

# Stress Hard, Recover Harder

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**Ancestral Tools for  
Modern Tradespeople**

Patrick Owen, PhD.  
Doctor in Human Nutrition  
Lecturer, McGill University



# Sleep Duration



*Roger Ekirch*, Historian, "At Day's Close: Night in Times Past" (2005)

# Obesity Rates



Bellisari, A. (2008). *Evolutionary origins of obesity*. Obesity Reviews.

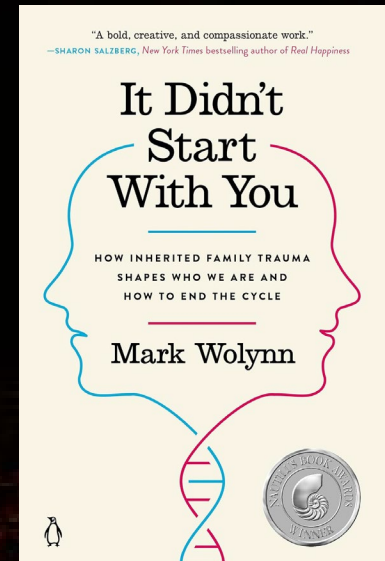
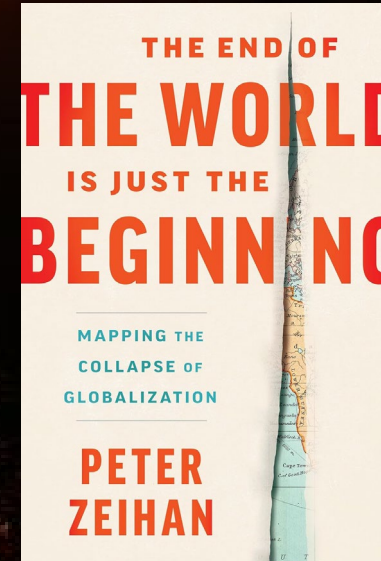
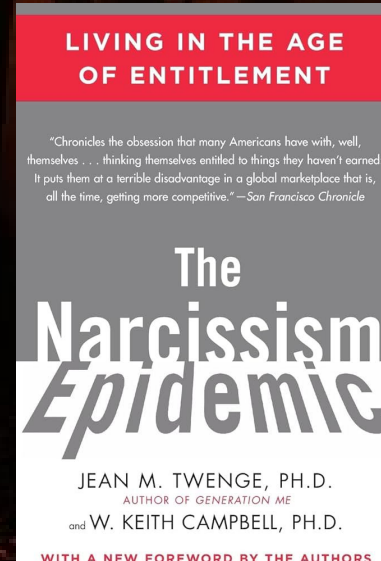
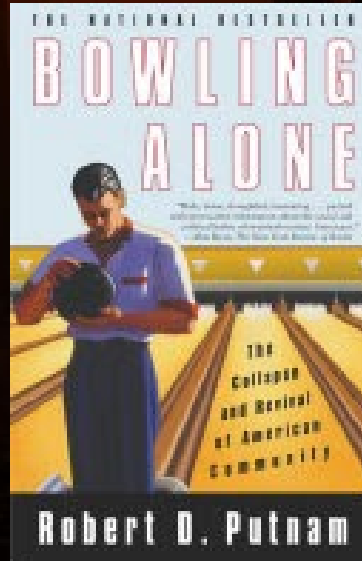
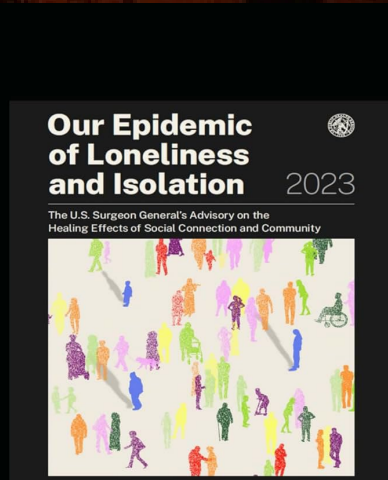
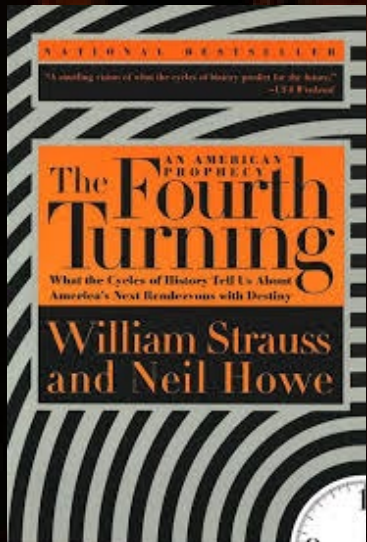


# Evolutionary Mismatch



**“Hard times create strong men,  
strong men create good times, good  
times create weak men, and weak  
men create hard times”**

-G. Michael Hopf



# History of Resilience





# EVOLUTION OF STRESS



## PHYSICAL STRESS

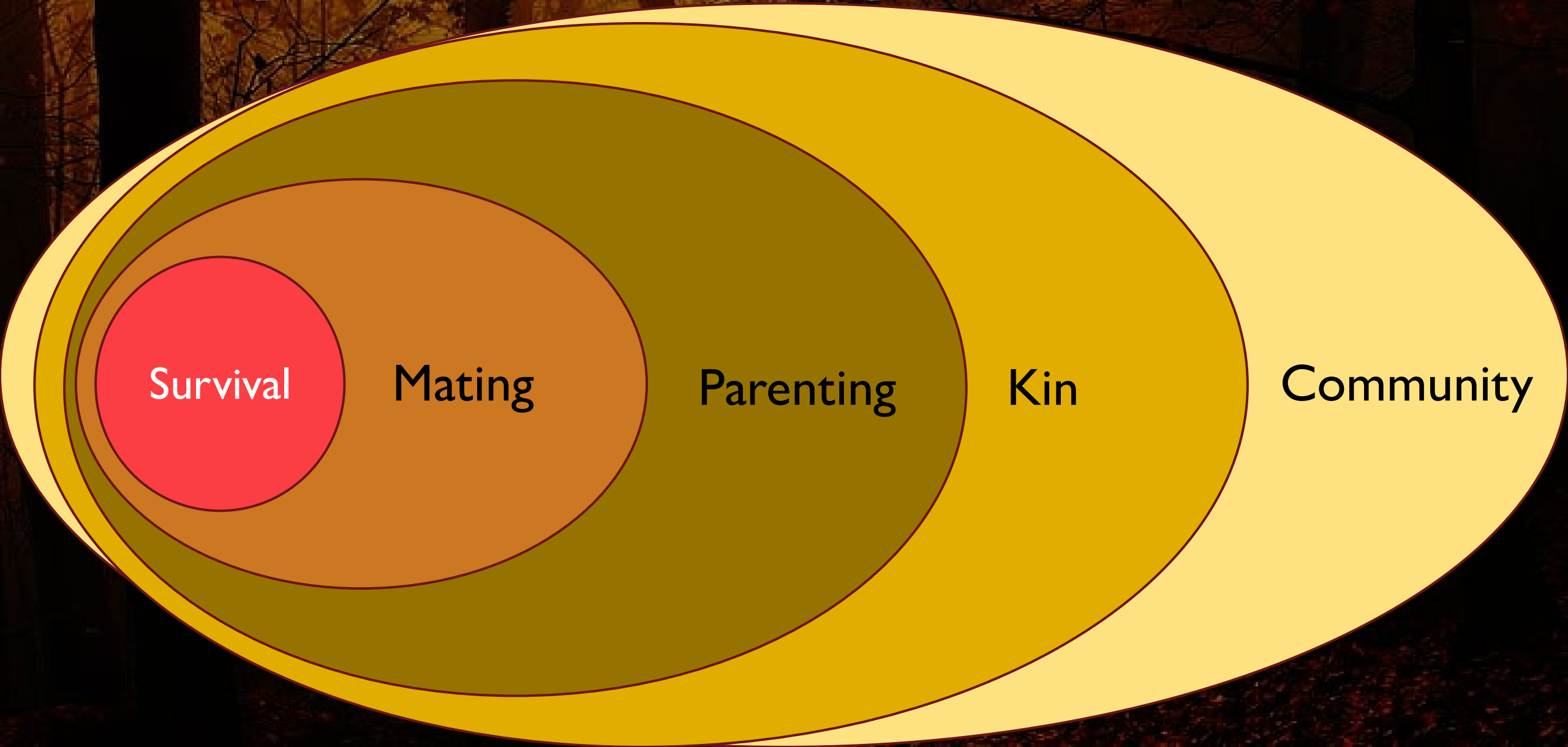
- Food Scarcity
- Environmental Hazards
- Infection
- Predation
- Conflict & Violence
- Reproductive Stress



## PSYCHOSOCIAL STRESS

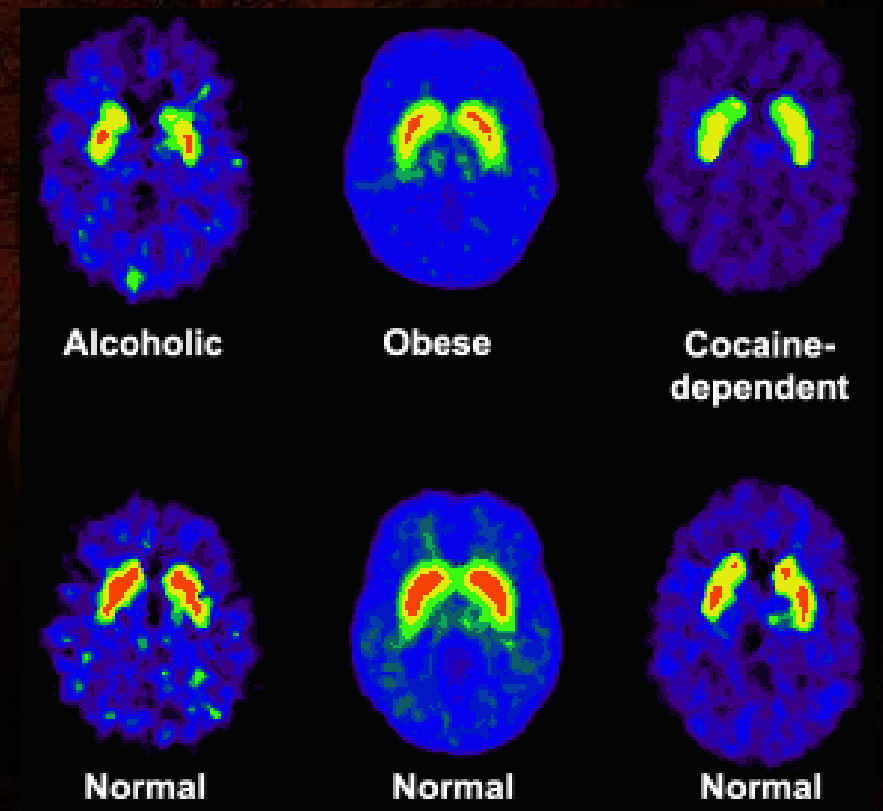
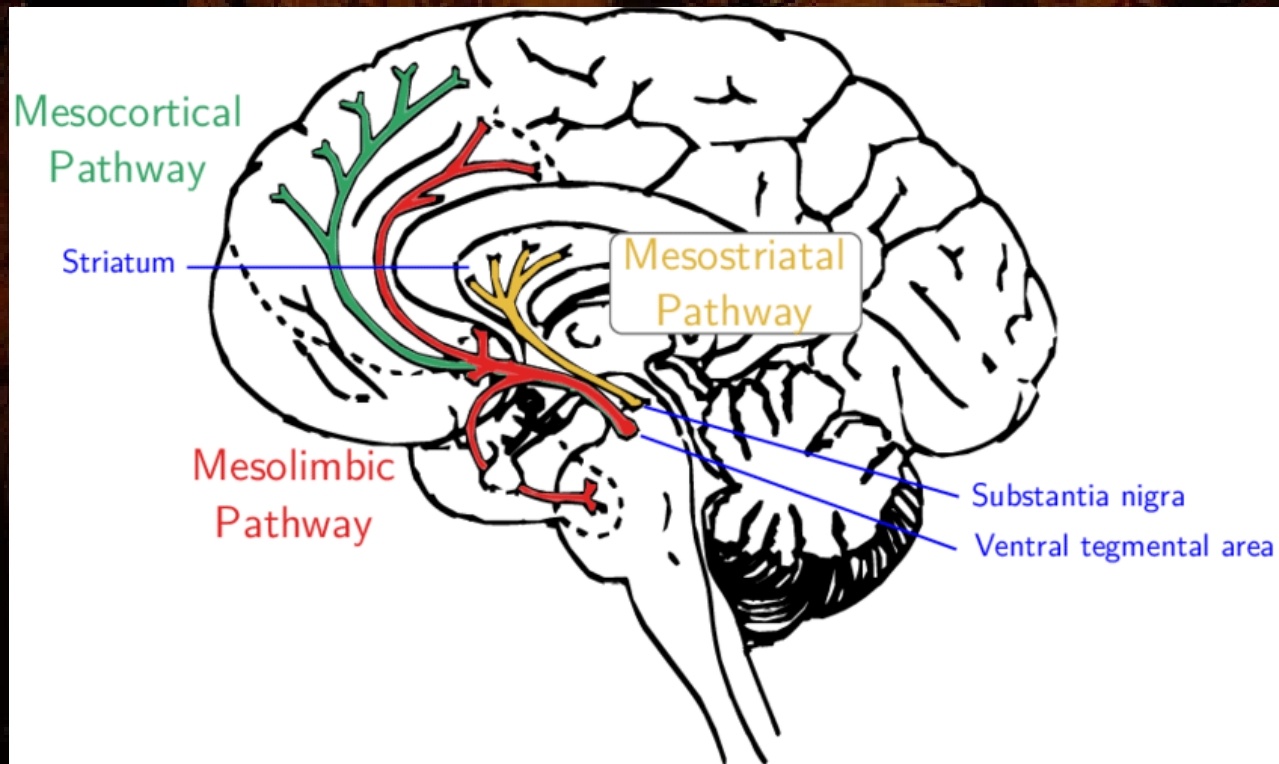
- Financial Hardship
- Workplace Stress
  - High work demands
  - Excessive Workload
  - Limited control over tasks
- Interpersonal conflict
  - ↑ Social Fragmentation / Distrust in Institutions
  - ↑ Shallow Relationships / External Validation
  - ↓ Empathy
  - ↑ Individualism / Entitlement

# Layers of Evolutionary Pressures





# DOPAMINE



# STRESS & DOPAMINE



“FAT THOR”

Avengers – Endgame

Alcohol  
Drugs  
Smoking  
Sweets / Comfort Food

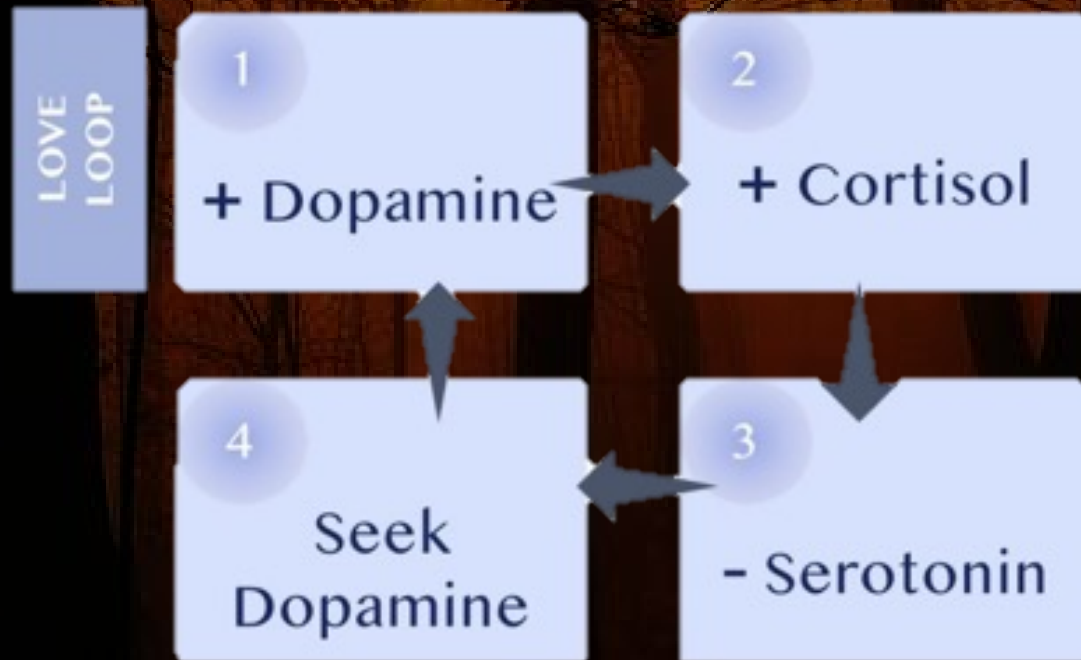
Social Media  
Netflix  
Video Games  
Gambling  
Porn  
Work  
Complaining  
Toxic Relationships



↓ Will Power  
↑ Procrastination

↑ Tolerance to  
pleasure

# OPERANT CONDITIONING





# REAL DOPAMINE



- Good Sleep
- Sunlight / Outdoors
- Physical Activity / Exercise
- Social Support
- Sense of Purpose
- New Experiences



# ANCESTRAL SLEEP

Calming  
rhythmic  
nocturnal  
sounds

Cool  
temperatures  
between 16  
and 19 °C



Fire emits  
calming red light  
wavelengths

Co-sleeping  
offers added  
security and  
comfort

Sleep was  
fragmented, but  
high quality and  
aligned with  
circadian rhythm

# MODERN SLEEP

Nocturnal  
Silence

Full control  
over room  
temperature

Alarms  
rupture sleep  
cycles



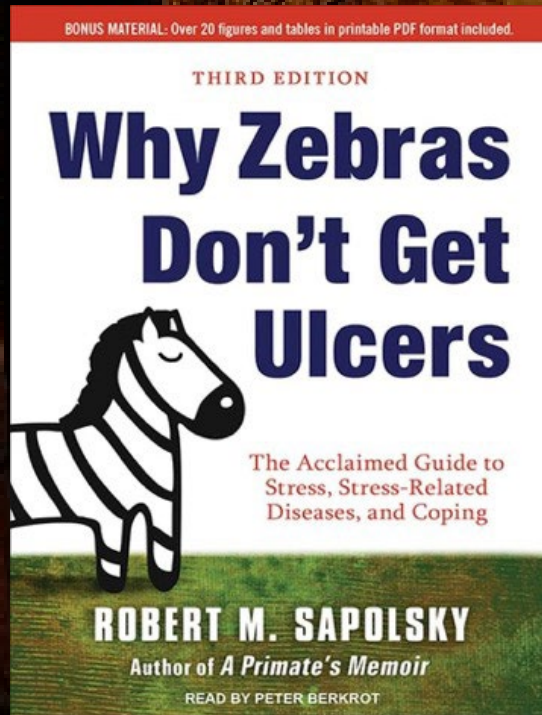
Screen emits  
stimulating **blue  
light** wavelengths

Children sleep  
independently

↑ Psychosocial  
stress increases  
rumination

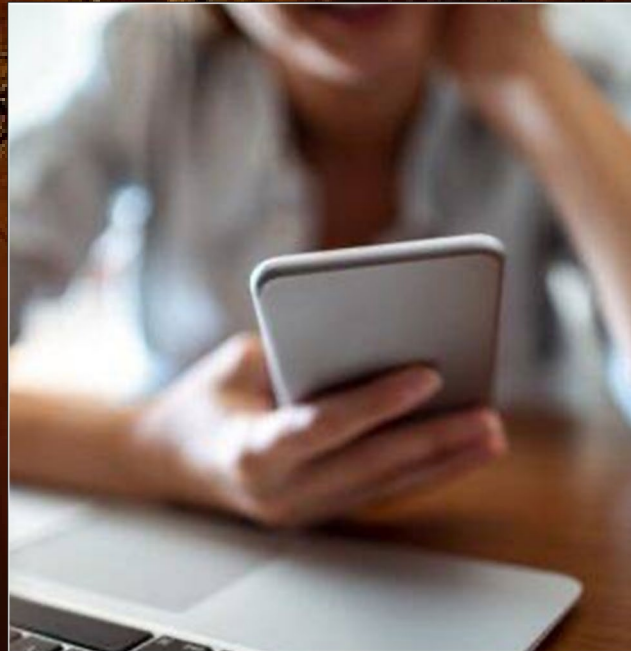


# RUMINATION



- The purpose of rumination is to find a solution.
- Rumination without a solution = depression.

# SCREENS



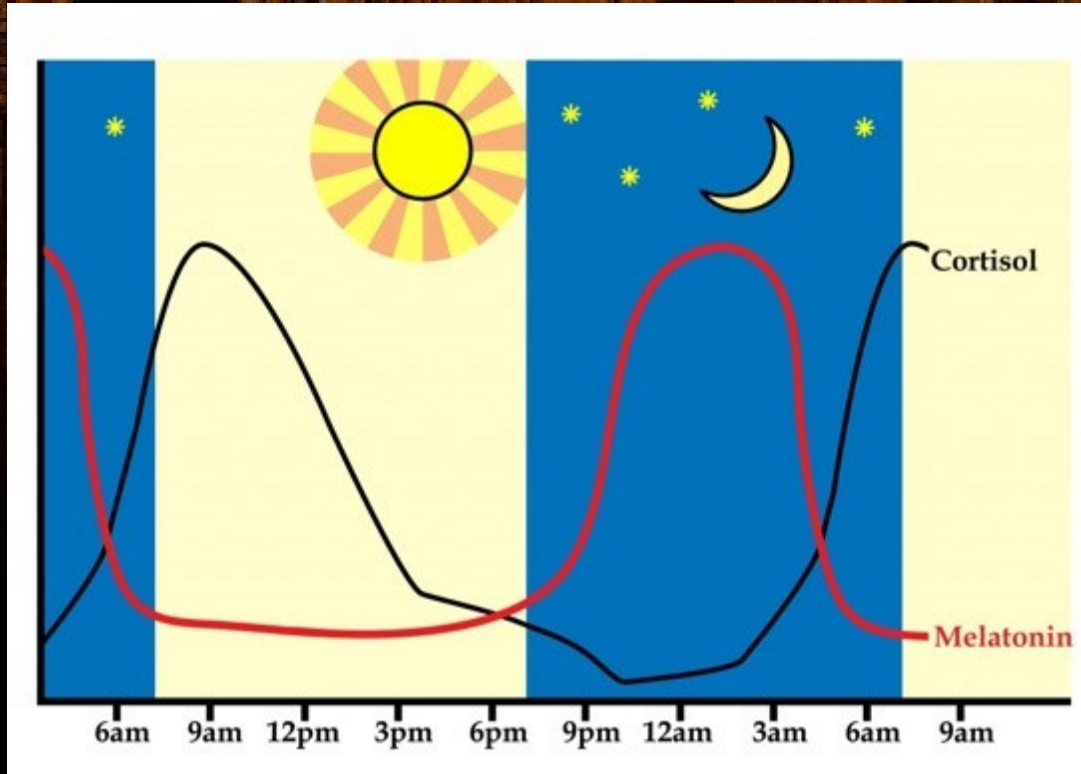
- Modern screens emit more stimulatory blue light
- Screen time correlates with ↑ obesity, hypertension, diabetes, myopia, depression, and sleep disorders.

# ZOOM

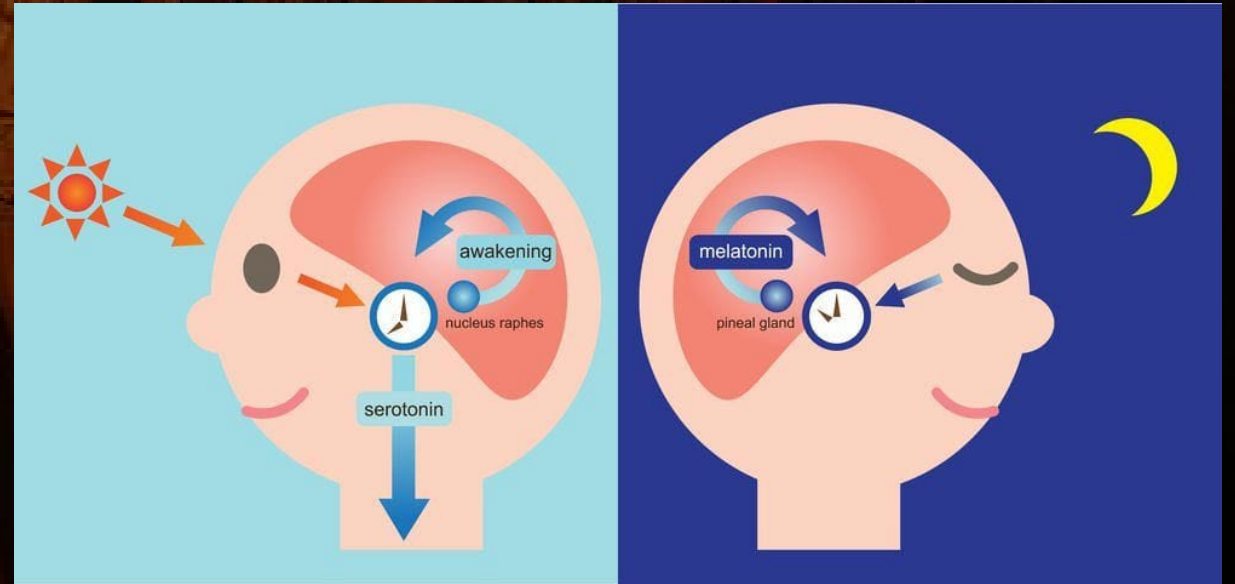


- Close Self-View
- Take breaks between meetings
- Turn your video off
- Look outside the window periodically

# CIRCADIAN RHYTHM

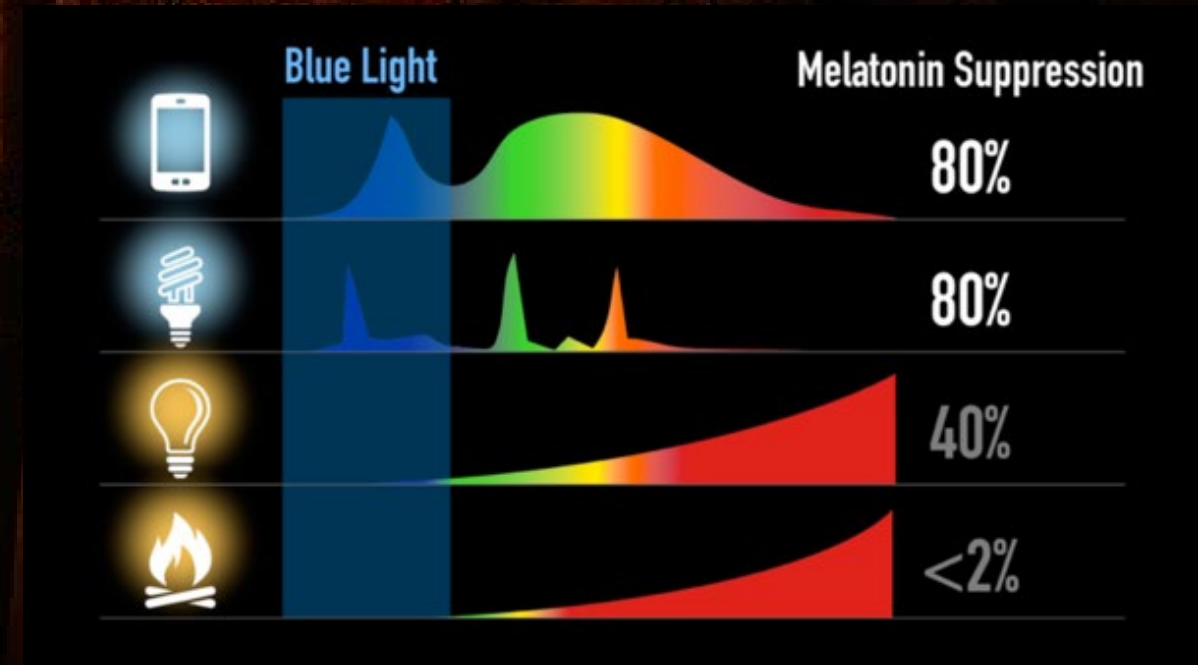
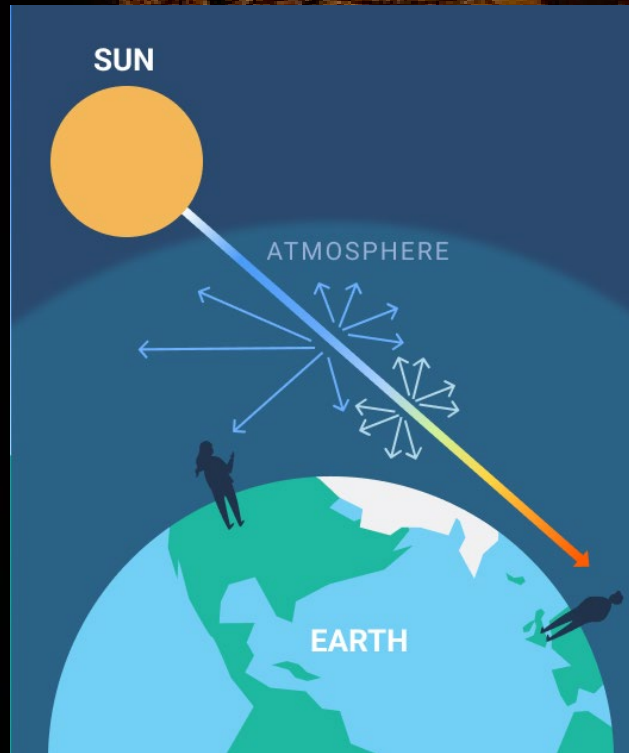


- Cortisol Awakening Response (CAR) wakes us naturally
- Blue light activates CAR



- Sun exposure increases serotonin production
- Darkness converts Serotonin to Melatonin
- More Melatonin = Deeper Sleep
- Happier people get better sleep

# CIRCADIAN RHYTHM

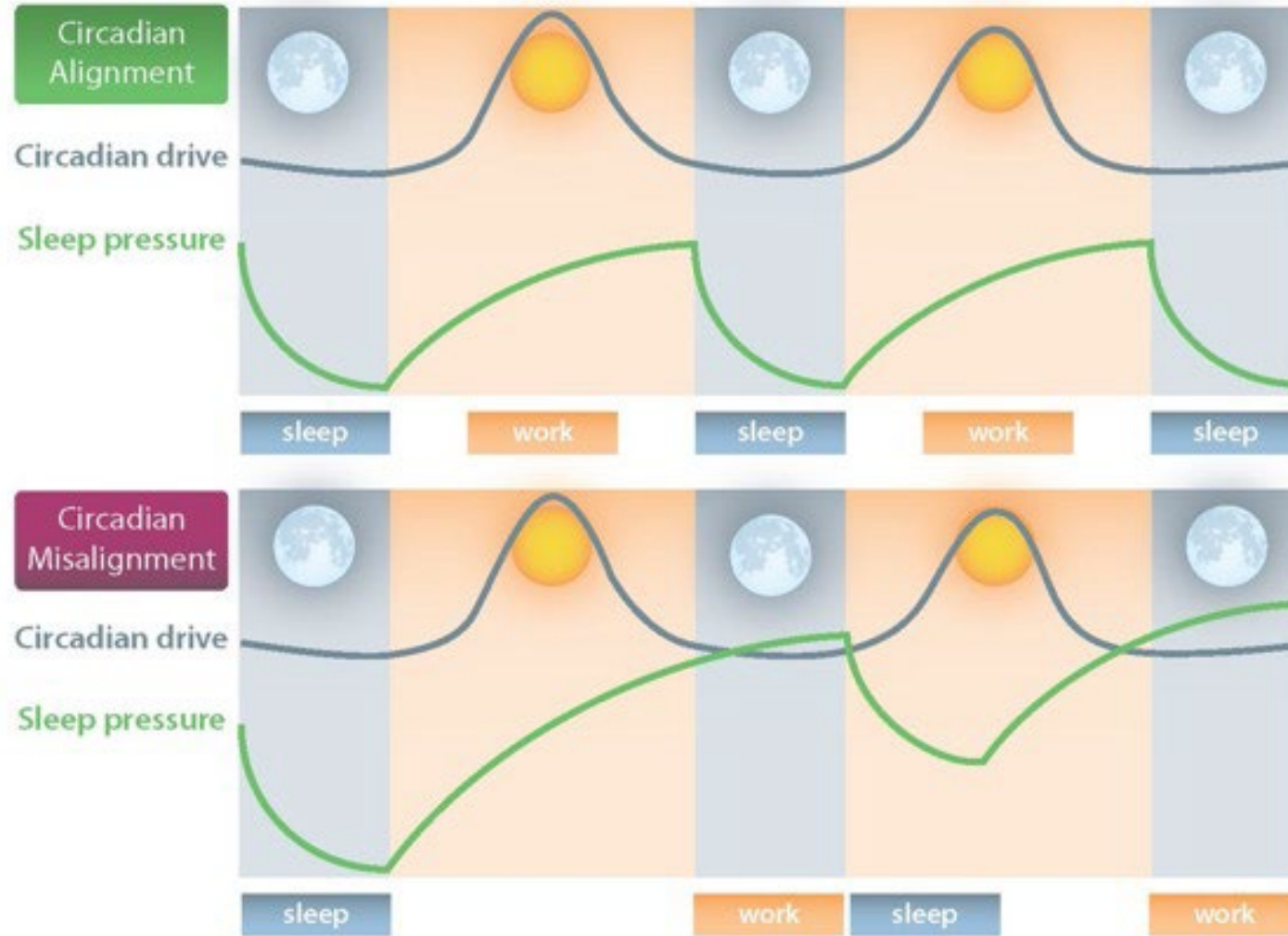


- Atmospheric particles refract short wavelengths (blue).
- At horizon, blue doesn't reach your eyes, and you see its **complimentary** colours

- Blue is the most potent ZEITGEBER
- Pituitary cannot differentiate between artificial and natural sources of blue light.



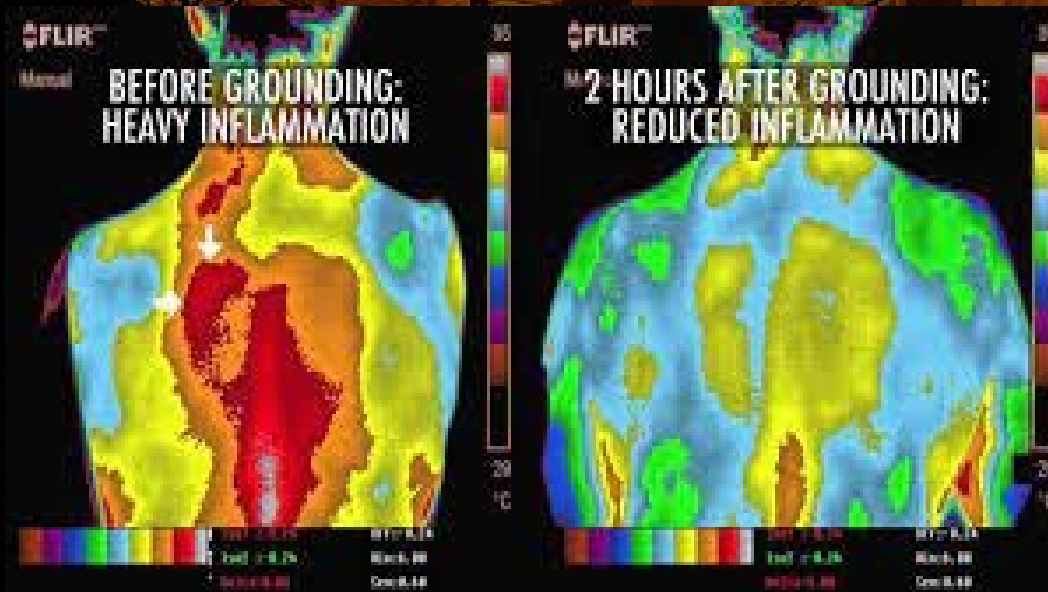
# SLEEP PRESSURE



Circadian  
Misalignment =  
**STRESS**

# TRY THIS....

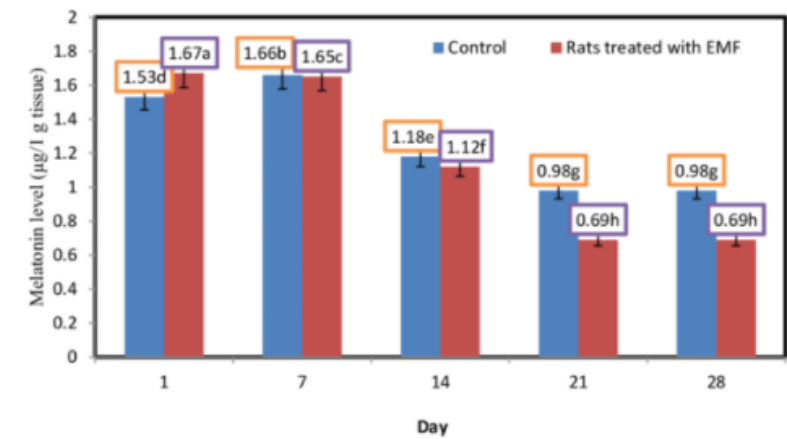
## GROUNDING



”Grounding for 1 hour improved mood significantly more than other relaxation techniques.”

Chevalier G. 2015 The effect of grounding the human body on mood  
Psychol Rep 116(2):534-42.

## REDUCE EMFs



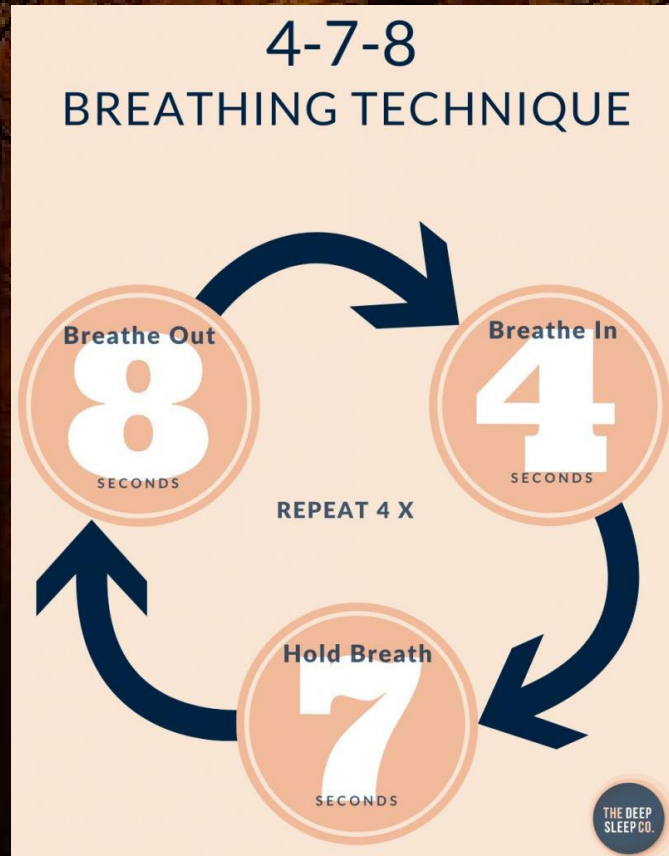
Influence of exposure to EMF on Melatonin level (µg/1 g tissue) of newborn rats Values are means of three determinations. Values followed by the same letter (a, b, c, d, e) are not significantly different ( $p < 0.05$ ) by Duncan's multiple range test. Least significant difference (LSD) at 5% level = 0.007.

- Pineal gland \*might\* mistake EMF for stimulatory short wave blue light.
- Workers with longer daily EMF exposure had a significantly higher risk of poor sleep quality.

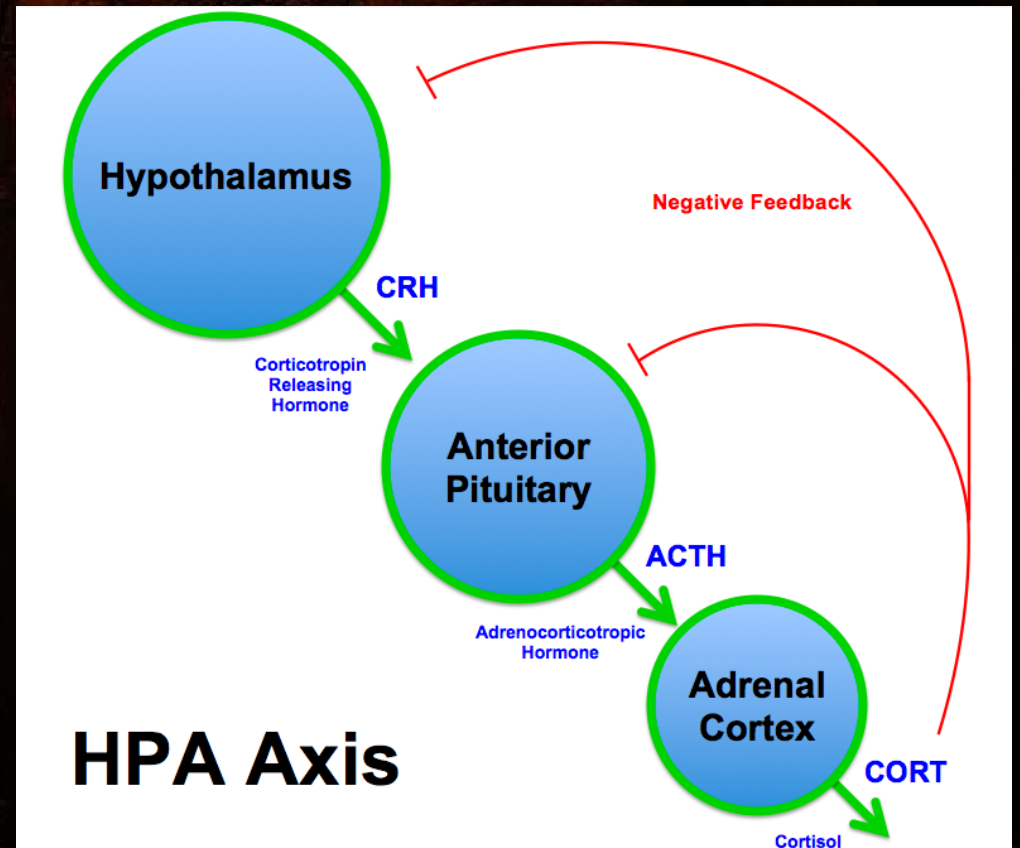
Liu H, Chen G, Pan Y, Chen Z, Jin W, Sun C, et al. (2014) Occupational Electromagnetic Field Exposures Associated with Sleep Quality: A Cross-Sectional Study. PLoS ONE 9(10): e110825.

# TRY THIS....

## BREATHWORK



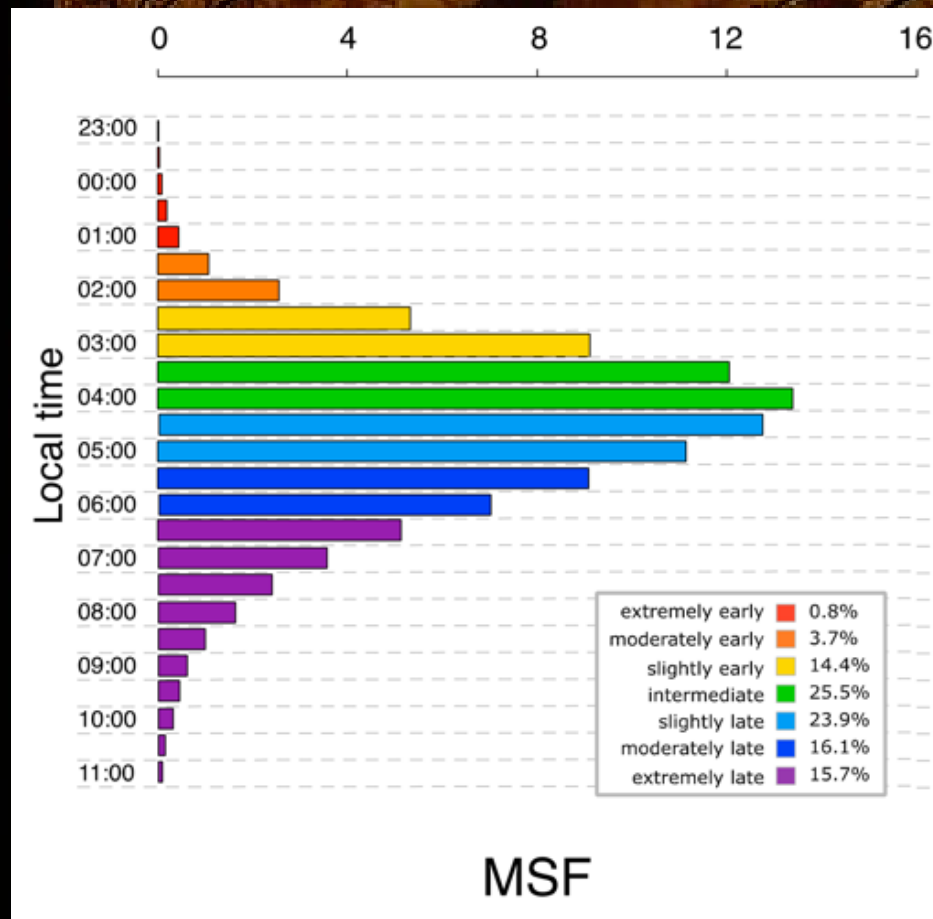
## COLD THERAPY





# CHRONOTYPE

% of the population



Midsleep on Free Day



Sentry Hypothesis

# STRESS & WEIGHT GAIN

Susceptibility to carb cravings and fat gain during times of **stress** / **sleep deprivation**.



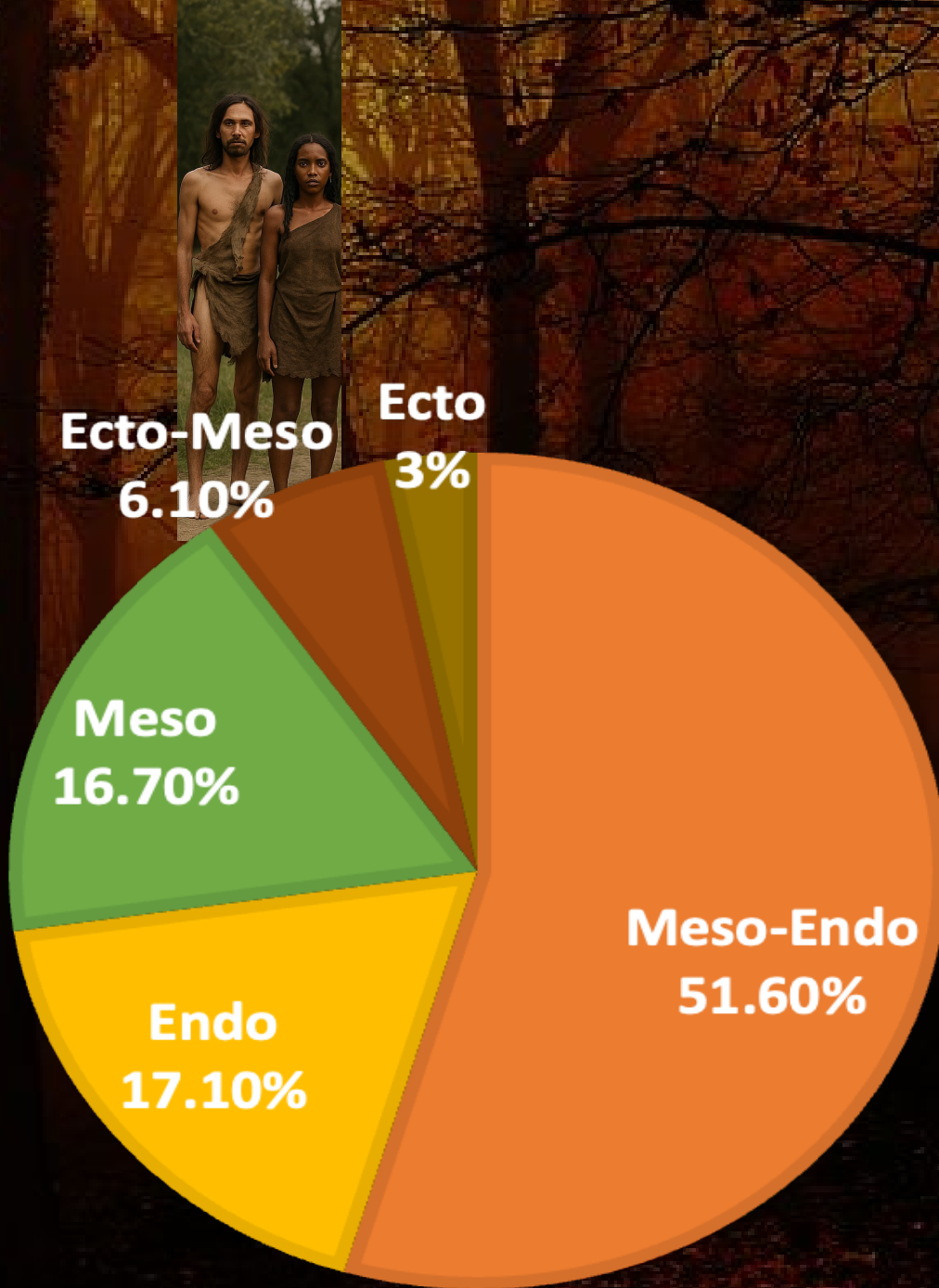
Ectomorph



Mesomorph



Endomorph





# SLEEP OPTIMIZATION

## CONSISTENCY

Go to bed and wake up at the same hour, every day. NO SNOOZE.

## WIND-DOWN

No screens 1h before bedtime

Relax, journal, light yoga, read, meditate, hot shower, converse

## ZEITGEBERS!

Make your room as dark as possible

Keep temperature at 16-19 °C

Sound machine

## NUTRITION

Avoid sweets, simple carbs, or heavy meals prior to going to bed.

Alcohol negatively affects REM.



# SHIFT WORK

## LIGHT EXPOSURE TIMING

Use BRIGHT LIGHT (daylight or sunlamp) early in your shift.  
Avoid bright lights 1-2 hrs before sleep

## ANCHOR SLEEP

Consistent 4+ hour sleep at the same time, even on off days.  
Nap before or after shift to restore total sleep time.

## TIMED NUTRITION

Avoid large meals during night shifts. Eat protein- and fat-rich snacks  
Try time-restricting eating by eating most of your meals during daylight hours

## POST-SHIFT WIND-DOWN

Avoid screens before bedtime, establish a relaxing ritual that signals sleep



# GO OUTSIDE

## Doctors in Scotland can now prescribe nature to their patients







Take one long stroll, four times a week.

EVAN FLEISCHER 12 October, 2018



Spending time outdoors can decrease blood pressure, anxiety, and increase happiness for those with diabetes, mental illness, stress, heart disease, and more.

Sun exposure for vitamin D synthesis

Skin tone						
June to August	10 minutes	15 minutes	20 minutes	25 minutes	30 minutes	35 minutes
April, May, September, October	20 minutes	30 minutes	40 minutes	50 minutes	60 minutes	70 minutes



# EXERCISE & PHYSICAL ACTIVITY



Increase in cortisol,  
adrenaline, noradrenaline,  
and endorphins

Few hormonal changes

# STRENGTH

## Science Says Strength Training Twice a Week Dramatically Reduces Anxiety and Stress

Another example of the ripple effect of positive outcomes.

BY JEFF HADEN, CONTRIBUTING EDITOR, INC. @JEFF\_HADEN

MAY 13, 2022

1. Strong bodies contend better with adversity
2. Stress IS adversity
3. Strength is an independent predictor of longevity



# SOCIAL SUPPORT



- More likely to seek social support ("tend and befriend") response.
- Emotional tone of voice, vocal warmth, empathetic language, and feeling of being truly "heard" are more important than the words.



- Testosterone rises when competitive or asserting dominance.
- Oxytocin rises during cooperation (not as much as in women).



# NUTRITION

## FOODS

- Water
- Fatty Fish (Omega-3)
- Dark Chocolate (Theobromine)
- Cruciferous Vegetables (Sulforaphanes)
- Green or Black Tea (EGCG)
- Yogurt (Probiotics)
- Grass-fed beef (Tryptophan)
- Eggs (Choline)
- Turmeric (Curcumin)

## HERBS

- Ashwagandha
- Rhodiola
- St. John's Wort
- Cordyceps
- Valerian
- Chamomile
- Lavender
- Passionflower

## SUPPLEMENTS

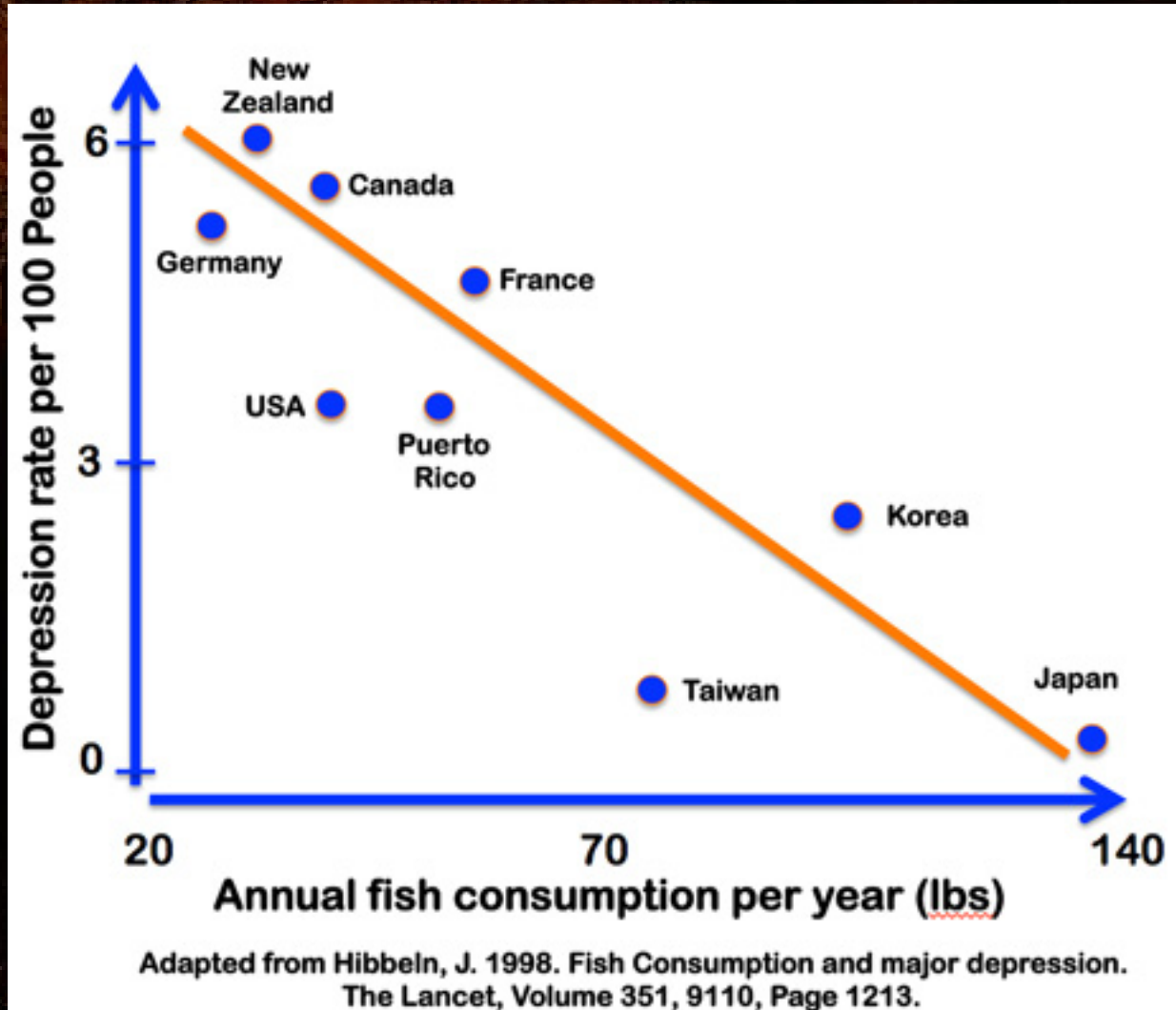
- **Magnesium**
- L-Tryptophan & 5-HTP
- GABA
- **Vitamin D**
- Phosphatidylserine (Brain Phospholipid)
- L-Glycine (Bone broth)
- L-Theanine (Green Tea)
- **Cod Liver Oil (Omega-3)**
- Vitamin C
- Vitamin B1, B2, B3

# OMEGA-3

*Review Article*

## **Omega-3 Fatty Acids and Depression: Scientific Evidence and Biological Mechanisms**

Giuseppe Grosso,<sup>1</sup> Fabio Galvano,<sup>1</sup> Stefano Marventano,<sup>2</sup> Michele Malaguarnera,<sup>1</sup>  
Claudio Bucolo,<sup>1</sup> Filippo Drago,<sup>1</sup> and Filippo Caraci<sup>3,4</sup>

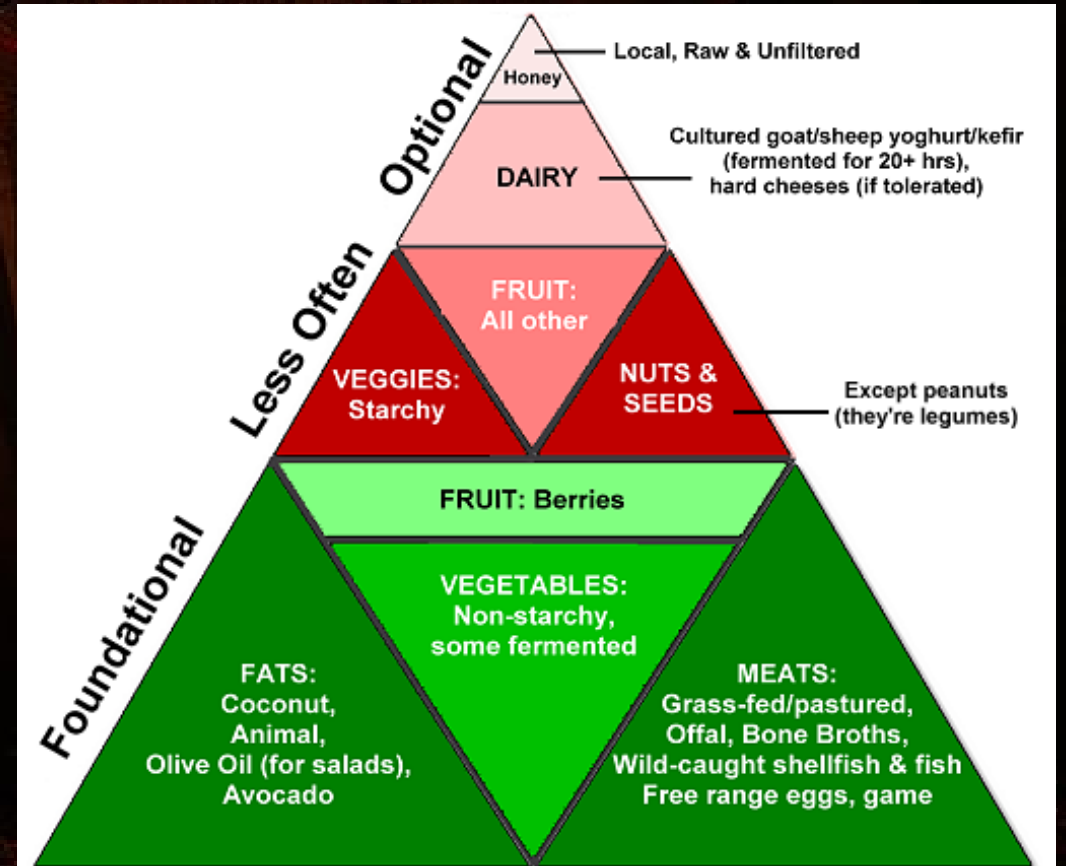




# MODERN Food Pyramid



# ANCESTRAL Food Pyramid





# BUILDING TRUE RESILIENCE

## 1. MICRODOSE ADVERSITY

- Exercise, Cold Therapy, Fasting, Learning New Skills

## 2. RESTORE TRIBAL REFLECTION

- Build small, high-trust groups where radical honesty is normalized

## 3. IDENTITY BASED ON CONTRIBUTION

- NOT on VALIDATION or how you are PERCEIVED
- Identity is stronger and healthier if you contribute

# BUILDING TRUE RESILIENCE

## 4. PHYSICAL RE-ANCHORING

- Emotional regulation is built through the body first, not the mind
- Poor sleep, no movement, bad food = fragile emotions.

## 5. RITUALIZED ACCOUNTABILITY

- Not Shame-Based, but Standard-Based
- Use "ritualized" accountability systems where feedback is normalized and expected, not personal.





# SIX "S"



1. SLEEP
2. SUN
3. SWEAT
4. STEAK
5. SOCIAL
6. SUPPLEMENT



# THANK YOU!



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