Brain Management

A Strategy For Difficult Times

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Our experience starts in our brain. What we are aware of, how we think, feel, and how we respond (or react) to life & work situations depends on the combination of brainwave patterns at any given time.

- For example, our brains function very differently when multi-tasking than when engaged in creative work.
- Understanding how our brains function and learning how to manage our brain patterns gives us the freedom to have responsible choice over our intellectual and emotional states of consciousness at any given time.
Brain management

- The capacity to manage our brain state is even more important in our current economic climate.
- In times of rapid change, stress, or uncertainty, the portion of our brain called the Amygdala activates, generating a flight, fight, or freeze response.
- While this is essential for physical survival it works against the very response we may need - resourcefulness and creativity.
- Whether we are in stressful situations or not, we can influence our brainwave patterns to induce the state most suited to the situation at hand.
- High performing athletes know this well and have practices to induce the state of focus, intuition, or reflective action needed to excel.
What you’ll learn

- We’ll introduce a simple technique which uses the natural process of our brain and body to enter a more relaxed, creative, open, and centered state by:
  - Shifting to lower brain frequencies, with greater access to our creativity and intuition
  - Slowing our brainwaves and accessing a more relaxed state
  - Releasing mood elevating hormones and stimulating our ability of our body to renew itself
Balanced Brain

**Frontal Lobe = “CEO Function”**
- Brakes on Emotions
- Ability to Self-Reflect
- Consider Alternatives
- Use Best Judgment
- See Big Picture
- Come From Place of Choice

**Amygdala = “Emotional Watchdog”**
- Scans environment for Emotional Information
- Reacts to situations with feelings (e.g. anger/fear)
- Matches what it finds to your emotional memories

When your brain is “balanced” you are able to weigh your options, bring in your emotional reactions/intuition, and make sound decisions based on good judgment and understanding of the consequences.
In an Amygdala Hijack your intense feelings flood your Frontal Lobe leading to impulsive reactions, poor judgment and decisions without planning and consideration of the consequences.

- Intense feelings
- Memories from past
- Overwhelming
- Speed heart rate
- Raise blood pressure
- Slow breathing
- Rivet attention
- Freeze muscle

Fear/Anger/Sadness

Fight/Fight/Freeze
Brainwaves are measured in Hz.
Brain waves

<table>
<thead>
<tr>
<th>Brain Waves (CPS)</th>
<th>Layman’s Term</th>
<th>Heart/Breathing Rate</th>
<th>Hormonal System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delta 0-4</td>
<td>The SEAT of Empathy / Intuition / Gut-feel</td>
<td>Low</td>
<td>DHMP activates: Parasympathetic system</td>
</tr>
<tr>
<td>Theta 4-8</td>
<td>The SEAT of Creativity / Inspiration / Memories</td>
<td>High-Beta activates: Sympathetic System</td>
<td></td>
</tr>
<tr>
<td>Alpha 8-14</td>
<td>One-point focused</td>
<td>High</td>
<td>Releases Mood-enhancing hormones, OXYTOCIN (hormone of happiness)/ engages more creative LEFT-brain</td>
</tr>
<tr>
<td>Beta 14-38</td>
<td>Multitasking</td>
<td>Low</td>
<td>Releases CORTISOL and ADRENALINE / engages RIGHT-brain for logical thinking</td>
</tr>
</tbody>
</table>

Hormonal System

- **High-Beta** activates: Sympathetic System
  - Releases CORTISOL and ADRENALINE / engages RIGHT-brain for logical thinking
- **DHMP** activates: Parasympathetic system
  - Releases Mood-enhancing hormones, OXYTOCIN (hormone of happiness)/ engages more creative LEFT-brain
- **Reverses stress-effect / feel more open and trusting**

Heart/Breathing Rate

- **Low**
- **High**

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Meditation – what do you think of?
Meditation encompasses a wide variety of techniques

- **Concentrative**
  - Meditative technique that directs the mind to a single focus, such as on the breath or a mantra
  - Teaches an even handed, accepting awareness of whatever arises in the senses
  - Heightens awareness of the sensations of movement, such as in walking or Tai Chi
  - Generates a mental image, from simple crosses or complex symbols such as the elaborate mandalas of Tibetan Buddhism
  - Cultivates a positive mood or beneficent outlook through the contemplation of such feelings as compassion for all people
  - Seeks solace or solution to specific problems by turning negative emotions into positive energies

Meditation practice has many benefits

- Reduce stress
  - Reduce blood pressure
  - Lower heart rate
  - Decrease psychological distress

- Improve health
  - Has positive impact on healing of medical conditions such as psoriasis
  - Prevents relapse/recurrence of major depression
  - Boosts immune response, increasing antibodies after flu shot
  - Helps manage chronic pain

- Heightened awareness
  - Improve memory
  - Increase learning skills
  - Improve academic performance

- Positive affect
  - Increase positive affect
  - Increases adaptability
  - Decreases frustration
  - Increases in vigour and energy

- Impact on brainwaves
  - Decrease in beta waves, associated with logical thinking, multitasking
  - Increase in theta waves, associated with creativity
  - Increase intensity of alpha waves, associated with single-pointed focus
Meditation is effective in reducing stress

- Reduce blood pressure
- Lower heart rate
- Decrease psychological distress
- Provide effective treatment for anxiety and panic disorders
- Reduce symptoms of stress in cancer patients
- Reduce metabolic rates
Meditation has numerous health benefits

- Has positive impact on healing of medical conditions such as psoriasis
- Prevents relapse/recurrence of major depression
- Boosts immune response, increasing antibodies after flu shot
- Relieves insomnia
- Dramatically improves fertility
- Improves the health of HIV patients
- Helps manage chronic pain
- Reduces heart disease
Scientifically proven that meditation heightens awareness

- Improve memory
- Increase learning skills
- Improve academic performance
- Remain aware of stimuli to which we normally become habituated to (e.g., clock ticking, clicks)
- Better control of psychological state
- Enhanced control of the body (e.g., metabolic rate)
Meditation increases positive affect

- Shift activity in the prefrontal cortex from right to left which leads to:
  - More enthusiasm
  - More interests
  - Greater relaxation
  - Tending to be happier

- Reorients one from stressful fight or flight mode to acceptance, a shift that increases contentment

- Increases adaptability and decreases frustration

- Increases in vigor and energy
Meditation has a direct impact on brainwaves

- Decrease in beta waves, associated with logical thinking, multitasking
- Increase in theta waves, associated with creativity
- Increase intensity of alpha waves, associated with single-pointed focus
- Deactivation of the frontal areas that receive and process sensory information
Building Blocks For Meditation

- Close Eyes
- Relax Body
- Focus Breath At Heart Level
- Visualize
Speaker information

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David Deming
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The **amygdalae** (Latin, also *corpus amygdaloideum*, singular **amygdala**, from Greek, *amygdalē*, 'almond', 'tonsil', listed in the Gray's Anatomy as the **nucleus amygdalæ**)
- almond-shaped groups of neurons located deep within the medial temporal lobes of the brain in complex vertebrates, including humans
- Shown in research to perform a primary role in the processing and memory of emotional reactions, the amygdalae are considered part of the limbic system.
Amygdala Hijack

Stimulus

Fight

Freeze

Flight

Thalamus

Limbic System

Reptilian Brain

Neocortex