

# The Role of Lifestyle in Stress, Coping and Mental Health

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# Disclosure

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I have no financial relationships to disclose

I will not be discussing off-label or  
investigational use of drugs

# Why focus on mental health?

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- Strong link between physical and mental health:
  - People with chronic health issues more likely to struggle with anxiety and depression
  - People with mood disorders more likely to develop physical health issues
  - Lifestyle interventions work for BOTH physical and mental health problems

# Overview

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- Stress and its effects on cognition
- Shutting of the stress response
  - Sleep
  - Physical activity
  - Recreation
  - Stress reduction strategies
  - Nutrition
- Facilitating behavioral change (MI)

# Why medication alone isn't enough

- New England Journal of Medicine  
Jan. 17, 2008- Vol. 358, No. 3 (252-260):
  - Selection bias in RTC' s of SSRI' s:
    - Meta-analysis, 74 RCT' s, 12 antidepressants
    - 12,500 patients (1987- 2004)
    - Of 38 positive studies, all but one was published
    - Of 36 the FDA considered negative or equivocal
      - Two thirds (22) were not published
      - 1One third (11) were published with positive conclusions
- THEREFORE:
  - 48/ 51 appeared to be positive, but....
    - only 38/ 74 actually produced positive results
- Need effective non-medication approaches to optimizing mental health for our clients

# Psychological Stress 101:

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- Evolutionarily advantageous:
  - Example of caveperson and saber-tooth tiger
  - Blood get shunted to organs critical for survival (heart, lungs, muscles, brainstem)
  - Blood gets shunted away from organs NOT critical for survival (GI track, reproductive track, immune system, prefrontal cortex)
  - Allows for “fight, flight or freeze” response
- Gets triggered equally by EXTERNAL as well as INTERNAL events (i.e. negative thoughts)
- Not all events are true threats to survival (but our body doesn't know this!)

# Psychological Stress Response: (continued)

- **Increased arousal, alertness, vigilance**
  - Over-interpretation of stimuli as potential threat to survival
  - Maximizes ability to stay alive in life-threatening circumstances
  - Chronic: cycle of negative emotions and distorted perception
  
- **Inhibition of higher (*cortical*) mental activity**
  - Mind goes “blank” (thinking is *reflexive*, not *reflective*)
  - Unable to take in and process new information as easily (car keys)
  
- **Chronic repetitive negative thoughts can become:**
  - Anxiety disorders (worries about the future)
  - Depressive disorders (anger, sadness, regrets about the past)
  - PTSD
  
- **Harmful/ addictive behaviors: an attempt to “quiet the mind”**
  - Drug and alcohol use
  - Cutting behavior

# Psychological Homeostasis

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- The mind's ability to SELF-RIGHT ( INNATE)
- Allows us to return to higher cognitive functioning
- During a stress response, blood is shunted from this region to the brainstem in order to facilitate the “fight, flight or freeze” response
- In order to facilitate the mind's ability to self-right, therefore...  
...one needs to shut off the STRESS response
- Most of the time, we do this automatically
- ....BUT sometimes we get stuck

# Why do we get stuck in the “stress” response?

- Repetitive negative thoughts

- Lifestyle:

- Inadequate sleep

- Inadequate physical activity

- Lack of recreational activities/ relaxation skills

- Sub-optimal diet

- Micronutrient deficiencies

- Food intolerances

- Inflammation

- Turns on stress response (cortisol, adrenaline)

- Energy used for “fight or flight”, NOT healing/ repair

# Optimizing Homeostasis

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- Stress reduction:
  - CRITICAL first steps:
    - Optimize sleep
    - Optimal nutrition
    - Increase physical activity
  - Recreational activities
  - Body movement therapies (Yoga, Tai chi, Qi gong)
  - Self-regulatory techniques ( biofeedback, self-hypnosis)
  
- Cognitive/ Behavioral:
  - Learning to recognize/ disengage from negative/ distorted thoughts
  - Mindfulness-based therapies (Jon Kabat-Zinn, Ph.D)
  - Health Realization (focus on innate capacity to self-right)

# SLEEP

- 2003 National Survey of Children's Health:
  - 15 million children/ adolescents: inadequate sleep
  - Risk factor for development of anxiety and depression
  - Anxiety, depression → poor sleep quality and quantity
- Optimal hours of regenerative sleep: 10pm to 2am
- What interferes?
  - School/ after school/work schedules
  - Intellectually stimulating activities before bedtime (TV, internet, reading, phone use)
  - Caffeine-containing foods and beverages
- What helps?
  - Limiting daytime naps
  - Exercise
  - Sleep environment (quiet, dark, no distractions)
  - Sleep routine (meals/ snacks at least 2 hours BEFORE sleep, soothing stimuli)



# PHYSICAL ACTIVITY:

- Over 18,000 studies on exercise and mental health

## The best exercise?

One the individual enjoys, and will maintain over time  
Ideally: 3-5 times a week, 20-30 minutes ideal

## Mechanism of action?

Increases blood flow, increasing O<sub>2</sub> and nutrients  
Reduces inflammation  
Alters brain chemistry  
Improves sleep

## Positive findings in research:

Aerobic activity (including brisk walking)  
Strength-training  
Yoga



# Recreation/ Relaxation:

- Hobbies (music, art, etc..)
- Quiet unstructured time
- Creative play: Stuart Brown, MD
  - “Play: how it shapes the brain, opens the imagination and invigorates the soul”
- Being in nature: Richard Louv (journalist)
  - “Last child in the woods”
  - “The Nature Principle”
- Relaxation techniques
  - Mindfulness-based training
  - Biofeedback/ self-hypnosis



# Optimizing NUTRITION:

- What's the problem?

- 1) We're no longer eating foods that nourish our bodies adequately

- 2) We're developing problems with digestion of certain foods, causing inflammation

- 3) Inflamed bodies= inflamed nervous system= altered cognition/ mood



# 1. Nourishing foods

- Standard American Diet (SAD diet):
  - Processed/ refined foods: NOT REAL FOOD!!!
    - Micronutrient poor (vitamins, minerals, phytonutrients)
    - High in calories (get stored as fat, NOT used as energy)
    - High in gluten, casein, whey, high-fructose corn syrup (inflammatory)
    - Contributing to rise in chronic inflammatory diseases (anxiety and depression as “neuro-inflammatory”)
- Solution: WHOLE FOODS diet
  - LOTS of colorful vegetables/ fruits (rich in phytonutrients, keep our cells working optimally)
  - Lean protein (lean meats, fish, legumes), 4 oz/meal or less
  - Some whole grains (ideally non-gluten: rice, quinoa, etc..)
  - Healthy fats (fish oil, avocados, nuts, olive oil)
  - Anti-inflammatory spices (turmeric, garlic, cinnamon, rosemary)

# PHYTONUTRIENTS:

- Health-protective, disease-preventing compounds produced by plants when stressed by the environment (why GMO is not good)
- Have anti-oxidant properties
- Help the cells get rid of environmental toxins
- Help the body promote healthy “cell-signaling:
  - Two main chemical reactions in the body:
    - STRESS (pro-inflammatory, fat-storing, disease-causing)
    - GROWTH/ HEALING (anti-inflammatory, optimize health)

# PHYTONUTRIENTS: Rainbow Diet

## □ RED

- Lycopene, ellagic acid: cooked tomatoes, strawberries, raspberries, pomegranates

## □ ORANGE/ YELLOW

- Alpha and beta carotene, hesperitin, cryptoxanthin: carrots, pumpkins, oranges, tangerines, cantaloups, sweet potatoes, lemons, squashes, peppers

## □ GREEN

- ECGC, Isothiocyanate, lutein, isoflavones, catechins: cruciferous vegetables (broccoli, kale, cabbage, watercress), dark leafy greens, green tea

## □ BLUE/PURPLE

- Anthocyanidins, resveratrol: blueberries, elderberries, red/purple grapes

## 2. Hidden Food Intolerances

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- “Hidden” because they don’t always cause discomfort after eating
- History of:
  - Colic/ feeding problems/ reflux as an infant
  - Frequent infections treated with antibiotics (kills off good bacteria in the intestines)
  - Development of chronic inflammatory conditions:
    - Asthma, allergies, eczema, anxiety depression, IBS, fatigue, insomnia, autoimmune disease

# Hidden Food Intolerances

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- Most common culprits:
  - Cow's milk protein (casein, whey)
  - Gluten (wheat, rye, barley)
  - Soy
  - Corn
  - Eggs

Note: refined/ added sugars increase inflammation

# Hidden Food Intolerances: Diagnosis

- Elimination (“anti-inflammatory”) diet:
  - For four weeks:
    - NO gluten, dairy, corn, soy, eggs, processed foods or refined sugars
    - Diet consists of MOSTLY vegetables and fruits, some lean protein and non-gluten grains, nuts, healthy oils/fats
    - Omega-3 fatty acids (fish oil) 1000 mg a day
      - GREAT for brain functioning
    - Probiotic once a day
    - Vitamin D3 (have level checked, then supplement)
    - Multivitamin once a day (depleted soil)

# Hidden Food Intolerances: Treatment

- Elimination (“anti-inflammatory”) diet:
  - At the end of the 4 weeks:
    - Reintroduce foods one at a time, every 2-3 days
    - Track symptoms (headaches, joint pain, insomnia, GI problems, anxiety, depression etc..)
    - If food causes symptoms, remove from diet, allow symptoms to resolve, and then try next food on list
    - At the end of the diet, only reintroduce foods that do not cause symptoms
    - If not feeling 100% better, may want to consult with practitioner trained in Functional Medicine

# Optimizing nutrition

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- Food is information
- (Real) Food is medicine
- Food is relationship (self, others, the planet)
- Mindful eating:
  - Reduces stress
  - Improves digestion
  - Increases enjoyment of food
  - Leads to consumption of fewer calories

# Screening: The Basics

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## □ Sleep:

- What's your typical nighttime routine?
- What time do you get into bed?
- How long does it take for you to fall asleep?
- Do you stay awake thinking about things/ what things?
- Do you wake up sooner than you want?
- If yes, is it hard to fall asleep?
- Do you feel well-rested during the day?

# Screening: The Basics

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## □ Nutrition

- Whole foods vs processed foods?
- Multivitamin, supplements?
- Essential micronutrient intake?

## □ Exercise

- How often? How much? If not, was there a time when you did? What would you be willing to do?

## □ Recreation (creative vs passive is better)

- Art, music, journaling, hobbies, etc.

# Motivational Interviewing: Two Assumptions

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1. Motivation: can be elicited by *interpersonal interaction* (not just innate character trait)
  - Confrontation leads to resistance
  - Empathy, understanding and exploration of patient's experience creates a space for self-reflection and desire for change
2. Ambivalence to change: normal and natural
  - Competing positive and negative feelings
  - Decision balance: pros and cons

# Motivational Interviewing (con' t)

- Patient: articulates arguments for change and the treatment plan
  
- Health care provider: facilitates, guides patient through questions and reflections:
  - Share information in a respectful way
  - Allow patient to direct treatment plan
  - Supports client self-efficacy:
    - Acknowledges difficulties of making behavioral change
    - Points out strengths
    - Points out previous successes
    - Avoids resistance by not lecturing/ arguing with patient
    - Asks patient what *they* want to do/ are willing to do

# Giving information and advice

- Ask for permission before giving advice
  - Supports patient's sense of autonomy
  - “Of course, while my job is to give you information, you're ultimately the one to decide...”
- Elicit – Provide – Elicit
  - “What do you know about what causes depression ( or other health condition/ problem behavior, etc)” “It sounds like you know quite a bit about...”
  - “There is some other information that might be helpful to you...may I share that with you?”
  - “ What are your thoughts about that? How might you use that information? Is there anything that might be relevant for you?”

# Giving information and advice

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- When given permission to offer suggestions, offer several, not one (otherwise it looks like the “right” answer)
  - “Here’s what we know about how lifestyle affects moods... which one do you think is most out of balance for you?”
    - (depression: Would you like to work on sleep, diet, exercise or stress reduction first?)
  - What do you think you could do to improve your (sleep)?
  - When would you like to start?
  - When would you like to come back and see me?
- If you offer solutions one at a time, it creates resistance, and the patient is more likely to offer reasons why each one won’t work

# TAKE-HOME MESSAGE

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- The MIND is connected to the BODY
- If ONE gets out of balance, it throws the OTHER out of balance
- There's A LOT we can do to help others get back in balance

# Resources

- Henry Emmons, MD
  - “Chemistry of Calm”
  - “Chemistry of Joy”
  - “Chemistry of Joy Workbook”
- Mark Hyman, MD
  - “Ultramind Solution”
- Motivational Interviewing: [www.motivationalinterview.org](http://www.motivationalinterview.org)
- Internet search terms:
  - **Institute for Functional Medicine**
  - **Mark Hyman, MD**