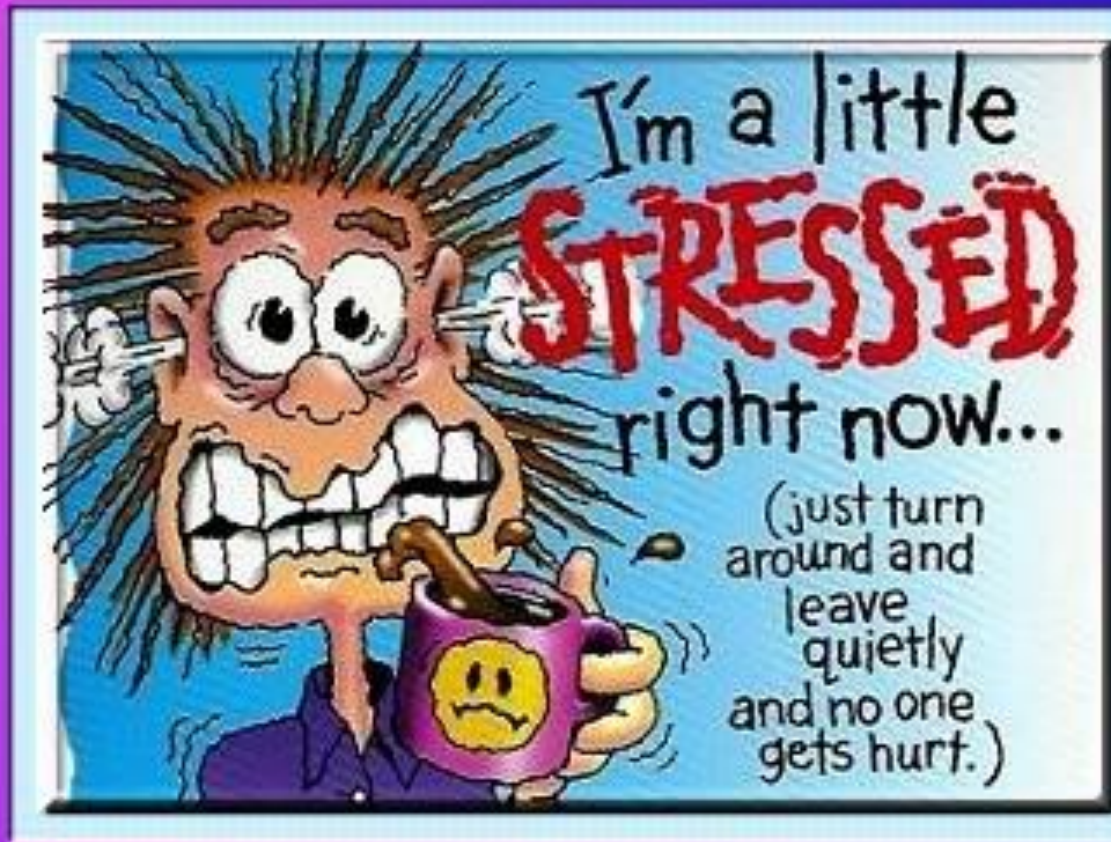


Stress: The difference between Wellness and Illness





"This symposium has gotten completely out of hand!"

Definitions

► Stress:

- The body's non specific response to any demand made on it.

► Better:

- Stress is what happens when the perceived demands of a situation are greater than the perceived coping skills we believe we have to deal with the situation.



Definitions (Continued)

- A. **Stress** = The way we respond physically, emotionally, and mentally various conditions, changes, and demands in life



Definitions (Continued)

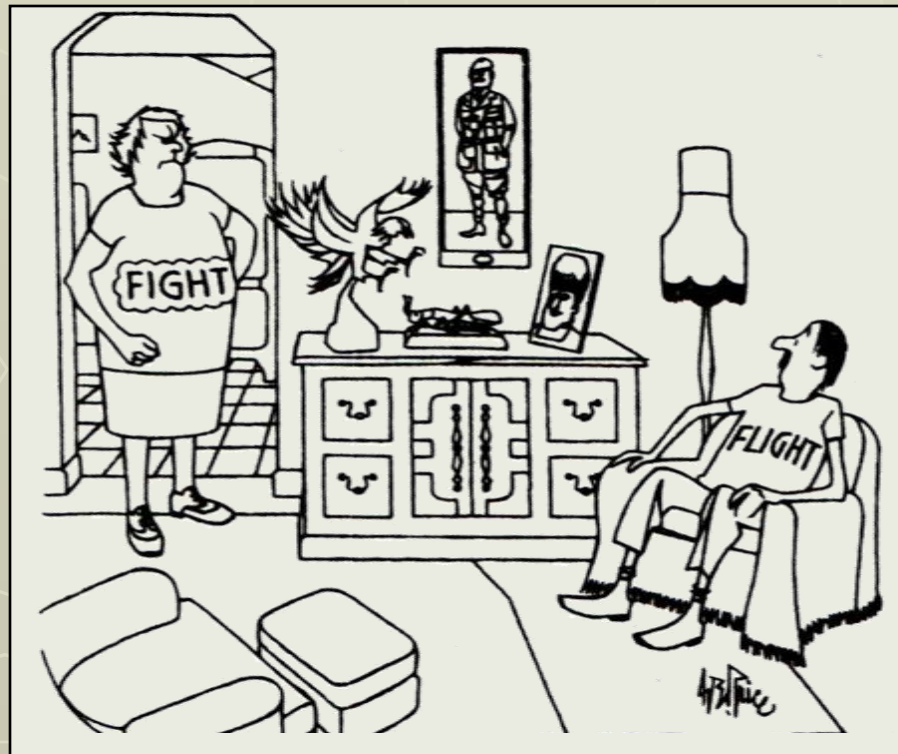
B. **Stressor** = what we believe makes us feel that way

C. **Personal Interpretation** =
The critical point between
A and B



The Stress Response

First known scientific research conducted by Walter Cannon. His study of shell shocked soldiers in WWI created the name "Fight – Flight – Fright" response.



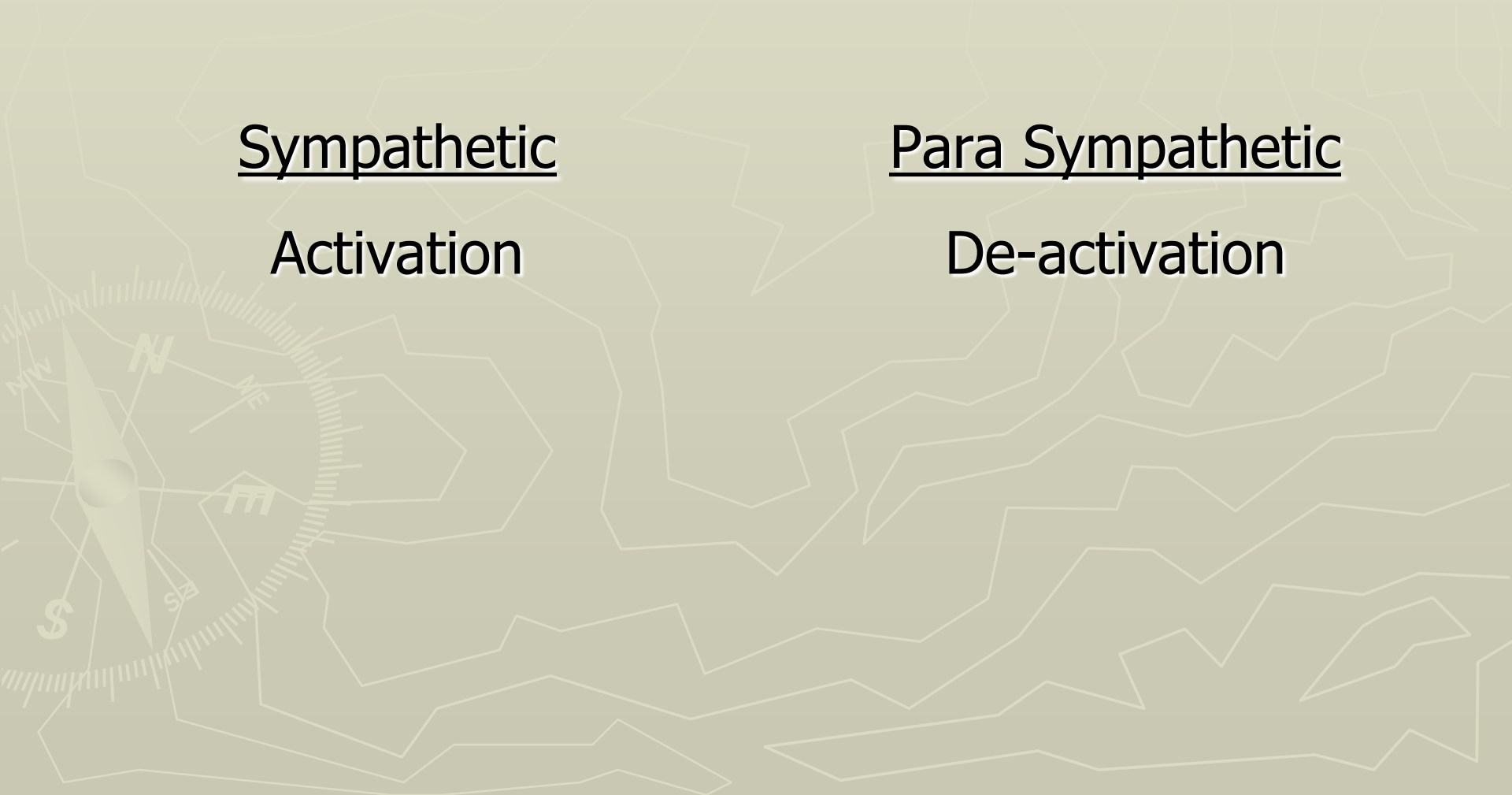
This response is governed by the Autonomic Nervous System (rules involuntary body functions)

Sympathetic

Activation

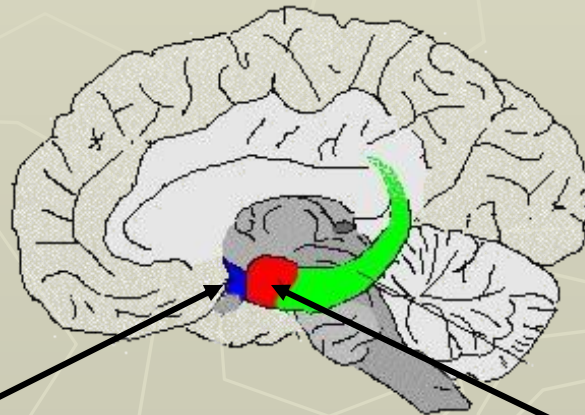
Para Sympathetic

De-activation



Stress begins in the Brain

- ▶ The primary Stress hormone corticotropin releasing factor (CRF).
- ▶ Two major pathways in the brain for CRF.



hypothalamus

(major command center
for hormone activation)

amygdala

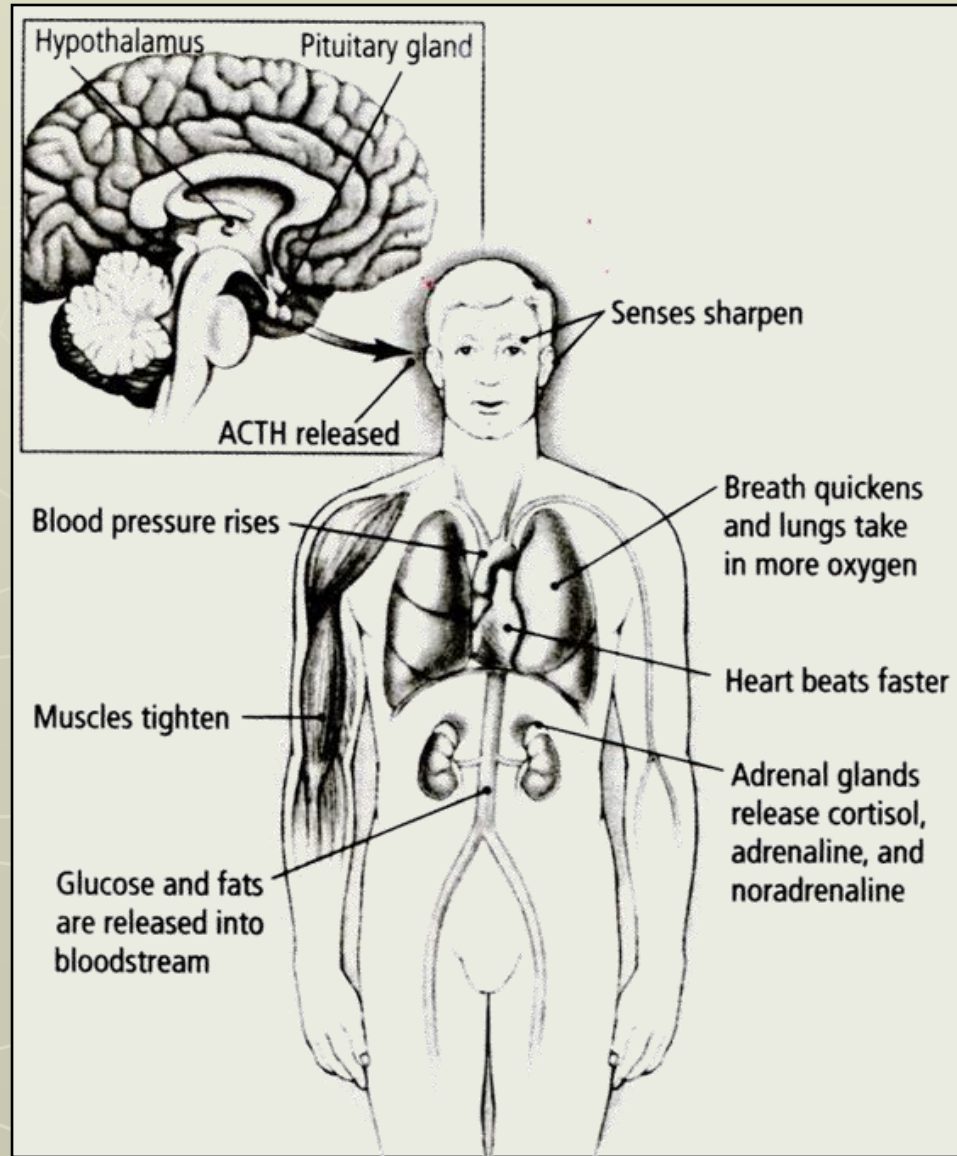
(crucial early warning system
& emotional regulation)



MANKOFF

"And, while there's no reason yet to panic, I think it only prudent that we make preparations to panic."

Inside the Stress Response



Inside the Stress Response

► What Happens?

1. Senses Sharpen
2. Blood pressure rises
3. Breath quickens and we take in more oxygen
4. Heart beats faster
5. Muscles tighten
6. Glucose & Fats are released into the bloodstream
7. Adrenal Glands release Cortisol, adrenaline and noradrenaline
8. Pituitary releases adrenocorticotropin (ACTH)
9. Reproductive, digestive and other growth systems are shut down.
(energy conservation in the face of crisis)
10. Energy resources are redirected to the elimination of the stressor

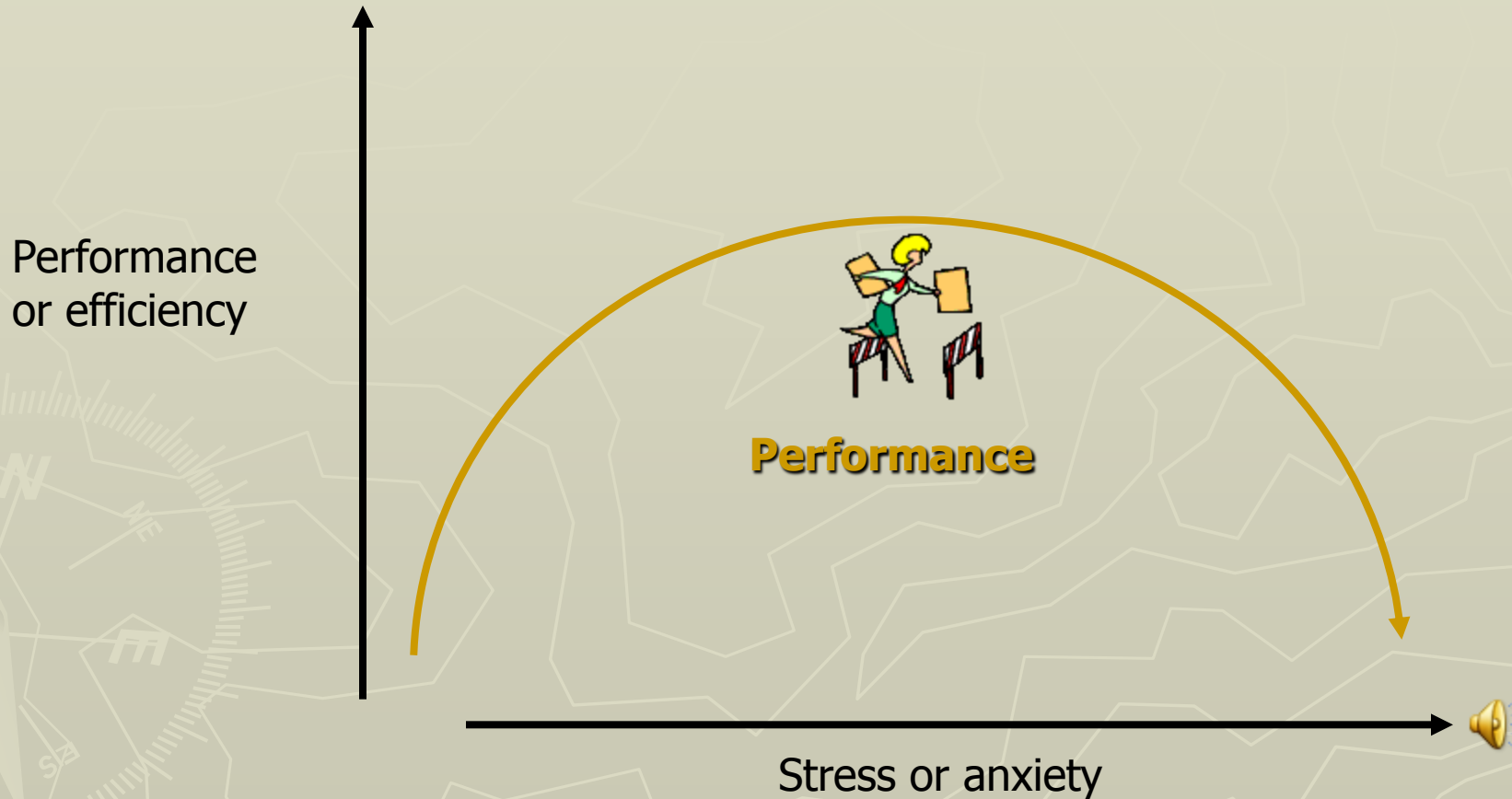
Another Look

- ▶ Metabolism is activated
- ▶ Stress – Brought to you by → CRF
- ▶ CRF – two major pathways: amygdala & hypothalamus.
 - Amygdala – warns
 - Hypothalamus – command center – connected to pituitary
- ▶ Pituitary – releases stress hormones including ACTH
 - ACTH – activates the adrenals producing:
 - ▶ Adrenaline
 - ▶ Noradrenaline
 - ▶ Cortisol
- ▶ All of this results in the release of glucocorticoids and catecholamines increasing metabolism to send fuel in the form of glucose, triglycerides, and free fatty acids via the blood stream.
- ▶ But it doesn't end here.
- ▶ All this activity causes some systems to shut down most notably:
 - Reproduction
 - Digestion

The Positive Side of Stress

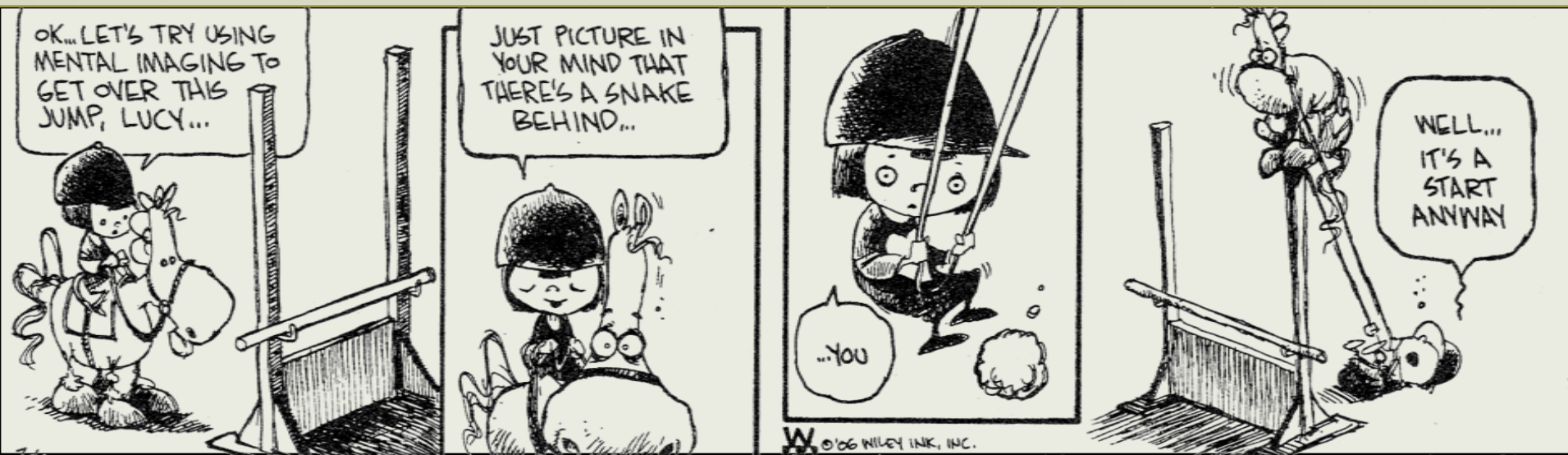
- ▶ The increased energy allows people to accomplish things they never thought possible.
- ▶ Fight or Flight helps us to rise to the challenge before us.
- ▶ Stress actually enhances performance to a degree (e.g. optimal stress... also known as Yerkes-Dodson Law).

Yerkes-Dodson Law



As stress increases, performance initially rises and then declines.

However, it is important to remember the ability to generate a fear response is a critical though unpleasant experience.



It can mean the difference between
life or death.

Factors Affecting the Stress Response

- ▶ Your Sense of Control
- ▶ Certainty / predictability
- ▶ Your knowledge and preparation
- ▶ Perception – your attitude and outlook
- ▶ Your ability to deal with your emotions

Distress vs. Eustress

- ▶ Some stressors actually increase our quality of life (Health), while others detract from it (Illness).
- ▶ And not all stressors are created equal.

EVENT	SCORE
Spouse's death	100
Divorce	73
Marriage separation	65
Jail term	63
Injury or illness	53
Pregnancy	40
Retirement	45
Change in finances	38

EVENT	SCORE
Trouble with in-laws	29
Difficulty with boss	23
Shift in job hours or conditions	20
Change in residence	20
Change in recreation	19
Shift in sleep habits	16
Vacation	13
Christmas	12

WE SHOULD APPRECIATE WHAT
WE HAVE....INSTEAD OF
WORRYING ABOUT WHAT
WE HAVEN'T..

...AND ENJOY WHAT IS,
BEFORE IT ISN'T !!



Personality and Stress

► Stress Vulnerable –

- Pessimistic with poor problem solving skills
- Early life trauma – pre-setting the amygdala for threat
- Hot wired for Fight or Flight

► Stress Hardy –

- Regular exercise
- Strong support system, i.e., family & friends
- Perception of control, challenge, commitment
- Predictability

SOMETIMES I LIE AWAKE AT NIGHT, AND
I ASK, "WHERE HAVE I GONE WRONG?"



THEN A VOICE SAYS TO ME, "THIS IS
GOING TO TAKE MORE THAN ONE NIGHT"



Individual Differences

- ▶ Personality Traits – Shyness vs. Sociability, Curiosity vs. Timidity
 - More timid/shy = increased levels of stress hormones
 - Many forms of chronic illness
 - Higher in shy people
- ▶ Perceived Resources – high vs. low self esteem
 - Low self esteem – high reactivity to stress
- ▶ Magnitude of Response – “hot wired” vs. “cool wired”, Seems moderated by early life events & genetics

The Physical Difference between Anxiety (Irrational Fear) and Fear itself.

► NONE

Both anxiety and fear are normal responses to a perceived threat but they exist at opposite ends of a spectrum.



Anxiety vs. Fear

- ▶ The body does a poor job distinguishing between a real life threatening event and anxiety triggered by less momentous sources (difficult boss or co-worker, traffic jams, financial fears, exams, teachers, demands of classes).

SILLY GOOSE DEPT.



When Stress is Chronic

Physical Costs

Allergies
Dermatitis
Diabetes
Heart Burn
Hypertension
Infectious Disease
Irritable Bowel Syndrome
Pain
Side effects
Ulcers

Headaches
Cardiac Arrhythmia
Appetite Changes
Insomnia
Fatigue
Tremors in the extremities
Acid Reflux
Weight gain / loss
Motor tics
Rashes; Hives

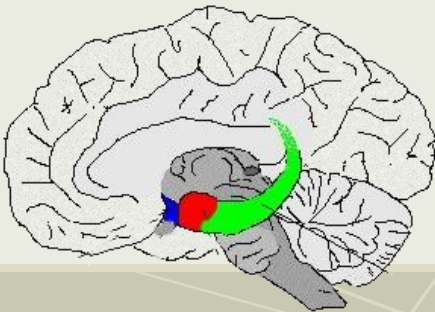


When Stress is Chronic

Cognitive Costs

Paranoia
Rigid Thinking
Confusion
Absentmindedness
Thoughts of violence
Inability to concentrate
Racing thoughts
Obsessive thoughts

Distorted thinking:
Blaming others
Personalizing
Denial
Catastrophizing
Polarized thinking
Mind Reading
Control Fallacies
Fallacy of Fairness
Scapegoating
Rationalizing



When Stress is Chronic

Psychological / Emotional Costs

**Chronic irritability
Resentment
Cynicism
Dissatisfaction
Excitement
Relief
Isolation / alienation
Chronic Anger
Sense of Helplessness
Depression
Nightmares
Self-denegration
Obsessions**

**Hatred
Sense of Rejection
Sense of Dissatisfaction
Fear
Hopefulness
Sense of being violated
Emotional confusion
Anxiety (gen. or chronic)
Feeling persecuted
Feeling inadequate
Insomnia/Hypersomnia
Compulsivity**

Another way to Assess Stress

My warning signs of stress

Physical symptoms

- ☐ Stiff or tense muscles, especially neck and shoulders
- ☐ Backaches
- ☐ Headaches
- ☐ Sleep problems
- ☐ Tiredness
- ☐ Fast heartbeat
- ☐ Shakiness or tremors
- ☐ Sweating
- ☐ Ringing in ears
- ☐ Dizziness or fainting
- ☐ Choking sensation
- ☐ Difficulty swallowing
- ☐ Stomachache
- ☐ Nausea or vomiting
- ☐ Diarrhea or constipation
- ☐ Frequent, urgent need to urinate
- ☐ Loss of interest in sex
- ☐ Weight loss or gain
- ☐ Restlessness

Behavioral symptoms

- ☐ Procrastination
- ☐ Grinding teeth
- ☐ Difficulty completing work assignments
- ☐ Overly critical attitude
- ☐ Fidgeting
- ☐ Strained face
- ☐ Fist clenching
- ☐ Changes in the amount of alcohol or food you consume
- ☐ Taking up smoking or smoking more than usual
- ☐ Increased desire to be with or withdraw from others
- ☐ Rumination (frequent talking or brooding about stressful situations)

Emotional symptoms

- ☐ Crying
- ☐ Overwhelming sense of tension or pressure
- ☐ Irritability
- ☐ Restlessness
- ☐ Trouble relaxing
- ☐ Nervousness
- ☐ Quick temper
- ☐ Lack of meaning in life and pursuits
- ☐ Sense of loneliness
- ☐ Unhappiness with no clear cause
- ☐ Depression

Cognitive symptoms

- ☐ Anxious thoughts
- ☐ Fearful anticipation
- ☐ Continual worry
- ☐ Poor concentration
- ☐ Trouble thinking
- ☐ Trouble remembering things
- ☐ Loss of sense of humor
- ☐ Indecisiveness
- ☐ Lack of creativity

Other symptoms

Adapted primarily from The Wellness Book, Herbert Benson, M.D., and Eileen M. Stuart, R.N., M.S. (New York: Fireside, 1993)

Stress and Sleep

► Chronic stress impairs sleep

- Rumination over slings and arrows
- Activation of stress response
- Inhibition of brain hormone systems that activate sleep
- Sleep deprivation renders us irritable and more sensitive to threat
- We increase reactivity to stressors leading to increased anger and anxiety
- Increased sleep deprivation
- Cycle inevitably worsens

Chronic Disease Status

► Development –

- Slow and steady process
- Cumulative – Doesn't happen overnight

► Homeostasis –

- Regulation of the body to a balance point and the subtle ebb and flow of the body

► Allostasis –

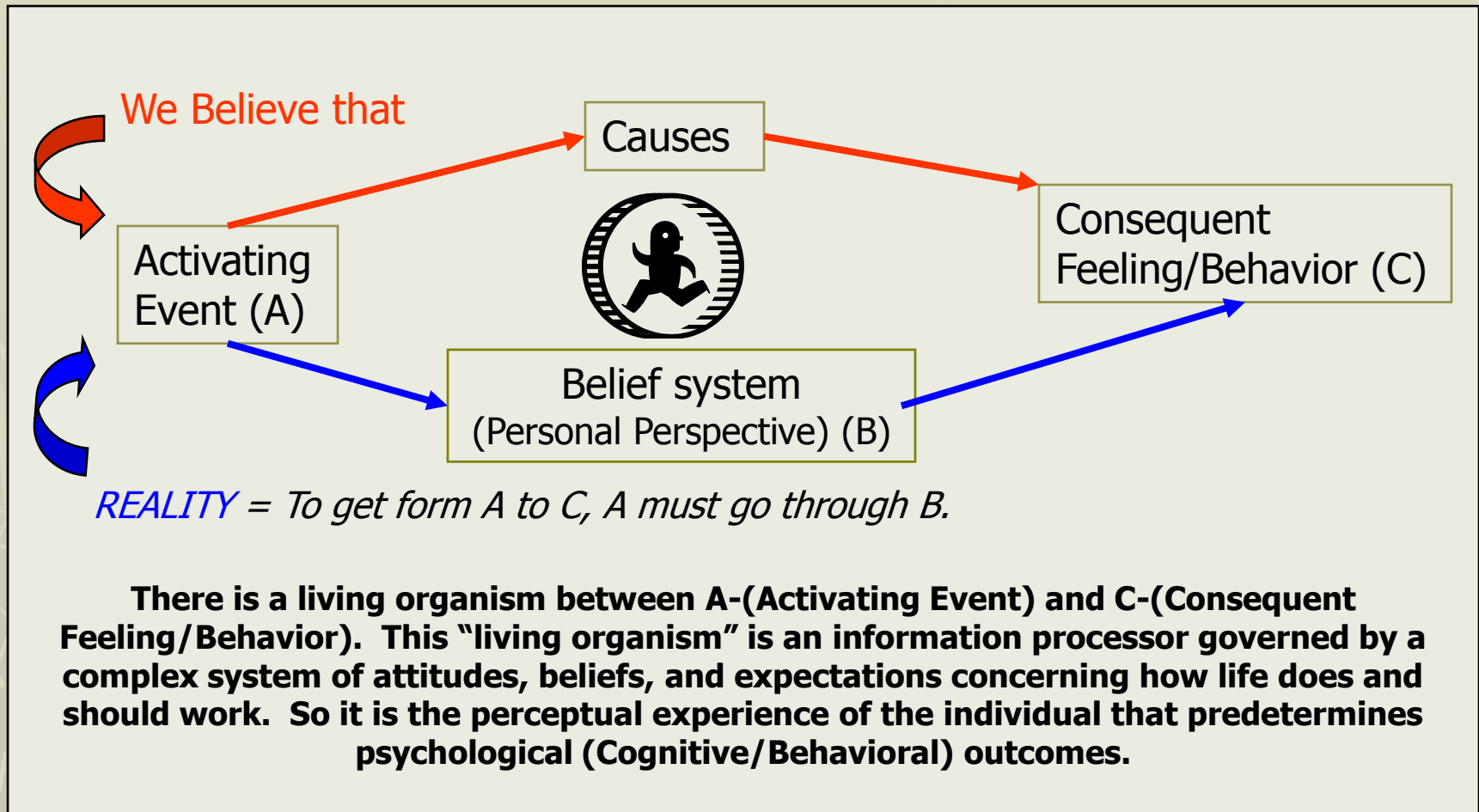
- Movement to balance thru challenge
 - Both involve the body's attempt to achieve stability but allostasis is a more dynamic process best reserved for the short term

Chronic Disease Status

- ▶ Long term allostatic load = Chronic Stress.
 - Continuous activation of stress hormones.
 - Insulin efficiency decreases.
 - Wear and tear on physiology increases.
 - Quality of sleep declines.
 - We eat more & crave more high fat diets.
 - We are more easily fatigued and less active.
 - Blood pressure rises.
 - Increased levels of triglyceride and cholesterol leading to diabetes, heart disease, and sometimes to behaviors that maintain the vicious cycle.

How do we participate?

► Making a Stressful World more Stress Full.



A BEHAVIORAL COGNITIVE DISPLAY (ABCD'S)

A	B	C	D
ACTIVATING EVENT:	BELIEF SYSTEM	CONSEQUENT FEELINGS/BEHAVIORS	DECISION POINT (Deal with it/Do it right)
(Antecedent i.e. comes before) Something happens representing some triggering event to an emotional state	Personal Perspective: Private ideas and attitudes that occur spontaneously and seem more like automatic thinking	Negative Emotional State (and resultant negative behavioral actions) which tend to lead to self-fulfilling negative personal positions	To overcome the negative effects of "B" (Belief System) we must engage in a cognitive/behavioral (thoughtful and action) shift in our personal perspectives, i.e., cognitive restructuring.
	THE FOUR WAYS THINGS GO WRONG: Distorted Thinking Irrational Beliefs Unrealistic Expectations Family Scripting	Problem Feedings: Depression Anxiety Panic Anger Resentment Phobias, etc.	DEVICES FOR PERSPECTIVE SHIFTING= Meditation and/or visualization, thought stopping, relaxation, Prayer, etc.
		& BEHAVIORS: Acting out Avoidance Withdrawal Substance abuse Physical abuse Verbal abuse, etc.	DISTRACT: Do a different physical activity such as gardening, playing an instrument, cleaning house, hobbies, etc.
			DIVERT: Do a different mental activity such as listen to music, do a crossword puzzle, write a poem/song. Etc.
			DISPUTE/DEBATE: Challenge the "enemy" within i.e. the gremlin/negative self talk by using the scientific method of the friend within (the "baker of your own cake metaphor"). Remember that the language of the self talk of the friend within is logical, objective, practical, realistic, common sense, beneficial, adult/adult conversation.

Lets Look at Anger

2 X 2 Table of Anger

	Appropriate Expression	Inappropriate Expression
Appropriate Anger		
Inappropriate Anger		
		100 %

Lets Look at Anger

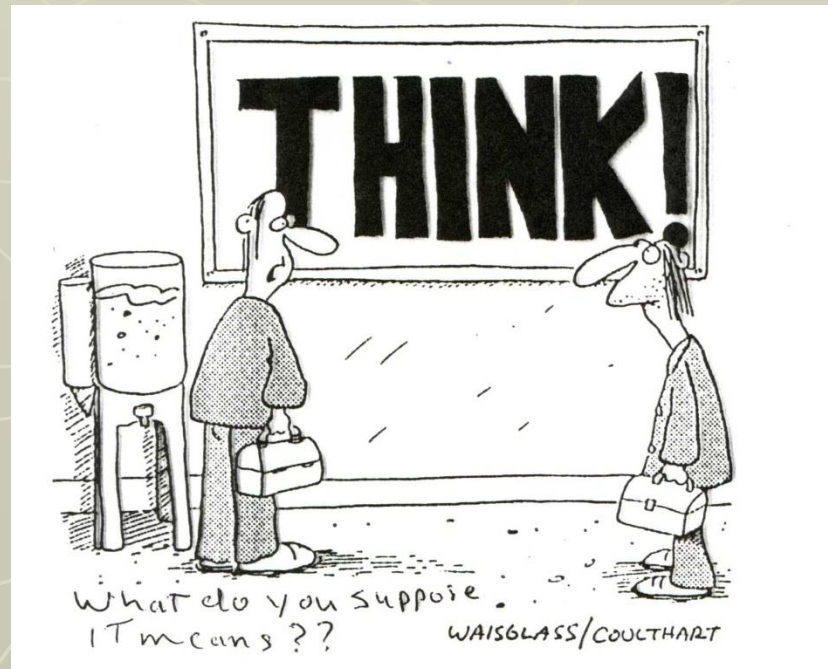
Note the Four Cells – Leaving only one cell (25%) appropriate both for anger and expression of anger

2 X 2 Table of Anger

	Appropriate Expression	Inappropriate Expression
Appropriate Anger	25 %	25%
Inappropriate Anger	25 %	25%
	100 %	

But its even more complicated

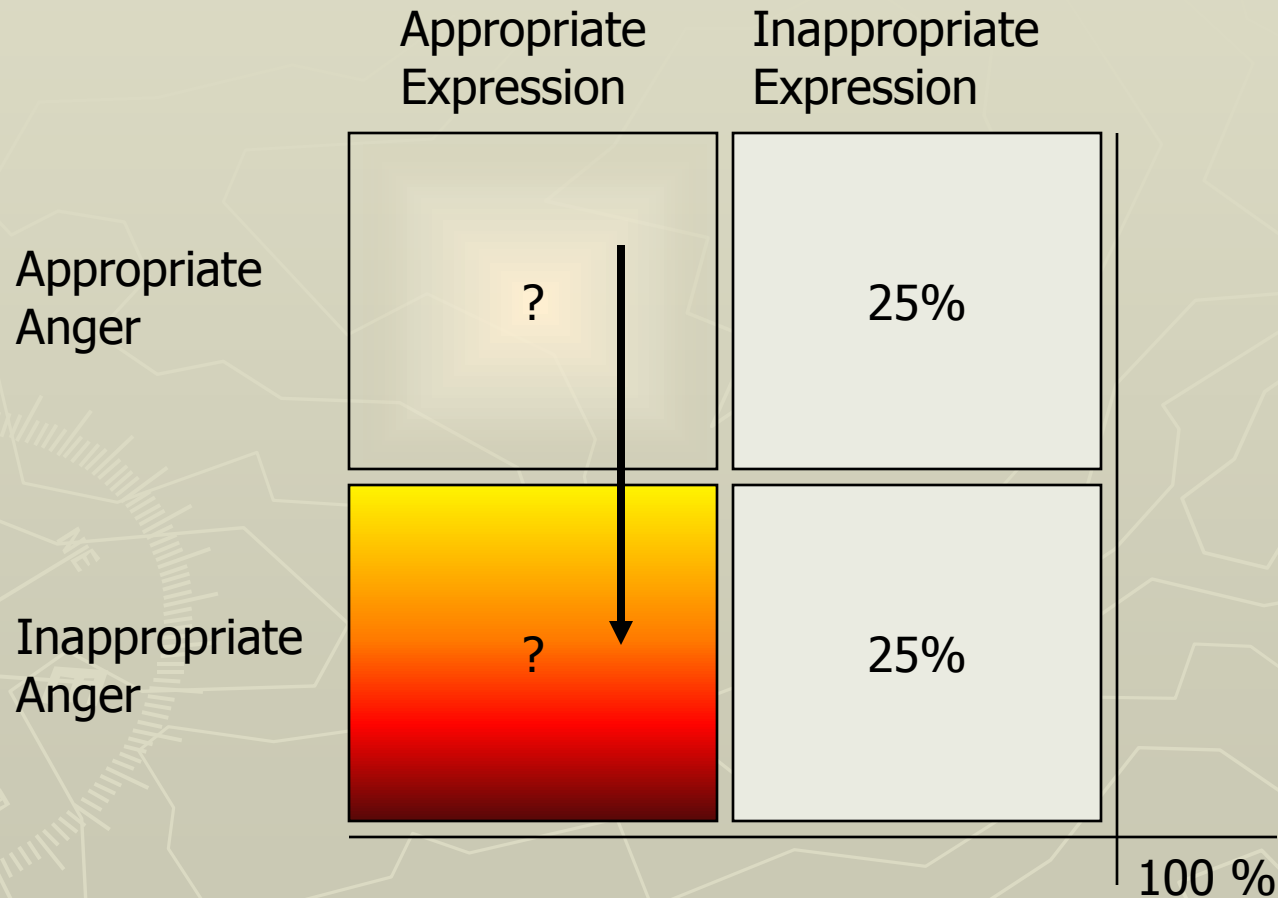
- ▶ Perception is at the root of all stress.
- ▶ And our perceptions are moderated by our brain/mind.



Four Ways Things Go Wrong

1. Distorted Thinking.
2. Irrational Beliefs.
3. Unrealistic Expectations.
4. Family Scripting.

When these are active, the appropriate expression of appropriate anger cell is depleted.



So what to do?



*"I'm no longer on mood medication
since I discovered ignorance is bliss."*

Managing Stress

1. Learning ways to relax

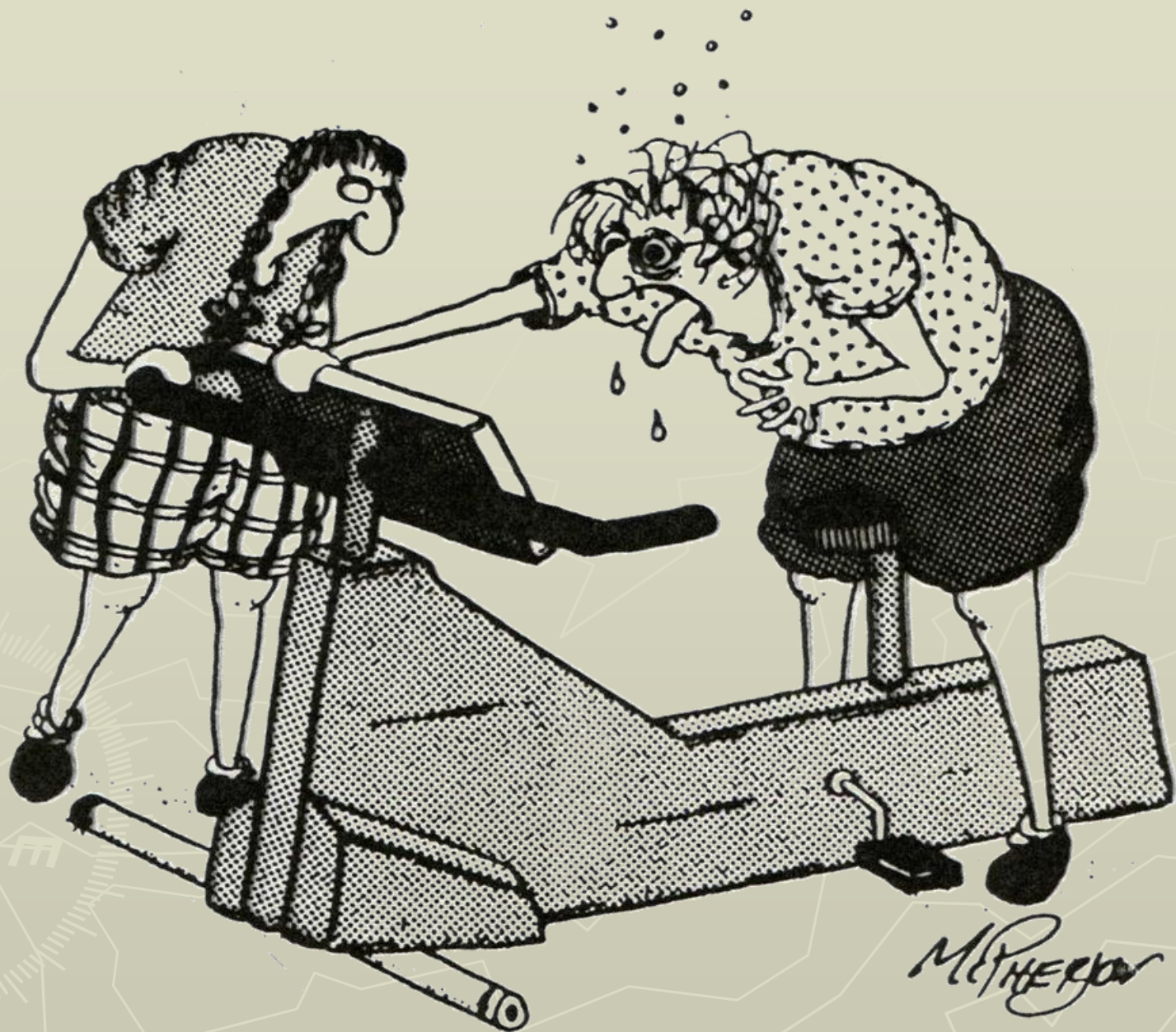
- **The relaxation response**
- **Progressive muscle relaxation**
- **Meditation techniques**
- **Yoga**
- **Visualization**
- **Prayer**
- **Guided Imagery**
- **Relaxation or Serenity Tapes/ CDs**

Managing Stress (continued)

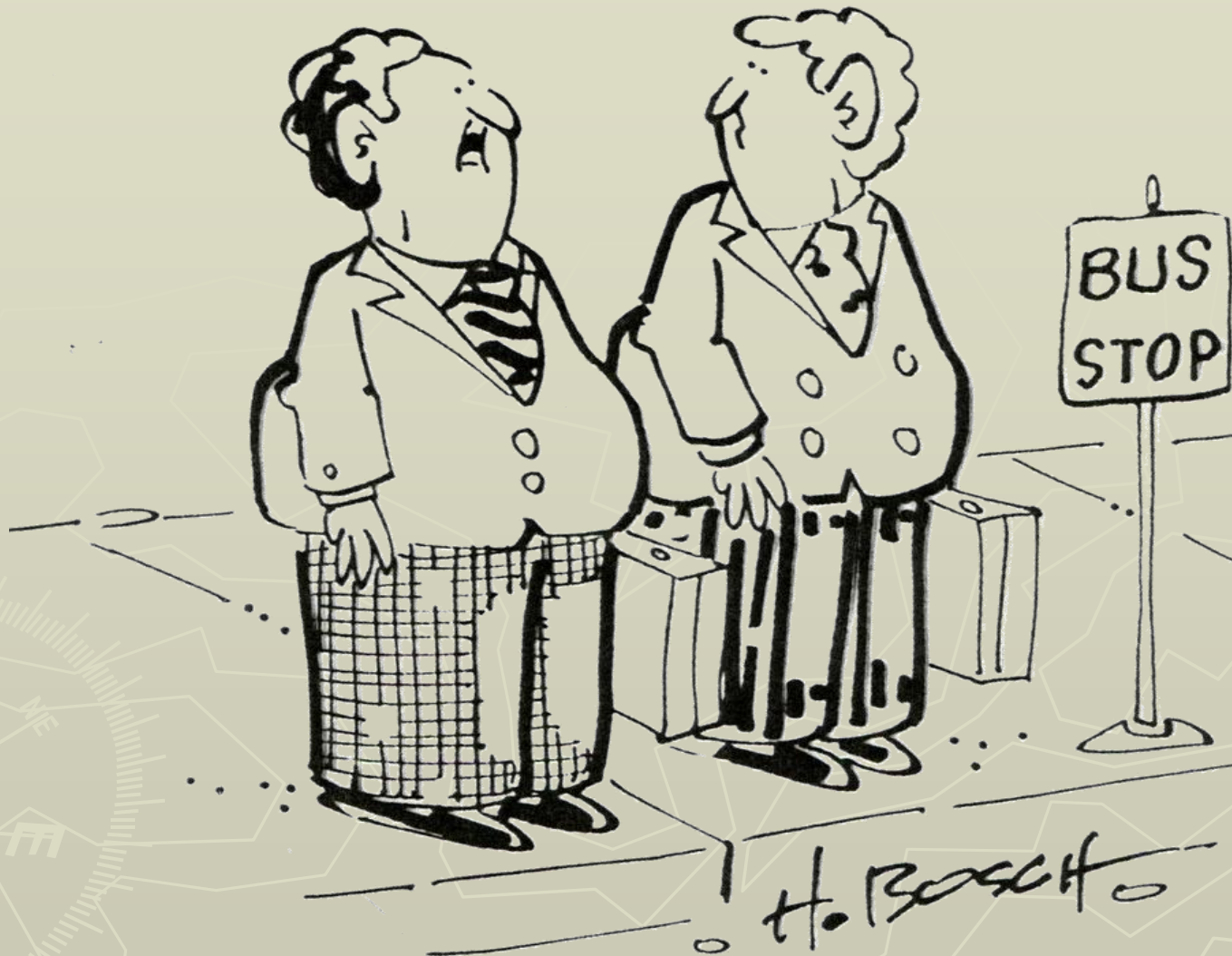
2. Setting Aside Personal Time.

- ▶ Journaling.
- ▶ Exercise.





*"According to the on-board calorie computer,
you burned the equivalent of three M&M's."*



*"My wife left me for health reasons.
She was sick of me."*

Managing Stress (continued)

2. Setting Aside Personal Time

- ▶ Journaling
- ▶ Exercise
- ▶ Social Support
 - ▶ Pursuing joyful activities
 - ▶ Eating well
 - ▶ Time management

GO! WHAT ON EARTH WOULD
MAKE A BUG HURRY?



YOU'RE DELUDING YOURSELF,
STUPID! NOTHING YOU DO
IS IMPORTANT! YOU'RE
JUST A BUG!



OH MY GOSH, LOOK
AT THE TIME!



Managing Stress (continued)

2. Setting Aside Personal Time

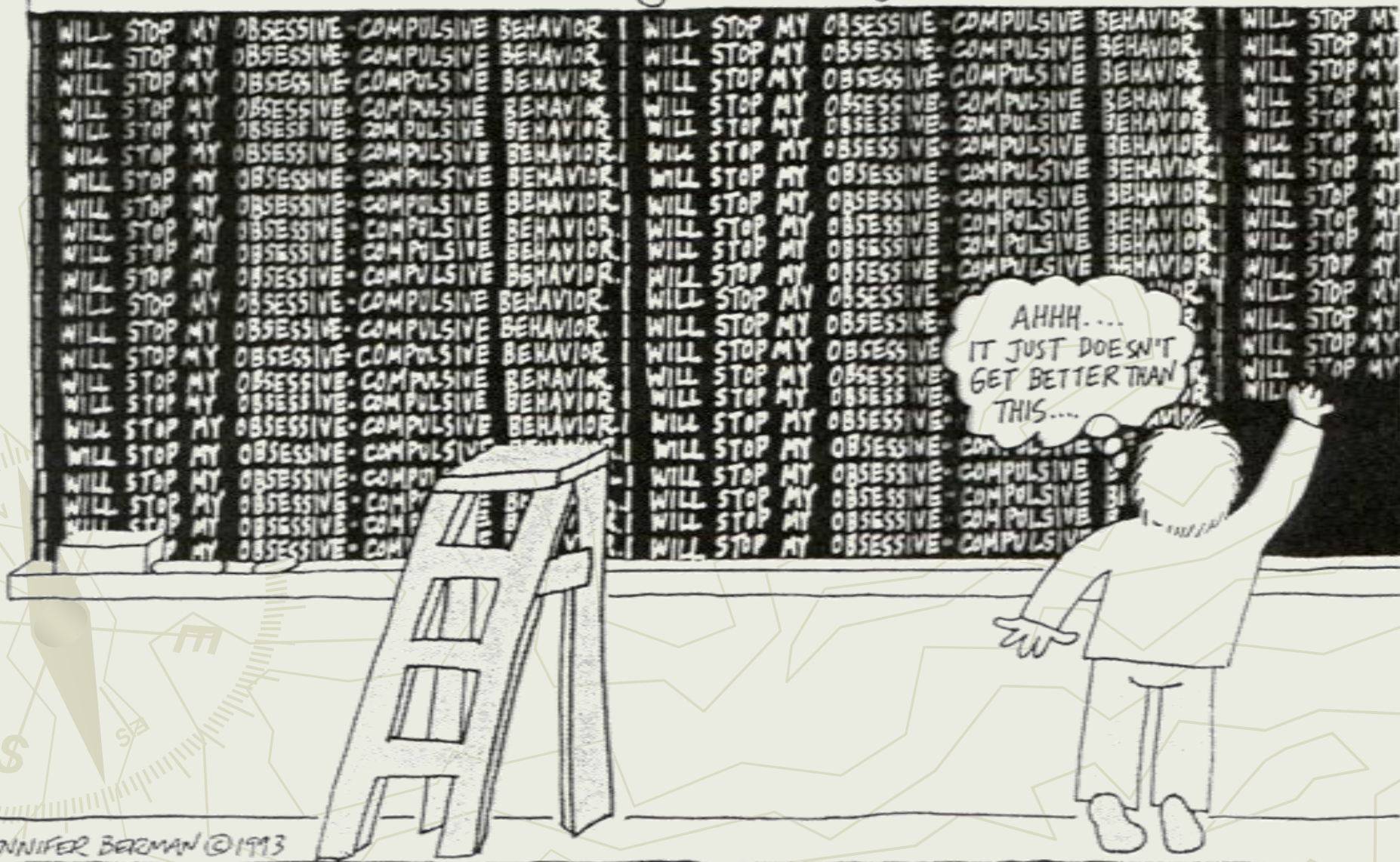
- ▶ Journaling
- ▶ Exercise
- ▶ Social Support
- ▶ Pursuing joyful activities
- ▶ Eating well
- ▶ Time management
- ▶ 10 – 2 - 4

Managing Stress (continued)

3. Cognitive Restructuring

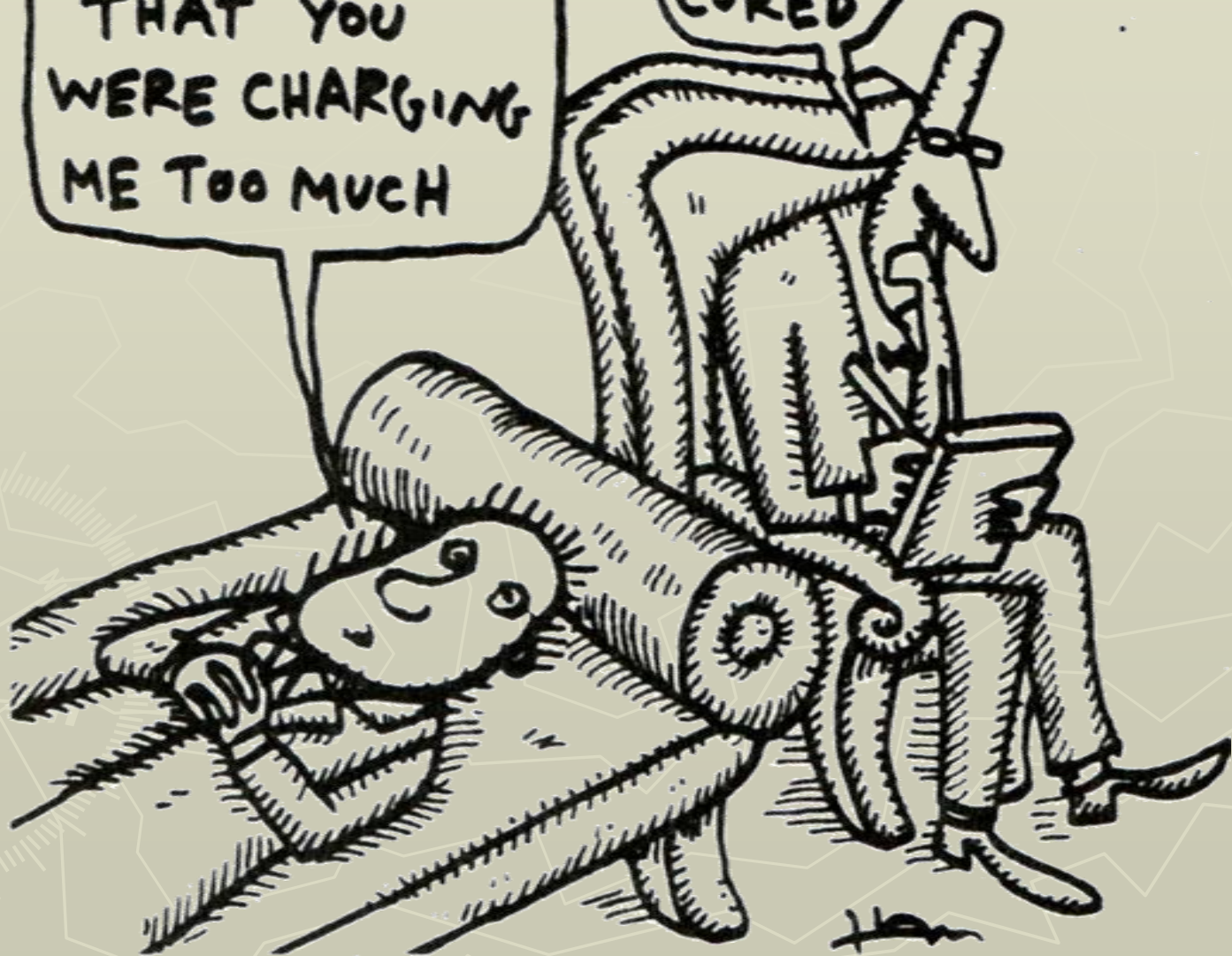
- Reframing automatic negative thoughts with more rational responses that promote coping.
- Learned Optimism.
- Cognitive Restructuring literally means changing the way you think about something. It **does not** just apply to stress management or “negative” thoughts.

Aa Bb Cc Dd Ee Ff Gg Hh Ii Jj Kk Ll Mm Nn Oo Pp



I DREAMT
THAT YOU
WERE CHARGING
ME TOO MUCH

YOU'RE
CURED



Questions ?

