

# THE HAPPY BRAIN

## A Review of Mental Hygiene and Its Importance in Supporting Well-Being

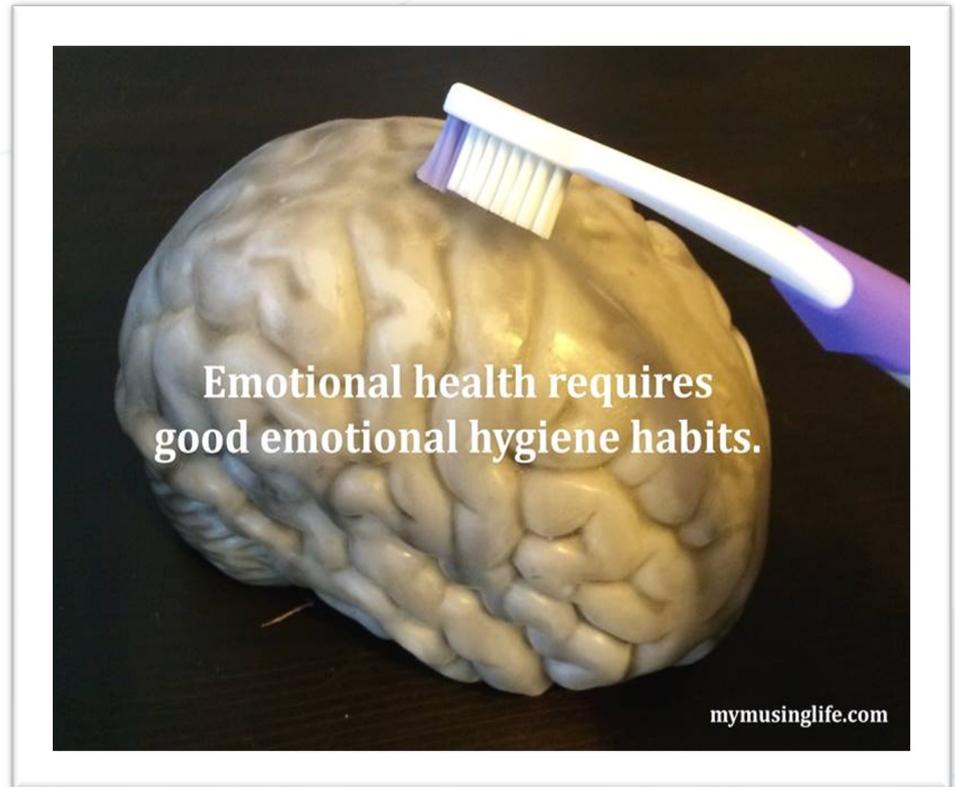
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Guillaume Tremblay, NP  
June 7<sup>th</sup> 2023



Mental Health - Care & Research  
Santé mentale - Soins et recherche

# Let's Talk Mental Hygiene

Hygiene can be defined as a science of the establishment and maintenance of health or as conditions or practices conducive to health (Merriam-Webster, 2018).



# Official Public Health Recommendations

## Oral Health

- Brush 2 minutes twice daily.(CDA)

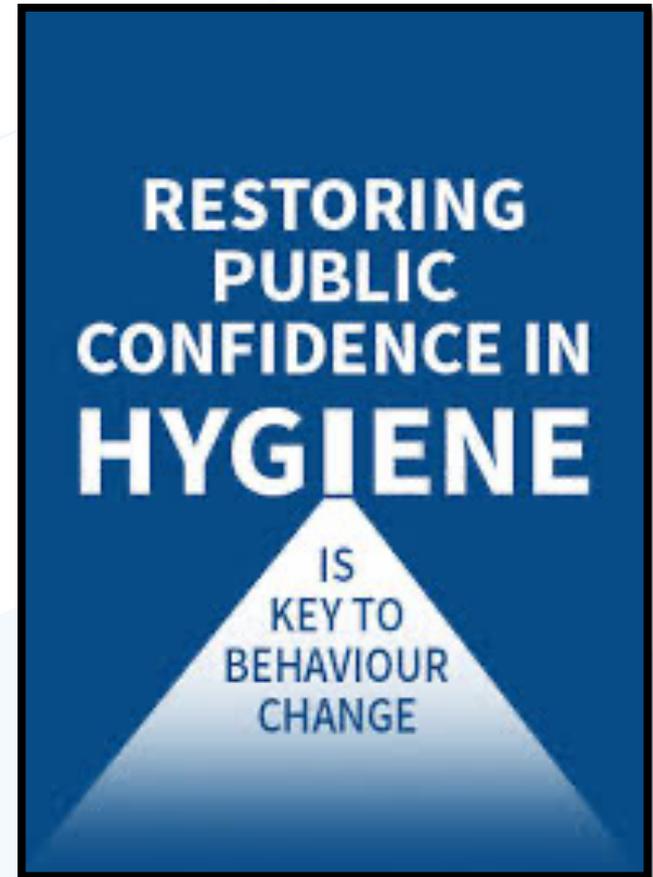
## Sleep Hygiene

- Target 7-8 hours for the average person with no nicotine, alcohol, or caffeine prior to sleep. (CSS)

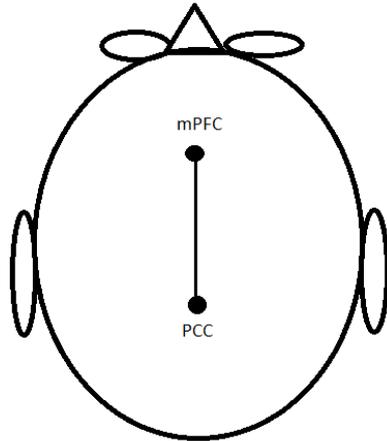
## Physical Health

- Target 150 minutes per week of moderate to vigorous physical activity. (WHO)

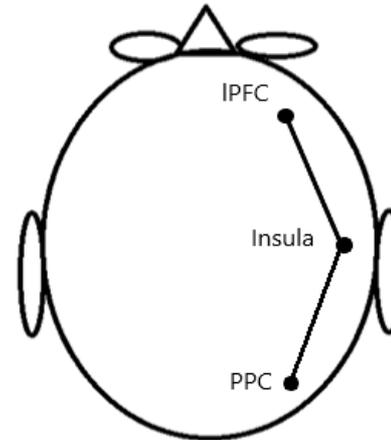
## Mental Health - ???



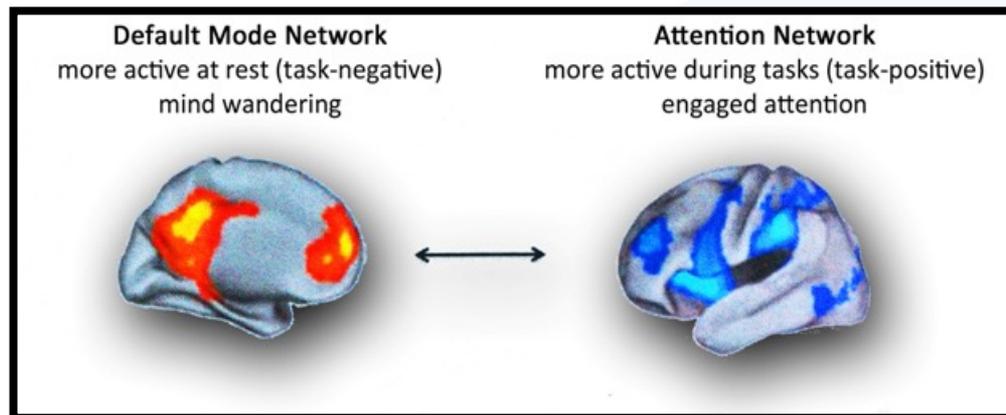
# Default Mode Network (DMN) vs. Task Positive Network (TPN)



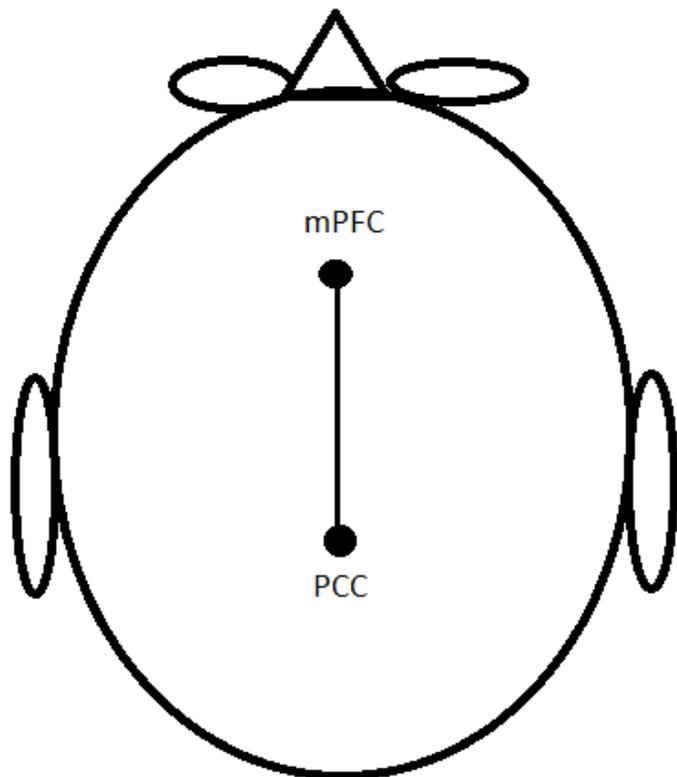
mPFC - Medial Prefrontal Cortex  
PCC - Posterior Cingulate Cortex



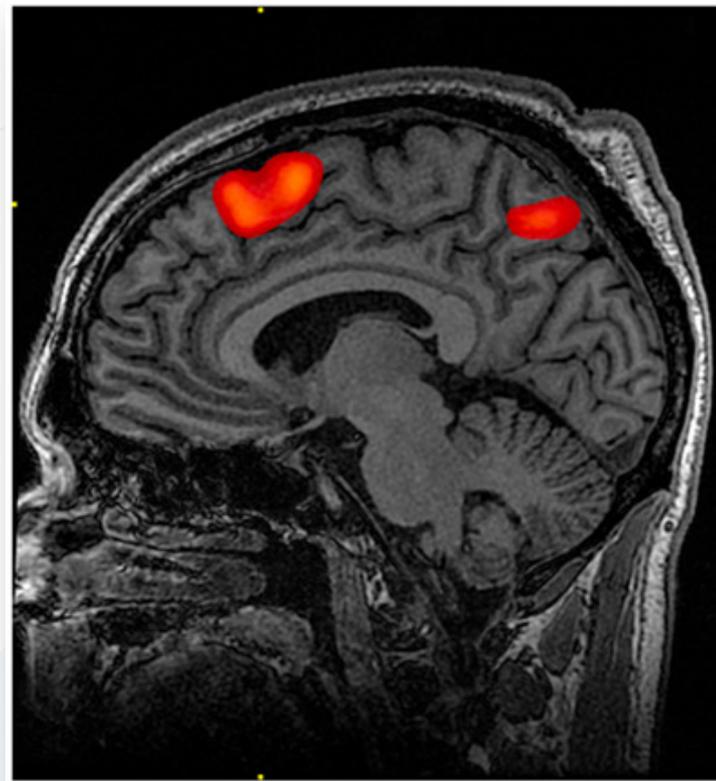
IPFC - Lateral Pre-Frontal Cortex  
PPC - Posterior Parietal Cortex



# The DMN



mPFC - Medial Prefrontal Cortex  
PCC - Posterior Cingulate Cortex

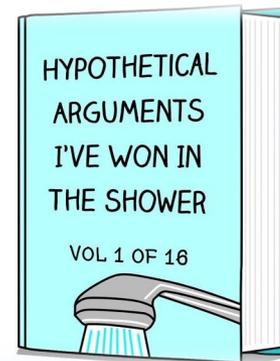


Andrews-Hanna et al., 2010

# The DMN

## Cognitive Patterns Associated to DMN Connectivity

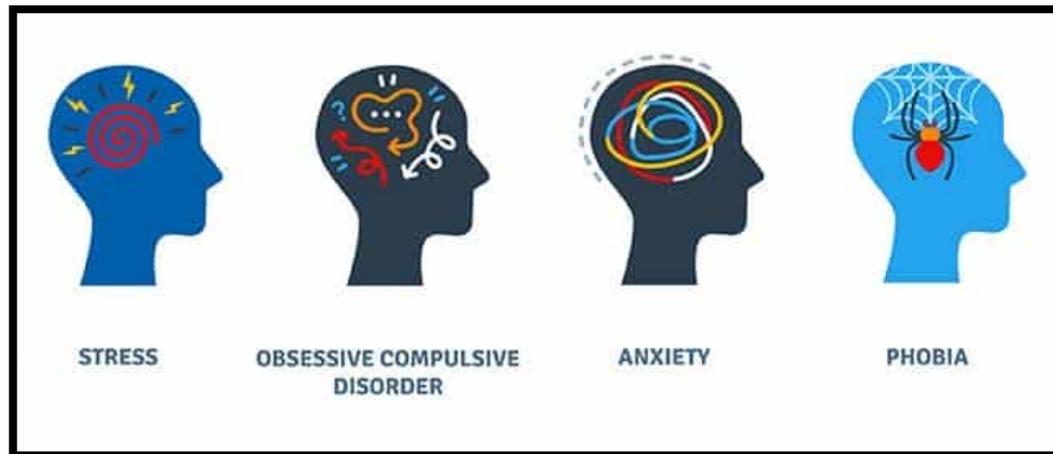
- Rumination (Spreng & Grady, 2009)
- Self-Referential Internal Narrative (me/my/I) (Berman et al., 2011)
- Mind wandering (Mason et al., 2007)
- Non-practical past/future thoughts
- Blah, Blah, Blah...
- Hamster running non-stop



# DMN

Hyperconnectivity of this network has been associated with:

- Major Depressive Disorder (Sheline et al. 2009)
- Elevated Anxiety Levels (Coutinho et al., 2016)
- Various other mental health disorders such as PTSD



# DMN and Happiness

- Reported happiness levels have been demonstrated to be inversely correlated with DMN connectivity (Luo et al.,2016)
- Others have found that a higher 'quality of life' is related to reduced DMN connectivity (Kraft et al.,2018)

One possible interpretation:  
a quieter brain = a happier brain



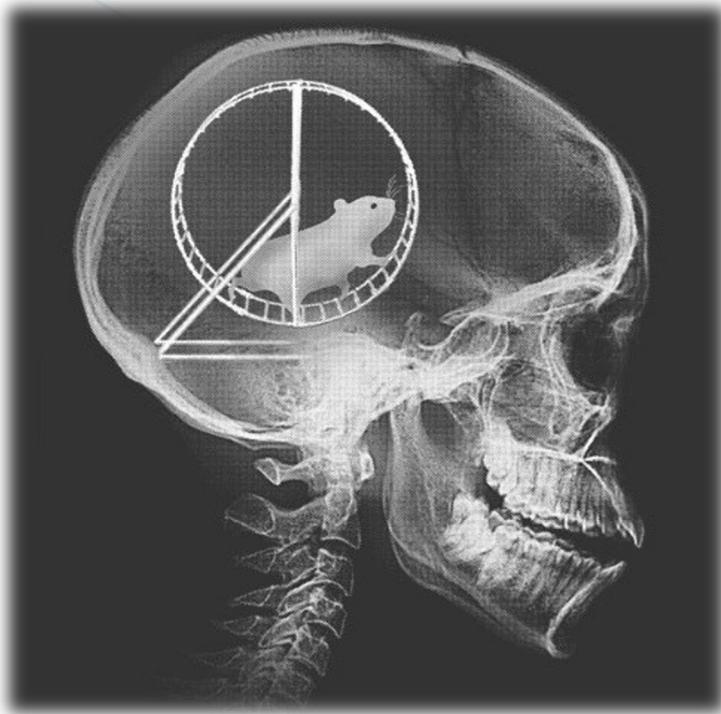
# Psychological Resilience and the DMN

- ▶ Psychological resilience is the process by which an organism adapts to an environment in the face of demanding and stressful stimuli, and can be thought of as “bouncing back” from a difficult experience. (Miyagi et al., 2020)
- ▶ A malleable trait.
- ▶ Psychological Resilience has been shown to be inversely correlated with default mode network connectivity. (Hemington et al., 2018)
- ▶ A quieter brain = a more resilient brain



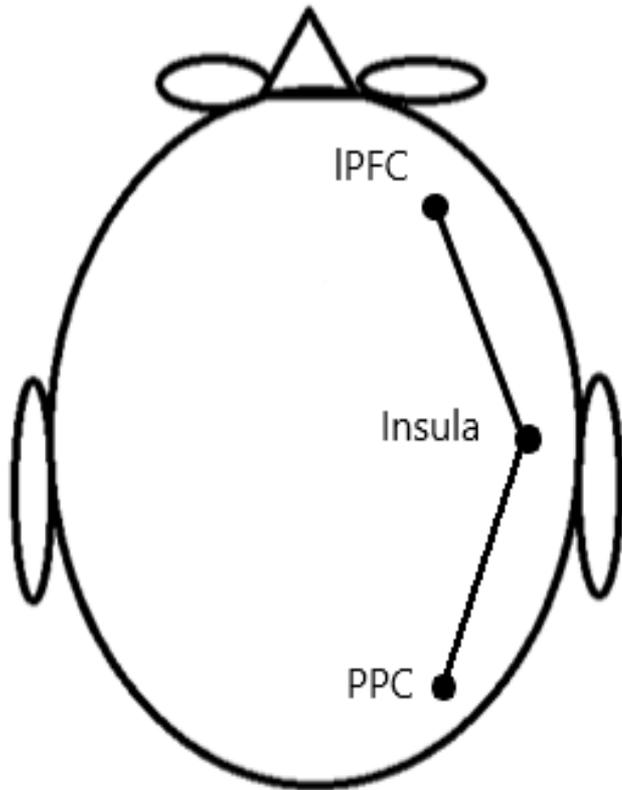
# Question?

Have you ever noticed the hamster running in your mind?  
(non-stop thinking, voice in your head)

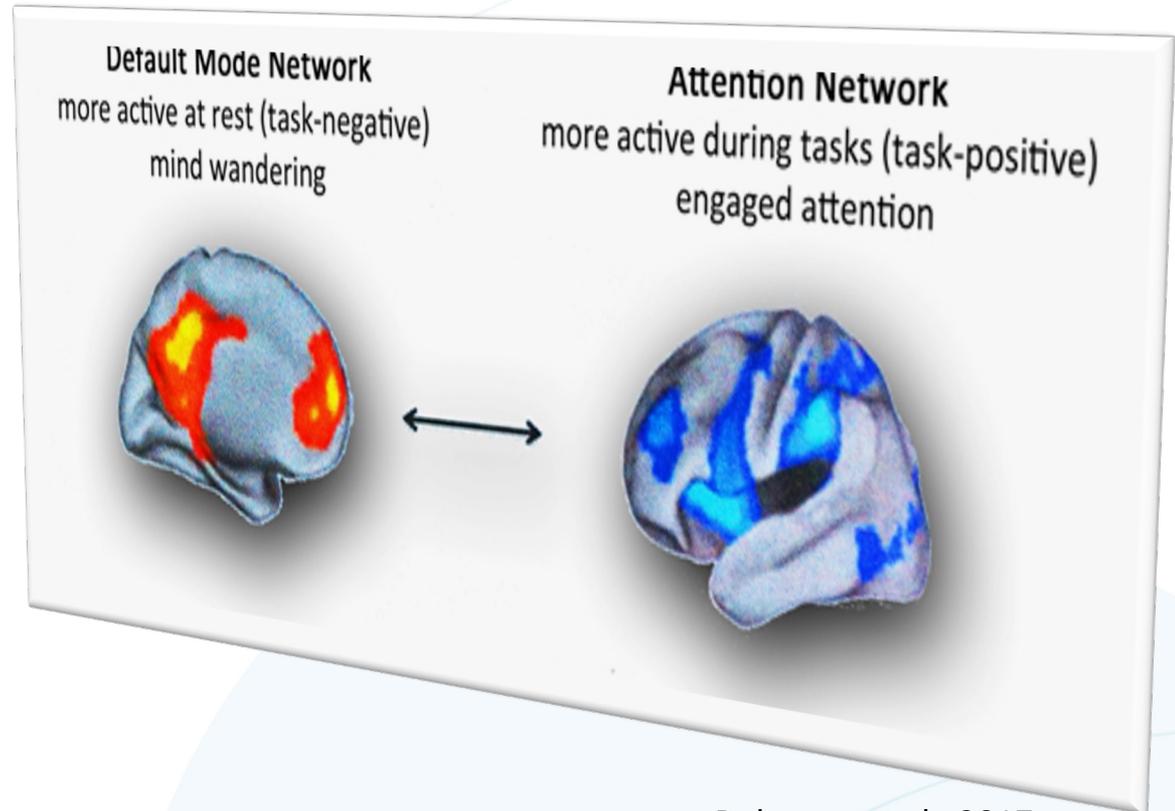


Many of us share the same challenge...  
**EXCESSIVE UNNECESSARY THINKING!!!** Too much Blah Blah Blah...

# Task Positive Network (TPN)



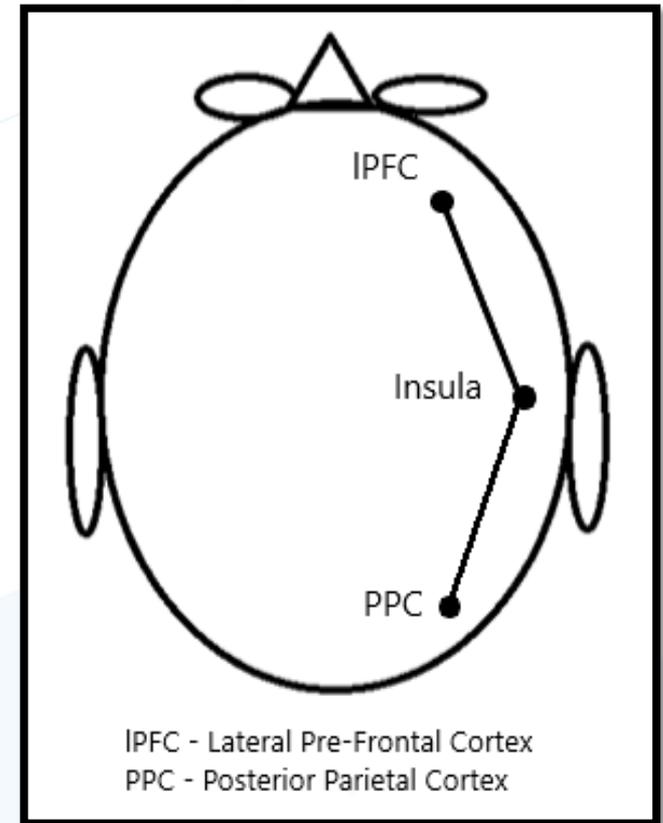
IPFC - Lateral Pre-Frontal Cortex  
PPC - Posterior Parietal Cortex



Delaveau et al., 2017

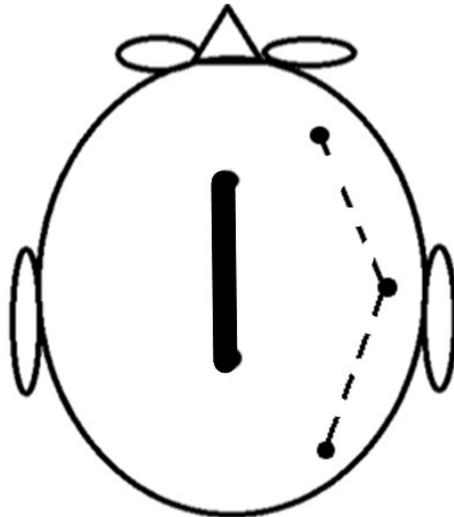
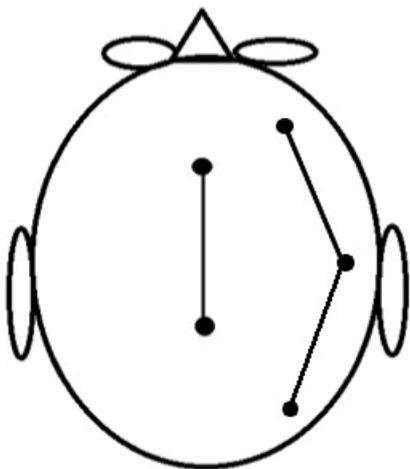
# The TPN

- Also referred to as Central-Executive Network (Wotruba et al.,2013)
- Highly involved in goal-oriented activity
- Associated with a focused state



# DMN vs. TPN

- These networks 'compete' for brain activity
- Researchers have described these networks as 'anti-correlated' (Wotruba, 2013)
- Depressive states have been characterized as a dominance of the DMN over the TPN (Marchetti et al., 2012)



# Mental Training

- Experienced meditators have demonstrated reduced DMN activity 'at rest/not meditating' compared to novice meditators (Brewer et al., 2011)
- DMN activity has been shown to be reduced when comparing pre/post mindfulness training program (Farb et al., 2007)
- As little as 6-12 minutes a day of various meditation practices has demonstrated beneficial effects on the brain (Moyer et al., 2011)



Gary Weber  
(30 000+ hours of meditation  
practice)

# The Case for Mental Hygiene

- We, as modern day people, are generally prone to excessive unnecessary thinking resulting in high DMN connectivity
- A quieter brain = a happier brain
- In order to **BE** a healthy organization, we must ourselves practice good mental hygiene
- Mental Hygiene is a universal principle

Article

## Mental Hygiene: What It Is, Implications, and Future Directions

Guillaume Tremblay<sup>1</sup> , Nicole C. Rodrigues<sup>1</sup>, and Sanjiv Gulati<sup>1</sup>

Journal of Prevention and Health Promotion  
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We need to move from selectively using ‘tricks’ and ‘techniques’ to embedding daily mental hygiene practices into one’s lifestyle

# Mental Hygiene Practices (16 available in the toolkit)

- ▶ Breathing Stillness (10-20 seconds of focused breathing)
- ▶ Any focused breathing, pushing the abdomen out as your inhale is healthy for you.
- ▶ Thinking Through vs. Thinking about (5 minutes on paper)
- ▶ TaSaNaMa Chant
- ▶ Coordinating breathing and walking
- ▶ Gratitude Exercises (Write and feel three new things daily you are grateful for)
- ▶ Positive Psychology Exercises (Write down and deliberately think about things you like about yourself)
- ▶ Journaling (write whatever comes to you for 5 minutes, finish up with 2-3 positive things.
- ▶ Pro-Social Prayer (wishing others well, being humble to the mystery of that which is greater than our individuality)
- ▶ Thought-Flow Charts (Identify your feeling, identify some of your thoughts, question them “is this thought absolutely true”)
- ▶ Nature Exposure (connect with nature, elicit a sense of AWE)
- ▶ Guided meditation

<https://www.youtube.com/watch?v=79r4jIECyTs>

<https://www.youtube.com/watch?v=9PozgygMY4s>

<https://www.youtube.com/watch?v=SOf6EXR3qlQ>

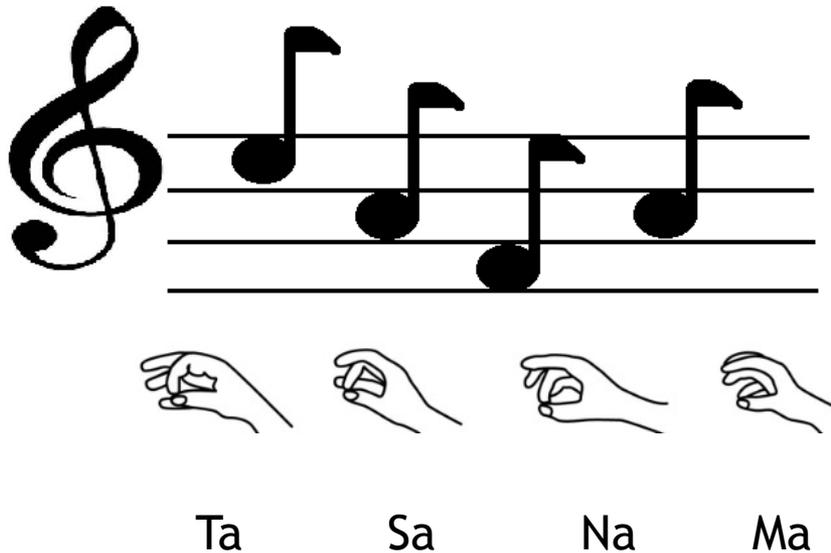
# Breathing Stillness

- ▶ 15-20 second exercise
- ▶ 2-3 breaths
- ▶ Deeply focus on the physical sensation of your nostrils as the air goes in and out.
- ▶ Feel you belly moving up and down.
- ▶ Help creates pauses in the 'blah blah', creates a temporary space of stillness. Reduces DMN activity.
- ▶ Repeating every hour during waking hours can be an excellent way to practice good mental hygiene.



# Kirtan Kriya Chant

- ▶ Evidence Based Technique for calming the mind.
- ▶ Non-symbolic sounds: Ta, Sa, Na, Ma
- ▶ We combine chanting, finger movements, and visualization
- ▶ 12 minutes chant: 2min normal voice, 2min whisper, 4min quietly, 2min whisper, 2min normal voice.



The image shows a musical staff with a treble clef and four notes. Below the staff are four hand gestures, each corresponding to a note and a syllable. The syllables are Ta, Sa, Na, and Ma.

Ta      Sa      Na      Ma



# Thinking about vs. Thinking through

- ▶ This is a pen and paper exercise



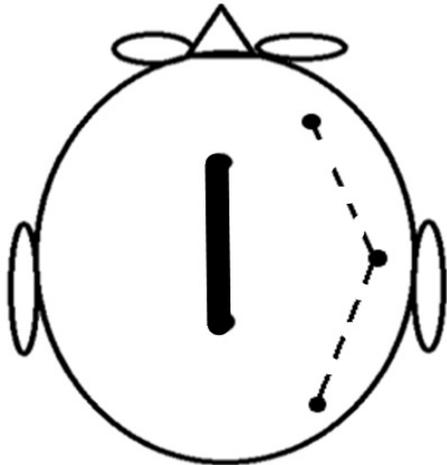
- ▶ Write down the one thing this is troubling you the most that day.
- ▶ Now think it through, really think through it:
  - What are the possible solutions to this challenge?
  - What are the pros and cons of solution A vs. solution B
  - What initial steps can I do to carry out the solution.
- ▶ Brainstorm through the challenge as best you can.

Remember thinking through  $\neq$  thinking about.

# Thinking about vs. Thinking through

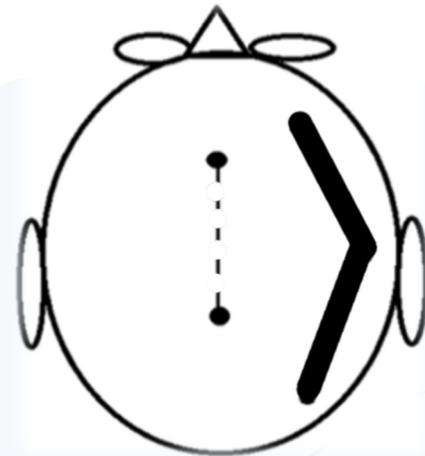
## ***THINKING ABOUT***

- Worry provoking
- Mind wandering
- Non-solution/problem focused
- Distracted



## ***THINKING THROUGH***

- Reflective
- Concentrated
- Solution focused
- Clear & Relaxed



# Coordinating Breathing and Walking



Inhale

Exhale

Inhale 3 steps...exhale 4 steps...inhale 3 steps...exhale 4 steps

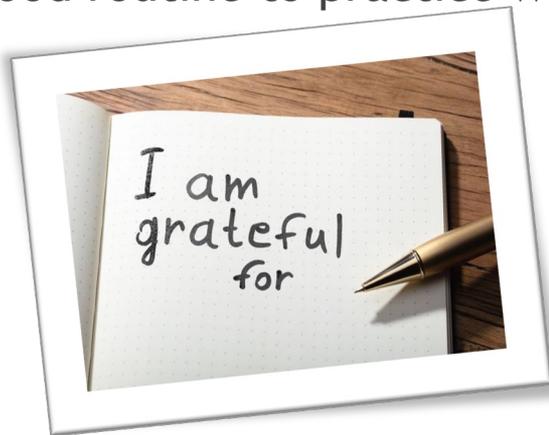
- The main idea is to have more steps on the exhale.
- Other combinations depending on your preference can also work.
- For example, inhale 2...exhale 3, or inhale 4...exhale 5

This can be done anytime you are walking anywhere, great way to encourage a quiet mind.

# Gratitude Exercises

Big big surprise, gratitude is very good for you!(O’Leary and Dockray, 2015)  
A simple gratitude exercise goes as follows:

- ▶ This is a pen and paper exercise
- ▶ Write down three different things you appreciate about your life and for which you are grateful.
- ▶ When you’re done, re-read them, slowly pausing between each one to take a moment and truly feel the gratitude in your body, even if it’s just a tiny bit.
- ▶ The goal is to elicit brief moments of genuine gratitude, even if on a small scale.
- ▶ This is a good routine to practice when you wake up or before you go to bed.



# Self-Compassion



There are three pillars to self-compassion. This is the work of Dr. Kristin Neff

- ▶ **Kindness and understanding to oneself** (particularly to those aspects we generally don't like)
- ▶ **Remembrance of our shared humanity** (we are not unique in our limitations and suffering, but rather an expression of the human condition)
- ▶ **Mindfulness over self-identification** (learning to observe/witness our negative emotions rather than identify with them)

# Self-Compassion vs. Self-Esteem



## Self Compassion

- ▶ A dedication to being kind and understanding to oneself, remembering your shared humanity, and learning to be aware of/witness/observe our negative emotions.
- ▶ Same or greater upside potential than self-esteem, no downside potential.
- ▶ Reliable, not dependant on external circumstances
- ▶ Provides a healthy and reliable buffer to the challenges of life.

## Self Esteem

- ▶ It is an evaluation of our worthiness as individuals. A judgement that we are good valuable people.
- ▶ Potential upside in supporting well-being, but also significant potential downside
- ▶ Often unreliable, dependent on external circumstances

**\*\*\* Fostering and nurturing self-compassion provides more emotional resilience and stability**

# The Mental Hygiene Recommendation

The mental hygiene recommendation is simple:

TEND TO YOUR MENTAL HYGIENE 10 MINUTES A DAY



Few thoughts on this:

- ▶ Find a combination that work for you, 1 minutes 10x a day, 2 minute 5x a day, or 10 minute all at once.
- ▶ Choose one you connect with, or...
- ▶ Mix and mash the different techniques reviewed in whichever way feels best for you.
- ▶ Make it your own!
- ▶ Pick it an approach that works for you and go for it!

# MENTAL HYGIENE

CHALLENGE 2022



- ▶ In March of 2022 we completed our first Mental Hygiene awareness campaign. This year in 2023 was another success for the second year in a row.
- ▶ For the month of March, The Royal inaugural Royal Mental Hygiene Challenge, through which we called on the community to practice at least 10 minutes of mental hygiene daily to support their mental health and wellness.
- ▶ One of our main goals of the challenge was to help the community build healthy habits and resilience in a challenging time. We wanted the challenge to serve as a springboard for the community to start thinking about their mental hygiene, and give folks motivation to start building these healthy habits.

# MENTAL HYGIENE

CHALLENGE 2022



## Testimonials from Participants

- ▶ “I was already working hard to mentally manage anxiety, etc., but this challenge has given me support, encouragement and so many new challenges to try. Thank you so much for creating this and to all the participants who shared their experiences.” - Facebook group participant
- ▶ “I wanted to say a huge thank you to all of you on the Mental Hygiene Challenge Team. You all have been amazingly supportive and all your experience and knowledge you have provided has taught me what I sought out to achieve in this challenge... to be more at peace through both physical and mental exercise, to think through instead of thinking about and to be more insightful. I feel like a much better person.” - Facebook group participant
- ▶ “I feel more grounded. I’m enjoying the different exercises and I really enjoy seeing others’ shared experiences. It really helps and those posts have often helped to remind me of doing the challenge. It’s so easy to get lost in a busy day, and the day becomes a blur.” - Facebook group participant
- ▶ “Really, just thanks for doing this. I try to walk outside every day and I keep a sort-of journal all the time. But this mental hygiene month challenge is terrific. Great to read people's comments and suggestions. It's having a wonderfully positive effect. Thanks, everyone!” - Facebook group participant

# MENTAL HYGIENE

CHALLENGE 2022



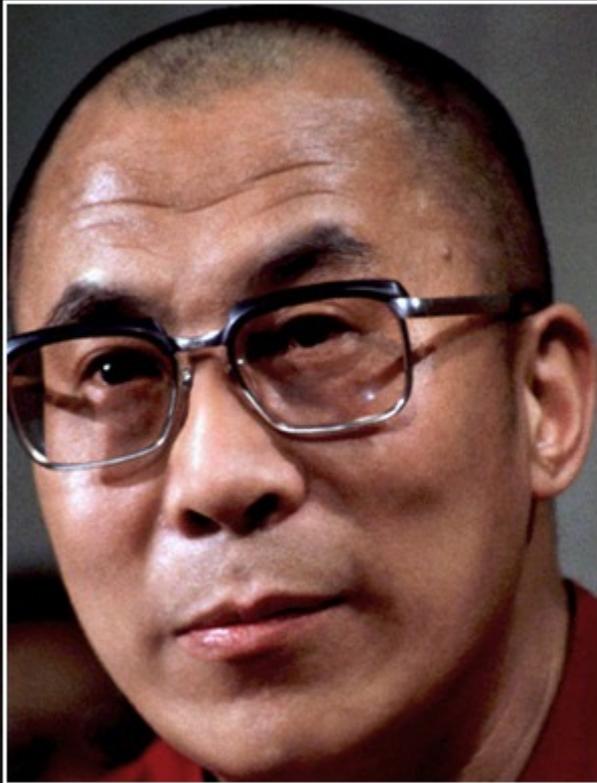
- ▶ Our results from the pre-post survey of the mental hygiene challenge showed an average improvement of 25% on the wellbeing scores.
- ▶ This year's Mental Hygiene Challenge well-being scores are still being collected and processed.
- ▶ Access the toolkit and podcast at this link:

<https://mentalhygienetoolkit.mystrikingly.com/>

<https://mentalhygienetoolkit.mystrikingly.com/mental-hygiene-practices>

- ▶ Tell your friends and family to sign up, spread the word!

## In other words...



Values are related to our emotions,  
just as we practice physical hygiene  
to preserve our physical health, we  
need to observe emotional hygiene  
to preserve a healthy mind and  
attitudes.

— *Dalai Lama* —

AZ QUOTES



THANK YOU!!!