/mindfulness>

Resources: Local

- **BC Children's Hospital**
 - MARS-A Group Mindfulness for Teens
 - Youth Health Clinic (Adolescent Medicine): 604-875-3472
 - Ask for "Mindfulness Intake" appointment with Dr. Vo
- **MBSR-BC**
 - Mindfulness training for adults
 - <http://www.mbsrbc.ca/>



The Guesthouse (Rumi)