Staying Centered!

In a Stressed-out world!

Dr. John Pellitteri
How did we get in this situation?
What does evolution reward?
Homo Sapiens

• May have co-existed with H. erectus and Neanderthals
• Believe in fantasies: work together
Why do we have stress at all?

Adaptive to our survival

Autonomic Nervous System

Sympathetic

Parasympathetic
Fight, Flight, Freeze

Sympathetic Arousal
- Eyes Dilate
- Heart Beats
- Blood Redirected
- Sweat
- Neurons fire faster (epinephrine)
Hans Selye

- The “father” of stress
- A misnomer, really
- Stress vs. Strain
These are adaptive!
So why is stress/strain bad?
Stress!

• Causes or exacerbates disease processes by exhausting our immune system
• Long term cortisol production results in organ damage
• Has been linked to cardiovascular diseases, coronary heart disease, hypertension, diabetes, and other chronic conditions
• Correlated with sick days, underproduction, work conflict, grievances, and complaints
Figure 11.17 The Alarm Reaction

Brain
Hypothalamus
Anterior pituitary

Adrenal glands
Epinephrine
Cortisol
Norepinephrine

Stress response
(a) Response systems affected in jump situation
<table>
<thead>
<tr>
<th>Principal components of the stress response</th>
<th>Common pathological consequences of prolonged stress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobilization of energy at the cost of energy storage</td>
<td>Fatigue, muscle wasting, diabetes</td>
</tr>
<tr>
<td>Increased cardiovascular and cardiopulmonary tone</td>
<td>Hypertension (high blood pressure)</td>
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<tr>
<td>Suppression of digestion</td>
<td>Ulcers</td>
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<tr>
<td>Suppression of growth</td>
<td>Psychogenic dwarfism, bone decalcification</td>
</tr>
<tr>
<td>Suppression of reproduction</td>
<td>Suppression of ovulation, impotency, loss of libido</td>
</tr>
<tr>
<td>Suppression of immunity and of inflammatory response</td>
<td>Impaired disease resistance</td>
</tr>
<tr>
<td>Analgesia (pain-killing)</td>
<td>Apathy</td>
</tr>
<tr>
<td>Neural responses, including altered cognition and sensory thresholds</td>
<td>Accelerated neural degeneration during aging</td>
</tr>
</tbody>
</table>

Source: Sapolsky, 1992.
Why Zebras don’t get ulcers
A comparison of the Human Animal
Species Cage Match
And yet...

- Homo Sapiens are the dominant species on the planet
All due to our frontal lobes and cerebral cortex.
We can

• Imagine things that never were
• Contemplate our own death
• Create fantasies
Sympathetic Nervous System

• Can’t tell the difference between life-threatening stimuli and others
Allostasis

• “changes in biological systems as a result of prolonged exposure to stress”
• Long-term neuroendocrine systems
• Occurs in high-stress and high-risk environments over time
Stress has

- Physical effects
  - Fatigue
  - Illness

- Psychological effects
  - Cognitive problems
  - Decision-making/insight

- Emotional effects
  - Depression
  - Anxiety
So what the heck do we do about it?
Physically
There’s only one way to armor oneself against the physical effects of stress...

Proper diet and exercise

Vitamins water walking avoiding people who are sick proper sleep relaxation time no smoking etc.
Psychophysiological
Breathing Techniques

• Optimum Resonant Breath Frequency (between 6.5-4) breaths per minute
• Respiration – semi-conscious control
• Balances sympathetic and parasympathetic nervous systems and affects vagus nerve (CN X)
Different people have different nervous systems, though

Who will get PTSD?
Cognitive Appraisal

• Train your brain to appraise stimuli differently

A → B → C

Model
Rational Emotive Therapy

- Activating Event – No control
- Emotional Consequence – No control

Belief System - control
The RET argument (Aspirational)

- You can choose how to feel ("you make me so mad")
- Since you can choose how to feel, and feeling angry, sad, depressed doesn’t feel good, it is rational that you should choose to feel good all the time
- Bad feelings, then, come from irrational thoughts
Examples

• “She shouldn’t treat me that way”
• “I must get my way”
• “I can’t fail”
• “This is just awful”
• “Don’t talk to me like that”
• “This should happen”
By changing the belief system,

• You give yourself emotional “room” to feel differently

A ⟷ B ⟷ C ⟷ D ⟷ E

Model
Recommended books that informed this presentation
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