

# Strategies for Improving Mental Health after Concussion

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# Outline

## **Mental Health and Concussion**

Background

Types of Difficulties

Cycle of Prolonged Symptoms

## **Managing Mental Health**

Non-pharmacological

The Basics

Talk Therapy

Mindfulness

Peer Support

# Mental Health and Concussion Background

# Epidemiology in Ontario

- ~ 150,000 new concussions in Ontario/year  
– most recover
- ~15-20% experience prolonged symptoms
  - ~22,500-30,000 Ontarians/year endure prolonged symptoms

Journal of Head Trauma Rehabilitation: [January/February 2020 - Volume 35 - Issue 1 - p E60-E66](#)

# Symptoms of Concussion

## Acute vs Prolonged

Table A. Common Symptoms of mTBI

Physical	Behavioural/Emotional	Cognitive
Headache Nausea Vomiting Blurred or double vision Seeing stars or lights Balance problems Dizziness Sensitivity to light or noise Tinnitus	Drowsiness Fatigue/lethargy Irritability Depression Anxiety Sleeping more than usual Difficulty falling asleep	Feeling “slowed down” Feeling “in a fog” or “dazed” Difficulty concentrating Difficulty remembering

Adapted from Willer B, Leddy JJ. Management of concussion and post-concussion syndrome. *Current Treatment Options in Neurology*. 2006;8:415-426; with kind permission from Springer Science and Business Media.

# Mental Health and Concussion

- Mental health difficulties are common following concussion (*or mTBI*), and appear to be **major determinants** of post-concussion wellness and functional recovery.

Zahniser E, Nelson LD, Dikmen SS, et al. . **The temporal relationship of mental health problems and functional limitations following mTBI: a TRACK-TBI and TED study.** J Neurotrauma 2019;36:1786–93

Lange et al. **Depression strongly influences postconcussion symptom reporting following mild traumatic brain injury.** J Head Trauma Rehabil 2011;26:127–37

Bryant et al. . **The psychiatric sequelae of traumatic injury.** Am J Psychiatry 2010;167:312–20. 10

# Emotional and Behavioural Symptoms

Approximately **1 in 5 individuals** may experience mental health symptoms up to 6 months after mild traumatic brain injury.

Stein MB et al. **Posttraumatic stress disorder and major depression after civilian mild traumatic brain injury: A TRACK-TBI study.** JAMA Psychiatry. January 30, 2019.

- Anxiety
- Depression
- Irritability/Anger
- Post Traumatic Stress Disorder...

# Suicide

## **Association Between Traumatic Brain Injury and Risk of Suicide**

Madsen et al. *JAMA*. 2018;320(6):580-588

- Relative to those without a TBI, those diagnosed with concussion or mild TBI were twice as likely to die by suicide compared to those who had not been diagnosed with a concussion or mild TBI

## **Demographic-Dependent Risk of Developing Severe Novel Psychiatric Disorders after Concussion**

Shahrestani et al., *J Neurotrauma*. 2022 Jan;39(1-2):131-137

- In patients <26 years of age, significantly increased rates of depression, anxiety, or suicidal ideation following concussion in all groups
- adult cohort also demonstrates significant increases in NPDs at readmission within 180 days.



# Mental Health and Concussion Causes?

## Physiological Brain Changes

Ellis et al. **Neuroimaging assessment of cerebrovascular reactivity in concussion: Current concepts, methodological considerations, and review of the literature.** Front. Neurol. 2016

## Other Symptoms & Functional Decline

(pain, poor sleep, cognitive problems, fatigue; inability to return to work...)

## Autonomic Nervous System Dysregulation

Pertab et al. **Concussion and the autonomic nervous system: An introduction to the field and the results of a systematic review.** NeuroRehabilitation 2018 Jun 29;42(4)

## Other Issues

(med-legal, WSIB, insurance, invisible disability, comorbid dysfunction)

Silverman. **Neuropsychiatry of Persistent Symptoms After Concussion.** Psychiatric Clinics of North America, 2014-03-01, Vol 37, Issue 1

# Cycle of Prolonged Symptoms

**Concussion**

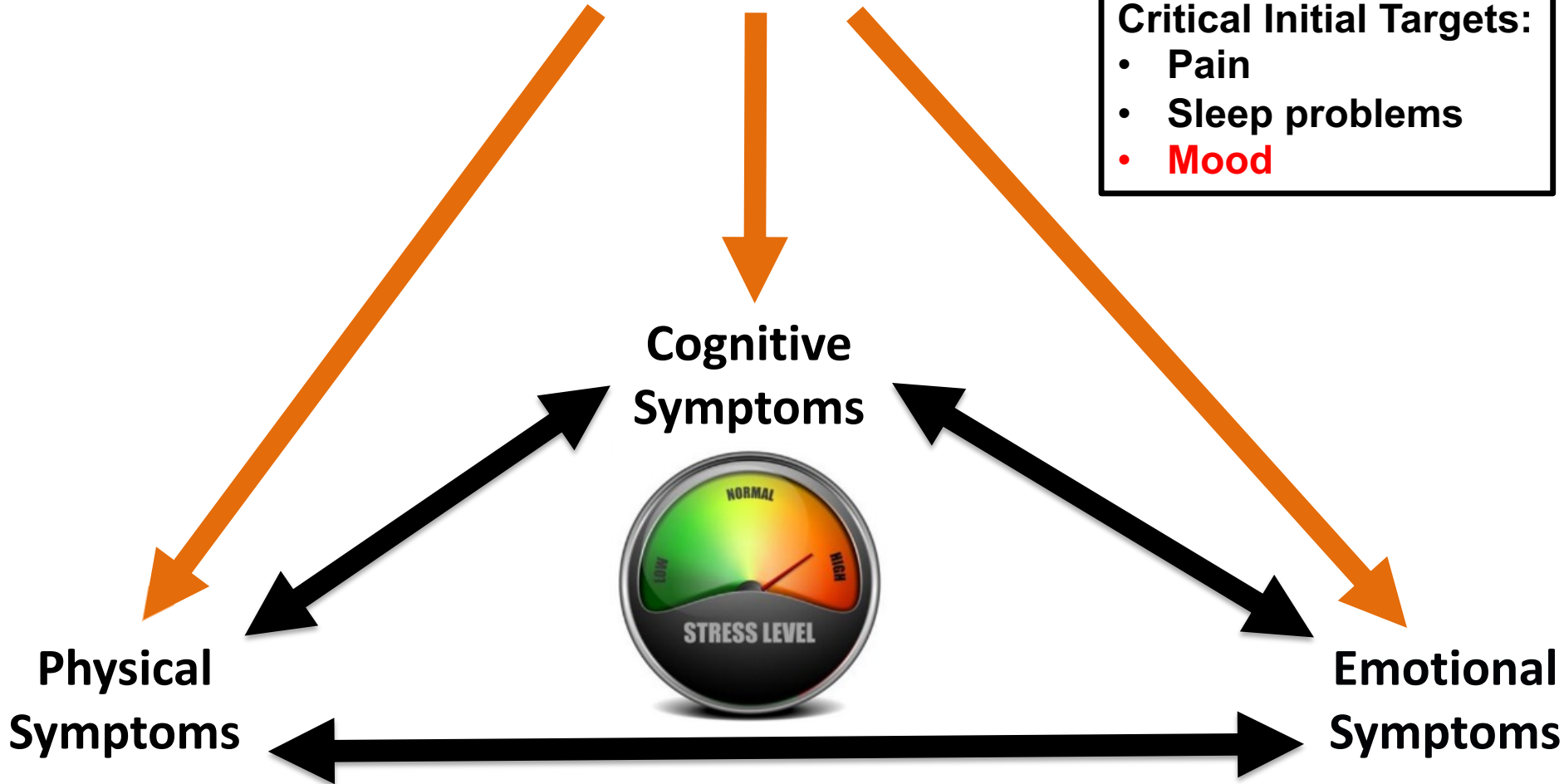
- Critical Initial Targets:**
- Pain
  - Sleep problems
  - **Mood**

**Cognitive Symptoms**



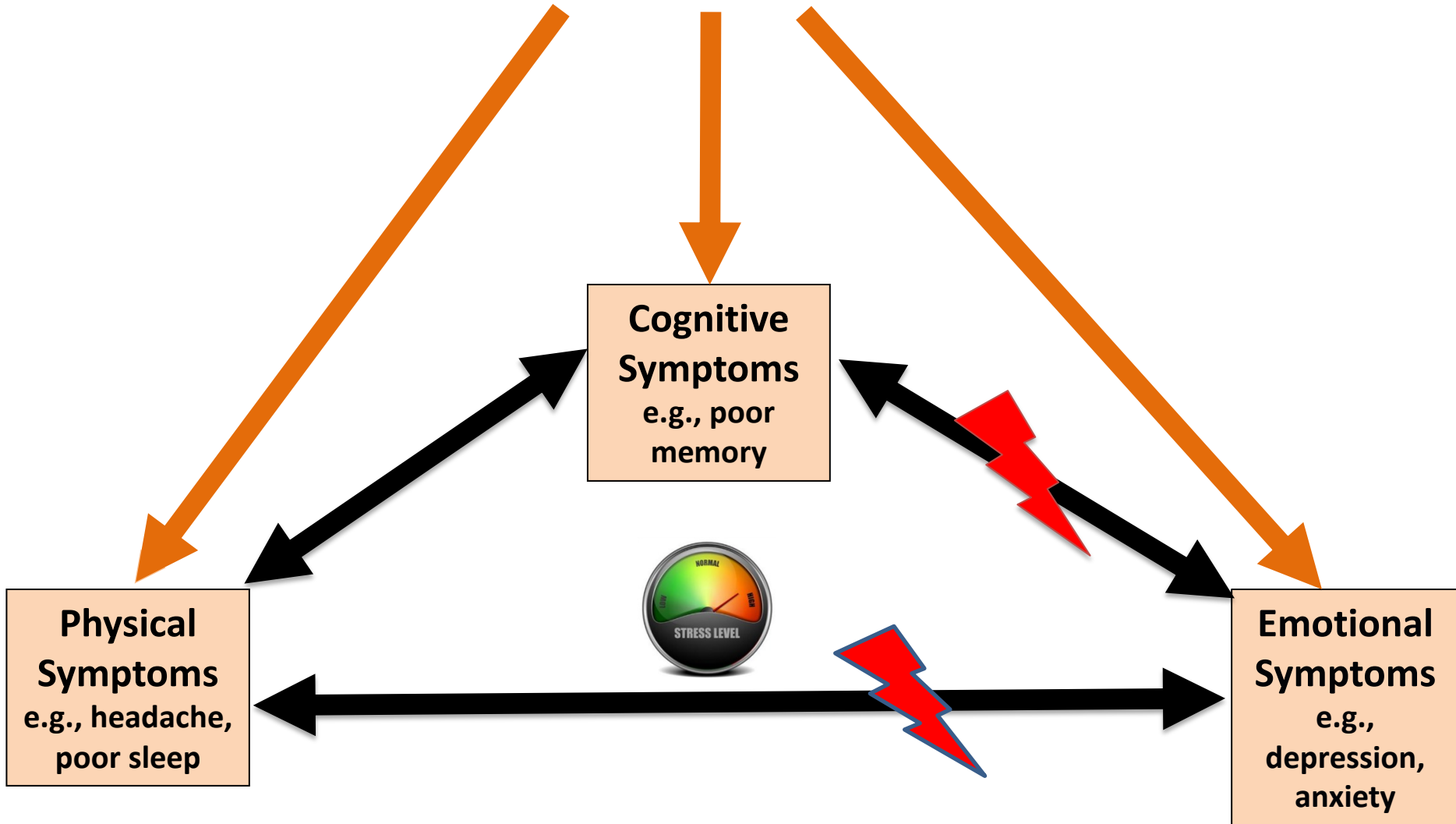
**Physical Symptoms**

**Emotional Symptoms**



# Intervening in the Cycle

**Concussion**



# Managing Mental Health

# Living Guidelines – Ontario, Canada Mental Health Treatment

Treat when symptoms cause distress, impact function and quality of life or are slowing recovery.



The screenshot shows a digital document interface. At the top left, there are four small images: a brain scan, a brain, a brain with neural connections, and a brain with a grid. To the right of these images is the title: "GUIDELINE FOR CONCUSSION/MILD TRAUMATIC BRAIN INJURY & PROLONGED SYMPTOMS" and "3RD EDITION, FOR ADULTS OVER 18 YEARS OF AGE". Below the title is a navigation menu with the following items: "Mental Health Disorders" (with a "< BACK" link), "> Open all content", "Introduction" (with "-" and "+" icons), "Assessment of Mental Health Disorders", "Recommendations" (with "-" and "+" icons), "Non-Pharmacological Treatment of Mental Health Disorders" (with a red arrow pointing to it from the right), "Recommendations" (with "-" and "+" icons), "Pharmacological Treatment of Mental Health Disorders", and "Recommendations" (with "-" and "+" icons).

Primary care providers,  
psychologists, other mental  
health specialists

# Living Guidelines – Mental Health Treatment

## Psychological interventions ('non-pharmacological')

- critical in managing primary mental health disorders
- 'talk therapy' (e.g., cognitive behavioural therapy/CBT)
- support for CBT across multiple mental health conditions including concussion

Review Curr Neurol Neurosci Rep. 2023 Mar;23(3):49-58. **Management of Psychological Complications Following Mild Traumatic Brain Injury.** [Silverberg](#) & [Mikolić](#)

*Broad-spectrum cognitive-behavioral therapy may modestly improve post-concussion symptoms, but **tailoring delivery to individual psychological risk factors** and/or symptoms may improve its efficacy.*

# Managing Mental Health

- The Basics: Self-Care
- Cognitive Behaviour Therapy
- Mindfulness Meditation
- Peer Support

Front Neurol 2022. **Mental Health Outcomes Across the Lifespan in Individuals With Persistent Post-Concussion Symptoms: A Scoping Review.**

Sheldrake et al.

- Biopsychosocial and holistic approach that addresses both physical and mental health needs should be emphasized

# Start with the Basics





# Sleep

Ludwig et al. **Sleep disturbances in the acute stage of concussion are associated with poorer long-term recovery: a systematic review.** *PM R* 2020; 12: 500–511.

Theadom et al. **Population-based cohort study of the impacts of mild traumatic brain injury in adults four years post-injury.** *PLoS One* 2018; 13: e0191655

- Research indicates that chronic poor sleep and insomnia can contribute to the development of depression, anxiety, irritability
- Screening and treating insomnia reduces symptoms of depression, anxiety, and stress
- Research also shows that emotional symptoms can contribute to the development of sleep issues

[CCC LiUNA Webinar Series #42: Dr. Neal Parekh](#)

# Nutrition

► [Nutrients](#). 2023 Aug 25;15(17):3726. doi: [10.3390/nu15173726](https://doi.org/10.3390/nu15173726)

## A Potential Role Exists for Nutritional Interventions in the Chronic Phase of Mild Traumatic Brain Injury, Concussion and Sports-Related Concussion: A Systematic Review

[Tansy Ryan](#)<sup>1</sup>, [Sarah Nagle](#)<sup>1</sup>, [Ed Daly](#)<sup>1</sup>, [Alan J Pearce](#)<sup>2</sup>, [Lisa Ryan](#)<sup>1,\*</sup>



ELSEVIER

### Neurochirurgie

Volume 67, Issue 3, May 2021, Pages 255-258



General review

## Nutritional factors in sport-related concussion

[S. Walrand](#)<sup>a</sup> , [R. Gaulmin](#)<sup>b</sup>, [R. Aubin](#)<sup>b</sup>, [V. Sapin](#)<sup>c</sup>, [A. Coste](#)<sup>d</sup>, [M. Abbot](#)<sup>b e</sup>

Which Foods  
Help the Brain?



**BRAIN HEALTH**  
FOOD GUIDE


An Evidence-Based  
Approach to Healthy Eating  
for the Aging Brain

<https://www.baycrest.org/getattachment/0c3275c8-2419-4f12-ad71-a890d5f70265/Brain-Health-Food-Guide.aspx>

# Physical Exercise

**Controlled exercise**  
can help patients  
of post-concussion syndrome  
return more quickly to their  
daily activities

Barry S. Willer, PhD.  
Research Director of the Concussion Clinic

-  BDNF (brain derived neurotropic factor) - supports survival/growth of new neurons and synapses
- Positive effect on mood, stress and cognition
- Low-level exercise for those slow to recover may be of benefit

## Postconcussion Moderate to Vigorous Physical Activity Predicts Anxiety Severity among Adolescent Athletes

SMULLIGAN, KATHERINE L.; WINGERSON, MATHEW J.; MAGLIATO, SAMANTHA N.; RADEMACHER, JACOB G.; WILSON, JULIE C.; HOWELL, DAVID R..

*Medicine & Science in Sports & Exercise* 2024; 56(5): 790-795.

## Dr. Mark Bayley - Exercise Therapy for Concussion



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Psychiatry Research

Volume 312, June 2022, 114542



Sports- and physical activity-related  
concussion and mental health among  
adolescents: Findings from the 2017 and 2019  
Youth Risk Behavior Survey ☆

Devon Ziminski <sup>a</sup>, Hannah S. Szlyk <sup>a</sup> ✉, Philip Baiden <sup>b</sup>, Lucinda Okine <sup>c</sup>,  
Henry K. Onyeaka <sup>d</sup>, Chioma Muoghalu <sup>e f</sup>, Patricia Cavazos-Rehg <sup>g</sup>

# Pacing

## MyBrainPacer™

*MyBrainPacer™ was co-designed by ABI patients and their caregivers, integrating technology and health care expertise into one easy-to-use tool. The app helps users safely monitor and track their daily activity and concussion symptoms using a smartphone, tablet, or personal computer.*

St. Joseph's Healthcare & Parkwood Institute, London, Ontario

<https://www.sjhc.london.on.ca/news-and-media/our-stories/pacing-your-recovery>

# Self Care - Other

- ❖ If mental health symptoms persist after implementing all of the basic self-care strategies, discuss other potential treatable causes of mood change such as **thyroid dysfunction, vitamin B12 deficiency, low iron, hormonal changes** etc. with your family physician/primary care provider

# Managing Mental Health

- The Basics: Self-Care
- Cognitive Behavioural Therapy
- Mindfulness Meditation
- Peer Support

# Background – Cognitive Behavioural Therapy (CBT)

- goal-oriented, short-term psychotherapy
- teaches strategies and skills
- focuses on ‘here-and-now’ problems
- collaborative effort between therapist and client



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Journal of Psychosomatic Research

Volume 136, September 2020, 110190

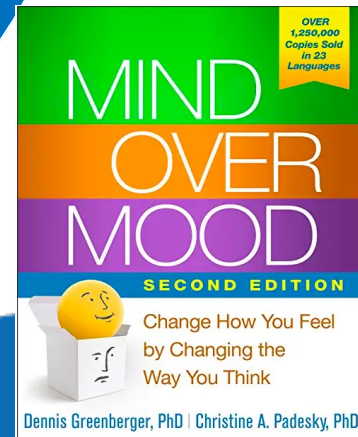
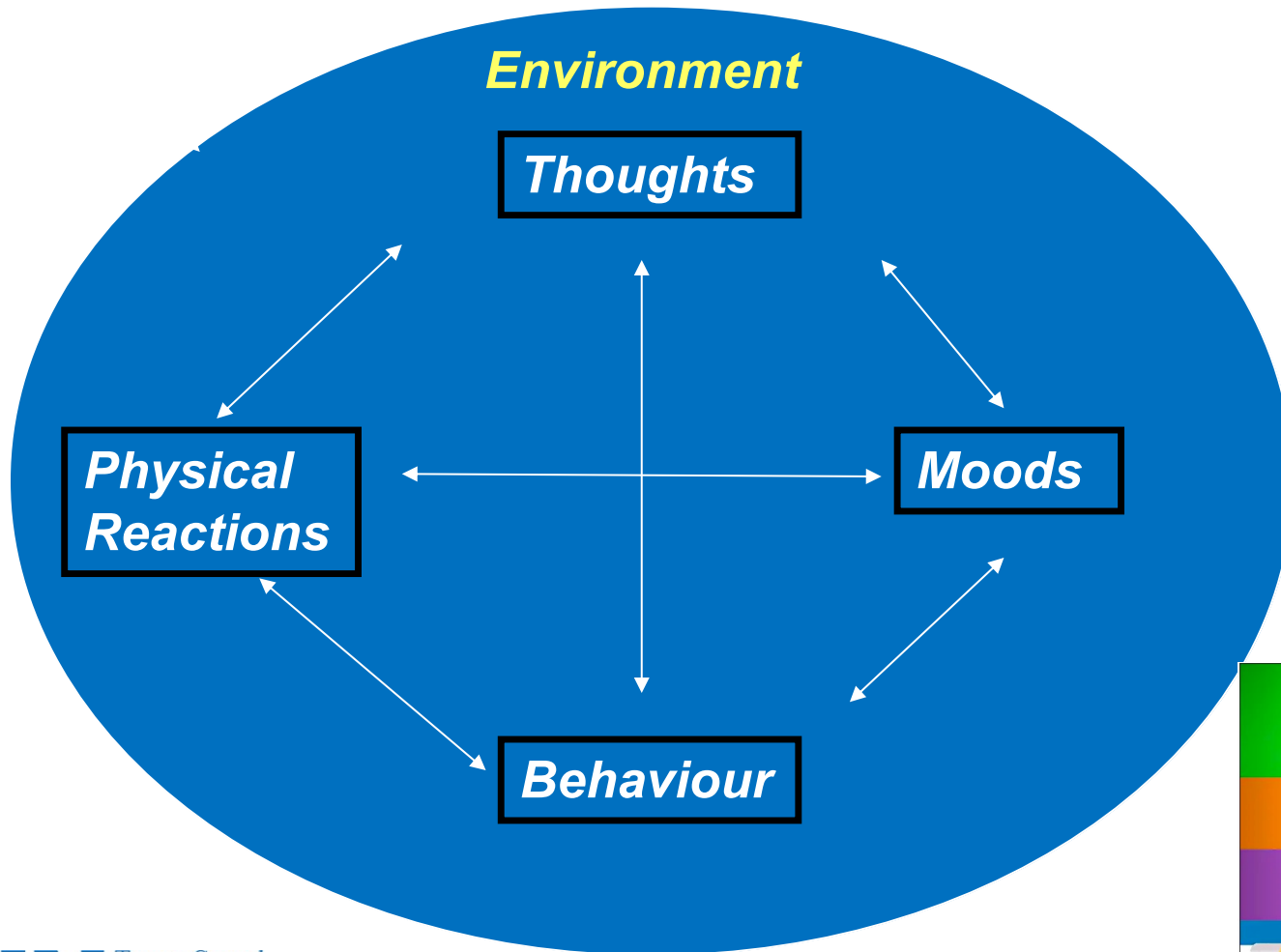


Review article

Effects of cognitive behavioral therapy for adults with post-concussion syndrome: A systematic review and meta-analysis of randomized controlled trials

Chiao-Ling Chen <sup>a, b, c, ✉</sup>, Mei-Yu Lin <sup>a</sup>, Mega Hasanul Huda <sup>a</sup>, Pei-Shan Tsai <sup>a, d, e, ✉</sup>

# The Five Factor Model of CBT



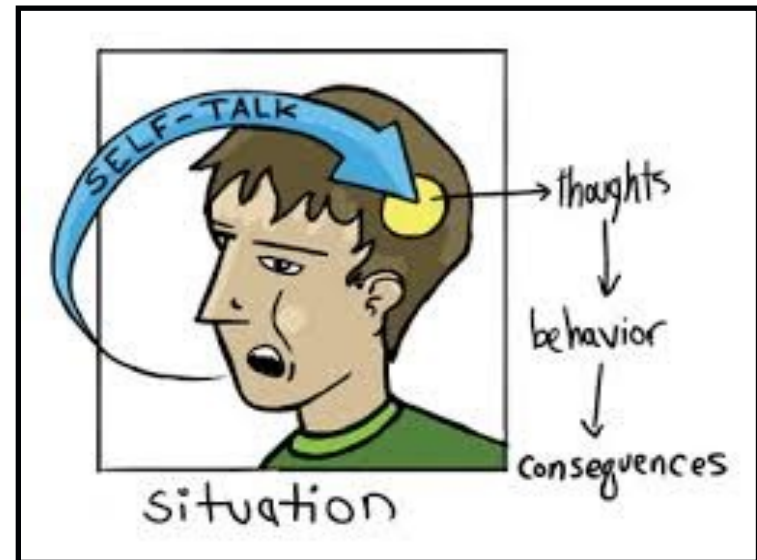


# Background - CBT


Psychological problems believed to be based, in part, on:

- unhelpful ways of thinking (that **'inner voice'**)
- learned patterns of unhelpful behaviour

## Overcoming Inner Voices



# Automatic Thoughts

- Negative thoughts about oneself, the world, the future
- Often unaware of these thoughts
- Assume them to be true
- ❖ Note automatic thoughts  with negative moods

J Neurotrauma. 2018. **Fear Avoidance and Clinical Outcomes from Mild Traumatic Brain Injury.** Silverberg et al.

- avoidance and endurance behavior were associated with a range of adverse clinical outcomes from MTBI

# Thinking Errors/Cognitive Distortions

Rehabil Psychol 2021 Nov;66(4):470-478. **Psychological mediators of avoidance and endurance behavior after concussion.** Terpstra et al.

- Catastrophizing
- All or nothing thinking...

Review Curr Neurol Neurosci Rep 2023 Mar;23(3):49-58.  
**Management of Psychological Complications Following Mild Traumatic Brain Injury.** Silverberg & Mikolic

# How does CBT evoke change?

CBT aims to encourage us to:

- question thoughts
- identify cognitive traps
- help identify more balanced alternatives
- challenge assumptions leading to automatic thoughts
- test out alternatives in the real world (i.e., behavioural experiments)

❖ **See Resource Section – for CBT options**  
(self guided, group, individual)

# Managing Mental Health

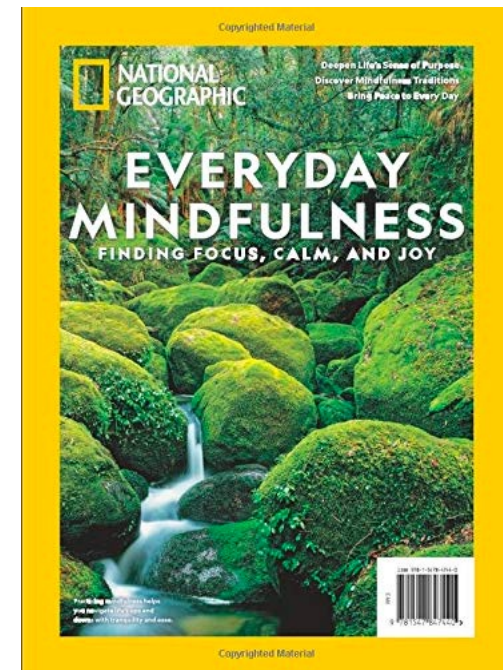
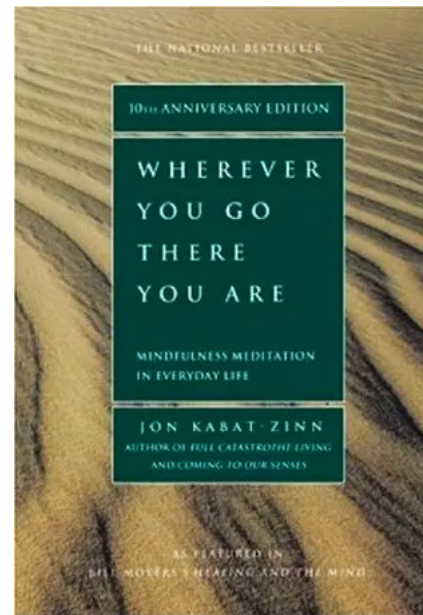
- The Basics: Self-Care
- Cognitive Behavioural Therapy
- Mindfulness Meditation
- Peer Support

# Mindfulness

The awareness that emerges from paying attention to something in a particular way:

- On purpose
- In the present moment
- Nonjudgmentally

Kabat-Zinn, J.



# Mindfulness

“Most people assume that meditation is all about stopping thoughts, getting rid of emotions, somehow controlling the mind. But actually...it’s about stepping back, seeing the thought clearly, witnessing it coming and going.”

Andy Puddicombe



# Mindfulness

## Possible benefit for:

- stress, anxiety, depression, pain, fatigue, sleep, attention...

**Mindfulness-based cognitive therapy reduces symptoms of depression in people with a traumatic brain injury: results...**

by [Bédard, Michel](#); [Felteau, Melissa](#); [Marshall, Shawn](#) ; [More...](#)

The journal of head trauma rehabilitation, 07/2014, Volume 29, Issue 4

**Clinical Utility of Mindfulness Training in the Treatment of Fatigue After Stroke, Traumatic Brain Injury and Multiple Sclerosis: A Systematic Literature Review and Meta-analysis**

by [Ulrichsen, Kristine M](#); [Kaufmann, Tobias](#); [Dørum, Erlend S](#) ; [More...](#)

Frontiers in psychology, 2016, Volume 7

Disabil Rehabil. 2023 **Feasibility of group telerehabilitation for individuals with chronic acquired brain injury: integrating clinical care and research.**

[Boulos](#) et al.

**Therapeutic Effects of Meditation, Yoga, and Mindfulness-Based Interventions for Chronic Symptoms of Mild Traumatic Brain Injury...**

by [Acabchuk, Rebecca L](#); [Brisson, Julie M](#); [Park, Crystal L](#) ; [More...](#)

Applied psychology : health and well-being, 02/2021, Volume 13, Issue 1

**A qualitative study exploring the experiences of mindfulness training in people with acquired brain injury**

by [Niraj, Shruti](#); [Wright, Sue](#); [Powell, Theresa](#)

Neuropsychological rehabilitation, 04/2020, Volume 30, Issue 4



# Mindfulness

Studies suggest that mindfulness can have positive effects on the brain...

**Mindfulness** related changes in grey matter: a systematic review and meta-analysis

by [Pernet, Cyril R](#); [Belov, Nikolai](#); [Delorme, Arnaud](#) ; [More...](#)

Brain imaging and behavior, 02/2021

**8-week Mindfulness** Based Stress Reduction induces brain changes similar to traditional long-term meditation...

by [Gotink, Rinske A](#); [Meijboom, Rozanna](#); [Vernooij, Meike W](#) ; [More...](#)

Brain and cognition, 10/2016, Volume 108

**Neural changes in early visual processing after 6 months of mindfulness training in older adults.** Isbel et al, Scientific Reports. Volume 10, (2020)

# Mindfulness Meditation

## Why be mindful?

*“My life has been filled with terrible misfortunes ...most of which have never happened.”* Michel de Montaigne, French Philosopher and Writer. 1533-1592



Teaches us to Respond vs React



*“Between stimulus and response there is a space. In that space is our power to choose our response. In our response lies our growth and our freedom.” - Viktor E. Frankl*

# If not Mindful...Mindless? Can you relate?



Have you ever...

- Driven past your exit?
- Missed your subway/bus stop?



## Mindlessness - How often do our minds wander?

Track Your Happiness app used to send automatic emails and text messages and collect ~250,000 experience samples from ~5,000 people in 83 countries, representing ages 18-88 and all 86 major occupational categories

### TED Talk

[https://www.ted.com/talks/matt\\_killingsworth\\_want\\_to\\_be\\_happier\\_stay\\_in\\_the\\_moment](https://www.ted.com/talks/matt_killingsworth_want_to_be_happier_stay_in_the_moment)

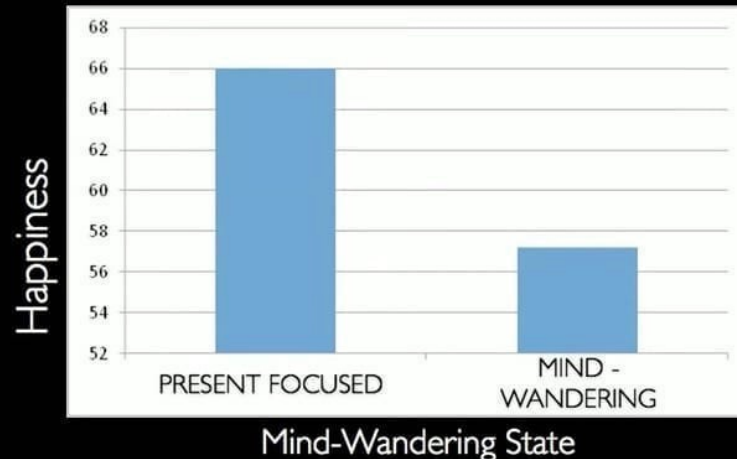
Matthew A. Killingsworth and Daniel T. Gilbert  
Harvard University, Cambridge, MA  
12 NOVEMBER 2010 VOL 330 SCIENCE

[www.sciencemag.org](http://www.sciencemag.org)

# 47% of the time!

- People are thinking about what is **not** happening almost as often as they are thinking about what **is**
- Mind-wandering typically makes people unhappy

12 NOVEMBER 2010 VOL 330 SCIENCE  
[www.sciencemag.org](http://www.sciencemag.org)



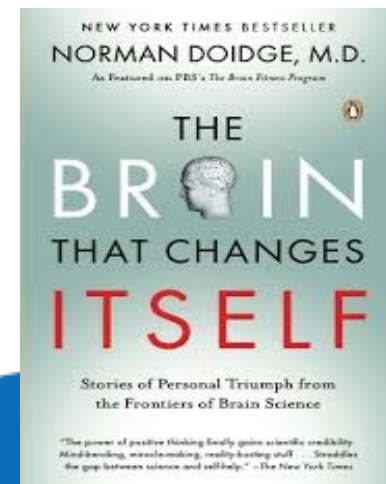
- True for every activity, even the least enjoyable

# Neuroplasticity

The brain:

- can change its structure & function through thought and activity
- architecture differs between people and changes in the course of our individual lives

Neuronal response to thoughts...habits and patterns are established and reinforced (good and bad!)



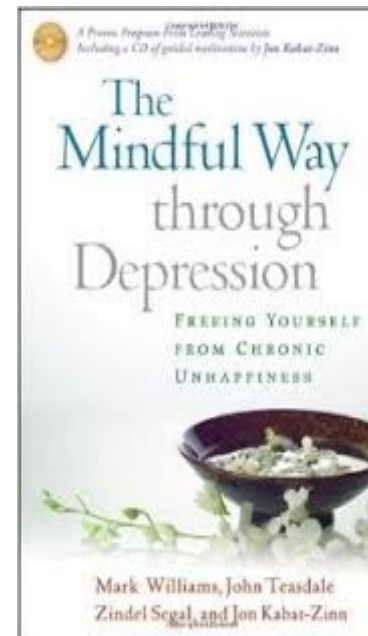
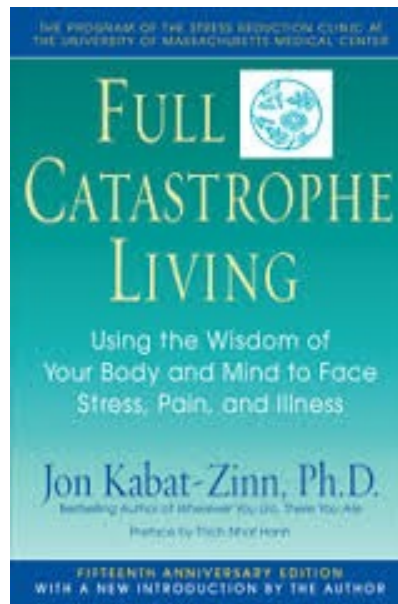
# 'Therapeutic' Mindfulness

## Mindfulness Based Stress Reduction (MBSR)

(Jon Kabat-Zinn, 1979, U Mass)

## Mindfulness Based Cognitive Therapy (MBCT)

(Zindel Segal, Mark Williams & John Teasdale, Toronto/UK)



# Mindfulness

## A Story of Traumatic Brain Injury

<https://www.youtube.com/watch?v=-ivm73nFVzE>

<https://www.loveyourbrain.com/>

Documentary – *The Crash Reel*



# Peer Support

**Peer support interventions for individuals with acquired brain injury, cerebral palsy, and spina bifida: a systematic review.** Levy et al. *BMC Health Services Research* Vol 19, 2019

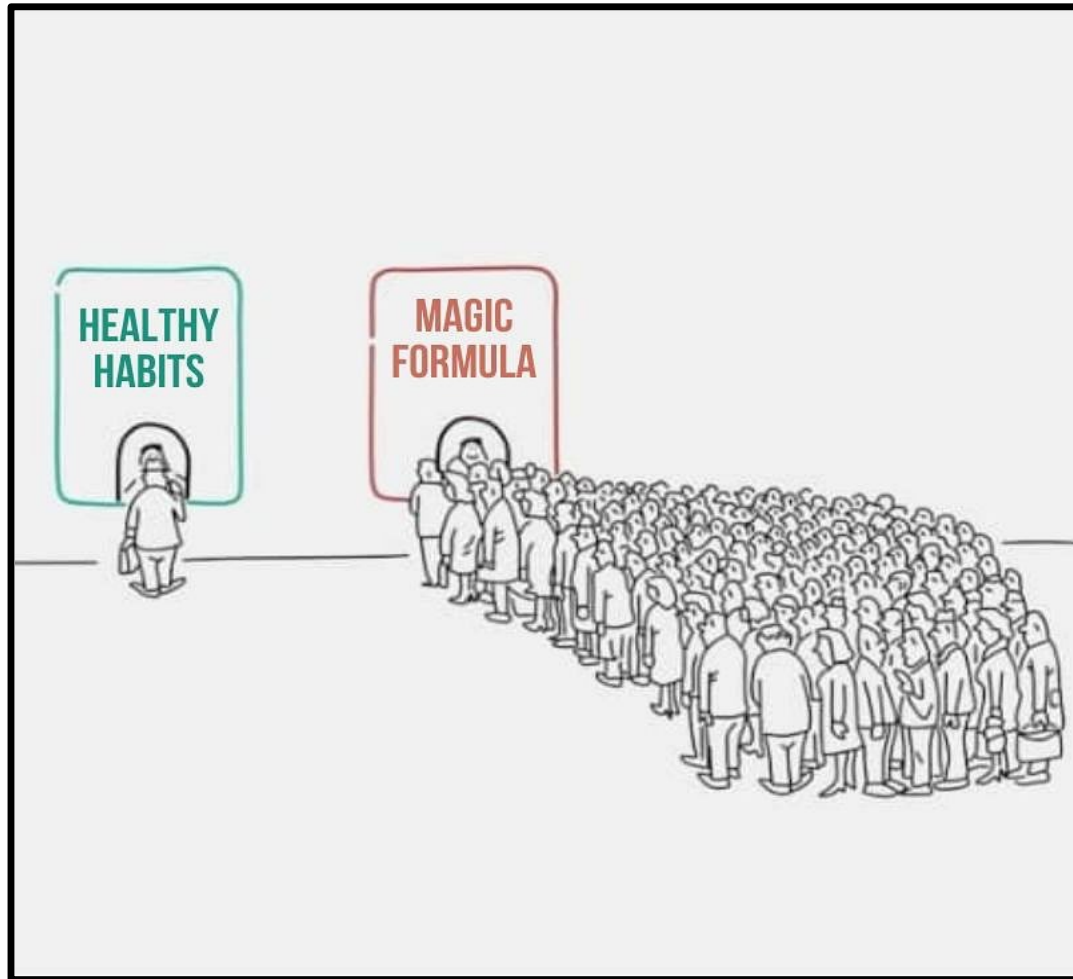
**College and Concussion Recovery: Students Reflections of the Role of Peer Support.** Kemp et al. *Archives of Physical Medicine and Rehabilitation*, 2020, Vol 101, Issue 11, Pages e23-e23

**Good support groups** should offer a safe place:

- to ask questions and tell your story
- learn/share coping strategies
- what has worked/not worked
- obtain recommendations regarding treatments and providers
- place to meet others who want to build healthier habits to optimize recovery.

*\*Avoid groups that are negative, stuck on what is wrong and lacking in direction forward.*

# Take Home Messages



Credit: Hal Elrod

# Take Home Messages

- ❖ Multi-pronged approach
- ❖ Address each symptom - regardless of the cause
- ❖ Beware the vicious cycle(s)
- ❖ Effective treatments and strategies are available
- ❖ Determine what works for you – start small

# Thank You!

# Resources - Crisis Lines & General Supports

**9-8-8** Suicide Crisis HelpLine (CALL or TEXT 24/7)

Ontario - <https://ontario.cmha.ca/provincial-mental-health-supports/>

- **Distress and Crisis Ontario:** <http://www.dcontario.org/>  
Distress Centres (DC's) across Ontario offer support and a variety of services to their communities. 24/7. The website also offers a chat function.
- **Good2Talk Helpline:** 1-866-925-5454 or text GOOD2TALKON to 686868  
Ontario's 24/7 helpline for postsecondary students.
- **Assaulted Women's Helpline:** TOLL-FREE: 1-866-863-0511  
TOLL FREE TTY: 1-866-863-7868  
#SAFE (#7233) on your Bell, Rogers, Fido or Telus Mobile

# Resources – Crisis Lines & General Supports

- **ConnexOntario:** 1-866 -531-2600 or [www.connexontario.ca](http://www.connexontario.ca)  
Free and confidential health services information for people experiencing problems with alcohol and drugs, mental health and/or gambling. Available 24/7.
- **Hope for Wellness Help Line:** 1-855-242-3310  
Offers immediate mental health counselling and crisis intervention to all Indigenous peoples across Canada. Phone and chat counselling is available in English, French, Cree, Ojibway and Inuktitut.
- **National Indian Residential School Crisis Line:** 1-866-925-4419  
Offers support to former residential school students and those affected. Available 24 hours.
- **Talk4healing** (for Indigenous women): 1-855-554-4325

# Resources – Brain Injury/Concussion

## **Parachute Canada**

<https://parachute.ca/en/injury-topic/concussion/>

## **Canadian Concussion Collaborative**

<https://casem-acmse.org/resources/canadian-concussion-collaborative/>

## **Brain Injury Canada**

<https://braininjurycanada.ca/en/survivor/concussion/resources-community/resources>

**Ontario Brain Injury Association (OBIA).** Helpline: 1-800-263-5404

[www.obia.ca](http://www.obia.ca)

## **Concussions Ontario**

<https://concussionsontario.org/>

# Resources – Brain Injury/Concussion

## **Living Concussion Guidelines – Patient Version**

[http://braininjuryguidelines.org/concussion/fileadmin/Patient\\_Version\\_-\\_Updates\\_PDFs2019/8.Mental\\_health\\_disorders.pdf](http://braininjuryguidelines.org/concussion/fileadmin/Patient_Version_-_Updates_PDFs2019/8.Mental_health_disorders.pdf)

## **Brain Injury Society of Toronto (BIST)**

[www.bist.ca](http://www.bist.ca)

## **Toronto ABI Network**

<https://abinetwork.ca/individuals-families/concussions/concussion-resources/>

## **Canadian Concussion Centre**

[https://www.uhn.ca/Krembil/Research/Projects/Canadian\\_Concussion\\_Centre](https://www.uhn.ca/Krembil/Research/Projects/Canadian_Concussion_Centre)

## **Concussion Alliance**

<https://www.concussionalliance.org/> (United States)



# Resources - Mindfulness

## Apps:

- Insight Timer
- Smiling Mind
- UCLA Mindful
- Healthy Minds Program
- Calm

<https://mindfulnessexercises.com/free-online-mindfulness-courses/>

<https://academy.happiness.com/courses/online-mindful-based-stress-reduction>

## TED Talk

[https://www.ted.com/talks/matt\\_killingsworth\\_want\\_to\\_be\\_happier\\_stay\\_in\\_the\\_moment](https://www.ted.com/talks/matt_killingsworth_want_to_be_happier_stay_in_the_moment)

# Resources - CBT

## Apps

- MindShift
- CBT-i Coach

**BounceBack:** <https://bouncebackontario.ca/>

**AbilitiCBT:** <https://myicbt.com/home>

**Mind Beacon:** <https://www.mindbeacon.com/>

**Ontario Psychological Association – Find a Psychologist:**  
<https://www.psych.on.ca/Public/Find-a-Psychologist>

# Resources – Group Offering

## KITE Tele-Rehab Centre for Acquired Brain Injury Toronto Rehab, UHN (Free Group Support)

- **Concussion Education and Symptom Management** (for individuals who have sustained a mild traumatic brain injury and are experiencing persistent symptoms)
- **Goal Management Training** (a cognitive intervention for reducing attentional slips and the interference they cause, and for improving planning and organization)
- **Relaxation Skills** (for individuals who are experiencing a lot of tension, anxiety, and distress, and would like to learn strategies to help with managing overwhelming emotions and relaxation)
- **Mindfulness Skills Training** (education and meditation practices that promote present-moment awareness and increased self-awareness; these skills and practices can be helpful for stress management and improving emotional well-being).
- **Emotions and Stress Management** (an education group about emotions, coping, and stress management).
- **Cognitive Behaviour Therapy Skills** (an introduction to CBT; for individuals who want to gain a better understanding of emotional problems and how unhelpful thoughts may be a barrier to change).



# UHN

Toronto General  
Toronto Western  
Princess Margaret  
Toronto Rehab

## Referral Form for the Telerehab Centre for ABI

Tel: (416) 597-3422 ext. 7871  
Fax (416) 597-7097

Addressograph

Date (mm/dd/yyyy):

Client Name:

Telephone:

OK to Leave Message?  Yes  No

Date of Birth (mm/dd/yyyy): Age:

Family Doctor  Yes  No

Name: OHIP:

Referred By:

Role/Title:

Telephone:

Email:

### Site/Program

UHN-University:  Stroke  ABI Day Hospital

UHN-Rumsey:  Stroke  ABI Day Hospital

Other UHN/non-UHN:

We currently offer **GROUP** therapies in an interactive, **ONLINE** format. These treatments involve discussion and interaction with other participants during the group session, as well as between-session, self-directed readings and homework. Because of the treatment format, eligible referrals **must** meet the following criteria:

- history of any acquired brain injury (e.g., mild to severe TBI, stroke, MS, tumor)
- > 6-months post-injury (some clients may be eligible earlier, please contact the Centre to discuss)
- no aphasia, dysarthria, or other communication disorder that would affect participation
- good insight
- no active psychosis or current mania
- 18 years of age or older
- fluent in English
- basic computer literacy

**Please note that referral to the Centre does not guarantee admission. Eligibility for each treatment will be determined by our clinicians based on a clinical interview and intake process.**

If your client has limited access to technology, is not comfortable using computers/tablets (e.g., to browse the internet, download/store/use files, check e-mail, etc.), AND/OR if you have questions or concerns more generally about your client's ability to participate in our therapies, please check the box below and we will contact you first to discuss eligibility.

**Please contact me first to discuss this client's eligibility**

Date of ABI (mm/dd/yyyy):

Type of ABI (e.g., concussion, mod-severe TBI, stroke, MS, etc.):

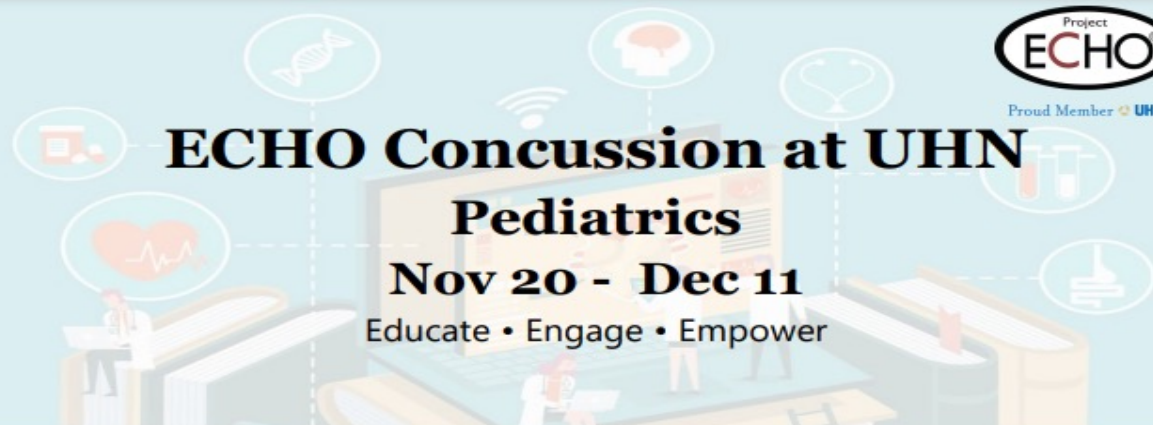
Details of ABI, comments or notes, or other relevant information (e.g., comorbid medical conditions):

Primary Area(s) of Difficulty: please indicate all that apply

- physical (e.g., headache, body pain, physical restrictions, etc.)
- cognitive (e.g., poor focus, loss of concentration, poor memory, executive dysfunction)
- emotional (e.g., low mood, anxiety, PTSD)
- other:

Please fax completed forms to (416)-597-7097

You will receive an email to confirm receipt of referral - **inappropriate referrals and incomplete forms will be returned**



# ECHO Concussion at UHN

## Pediatrics

**Nov 20 - Dec 11**

Educate • Engage • Empower

Diagnose & manage your pediatric concussion patients through interactive online medical education.

**Please join us for an upcoming ECHO Concussion session**

- You do not need to be registered in this program to attend any session listed below
- Please share with other healthcare providers in Ontario
- The sessions are: no cost, online and CPD accredited

**Open Sessions: Concussion Pediatrics for Primary Care \*Wednesdays from 12:15 PM—1:30 PM EST**

Nov 20 2024	General Pediatrics Overview 101
Nov 27 2024	Management
Dec 4 2024	Diagnosis & Assessment
Dec 11 2024	Return to school/activity

**[Register](#)**

- Open to all health care providers
- No cost to participate
- Access to an interprofessional specialist team
- Earn CPD Credits
- Present your real cases for support from the ECHO community
- Online (via zoom)

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