STRESS AND THE HUMAN MACHINE

WHY IT ALL MATTERS

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BASIC BRAIN SCIENCE

Neo-Cortical Brain
Limbic (Mammalian) Brain
Reptilian (Lower) Brain

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STRESS RESPONSE
THE ONE TWO PUNCH OF SURVIVAL

- Sympathetic Nervous System
- HPA Axis

STRESS INJURY FORMATION

TRAUMA: “A STIMULUS THAT OVERWELMS ONE’S CAPACITY TO INTEGRATE IT.”

- Response system overwhelmed
- Emotional Connection
- Isolation
- Helplessness
STRESS INJURIES ARE PHYSICAL INJURIES

Increased chronic cortisol secretion leads to:
- Increased inflammation
- Sleep disruption
- Central Adiposity
- Pathological Fractures
- Hypertension
- Hyperlipidemia
- Cardiac injuries
- Diabetes
- Cancer

NUMBING AND SURVIVAL TOOLS

Numbing and addiction are always adaptive for something.

People always choose the best option available

If you know how you numb, you’ll know when your numbing

ALWAYS add a resource, rather than taking one away
Rigidity
Lack of choices
Scarcity
Feeling there is not enough
Feeling of fear looking for a confirming story
Isolation
Unable to change without outside help.
Everything is a problem
Depletion
“This is just how I am”

PRE-TRAUMATIC STRESS MANAGEMENT
Changing the camera angle
What does this have to do with risk management?

**READY**
- “My observations matter”
- Engaged in mission
- Keen to communicate
- Agility to respond to risk
- Trust actions will make a difference
- Willing to be wrong
- Willing to take a risk to manage risk
- Spontaneous noticing
- Stop and fix

**REACTING**
- Shortcuts
- Apathy
- Careless errors
- Things falling through cracks
- Out of character mistakes
- “Nobody’s listening”
- Risk is someone else’s problem
- Freelancing noncompliant behaviours

**INJURED**
- Stop sharing observations
- Executive thoughtfulness hijacked
- “tunnel vision”
- Disconnection from positive pressure
- Non-sharing silo tribes
- “It’s not my problem.”
- I’m not going to be here long
- “Fuck them.”

**ILL**
- Non compliant with systems
- Culture of trust breaking down
- Fear of retribution
- Fear of reporting
- “My actions don’t matter”
- Hiding knowledge gaps
- Unresolved conflict
- Loss of scene awareness
- “It’s not my problem.”

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**STRESS CONTINUUM FOR THE TEAM**

**READY**
- Resources adequate if not ample
- Open to Opportunity & Innovation
- Meeting emergencies with a well-oiled, capable team
- Mission Alignment

**REACTING**
- Resources stretched
- Open to opportunity in theory, “but not now, we’re busy”
- Coping with emergencies – barely
- Some Mission Questions

**INJURED**
- Resources scarce
- Rigid perspectives
- Closed to opportunity
- Emergencies strain the system and are survived rather than dealt with capably
- Major Mission Questions

**CRITICAL**
- Resources absent
- Calcified perspectives
- Communication channels closed
- Sense of doom
- Mission Drift: “why are we doing this?”

Mission satisfaction/ Mission Drift
Room for complexity
Space for integration
Cognitive flexibility
Choices
Connected relationships
Available for relationships
Innovation
Motivation
Physical Health
Mission Satisfaction

LIFE IN GREEN

“A tree that cannot bend will crack in the wind.”

Lao Tzu – Tao The Ching
4th Century B.C.
**Battery Check**

**Capacity Snapshot**

Connection  
Mission  
Sleep  
Space

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**Battery Snapshot**

**What charges the battery?**
- Space
- Connection
- Sleep
- Movement
- Play
- Gratitude
- Innovation
- Mission Satisfaction

**What drains the battery?**
- Overwhelm
- Too much demand
- Broken systems
- Isolation
- Meaningless work
- Sleep deprivation
- Mission exhaustion

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ELDORA PATROL BATTERY

What charges the battery?
Playing outside of work
Pizza delivery to PHQ
Days off in a row
Projects that mean something
Slow days
Good teamwork
First Tracks on the Backside
Working with great people

What drains the battery?
Being short staffed on the mountain
Early open
Early morning racing all week
Serious incidents on the mountain
Holiday madness
Too much work for too few patrollers
Too much volume on the ICON pass

EXPOSURE CARE IN REAL TIME
Green choices
What helps.

1. One person you tell what's really happening (who knows what you do)
2. Measure for vitality and participation in life
3. Identify numbing tools so you know if you’re using them
4. Sleep commitment
5. Exercise to decrease arousal
6. Early warning system to recognize injury formation
7. Space for integration.
8. Plan for exposure
9. Low tolerance for emotional pain
10. Family and community involvement

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1. Trend toward green yourself. People will follow you
2. Model using available support
3. Use language that supports early recognition
4. Consider using the Stress Continuum to create a common goal and common language
5. Prioritize and recognize green behavior in teams and individuals
6. Set realistic goals for resiliency and vitality
7. Hire green people
8. Create teams that people want to come home to when critical incident stress occurs

What helps.

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**GREEN CHOICES-INDIVIDUAL**

<table>
<thead>
<tr>
<th>Health</th>
<th>At work</th>
<th>Outside of Work</th>
<th>Relationships</th>
<th>Survival Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sleep 8 hours a night (5 days a week)</td>
<td>1. Reviewing what worked on a call vs. talking shit</td>
<td>1. Get to the mountains twice a month</td>
<td>1. My 2 best friends known how I’m doing</td>
<td>1. One beer turns into four</td>
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<tr>
<td>2. Playing on a softball team</td>
<td>2. Volunteer to teach a training</td>
<td>2. Have dinner with friends/family once a week</td>
<td>2. Choosing time with my family</td>
<td>2. Busyness/Constant noise</td>
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<tr>
<td>3. Meditation/Prayer 4-6 times a week</td>
<td>3. I am enjoying my work</td>
<td>3. I say no when I feel overwhelmed</td>
<td>3. Spend time with people who aren’t responders</td>
<td>3. Drinking coffee to stay awake</td>
</tr>
</tbody>
</table>

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### YOUR TEAM, GREENER

<table>
<thead>
<tr>
<th>Training</th>
<th>Connection</th>
<th>Mission Care</th>
<th>Practices</th>
<th>Resources</th>
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### INDIVIDUALIZED RESILIENCY PLAN

- Connection
- Structure
- Creativity
- Laughter/Play/Dance
- Movement
- Health
- Meaningful Work
- Service
- Boundaries

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• **Connection / authentic relationships**
  • Serve as a buffer to the challenges of life
  • Decrease anxiety and depression
  • Add to motivation to persevere
  • Help you process your thoughts
  • Increase self-esteem

**Examples:**
• Dinner prep and eat with Charlie
• Gratitude practice with crew
• Dinner with GC
• Workout with E
• Call M, R, E, GC, J
• Hoffman group
• Duties dinner
• Text or email a message of support or kudos

• **Structure / Order**
  • Increase free time and energy
  • Instills good habits and break bad habits
  • Reduces the amount of willpower
  • Builds momentum
  • Reduces procrastination

**Examples:**
• Sunday meal prep
• Pack bag the night before
• No electronics after 8:30
• Go to the gym straight from school pick up
• Walk dogs first thing in the morning
• Computer off by 5, phone by 9
Laughter / Play / Dance

- Improves state of mind
- Reduces stress hormones
- Builds social connection
- Healthy and de-escalating physical release

Examples:
- Movies
- Chill out with my playlist
- Play goalie for my kid
- Fort building
- Ski with anyone

Creativity / Innovation

- Increases focus on the present
- Increases connection with our authentic self
- Expands our awareness
- Provides an opportunity for freedom
- Decreases depressive symptoms
- Delays cognitive decline

Examples:
- Say yes to invitations
- Record videos of youtube on
- Meditation, Resilience, Retirement
- Journal
- Seek opportunities to collaborate
• Solitude / Space for Integration
  • Provides the psychological and emotional space to integrate our lives with ourselves
  • Reboot your brain and unwind
  • Get more in touch with yourself
  • Examples of ways to create:
    • Digital detox
    • Close the door
    • Arrive early
    • Scheduled time to reflect
    • Quiet

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• Gratitude & Joy
  • Ways to build and savor the positive in your life while acknowledging the struggle
  • Builds a positive state of mind
  • Makes your worldview more productive
  • Feels good
  • Increases connection with others
  • Examples:
    • Gratitude journal
    • Express my gratitude for those around me
    • STOP to savor the positive when it occurs

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- **Cultivating Meaningful Work / Home**
- Working on something meaningful to us is the definition of purpose
- Creates fulfillment, satisfaction, and integrity
- Drives deeper engagement
- Builds a resilient mindset
- Creates integrity

**Examples:**
- Journal about how my work connects with my values of growth, connection, humor, and authenticity.
- Write and reflect on my vocation description. What calls to me about my job?
- Contemplate 3 positive points of focus I can have each workday.
- What’s meaningful that I want to pursue?
- Contemplate how many years I have left and how I want to be remembered.

- **Movement**
- Stress relief!
- Increased mental clarity and creativity
- Increases beneficial hormones
- Improves immune response
- Combats depressive symptoms

**Examples:**
- Yoga
- Trail run
- Lacrosse with C
- Gym
• **Boundaries**
  - Saying no and being clear about how you want to be treated
  - Decreases drain
  - Increases mental energy
  - Shifts of attention to your values
  - Builds self-esteem and often challenges unhealthy behaviors
  - **Examples:**
    - What will you say no to? Alternatively - what do you say yes to that drains you?

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**Health**
Sleep
Good food
Hydration
Alcohol/smoking/drugs - How much, limits, goals

**Examples:**
Plan for 8-hour sleep window
Decaf coffee
3 liters of water a day
Green leafies
No booze after 20:00
Move my body or eat fruit when craving sugar
Beware of the afternoon doldrums
• **Faith & Service**
  • Ways to build trust and connection to others and things larger than you
  • Create meaning and connection
  • Decreases depressive symptom
  • Increases self-confidence
  • Contributes strongly to physical health

  Examples:
  • Look for small ways to help each day and discuss with Charlie
  • Service mindset at work - picture the people I’m helping and see them as whole people
  • Say yes when someone asks for help
  •