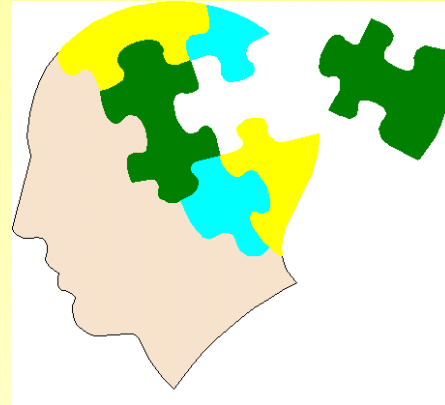


# **Strategic Rehabilitation:**

## **Practical Strategies For Seniors with Neurologic Impairment**



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**VillaMartelli Disability Resources Website**

**<http://villamartelli.com>**

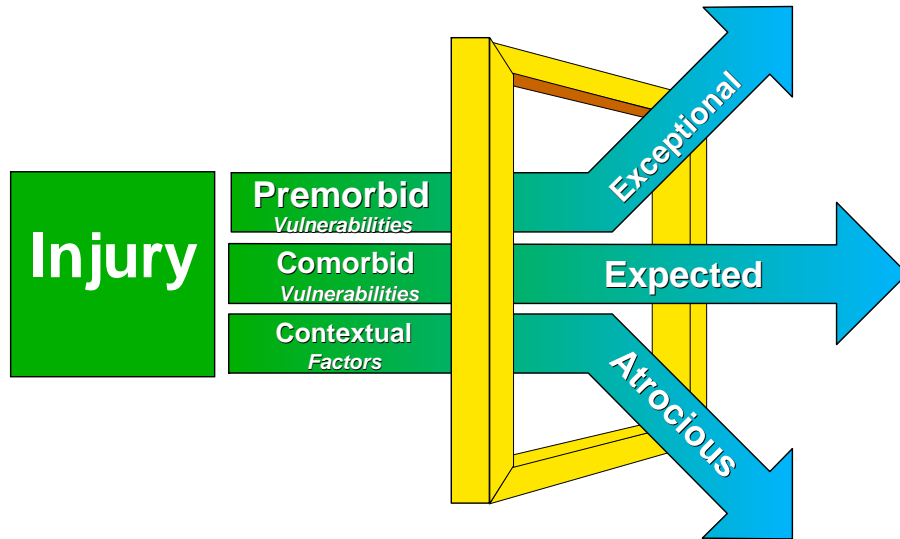
## **Purpose of Talk**

### **■ Offer a Model and Strategies for Continuing Rehabilitation in Seniors with Neurologic Impairment that:**

- ▶ **Reduces the complexity of identifying and accomplishing meaningful goals**
- ▶ **Simplifies the goal achievement process**
- ▶ **Issues from:**
  - **(a) the "automatic learning" and "errorless learning" literature and recent evidence of skills relearning;**
  - **(b) a task analytic examination of acquisition of relevant habits as a model of skills retraining;**
  - **(c) analysis of developmental, characterologic, organic and situational obstacles & facilitators of strategy utilization; and**
  - **(d) techniques for promoting rehabilitative strategy use, adaptable to an individuals reinforcement preferences and style, which highlight relationships to functional goals, utilize social networks, and employ a simple and appealing cognitive attitudinal system and set of procedures.**

## ***Myths of Recovery and Adjustment Following Neurologic Insult or Illness***

- **If the Structure Tests say they Can, They Will**
- **If the Structure Tests say they Can't, They Won't**



## **TBI and Aging**

<http://villamartelli.com>

## Demographics: the Elderly

- 2000:
  - 12% (26 mil)  $\geq 65$
  - 1% (2.4 mil)  $\geq 85$
- 2050:
  - 25% (65 mil)  $\geq 65$
  - 5% (15 mil)  $\geq 85$

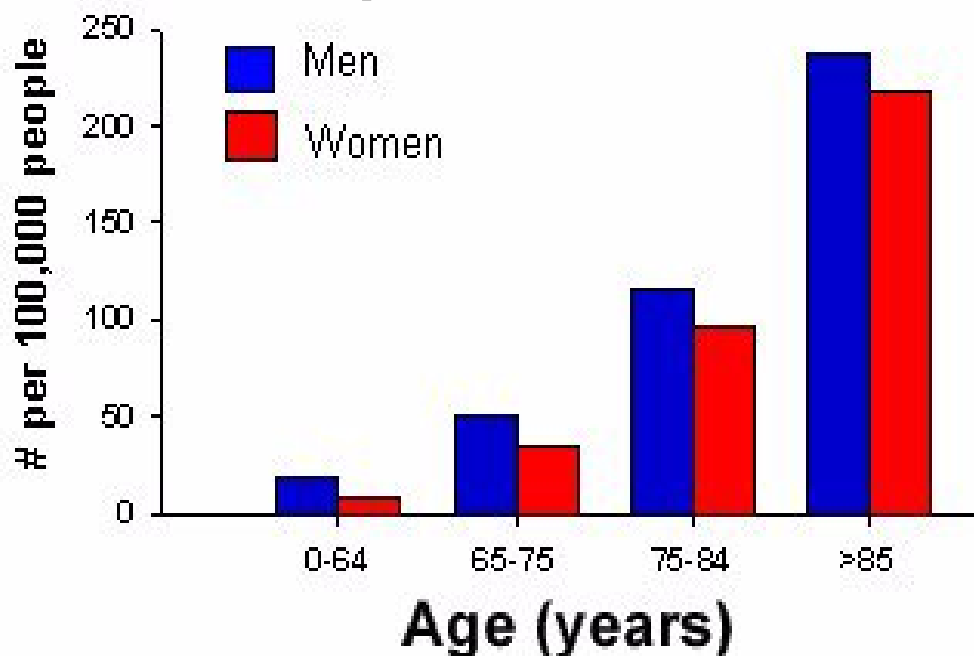
## Disability in Elderly Community Dwellers

- 77% report No Functional Disabilities
- 23% Need Assistance:
  - Physical
  - Walking
  - ADL's: Toileting, Grooming, Dressing...
  - Bathing
  - Getting out of bed
- 95% Need Assistance Post-TBI

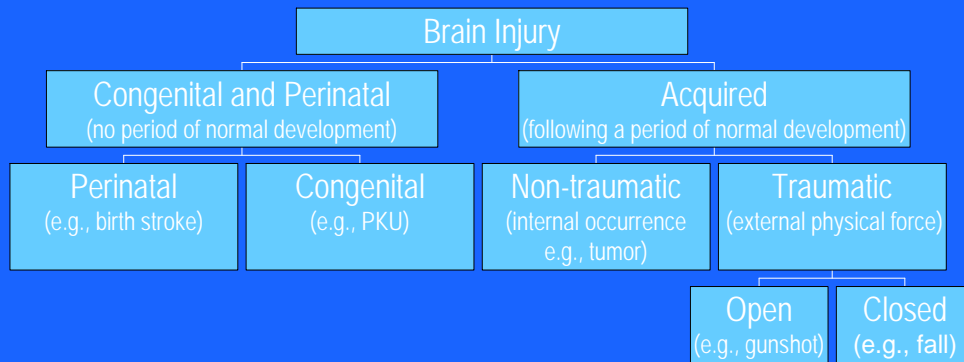
# TBI Mechanisms in Elderly

- 50% from FALLS
  - 78% ground level
  - 22% elevated (stairs, etc.)
- 20% Pedestrian - MVA
- 20% MVA (usually low mph)
- 3% Assaults
- 3% Other Strikes
  - Blunt or Falling Objects

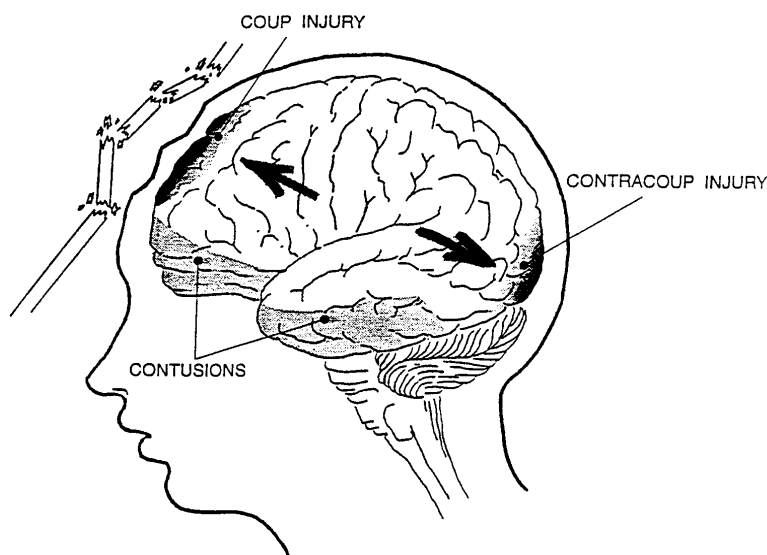
## Nonfatal fall-related TBIs: Hospitalizations



# Types of Brain Injury



## Coup/Contracoup



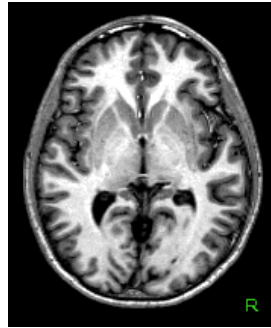
# Preventing Falls in the Elderly

- 1. Use Balance and Gait training
- 2. Use Muscle-strengthening Exercises
- 3. Gradually Discontinue Medicines that cause Drowsiness
- 4. Increase Home Safety
  - Remove hazards (e.g., rugs)
  - Use Non-slip bathmats & stair rails
  - Employ Assistive Devices
  - Other Individualized Safety Designs
    - Person & Environment

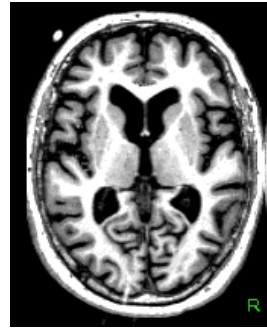
## Neurophysiology of the Aging Brain

- ▶ Enlargement of ventricles, sulci, subarachnoid & peri-ventricular areas
- ▶ Reduction in Brain Volume (esp. frontal)
- ▶ Reduction in rCBF, EEG, metabolism
- ▶ Periventricular, deep white matter lesions
- ▶ Neural Loss (esp. hippocampal)
- ▶ Placques, Tangles, Atherosclerosis, Infarcts...
- ▶ Neurotransmitter declines

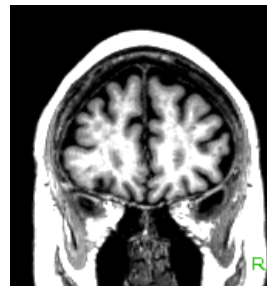
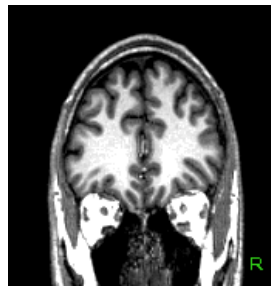
# Normal Aging



YOUNG

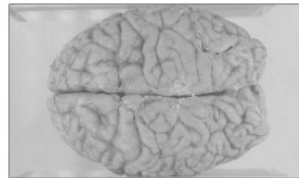
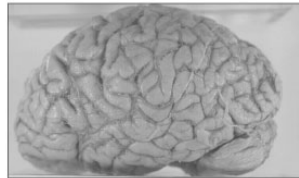


OLD



# Alcohol Consumption

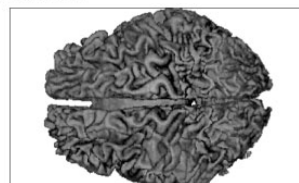
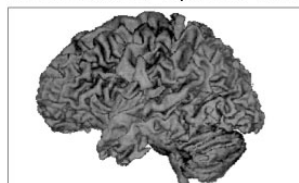
A. The brain of a normal elderly person



B. The brain of a person with Alzheimer's disease



C. The brain of a person with alcoholism



# Cognitive Problems Associated with Aging

Construct	Reference	Criteria
Age-associated memory Impairment (AAMI)	[58]	Single neuropsychological score one S.D. below the mean for normal young adults on memory test. Absence of dementia. Memory complaints
Age-related cognitive Decline (ARCD)	[59]	Psychologists clinical judgement based on comprehensive neuropsychological assessment. Current level of function compared to premorbid level
Questionable Dementia (QD)	[60]	Clinical Dementia Rating of 0.5. Indicative of cognitive Impairment 2S.D. below the mean in one cognitive domain
Benign Senescent Forgetfulness (BSF)	[61]	Poor short term memory for details. Awareness of deficit and use of compensation strategies. Long term recall intact
Mild neurocognitive Disorder (MND)	[96]	Deficits in at least two cognitive domains. No dementia or other mental disorder. Impaired social function. Associated with a general medical condition
Mild cognitive Impairment I (MCI)	[97]	Global Deterioration Scale (GDS) stage 3. One S.D. or more below average on age-appropriate norms
Mild Cognitive Impairment II (MCI)	[8]	Memory deficit based on age-appropriate norms. Normal activities of daily living. Absence of dementia or self-reported memory loss

## Neuropsychology & Aging

- Attention & Executive Functions
- Working & Episodic Memory (& *Implicit*)
- Sensory Acuity
- Cognitive & Motor Speed & Strength
- Fluid Intelligence (vs crystallized)
- Language
- Social Network (Peer) Pruning
- Depressive Symptoms
- Vegetative Disturbance: Sleep, Energy



# Dementia

- NOT Normal Aging
- Progressive Loss in Overall Mental Functioning
- Behavioral symptoms similar to other disorders (e.g., Depression)
- Global Mental Deterioration
  - ▶ Disorientation
  - ▶ Memory Problems
  - ▶ Coordination Problems
  - ▶ Mental Slowing
  - ▶ Impaired Judgment
  - ▶ Personality

## Depressive Pseudodementia (30%?)

- *Symptoms:*
  - ▶ Apathy
  - ▶ Psychomotor slowing
  - ▶ Impaired concentration
  - ▶ Delusions
  - ▶ Confusion
  - ▶ Complain of memory loss

## TBI Outcome in the Elderly

- TBI Effects are often amplified in Elderly, especially in those with:
  - Severe Injuries
  - Greater Preinjury Vulnerabilities

An injury severity-matched investigation in TBI revealed that individuals aged  $\geq 55$  years had:

- Twice the Rehab LOS & Cost
- Half the Rate of Functional Recovery
- Greater Cognitive Impairment at D/C
- Twice the Nursing Home Placements
- Same D/C Physical Impairment level

*Cifu: Arch Phys Med Rehabil 1996;77:883-8.*

## TBI Outcome in the Elderly

- A randomized, controlled trial demonstrated that after traumatic brain injury, interdisciplinary vs multidisciplinary team care results in decreased dependency and nursing home placement

*Semlyen Arch PM&R 1998*

# Strategic Rehabilitation: A Model and Methodology for Seniors with Neurologic Impairment

<http://villamartelli.com>

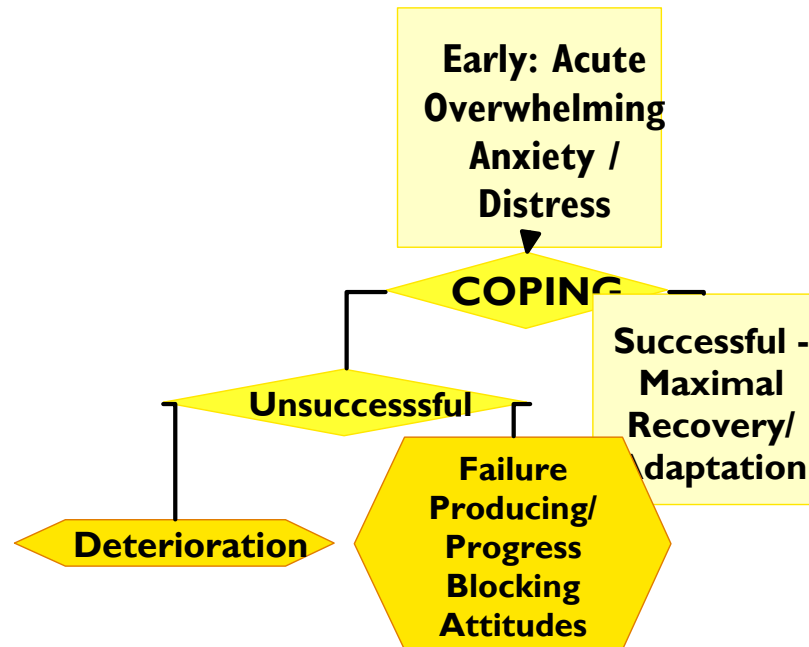


## REHABILITATION

### **The Systematic Process of:**

- **Removing Obstacles to Independence**
- **Accessing Opportunities for Stepwise Achievements** (*Of Desired Goals*) in the areas of **Love, Work and Play!**
- **Changing Destiny!**

# Catastrophic Reaction



**Catastrophic Reaction:** Goldstein's term for the extreme depression he observed after left-hemisphere lesions.

- *"We have characterized the conditions of brain-injured patients, when faced with solvable and unsolvable tasks, as states of ordered behavior and catastrophic reaction. The [latter] show all the characteristics of anxiety."*
- Organism in struggle to cope with the challenges of environment and own body.
- Whole; Cannot be divided into "organs" or "mind" & "body"
- "Disease" = changed state with the environment.
- Healing comes not through "repair" but through adaptation to conditions causing the new state

## **Common Personality Disturbances**

### **Following TBI** (Prigatano, 1987)

- ➔ Anxiety and the **Catastrophic Reaction**
  - ➔ cf Chronic Compensatory Effort Syndrome (Hopewell, 2001)
- ➔ **Denial** of Deficits (Anasognosia / Anosodiaphoria)
- ➔ **Paranoia** and Psychomotor **Agitation** (cf Bateson)
- ➔ **Depression, Social Withdrawal & Amotivational States** (cf Seligman; Taub)

## **Other Psychoemotional & Neuro-behavioral Patterns Associated with TBI**

- ➔ **Behavior Disorders**
  - ➔ Irritability / Reduced Frustration Tolerance, Impulsivity, Reduced Insight, Social Inappropriateness, Reduced Motivation, Increased Emotionality
- ➔ **Executive Disorders**
  - ➔ Initiation, Planning, Problem Solving, Self Regulation
- ➔ **Psychosocial Disorders**
- ➔ **Substance Abuse**

## **Sequelae That Tax Reduced Coping Systems (Contribute to Emotional Distress)**

- ➔ **Physical Dysfunction**
  - ➔ **Headache (chronic pain), Fatiguability, Dizziness**
- ➔ **Cognitive Dysfunction**
  - ➔ **Sensation, Perception, Information Processing (Att, Memory, Reasoning, Judgement)**
- ➔ **Psychosocial Changes**

## Predictors of Poor Adjustment: Impediments to Recovery

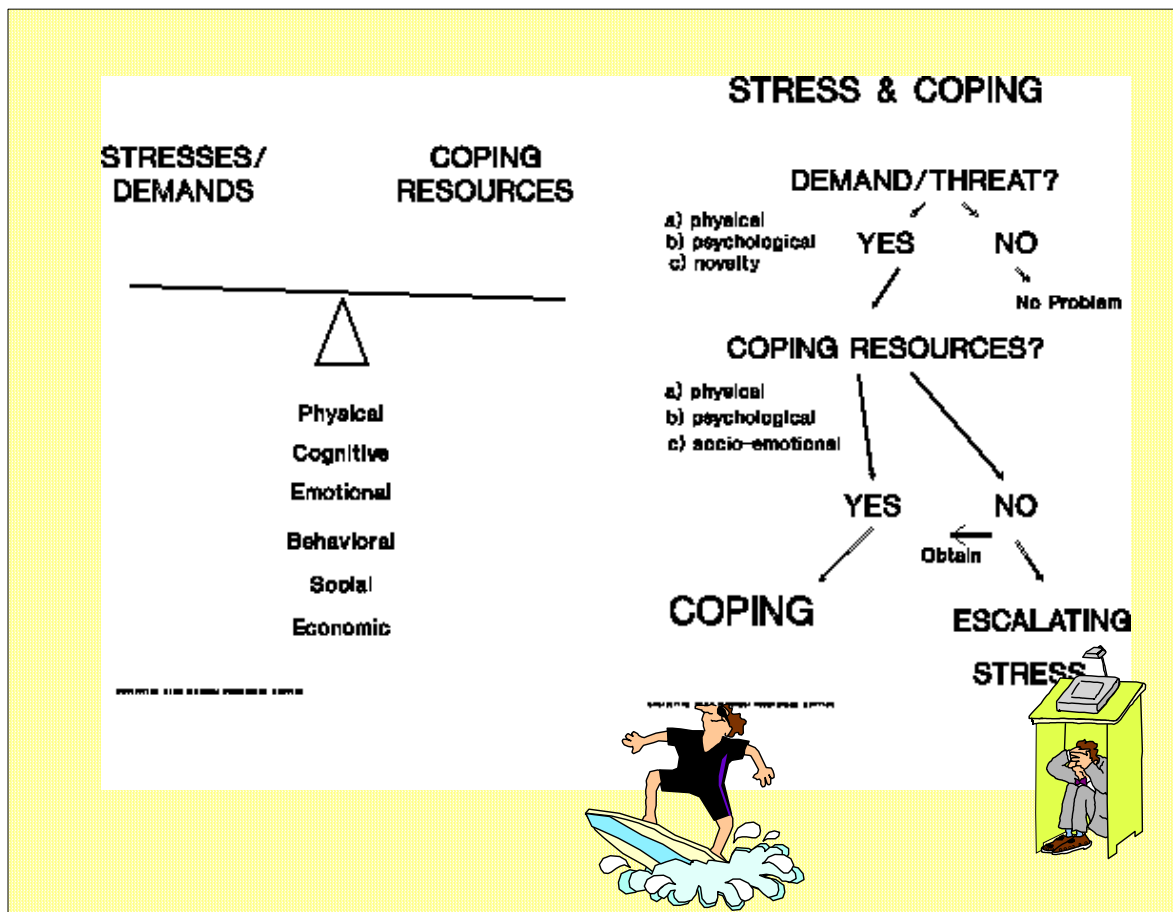
- **Anxiety / Catastrophic Emotional Reactions**
- **Fear of Failure Or Rejection (e.g. damaged goods)**
- **Loss of Self-confidence and Self-efficacy associated with Residual Impairments**
- **Excessive Stress (Real & Perceived)**
- **Fear of Pain (*Kinesophobia, Cogniphobia*) Re-injury / Exacerbation of Injury**
- **Discrepancies between Personality / Coping Style Behaviors and Injury Consequences**
- **Anger or Resentment or Perceived Mistreatment**
- **External (health, pain) Locus of Control**
- **Depression**
- **Disuse Atrophy /Conditioned Nonuse**
- **Inadequate, Inaccurate Medical Disagnosis, Information, Treatment; Delayed, Late Treatment**

# DAILY REMINDERS

*(adapted from John Sarno, MD (1998). The Mind Body Prescription, NY: Warner Books)*

- My \_\_\_\_ has become a distraction from my currently triggered emotional pain and it's historical roots:
  - ▶ \_Resentment / Anger about neglect;
  - ▶ \_Anger about being blocked;
  - ▶ \_Fear of being out of control;
  - ▶ \_Fear of being rejected;
  - ▶ \_Fear of not being adequate;
  - ▶ \_Fear of not achieving internal and external goals and expectancies.
  - ▶ \_Etc...

*It has learned that it can sustain and replicate itself like a virus by distracting me from the emotions that keep muscles tight and SNS aroused, thereby ensuring it's survival.*



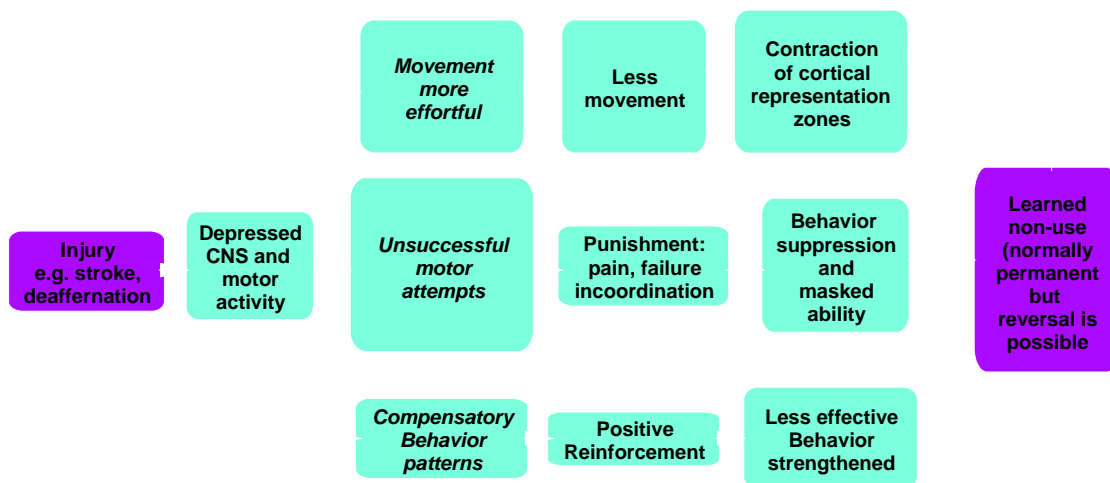
## Neuroplasticity & Rehabilitation:

### Evidence for Rehabilitation Suppression by Catastrophic Reaction

#### Constraint-Induced Movement Therapy (CIMT):

- To date, CIMT used effectively for:
  - ▶ Upper paralytic/ paretic limb of Chronic , Subacute CVA, TBI, LE CVA, Focal hand dystonia, Phantom limb pain
- Use Dependent Cortical Reorganization
  - ▶ Numerous efficacy studis, 5+ TMS, EEG, MEG studies with humans, 2+ studies of monkeys indicate: Cortical reorganization associated with TX effect of CIMT.
- Several Converging Lines of Evidence: Nonuse of a Single Deafferented Limb is a Learned Conditioned Suppression of Movement...efforts to use limb during initial post trauma period are unsuccessful (due to diaschisis, etc.), painful, anxiety and failure inducing and result in Learned Nonuse (cf. Learned Helplessness, Catastrophic Reaction) which persists after cerebral reorganization is possible.
- Mechanism of Action
  - ▶ (1) Changing learning contingencies reinforces Use Learning, inhibits Nonuse Learning
  - ▶ (2) Sustained, repeated practice of functional arm movements induces expansion of contralateral cotical area controlling movement and recruitment of new ipsilateral areas.

## Model of Learned Non-Use

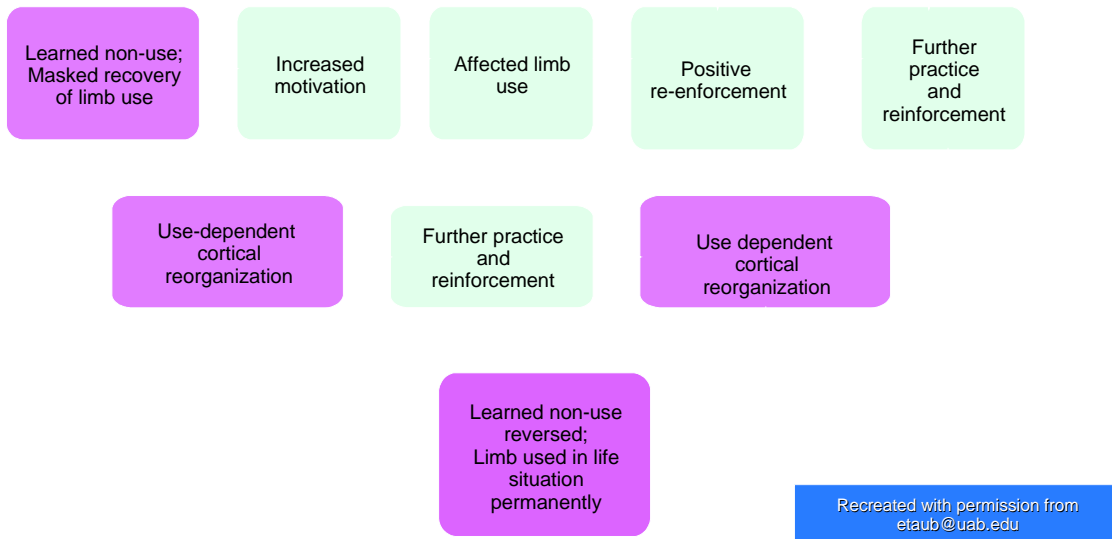


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etaub@uab.edu



# Model for Overcoming Learned Non-use

## Constraint-Induced Movement Therapy



## Resolving the Persistent Catastrophic Reaction

- Confront deficits:
  - ▶ Without being Overwhelmed by distress
  - ▶ With a Conceptual Framework and Rehab Methodolgy that Bolsters and Supports and offers Hope Conceptually and Through Graduated Successes
  - ▶ With a Calmer CNS and Decreasing Catastrophic Reactions (emotional, cognitive, neurophysiologic) that would block optimal recovery

## **Habit Retraining Model for ABI:** ***(continued)***

- If some of even the most basic habits are weakened or erased, everyday abilities and routines can be seriously disrupted, efficiency lost. What was once automatic and effortless can become overwhelming, requiring the same effort it took before efficient ways of performing any of the components of daily activities were learned.
- Even if important behavioral habits are lost, and the brain cells which sustain them destroyed or altered by injury or illness, the ability to relearn is seldom destroyed. New learned habits can be developed as replacements.
- We know the prerequisites for learning / relearning:

M.F. Martelli, Ph.D.: 1995

## **Habit Retraining Model for ABI:** ***(continued)***

- The greatest obstacle to learning or relearning is the redirection of energy away from goal directed activity and toward debilitating emotion and activity.
- The most frequent Rehab Energy Reserve *Poisons* (Re-Learning Blocks) include:
  - ▶ Fear / Anxiety, Persistent Catastrophic Emotional Reactions (usually subterranean), Anger and Resentment, Feelings of Victimization, and inertia
- Rehabilitation Requires Removal of Blocks

M.F. Martelli, Ph.D.: 1995

# Holistic Habit Rehabilitation

## **Ingredients: The 3 P's**

**Plan:** A strategy or design for stepwise progress toward a desired outcome. Most plans are based on task analyses, or breaking seemingly complex tasks down into simple component steps, and proceeding in a list wise fashion. Clearly, the more specific, concrete, and obvious, the more likely the plan will work.

**Practice:** Repetition is the cement for learning which makes complex and cumbersome and boring tasks more automatic and effortless. With practice and repetition, even complex tasks become automatic and habitual. That is, a habit, or automatic robots, performs the tasks for us without special effort, energy, concentration, memory, and so on.

**Promoting Attitude:** A facilitative attitude provides the motivation that fuels persistence & mobilization of energy necessary for accomplishment of a progressive series of desirable but challenging goals.

M.F. Martelli, Ph.D.: 1999



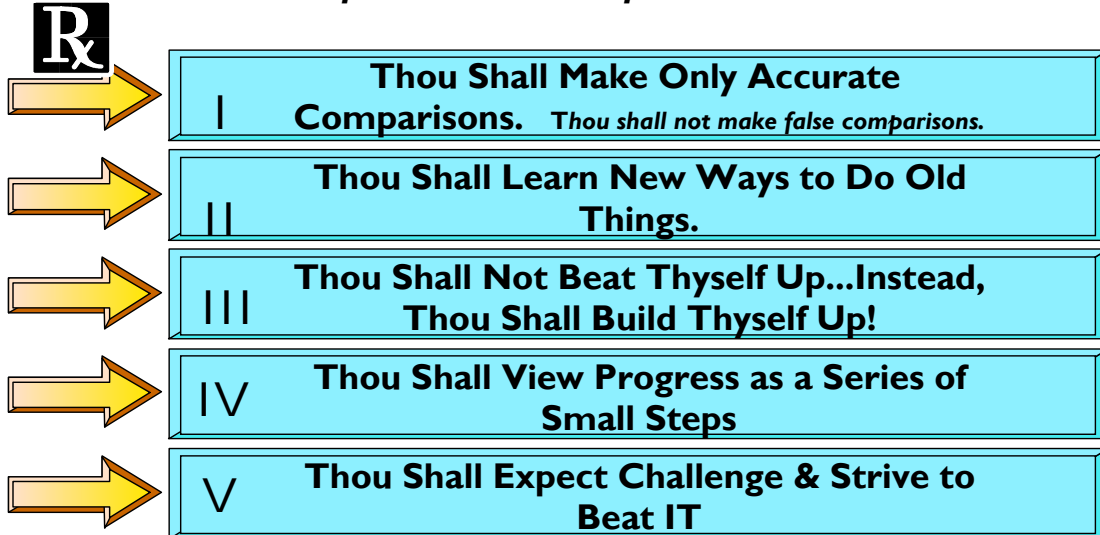
- **TA: Breaking a task into single, logically sequenced steps & recording in a Checklist** and then checking off each step as it is completed.
- **TA's always make task initiation, completion & follow through much easier....**greatly improve performance despite limitations in memory, attention, energy, initiative, ability to sustain performance, organization...any other difficulty.
- **TA's reduce demand and energy consumed** by reasoning and problem solving associated with planning, organizing & having to recall, make decisions & prioritize appropriate steps and sequences for both **basic and complex tasks**.
- **TA's (re)establish efficient habit routines** that make up normal everyday activity. **30 to 1000** consistent **repetitions** produce **automatic habits**
- **Ingredients** for (re)building automatic habits are the **3 P's: Plan, Practice, Promoting Attitude**. The result is (re)habilitation, or increased efficiency accomplished by removing obstacles to independence.



# The Five Commandments

## *of Rehabilitation:*

*Incorporating Cognitive Behavioral Psychotherapy to  
Conquer the Catastrophic Reaction*



M.F. Martelli, Ph.D.: 1999

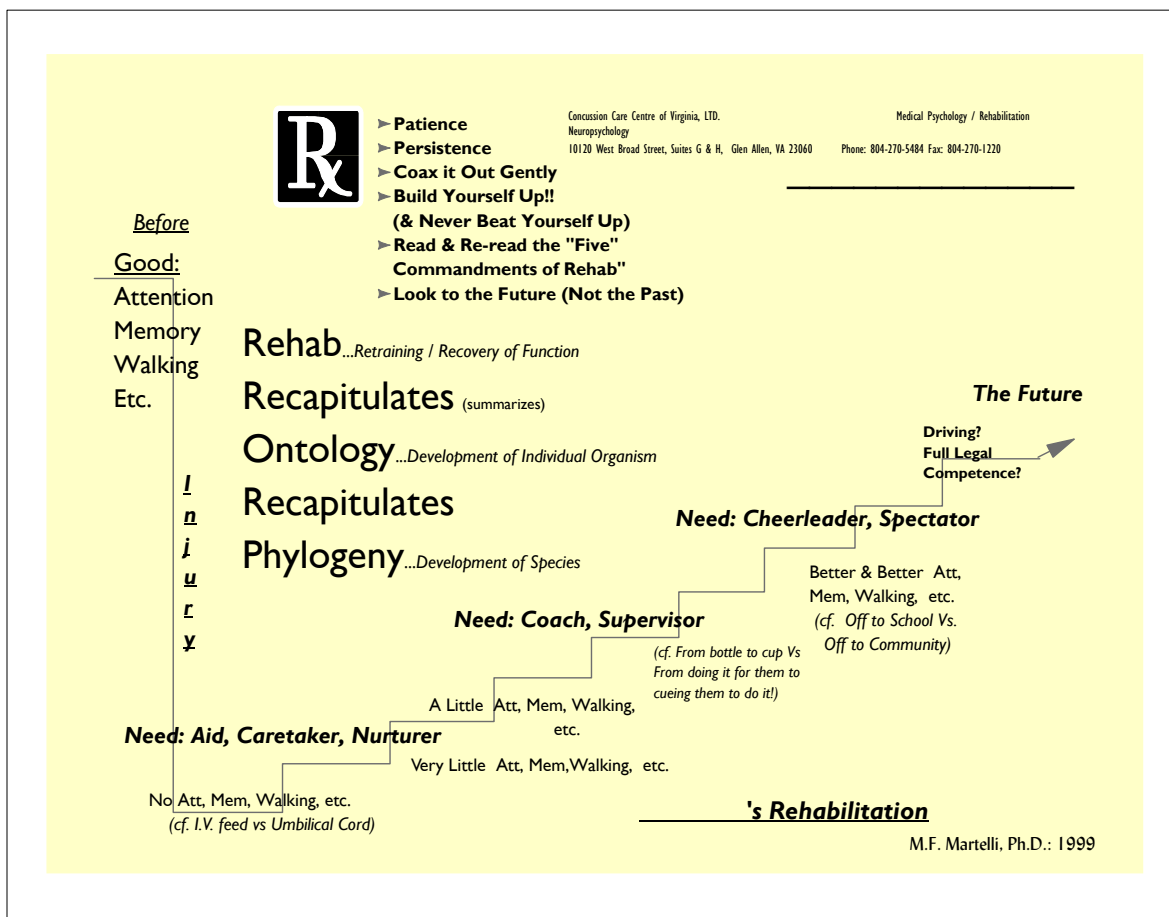
Concussion Care Centre of Virginia, LTD.  
Medical Psychology / Rehabilitation Neuropsychology



## **Rehab Commandment IV: Rehabilitation Imperative**

- ✓ First - Want to Improve
- ✓ Second - Believe that You Can Improve
- ✓ Third - Set a Series of Gradual, Incremental Goals so that You Can Improve *in small steps!*

*You can only Get Better If...  
You want to get better more  
than you want anything else\**



## The Behavior Management Imperative: Replace Negative Reinforcement (the "Stick") with Shaping (the "Carrot")

Negative Reinforcement "The Stick"	Shaping "The Carrot"
<ul style="list-style-type: none"> <li>☒ Believes that human nature is basically bad and that bad must be guarded against and kept in check</li> <li>☒ "Bad" Focused. Avoiding Bad is Good &amp; the Absence of Bad is Good. Focus is with Avoiding and Preventing Bad Behaviors and Negative Behaviors --&gt; "I don't want"...something Negative</li> <li>☒ A Self-Fulfilling Prophecy of Bad!</li> <li>☒ Uses "Should, Ought, Must... Shouldn't; Mustn't", Frowns, Nods, etc. Leads to --&gt; Anxiety, Distress, Pessimism &amp; Negative Identity</li> <li>☒ Uses Distress / Punishment to Decrease and Prevent Undesirable (Bad) Behavior and</li> <li>☒ Uses Anxiety, Fear, Distress &amp; Guilt Until the Bad Behaviors Stop and Good Ones Begin</li> </ul>	<ul style="list-style-type: none"> <li>☒ Believes that human nature is neutral and that good and bad are learned. Good can be taught, nurtured and cultivated</li> <li>☒ "Good" Focused. Good is Good, which Prevents Bad. Focus is with a Driving/ Goal Directed Vision of Making Desirable Changes and a Positive Future --&gt; "I want"... something Positive</li> <li>☒ A Self-Fulfilling Prophecy of Good!</li> <li>☒ Uses "In Your/Their Best Interest... Not in ...Best Interest", Smiles, Pats, etc.. Leads to --&gt; Confidence, Optimism, Hope &amp; Positive Identity, in My / Their / Our Best Interest</li> <li>☒ Uses Rewards to Increase Desirable (Good) Behavior Rewards &amp; Praises approximations of Good/Desirable Behavior that are present, and</li> <li>☒ Gradually and Successively Shapes Increases in Desirable Behavior Until Achieved</li> </ul>

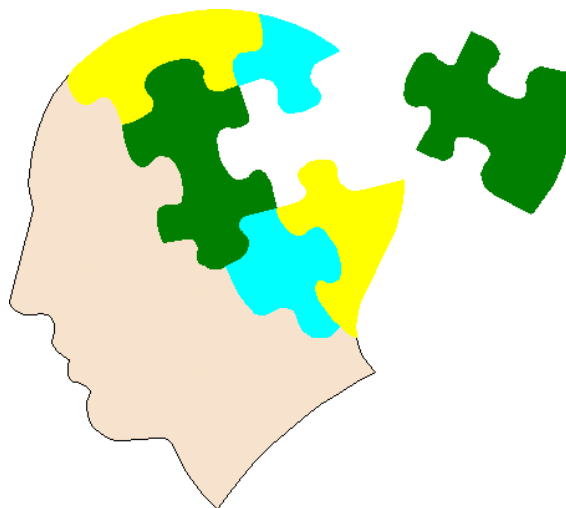
## **Shaping via Reinforcement of Successive Approximations of Desired Behavior:**

**This involves successively rewarding the smallest movements (baby steps) in the desired direction with carrots (i.e., verbal rewards, expressions of approval & appreciation, smiles & nonverbal gestures of approval, physical/tangible rewards, jumping up with joy, etc.)**

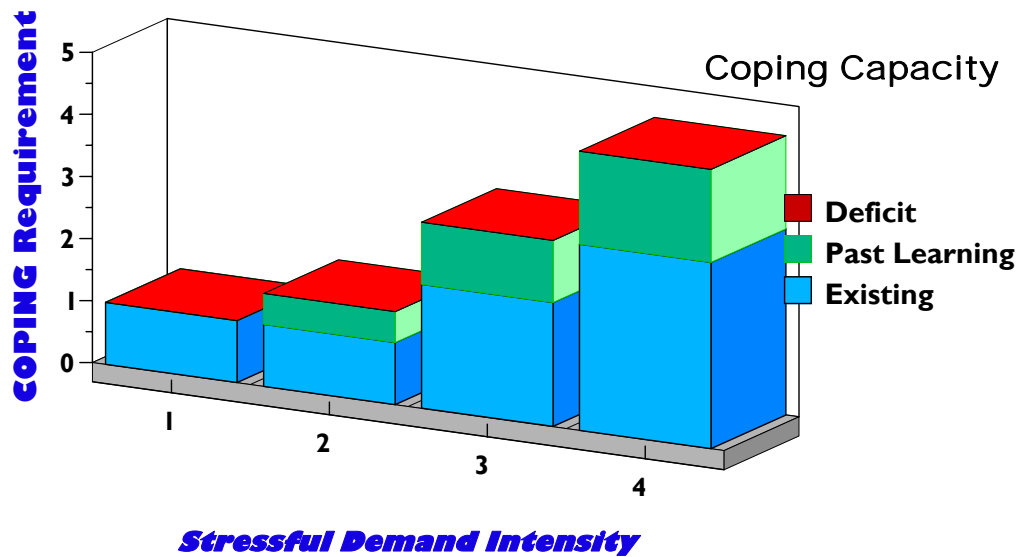
**Each successful small step is rewarded, which teaches feeling good about being good.**

## **NeuroBehavioral Regulation:**

**Adaptative Habit Retraining Strategies  
Derived From Task Analyses**

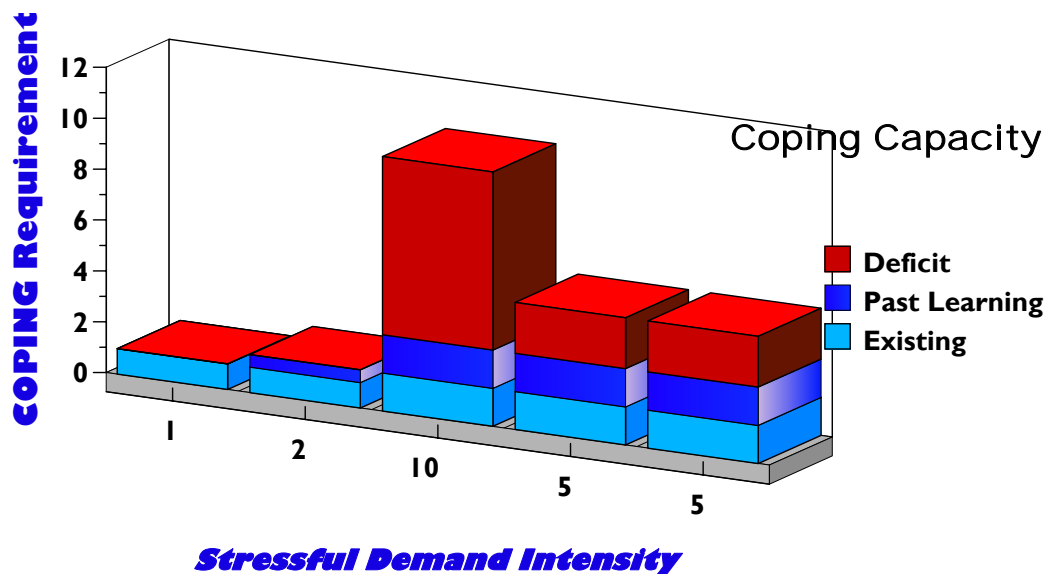


## Acquisition of Coping: Resilience (Optimal Learning)



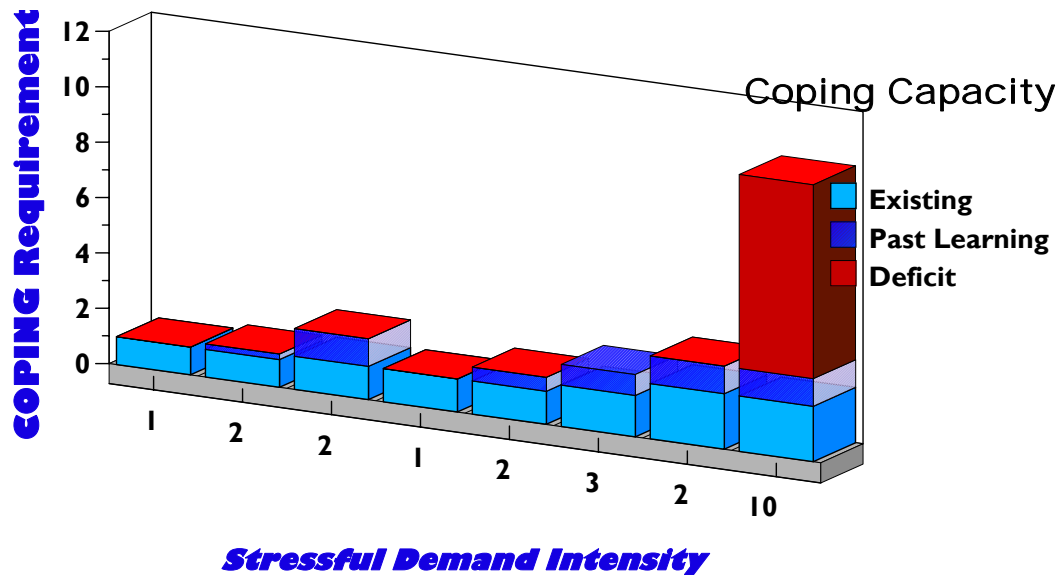
M.F. Martelli, Ph.D.: 1999

## Poor Acquisition of Coping: Resilience (Suboptimal Learning: Traumatization)



M.F. Martelli, Ph.D.: 1999

## Poor Acquisition of Coping: Resilience (Suboptimal Learning: Overprotection)



M.F. Martelli, Ph.D.: 1999

## Protocol for Increasing Self-Confidence

(Decreasing Self-Consciousness, Anxiety, Low Self-Esteem, etc.)

		Required Amount of	of External	Assistance Structuring/	/ Cueing
Complexity		High	Medium	Low	None
of	Low				
Task	Medium				
	High				

- Subsequent introduction of slightly more challenging tasks and reintroduction of the above noted process of maximum to gradually diminishing cues (method of diminishing cues)

M.F. Martelli, Ph.D.: 1999



## **Graduated Exposure Programs in Rehabilitation**

- Exposure to distressful emotional, physiological and sensory reaction situations
- Incremental increases in tolerance (and incremental compensatory learning, anxiety extinction, sensory interpretation distress) without experiencing significant anxiety or sensory distress.
- Requires person Not experience distressful reactions or experiences.
- Examples: anxieties, phobias & distressful emotions and sensory reactions related to the following:
  - Noise and/or light (when not mediated by headaches, etc.)
  - Crowds and public places (e.g., stores, malls, sporting events)
  - Overwhelming visual stimulation and patterns
  - Driving (especially in traffic)

**METHOD:** Schedule Gradually Increased Exposure / Assigned Activities, Incremented in Time and/or Distance and/or Intensity that are followed Exactly

### **Lisa's Graduated Exposure Driving Program**

(Beginner's Version)

Level /Step	Activity	Time	Frequency	SUDS
1-1	Sit in and Start Car	<= 2 min.	1-3 X/day	
1-2	Start Car, Back up slightly, then pull forward in driveway, going no further than is comfortable	<= 2 min.	1-3 X/day	
1-3	Start Car, Back up all the way to street, then pull forward, going no further than is comfortable, and repeat one or two times.	<= 2 min.	1-3 X/day	
2-1	Start Car, Back up all the way to street and then slightly into street, then pull forward, going no further than is comfortable, and repeat one or two times.	<= 2 min.	1-3 X/day	
2-2	Start Car, Back up all the way to and one full car length into the street and then then pull forward, going no further than is comfortable, and repeat one or two times.	<= 2 min.	1-3 X/day	

#### **RULES:**

- Stop the activity if you begin to feel even a little shaky.
- Do not progress to next level previous level completed for all exposures for 2 consec. days
- Email feedback to MFM re: progress, any shakiness you experienced, when level completed

M.F. Martelli, Ph.D.: 1999

## LT's Graduated Exposure Driving Program

### Monday (3/23)

Drive from home around 6:00pm to Chamberlayne Avenue and follow to Broad Street to Mid Town Auto Sales, look at cars for 10 minutes, and return home.

### Tuesday

Drive from home around 6:00pm to Chamberlayne Avenue and follow to Broad Street to Bailey's Auto Sales, look at cars for 15 minutes, and return home.

### Wednesday

Drive from home to technical center while mom is in back seat around 6pm, drive from center to home around 9:30pm with mom in back seat.

---

### Saturday (3/28)

Drive from home around 6:00pm to Chamberlayne Avenue and follow to Broad Street to the Mid Town Auto Sales, look at cars for 10 minutes, drive to Bailey's and look at cars for 10 minutes, drive to any other car lot on Broad Street and return home.

---

### Thursday (4/3)

Drive from home around 5:00pm to Byrd Park, circle through, head to Broad St. to Mid Town Auto Sales, then to Bailey's, then to a lot on the South Side and then return home.

### Friday (4/4)

Return at 5:00pm to Sheltering Arms. Drive self. After leaving, head to Byrd Park, circle through it, then head to Broad Street to the Mid Town Auto Sales, then head to Bailey's, then to a lot on the South Side, and then return home.

M.F. Martelli, Ph.D.: 1999

## Graduated Exposure Sensory Tolerance Program

Level /Step	Activity	Time	Frequency	SUDS
1-1	Stand on stepladder or chair for 3 Sec's (s	3 Sec.	3 X/day	
1-2	Perform a visuomotor scanning computer exercise	30 Sec	4 X/day	
2-1	Listen to radio while driving	1 Min	1-3 X/day	
2-2	Track 2 persons talking at same time	2 Min.	1-3 X/day	
3-3	Visit Clover Mall (9-11am, 2-4pm, Main ent.)	10 min.	1-2 X/day	

**Sample Rationale:** "Like Breaking a Bronco, you can't learn to ride until you can get in the saddle. You can't get in the saddle until the horse believes it won't die if something gets on its back. Similarly, You can't increase your tolerance for (sounds, etc.) unless your system learns that it can tolerate some level of that (noise, etc.) without great (distress, pain, fatigue, etc.)."

M.F. Martelli, Ph.D.: 1999

## Increasing Self-Confidence: Graduated Successes

(Decreasing Self-Consciousness, Anxiety, Low Self-Esteem, etc.)

### ○ **Graduated Success Shaping**

- Noncomplex tasks, successfully completable
- Gradual increases in complexity (challenge) following successes
- Diminishing Cues / Errorless Learning
- Increasing Accuracy of: a) Self-Monitoring; b) Self-Evaluation and c) Self-Reinforcement (self-delivered praise, etc.)

### ○ **Progress gauged through progression from:**

- Initial stages: Maximal, Diminishing Cues, Errorless Performance & accurate self-monitoring, self-evaluation & self-reinforcement
- Middle stages: increasing internal cueing & decreasing need for external assistance for task completion, accurate self-monitoring, self-evaluation & self-reinforcement, to
- Later stages: independent task completion and independently conducted accurate self-monitoring, self-evaluation & effective self-reinforcement
- Subsequent introduction of slightly more challenging tasks and reintroduction of the above noted process of maximum to gradually diminishing cues (method of diminishing cues)

M.F. Martelli, Ph.D.: 1999



## Self-Regulator for Involuntary Sadness!

**1-Re-Label...***It's Not an Intended, or Legitimate Degree of Emotion...It's **Involuntary Sadness!***

**2-Re-Interpret...***It's just Involuntary and Unintentional Sadness in which nerves connecting the brain's emotional experience centers to emotional expression muscles are weakened - resulting in decreased control & exaggerated release of emotion!*

**3-Re-Focus...***Concentrate on something different, or pleasurable or funny, to distract myself and & restore control of expression ("Plop, Plop, Fizz, Fizz...."!)*

**4-Re-Evaluate...***Decide that the involuntary sadness or teariness is Illegitimate and False Information. Decide to Dismiss This Information and Restore Control through re-focusing attention! Re-LIFE it!*

Re-LIFE it!

M.F. Martelli, Ph.D.: 1999  
adapted from Schwartz (1996) OCD Procedure



## Management of Emotional Reactions: Temporal Lobe Epilepsy (TLE)



To increase control of emotions and improve problem solving and general stress management and coping, we have developed a 4 step self-control procedure called **Re-L.I.F.E.**

The general outline for the Re-L.I.F.E. procedure is as follows:

Re:

1. **L-Label:** re-label the feelings as illegitimate, hyper-intensified emotions
2. **I - Interpret:** re- interpret them as emotional amplifications or hyperintensifications caused by electricity (i.e., kindling or hyperconnectivity) or B.S. (Between Seizure electrical amplification)
3. **F- Focus:** re-focus on anything less distressing, more pleasant, different, in order to disrupt the developing escalation of electricity and intensified emotions
4. **E - Evaluate:** re-evaluate the theme of electricity intensifying emotion as a component of epilepsy, as requiring that the primary red flags be monitored, and, when identified, re-interpreted more accurately, so that they can be controlled.

When this "self-talk" self-control procedure is used before the amplification of emotions progresses too far, it can counter amplification, preventing the escalation of emotions that leads to: psychic changes and increased emotional distress; increased fatigue and possible eventual exhaustion; and increased probability of eventual seizures - and a recurring pattern of poor emotional and/or seizure control.

Notably, posters, and graphic representations, with personalized details, are typically employed to assist with learning and application of this self-control intervention.

cf. Psychophysiologic Aura/Red Flag Discrimination / Self Control Habit Procedure

M.F. Martelli, Ph.D.: 1999

# Mission Impossible

## Assignment

*Your Mission, should you decide to accept it:*

- **Look for Opportunities to Build Stability By Practicing Emotional De-escalation / Self-Control Strategies**
  - ▶ **Practice Both:**
    - (A) Preventing Temporal Lobe Based Emotional Hyper-intensication (i.e., use Emotional Well-Being Habit to prevent "kindling" of electro-emotion)
    - (B) De-escalating "kindled" Emotion via Re-Interpreting it as electrical buildup trying to replicate itself by using your emotions against you to fuel more electricity !

**Freedom is  
Worth The Effort!**

M.F. Martelli, Ph.D.: 1999  
Derived from Task Analysis

## CRISIS SURVIVAL RULES: Emotional Control Strategies

### Mirroring

- **Sponging**: absorbing/ catching others negative emotions; allowing them to control your emotions, reactions.
- **Mirroring**: reflecting negative emotions, with factual comment and without emotional reaction or obligation to "catch" the emotion or respond with it.
  - ▶ involves a slow, deliberate and open look at the others statements while **Under reacting**: prevents escalation, allows self control through control of response, allows keeping a cool head to help calm the situation, not let another persons problem become your own.

**RX: Be a Mirror (not a Sponge).** Contract with partners to allow mistakes, not beat each other up when mistakes are made... learning and taking into account the "Rules of Crisis" can help...!

M.F. Martelli, Ph.D.: 1999  
Derived from Task Analysis

## EMOTION CONTROL HEADQUARTERS



### HOMEWORK

- Look for Opportunities to Think Suspicious Thoughts, Think Someone is Screwing You, and Get Angry, *and then*:
  - ▶ Practice re-interpreting them in a harmless, non-threatening, non-angering way!
  - ▶ Practice Saying "So What", "Who Cares" and "Who Says"
  - ▶ And, Remember the **Stress Buster Rules**:
    - Rule#1: Don't Sweat the Little Stuff!
    - Rule#2: It's All Little Stiff!

*(it's just that your injury makes it seem bigger than it really is!)*

M.F. Martelli, Ph.D.: 1999  
Derived From T.A.



Chris's

# Mission Impossible

## HOMEWORK

*Your Mission, Should you decide to accept it:*

- Look for Opportunities to Feel Urgency Or Need for Immediate Fulfillment and Convert it to Strategic Under-Reaction
  - ▶ Practice Countering Urgency via the Stress Buster Rules
  - ▶ Practice Building up Tolerance to Need/ Stress Frustration (i.e., Become *More Stress Resistant*, *More Under-Reactive*, and *More Strategic*)
  - ▶ Remind Yourself that Strategic Behavior is the Key to Influencing Important People (e.g. Dad) and Desirable Persons (e.g., girlfriends)

M.F. Martelli, Ph.D.: 1999



## Rehab N Pacing Imperative \* Neurogenic Fatigue

\* cf.: Vestibular Overload

- ▶ Remember to Leave Enough Reserve Energy For Brain Recovery, Strengthening & Building of Resilience/Increased Capacity in Brain Cells....
- ▶ ....If You Go as far as Tolerance or Energy Will Let You (i.e., until fatigued and/or sick), you will Not Allow Continued Recovery and Brain Strengthening (...instead, energy will go toward recovery from sickness, which only returns you to where you were...without progressing!)

*Pace it...Don't Race it!*

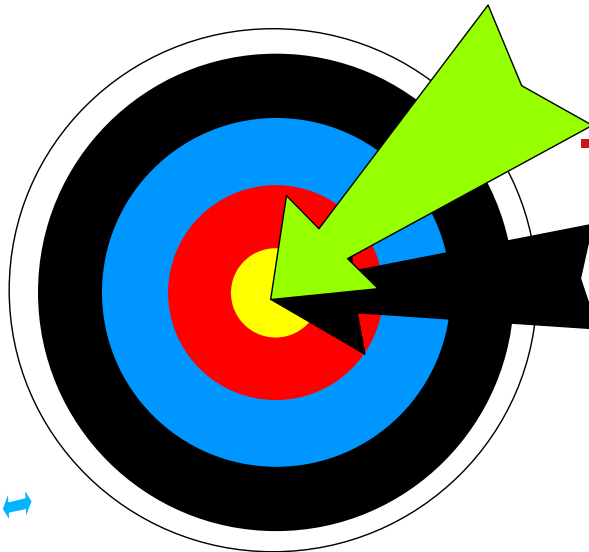
Progress is a series of small Steps...Celebrate each one patiently!

© M.F. Martelli, Ph.D.: 1994;1996



M.F. Martelli, Ph.D.: 1999

AJAX Strategies...Cognitive  
Cleaning Detergent!

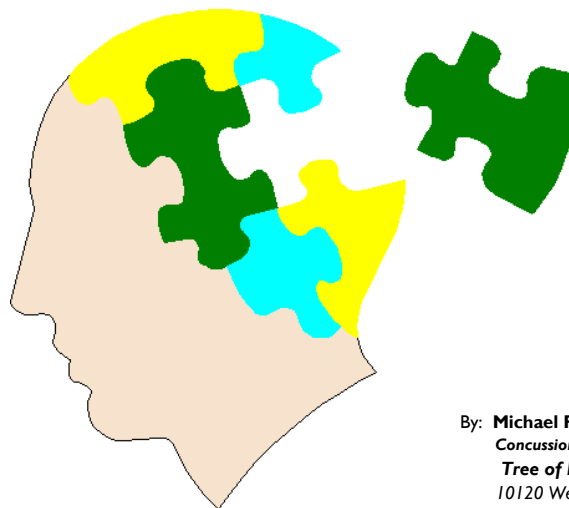


... **Stronger**  
**than**  
**Neurobehavioral**  
**Dirt!**

Derived From Task Analyses...  
Designed to Counter Cognitive Obstacles

## **FATIGUE Management:**

Strategies for Habit Retraining



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Tree of Life  
Rehab Neuropsychology

## **FATIGUE REGULATION STRATEGY**

### **General Interventions**

- ✦ **PACING** (gen. relaxation procedure & prophylactic), including
  - ✦ Enhanced discrimination, and
  - ✦ Proactive management of fatigue via segmenting activities into steps and taking frequent brief relaxation breaks.
- ✦ **ENERGY CONSERVATION** Strategies that emphasize
  - ✦ Early discrimination of fatigue (e.g., irritability, frustration, decreasing strength, speed or endurance, decreased cognitive efficiency)
  - ✦ Modifying activity and schedule to promote rest breaks before fatigue progresses, with
  - ✦ Gradual increases in length of activities to maximize energy level and peak performance on functional activities and vocational or educational pursuits.
- ✦ **TASK ANALYSES** & other Organization Strategies, to enhance automatic task performance & decrease energy requirements

## **CHRONIC PROGRESSIVE DISORDERS:**

### ***Developmental & Reactive Stresses***

- Generalized Declines in Control and Coping Resources
  - ▶ Declines in Physical Capacities
    - Sensory
    - Motor
  - ▶ Declines in Activity
  - ▶ Declining Independence
  - ▶ Decreased Self-Esteem and Self-Confidence and Sense of Purpose secondary to decreased involvement in activities that provide reinforcement, feeling useful, productive & worthwhile
  - ▶ Declining Friends and Social Outlets and enjoyments
  - ▶ Declining Energy & Endurance / Increasing Fatigue



## **CHRONIC PROGRESSIVE DISORDERS:**

### ***Developmental Factors***

- Fatigue related decreases in physical, cognitive, emotional & social functioning
- Cognitive & Social Understimulation related increases in cognitive deficits (e.g., atrophy, depression)
- Depression related reductions in physical, cognitive & social functioning, and motivation
- Misunderstanding of symptoms by others (e.g., laziness, selective memory, manipulation, etc.)
- Beating Up Self: Guilt, Frustration, Anger --> SelfAbuse
- Learned Helplessness
  - ▶ Difficulty making continued effort given past failures/expectation of future failures / belief that efforts will not work / over-reliance on others & external help

## **CHRONIC PROGRESSIVE DISORDERS:**

### ***Compensatory Equalizers***

- Shaping and the 5 Commandments
  - ▶ Self Pacing & Activity Planning to control fatigue (Prot.)
  - ▶ Attention, Memory & Organization Strategies
    - Internal Aids
    - External Aids
  - ▶ Task Analyses to Counter Fatigue & Decreases in Organization & Energy (and memory, etc.)
  - ▶ Assertiveness: educating others; requesting accommodations (e.g., extra time, breaks, etc.); expressing desires, thoughts, etc.
  - ▶ Set incremental, step-wise goals, build self up for accomplishments despite obstacles, and celebrate each tiny step of progress (*Nurse it, don't curse it; build self up instead of beating self up*)

## **CHRONIC PROGRESSIVE DISORDERS:**

### ***Compensatory Equalizers***

- **Adjust Standards & Expectancies to Fit Limitations**
  - ▶ accurate comparisons: peers vs healthy others, premorbid
- **Set Modest, Incremental Goals to Allow Control & Minimize Symptom Interference**
- **Employ Accurate Self-Expectancy, Self-Monitoring & Self-Evaluation and, finally**
- **Appropriately Self-Reinforce for Accomplishments Despite Odds, Obstacles**
  - ▶ Identify & Engage in alternative activities (inc. social) that allow feeling worthwhile & useful
  - ▶ Dispute Myths:

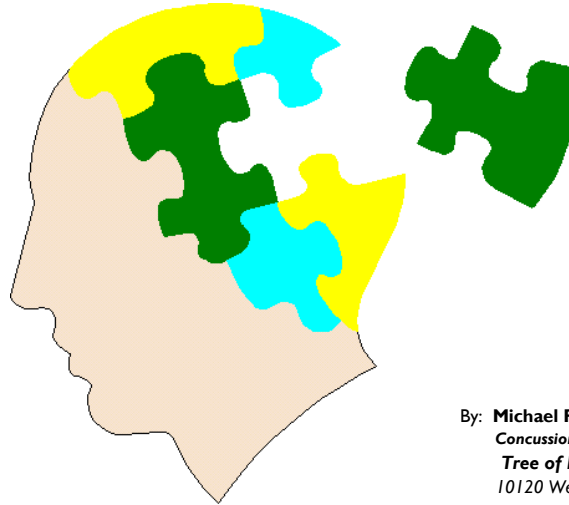
## **CHRONIC PROGRESSIVE DISORDERS:**

### ***Compensatory Equalizers (continued)***

- **Dispute Myths:**
  - ▶ "Why me...? (vs "What contract did I sign that said this would never happen to me?")
  - ▶ Grass is always greener
- **Use**
  - ▶ 5 Commandments of Rehab
  - ▶ Caregiver Rules
  - ▶ Rules of Conflict
  - ▶ Ideas to Help You Function &
  - ▶ Other Self-Help Tools, for patient, family, staff

# Attention Regulation:

## Strategies for Habit Retraining



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## ATTENTION REGULATION STRATEGY

### Auditory Comprehension & Memory

- ✦ **TO REALLY CONCENTRATE, I MUST LOOK AT THE PERSON SPEAKING TO ME**
- ✦ **I Must Also Necessarily FOCUS ON WHAT IS BEING SAID, NOT ON Surrounding Sounds or Activities or OTHER THOUGHTS WHICH WANT TO INTRUDE**
- ✦ **ALTHOUGH IT IS NOT HORRIBLE IF I LOSE TRACK OF CONVERSATION, I MUST TELL THE PERSON TO REPEAT THE INFORMATION IF I HAVE NOT Fully ATTENDED TO IT**
- ✦ **I Must CONCENTRATE ON WHAT I AM HEARING AT ANY MOMENT BY REPEATING EACH WORD IN MY HEAD AS THE PERSON SPEAKS**



## ATTENTION REGULATION STRATEGY

### General Distraction Buster

- ✚ **TO REALLY CONCENTRATE, I MUST LOOK/ FOCUS ON THE TASK AT HAND**
- ✚ **I Must Also FOCUS ONLY On WHAT IS BEING Done, NOT ON Surrounding Sounds, Sights or Activity, or OTHER Stresses of THOUGHTS WHICH WANT to Intrude**
- ✚ **I I MUST CONCENTRATE ON WHAT I AM DOING AT EVERY MOMENT BY FOCUSING ON THE CURRENT STEP TOWARDS TASK COMPLETION**
- ✚ **IT IS NOT HORRIBLE IF I LOSE My FOCUS or CONCENTRATION. I will simply have to Repeat and Re-Focus ON THE ONGOING TASK AT HAND, THE NECESSARY STEPS TO COMPLETE IT, AND THE NEXT STEP TO WORK ON!**



## ATTENTION REGULATION STRATEGY

### Lecture Distraction Buster

- ✚ **To REALLY CONCENTRATE, I Must LOOK / FOCUS on the PERSON LECTURING**
- ✚ **I Will ALSO FOCUS ONLY On WHAT IS BEING SAID, NOT ON Surrounding Sights, Sounds or Activities, or Other Thoughts Which Want to Intrude**
- ✚ **I MUST CONCENTRATE ON WHAT I AM HEARING AT EVERY MOMENT BY FOCUSING ON THE CURRENT WORD & PHRASE AS I HEAR IT**
- ✚ **IT IS NOT HORRIBLE IF I LOSE My FOCUS or CONCENTRATION. I will simply have to Re-Focus ON THE CURRENT WORD, PHRASE and MEANING, To Get Back on Track!**



Concussion Care Centre of Virginia  
Medical & Rehab Neuropsychology

## ATTENTION REGULATION STRATEGY

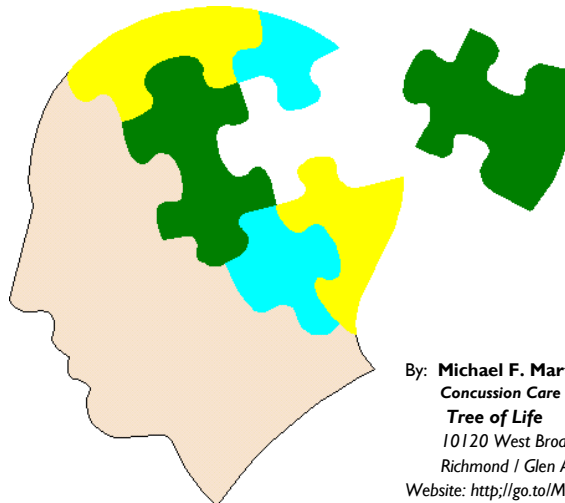
# DRIVING Distraction BUSTER

- ☛ To REALLY CONCENTRATE, I Must LOOK / FOCUS on the ROAD, My Vehicle & Other Vehicles
- ☛ I Will Also FOCUS ONLY On WHERE My CAR IS, WHERE OTHER VEHICLES & PEOPLE ARE and WHAT I AM DOING With My CAR And NOT On Surrounding Sounds, Sights, People or Activity or Other Thoughts Which Might Want to Intrude
- ☛ I MUST CONCENTRATE ON WHAT I AM DOING AT EVERY MOMENT BY FOCUSING ON WHAT I AM DOING AND TALKING MYSELF THROUGH IT
- ☛ IT IS NOT HORRIBLE IF I LOSE My FOCUS or CONCENTRATION. I will simply have to Immediately Re-Focus ON WHERE and WHAT I am DOING!

\* and Reading, Multiple Attention, etc.

# MEMORY:

Strategies for Habit Retraining



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## **Strategies For Remembering Names**

- **Repeat the Name 5 Times**

*Repeat to yourself and out loud in sentences - "So your name is \_\_\_\_..I know a \_\_\_\_, I like the name \_\_\_\_", etc.*

- **Make Associations**

*Between Name & Physical Features - e.g. Mike& mustache*

- **Write Down the Name**

*Write Name and Description (in your head and/or Logbook)*

- **Review Your Memory Immediately Afterwards**

*Replay Introduction in Memory and Repeat Five Times*

- **Use a Tape Recorder** *as a memory fail safe aid*



## **Strategies To Prevent Losing Things**

- **Always Review What You Have in Your Possession & Where You are Going With It & Where You Will Place it Beforehand**

*...Where are you going & how will you get there & What Do You Have With You and What Are You Going to Do/ Where Will You Put It*

- **Picture Where You Are Going and What You are Taking With You**

*...See every landmark, item, room, building, etc.*

- **When You Begin the Activity, Talk to Yourself to Monitor Where You are Going, Where You Place**

**What, etc.**



## Strategies To Keep Track of Tasks & Activities

- **Always Review What You Have in Your Possession & Where You are Going With It & Where You Will Place it Beforehand** ...*Where are you going & how will you get there & What Do You Have With You and What Are You Going to Do/ Where Will You Put It*
- **Picture Where You Are Going and What You are Taking With You** ...*See every landmark, item, room, building, etc.*
- **When You Begin the Activity, Talk to Yourself to Monitor Where You are Going, Where You Place What, etc.**

## Strategies To Prevent Driving Lapses

- **Review the Travel Route In Your Mind Before Beginning the Trip** ...*Where are you going & how do you get there? (Include every landmark, exit, turnoff, etc.)*
- **Picture The Travel Plan and Picture Yourself Driving the Route** ...*See every landmark, exit, turn off, etc.*
- **When You Begin the Trip, Talk to Yourself to Monitor Travel Route, Turns, etc**
- **Consider Making a Map of the Travel Route, Placing it on the Carseat, Marking the Major Exits, Turnoffs, etc. & Following & Checking It While Driving**

Tree of Lifes  
Rehab Neuropsychology Service

## Lisa's Habit Retrainer



3N's +1 = Necessary Nuisance  
for iNdependence

**iNventory:** Before you do anything!

- **Set/Check Your Scheduler**
- **Evaluate Your Fatigue and Adjust Activities**
- **Reinterpret Negatives into Positives** (e.g.,  
Convert Curses into Nurses; Focus on what you Can Do Despite Great Obstacles... instead of what you can't yet do or how big the obstacles are!)
- **Pace (start out slowly, build up slowly!)**

Practice Will Make it Automatic, Like Before

# Barb's Habit Retrainer



3N's +1 = Necessary Nuisance  
for iNdependence

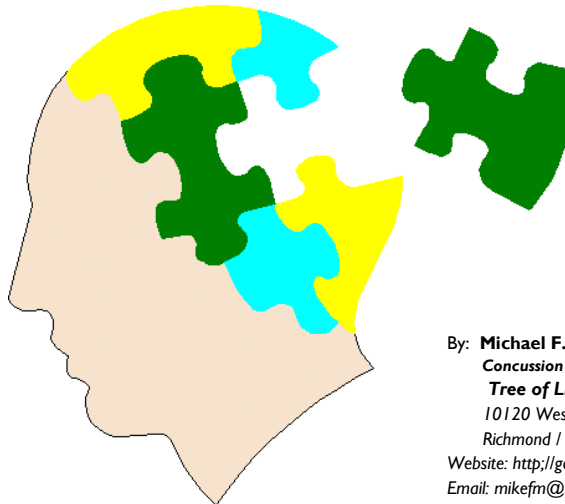
**iNventory:** Before you leave the house...

- **Get Your Exec. Organizer**
- **Take Your Medicationss**
- **Get Your Glasses**
- **Get Your Leg Rest**
- **Get Your Watch (start out slowly and build up slowly!)**

Practice Will Make it Automatic, Like Before

## Comprehension and Organization:

Strategies for Habit Retraining



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## **Organization Strategy: Comprehension #1**

### **5 W's**

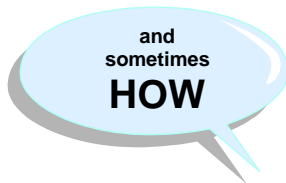
**WHO**

**WHAT**

**WHEN**

**WHERE**

**WHY**



## **Organization Strategy: Comprehension #2**

### **SQR3**

**Survey** *(Preview Content Areas)*

**Question** *(Formulate Questions)*

**Read** *(& Answer your Questions)*

**Recite** *(Main Points)*

**Review** *(and Rehearse)*



# The **Organization Imperative**

## **Bottom Line**

- Short, succinct, to the point...
- ...MAIN POINT...BOTTOM LINE!
- ...Give OUTLINE of BOTTOM LINE BEFORE elaborating DETAILS

## **One Thing at a Time**

- STAY FOCUSED on One Thing at a Time & INHIBIT WANDERING
- Monitor Ongoing Activities & Conversations & Demonstrate Ability to TRACK
- Use Multi-Tasking Monitor to Keep Track of other Things

M.F. Martelli, Ph.D.: 1999

*\*Derived from Task Analysis*



## **Multi - Task Monitor / Trainer**

TO DO List	6.
1.	7.
2.	8.
3.	9.
4	10.
5.	Transfer incompletes to next day
Multi-Tasking Monitor	Multi-Tasking Monitor
Task 1:	
Left Off:	Left Off:
Task 2:	
Left Off:	Left Off:
Task 3:	
Left Off:	Left Off:
Task 4:	

M.F. Martelli, Ph.D.: 1999

*\*Derived from Task Analysis*

## Jim's Executive Self-Control Habit: SOBER

→ Every day, and every Two Hours, to make it a habit:

### (1) *Rate your Current Impulsiveness and Executive Status!*

- Have you been **S**cattered (Been on more than one task or idea or topic at a time) in the last 2 hours?
- Have you Been an **O**pen **B**ook ( i.e., Talking about You, Your Concerns, Your Life Story...Talking Like a Russian Novelist; Disclosing Too Much, Too Quickly...
- Have you Felt **E**xcited in any manner in the last two hours?
- Have your Thoughts or Speech **R**aced in the last two hours? (or are they Now - Don't underestimate)

M.F. Martelli, Ph.D.: 1999

*\*Derived from Task Analysis*

*(continued)*

### ■ (2) *Adjust your Daily Activities Accordingly!*

- ▶ If You Have **Some Vulnerability** ('Yes' to 1 question, or unsure) to Dysexecutive symptoms, **Engage in Some Executive Renewing Activities and Closely Monitor and Reduce Executive Taxing Activities**
- ▶ If You Have **High Vulnerability** ('Yes' to 2 or more) to Dysexecutive symptoms, Reduce all Executive Taxing Activities (that is, do few, pace and go very slowly) and **Engage Mostly or Only in Executive Renewing Activities**

#### *Activity Effects on Executive Skills*

##### ***Executive Renewing Activities***

Pace / Slow / 1 Thing at a Time  
Planning/Organization  
Relaxation / Power Nap  
Q Reflex/ Deep Breathing  
Swimming / Moderate Exercise  
Music/Guitar/Singing Reading

##### ***Executive Taxing Activities***

Overactivity  
Stimulating Situations  
Stress & Worry/ Rumination  
Working  
Walking / Prolonged Standing  
Meeting New Persons / esp. Women

M.F. Martelli, Ph.D.: 1999

**For Anticipated, Unavoidable Executive Taxing Situations,  
Liberally Engage in Executive Renewers Both Before and After**

# Piloting: Internal Self-Monitor

## ■ ANTICIPATION

- ➡ How will/does this look to others, WORST CRITIC?
- ➡ Will it help or hurt to turn out the way I want?

## ■ BRAKE ON ALL RED FLAGS

- Perceptions of Inequality, Unfairness, Mistreatment
- Perceptions of "Stupidity" in others
- Perceptions of Being Ridiculed
- Feeling Lonely or Horny
- Anger / Frustration / Excitement

## ■ COMPENSATION

- 🟢 Inner Running Dialogue with constant Red Flag review
- 🟢 Practice inhibiting and braking responses during all Red Flags!

M.F. Martelli, Ph.D.: 1999

*\*Derived from Task Analysis*



## Stairway to Love Heaven

Name: \_\_\_\_\_

### Before

Good Friends and Relationships

- Patience
- Persistence
- Coax it Out Gently
- Build Yourself Up! (& Never Beat Yourself Up)
- Read & Re-read the "Five" Commandments of Rehab"
- Look to the Future (Not the Past)

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### Single Persons Introductory Guide to Relationships and Dating

Rule #1: Don't Touch Anyone or Get Too Close or Friendly Before you take them out for a 2nd Date. This means Anyone!  
Rule #2: Never Attempt to Date, get fresh, flirt with, or Touch Any Possible New Friends you meet. Grow these friends to increase your contacts with friends. Only their friends should be considered for dates.  
Rule #3: Compliment anyone you think you might want to date. Compliment everyone for practice to learn how to compliment unselfishly. Some things to compliment people about, include: Are Nice; are Bright; are Attractive Have a Nice Personality; Are Fun to Be With Are Witty / Funny; are Pleasant, etc.)  
Rule #4: Don't go out looking for dates. The best dates sneak up unexpectedly when you are just trying to have fun.  
Rule #5: Learn to Fast Dance, and dance more. Look for people to dance with and go out and dance with. Ask your friends out on a friendly basis. Ask What They Like to Do and then ask them to do something they like to do.  
Rule #6: Take chances asking others out on dates - let them say no. Don't be too afraid of rejections. It takes three rejections before you learn that it won't kill you, and before you can build up courage. And in the long term, it takes three severe heartbreaks before you are courageous enough to stay out of, or get out of bad relationships.

### The Future

Marriage?

Girlfriend

More Successful Dating

Some Successful Dating/ Clean Apt

Better Social Skills & Socialization & Self-Control & Friends But Unsuccessful Dating

A Little More Social Skills, Self-Control & Socialization/ Few Friends/ Messy Apartment, etc.

Very Little Social Skills & Little Socialization and Self-Control / No Friends

No Friends or Social Skills or Frustration Control

### Rehabilitation

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*\*Derived from Task Analysis*

M.F. Martelli, Ph.D.: 1999

## *The* **Rehabilitation**



### **Progress Imperative**

**Attack Incremental Rehab Goals, One Tiny Step at a Time! ...Remember, the Quality of Your Life Depends on it!**

**Do Nothing HALF-BUTT! ...That is, use strategies or do things half way, and then say "but..." \***

- ◆ But I used to could.. .But I didn't use to have to...
- ◆ But it's hard... But he said...But they don't understand
- ◆ ...But, What If...?...But my Butt hurts (from excessive butting!)....

P.S.

**Every Butt Leads to...  
Crap!**

M.F. Martelli, Ph.D.: 1999



### **Compensatory Habit Retraining**

- The use of strategies, self-talk, notes, log books, breaking things down into small steps, doing things one step at a time, using checklists, etc.**
- It Feels Like a Pain in the Butt!**
- Not Remembering, however, is a Colossal and Gigantic Pain in the Butt!**
- So be aware, When Habit Retraining Strategies become Habitualized, they become Automatic and produce good memory and other skills, and are No Longer a Pain in the Butt!**
- Think of Retraining with Strategies As a Temporary Pain in the Butt that is really an Opportunity to Get Rid of Permanent Gigantic Pains in the Butt.**

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# *The* **Rehabilitation** **R<sub>x</sub>** **Progress Imperative**

**Attack Incremental Rehab Goals, One Tiny Step at a Time! ...Remember, the Quality of Your Life Depends on it!**

**Do Nothing HALF-BUTT! ...That is, use strategies or do things half way, and then say "but..." \***

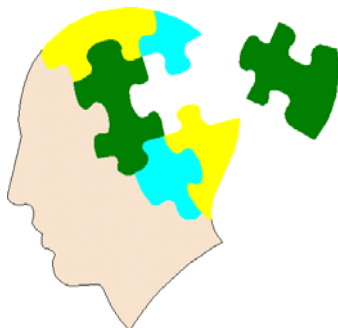
- ◆ But I used to could.. .But I didn't use to have to...
- ◆ But it's hard... But he said...But they don't understand
- ◆ ...But, What If...?...But my Butt hurts (from excessive butting!)....

P.S.

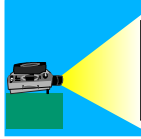
**Every Butt Leads to...  
Crap!**

M.F. Martelli, Ph.D.: 1999

## **A Protocol for Rebuilding Life and Self Satisfaction and Identity After Brain Injury**



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<http://villaMartelli.com>

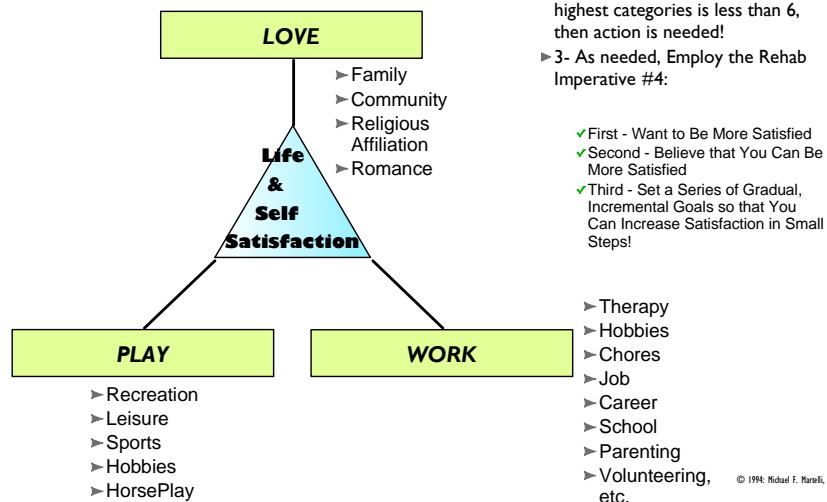


## Life Satisfaction and Self Esteem Protocol: Instructions

1. Complete Life Analysis Form (i.e., follow instructions to rate each area, Love, Work and Play, according to your current satisfaction level from 0 or couldn't be worse, to 10, or couldn't be better) to get a baseline starting point for comparison farther down the road, as you work toward and make progress in each area.
2. Complete Life Satisfaction & Self Esteem Form Ratings (i.e., follow instructions to rate each goal area according to your current satisfaction, from 0 to 10; when completed, divide the total score by the number of goals, to get your "Self Satisfaction") to get a baseline starting point for comparison farther down the road, as you work toward and make progress in each area.
3. Continue working on identifying strategies and objectives to work toward Each Goal on your Master Life Organizer Task List. On the small calendar on page 1, please mark with a checkmark for any day for which work is done toward a goal (if more than once in that day, put more than one check).

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## Life Analysis

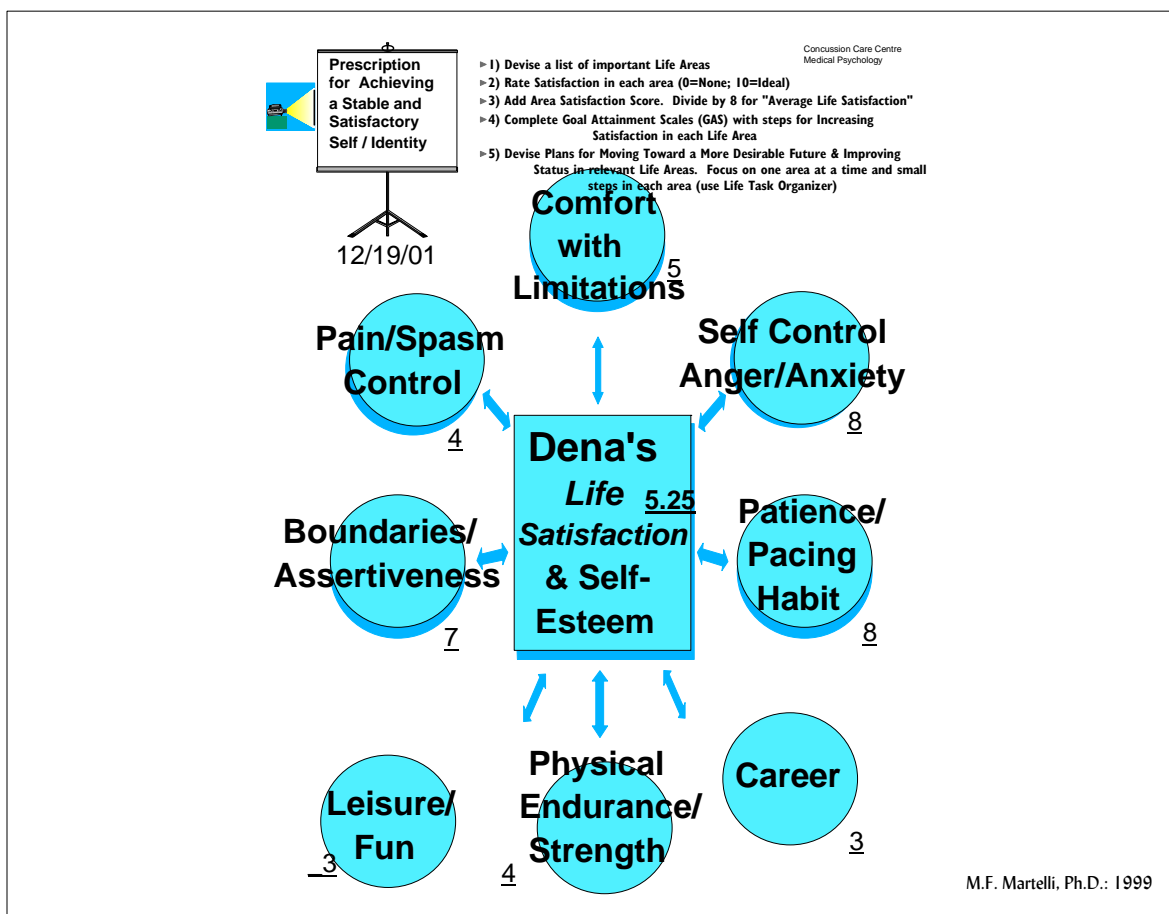
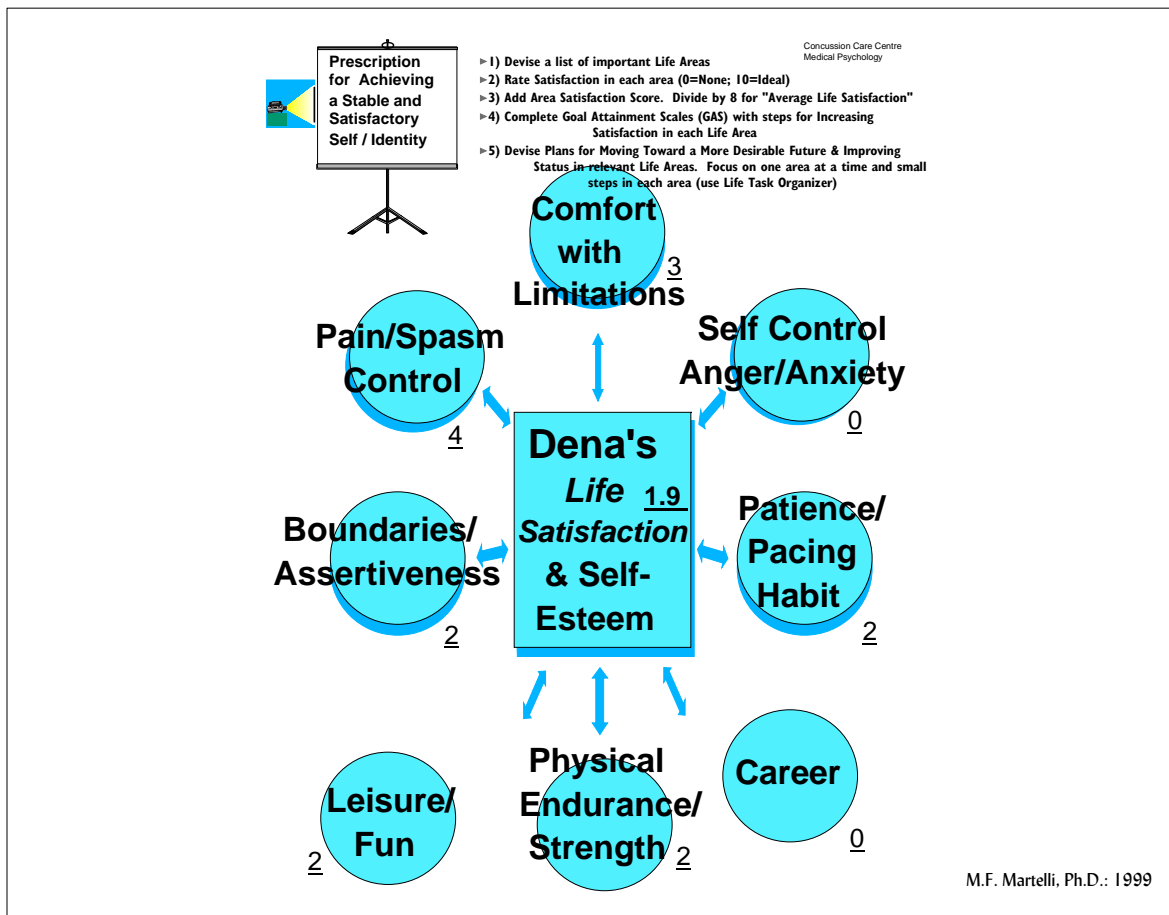


### Procedure

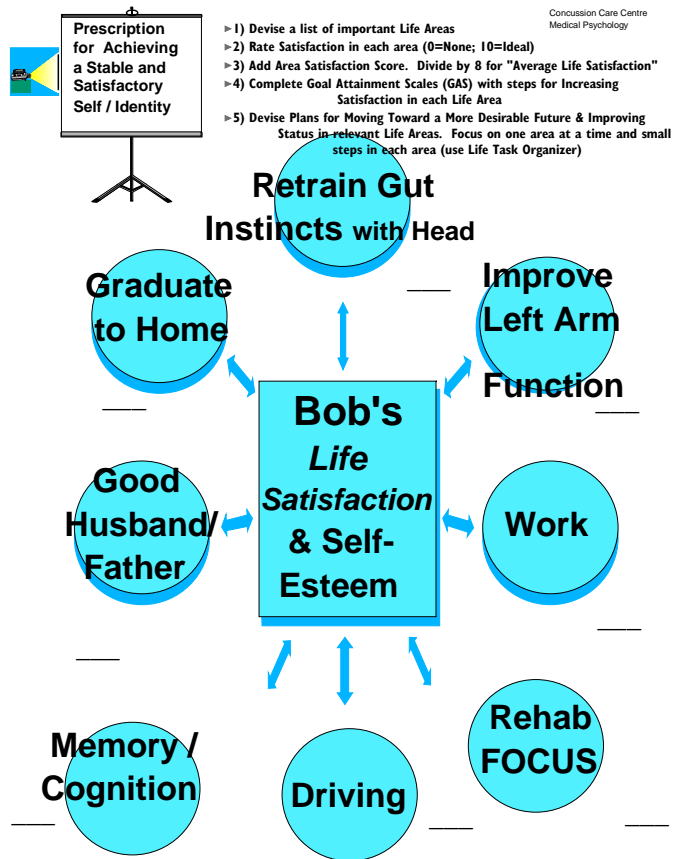
- 1- Rate each Domain (Love, Work, Play) From 0 (Nothing, Zilch) Through 5 (Mixed) to 10 (Couldn't be better; Ideal)
- 2- Interpret Data:  
If Overall Score is 15 or Less, or if Score for either of your two highest categories is less than 6, then action is needed!
- 3- As needed, Employ the Rehab Imperative #4:
  - ✓ First - Want to Be More Satisfied
  - ✓ Second - Believe that You Can Be More Satisfied
  - ✓ Third - Set a Series of Gradual, Incremental Goals so that You Can Increase Satisfaction in Small Steps!

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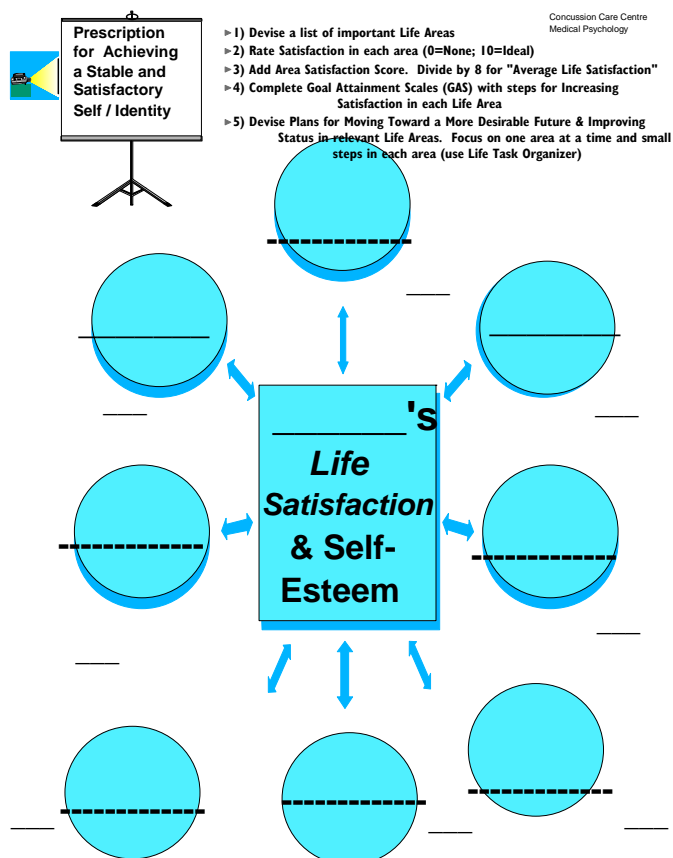
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## Master Life Goal / Task Organizer

		M	T	W	Th	F	St	Su
1	Relationship with Children							
2	Taking Care of Business							
3	Less Pain Interference							
4	Be More Self Serving vs. Self Sacrificing							
5	Home Maintenance							
6	Intimate, Romantic Relationship							
7	Leisure / Fun							
8	Career / Vocation / Avocation							

	Specific Task/Action List: <b>RELATIONSHIP WITH CHILDREN</b> _____ <b>No: 1</b> _____
A	
B	
C	
D	
E	
F	
G	
H	
I	
J	

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## ...Vulnerable Personality Styles

### Style

Premorbid traits / Post morbid reactions

#### ► OVERACHIEVER

- Sense of self derived from driven accomplishments, which is frequently accompanied by obsessive compulsive traits
- Catastrophic reaction if drop in performance is perceived

#### ► DEPENDENT

- Excessive need to be taken care of, frequently leading to submissive behaviors and a fear of separation
- Paralyzed by symptoms if critical erosion of independence occurs

#### ► BORDERLINE traits

- Pattern of instability in interpersonal relationships and self-image with fear of rejection or abandonment
- Exacerbation of personality disorganization, including despair, panic, impulsivity, instability, and self-destructive acts

#### ► GENERAL INSECURITY

- Weak sense of self, which can include shame, guilt, and dependency needs
- Magnification of symptoms

#### ► GRADIOSITY

- Overestimation of abilities and inflating accomplishments, can include need for admiration and lack of empathy
- Minimization or denial of symptoms. If failure results, crash of self-esteem can result in catastrophic reaction

Adapted from Ruff RM, Mueller J, Jurica P. (1996). Estimation of Premorbid Functioning after traumatic brain injury. NeuroRehabilitation, 7, 39-53.

## Styles

## **...Vulnerable Personality Styles**

Premorbid traits / Post morbid reactions

- ▶ **ANTISOCIAL traits**
  - ▶ Tendency to be manipulative or deceitful, temperamental, impulsive and irresponsible; lacks sensitivity to others
  - ▶ Possible exaggeration or malingering, increased risk taking, irritability, takes little responsibility for recovery
- ▶ **HYPERACTIVE**
  - ▶ Restless, unfocused and sometimes disorganized
  - ▶ Attentional difficulties, impulsivity may be compounded; possible oppositional behavior
- ▶ **DEPRESSED**
  - ▶ Mood fluctuations dominated by negative affect
  - ▶ Increase of depressive symptoms, despondency
- ▶ **HISTRIONIC**
  - ▶ Emotionality and attention seeking behavior
  - ▶ Dramatic flavor to symptom presentation; blaming behavior
- ▶ **SOMATICALLY FOCUSED**
  - ▶ Preoccupation with physical well being, reluctance to accept psychological conflicts.
  - ▶ Endorsement of multiple premorbid physical symptoms intermixed with new or changing post morbid residua
- ▶ **POST TRAUMATIC STRESS**
  - ▶ Prior stressors produced an emotional reaction of fear and helplessness
  - ▶ Decreased coping ability, cumulative reffect of traumas with exaggerated reaction to current crisis

Adapted from Ruff RM, Mueller J, Jurica P. (1996). Estimation of Premorbid Functioning after traumatic brain injury. *NeuroRehabilitation*, 7, 39-53.

## Therapist (&Caregiver) Survival Rules

- Burnout Prophylaxis
- Learn how / become comfortable Asking for / Enlisting Help from Others
- Ensure some of the therapist-client interaction includes interactions in client's areas of residual strengths and competencies and enjoyments.
- Practice "Mirroring" vs "Sponging"
- Contract with each other to allow mistakes in the beginning and in crises ...and not to Blame 'Rules of Crisis' can help...

# CAREGIVER SURVIVAL RULES

- 1. Caretakers can not take care of anyone if they **BURN OUT** from not taking care of themselves. For starters, try scheduling one half day per week off for rest and relaxation, in some form of recreation that does not involve treating, helping, caretaking, or being responsible for anyone else, building to one full and one-half day, and moving toward caretaking of no more than 40 hrs/week
- 2. It is in the patient and caretaker's best interest to learn to easily & openly ask others for help!
- 3. At least some of the caretaker- patient (usually husband-wife) interaction must include non-caretaking activities - i.e. allowing interaction in the patient's areas of residual strengths and competencies - especially for leisure activities. (RX: Perform an inventory of every enjoyable activity ever tried or thought of and start planning and experimenting - the more non-caretaking activities engaged in, the stronger the relationship can become

## *(Caregiver Survival Rules, continued)*

- 4. ***Be a "Mirror" and not a "Sponge".***
  - ▶ **Sponging:** absorbing/ catching others negative emotions; allowing them to control your emotions, reactions.
  - ▶ **Mirroring:** reflecting negative emotions, with factual comment and without emotional reaction or obligation to "catch" the emotion or respond with it.
    - involves a slow, deliberate and open look at the others statements while **Under reacting**: prevents escalation, allows self control through control of response, allows keeping a cool head to help calm the situation, not let another persons problem become your own.
- 5. ***Contract with partners to allow mistakes, not beat each other up when mistakes are made... learning and taking into account the "Rules of Crisis" (Next Slide) can help...!***
  - ▶ Necessity of receiving help usually produces resentment of helper (because it is a reminder of unwanted dependence and disability)!!

*(Caregiver Survival Rules, continued)*

## **RULES OF CRISIS**

- Everyone will be at their worst!
- Our/Their behavior and communication will reflect our/their worst!
- We/They will hold others accountable and Excuse ourselves/ themselves!
- When we are hurting, we fail to appreciate other's hurt!
- Things will get better or worse after a crisis, but will not stay the same!

## **Help for Family Caregivers**

- Offer education, training and consultation
- Promote respite services, e.g., adult day care, companion
- Offer individual and family counseling
- Encourage participation in support groups
- Utilize available resources. For example, see Caregiver Resources (from Index) on [\*\*http://villamartelli.com\*\*](http://villamartelli.com)

## CRISIS SURVIVAL RULES: Emotional Control Strategies

### **Mirroring**

- **Sponging**: absorbing/ catching others negative emotions; allowing them to control your emotions, reactions.
- **Mirroring**: reflecting negative emotions, with factual comment and without emotional reaction or obligation to "catch" the emotion or respond with it.
  - ▶ involves a slow, deliberate and open look at the others statements while **Under reacting**: prevents escalation, allows self control through control of response, allows keeping a cool head to help calm the situation, not let another persons problem become your own.

**RX: Be a Mirror (not a Sponge).** Contract with partners to allow mistakes, not beat each other up when mistakes are made... learning and taking into account the "Rules of Crisis" can help...!

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Derived from Task Analysis

## Rehabilitation Advances: An Outline

- I. Combination Neuropharmacologic and Neuropsychologic Rehabilitation
- II. Forced Use Interventions (e.g., CIMT)
- III. Neurophysiologic Rehabilitation Strategies
- IV. Neurobehavioral Retraining and Reorganization Strategies
- V. Integrated Multi-System Rehabilitation

<http://villamartelli.com>

## **I. Empirical Evidence: Effects of CDP-Choline:**

- **Decreases Cerebral Insufficiency**
- **Accelerates Stroke Recovery and enhances acute cerebral infarction treatment** (multi-center study)
- **Retards Progression of Alzheimer's Disease**
- **Shown value as co-therapy for Parkinson's**
- **Shown benefit in treatment of severe Depression.**
- **Shown suggested benefit for Tx of Dyskinesia**
- **Increases Cerebral Blood Circulation and Oxygen utilization:**
  - ▶ Has been used as a Brain circulation stimulator to treat disturbances of consciousness following Brain injury or surgery
  - ▶ Improves Learning ability and Produces Memory Enhancement Effects (especially in memory impaired, elderly & rats)

## **Effects of CDP-Choline: *(continued)***

- **Beneficial neuroendocrine, neuroimmunomodulatory, vasoregulatory and neurophysiological effects are described**
- **The active Lipotrope form of Choline normally produced within the body**
- **Readily passes through blood-brain barrier directly into CNS, activates the synthesis of critical components in cell membranes, boosts levels of neurotransmitters such as acetylcholine, and enhances Cerebral energy metabolism**
- **Boosts mitochondrial energy production, causes the re-absorption of cerebral edema caused by trauma or stroke**

## **CDP-Choline: The New Form of Choline**

- **Safe - no serious cholinergic side effects, well tolerated @ 500-1000mg / day.**
- **Multiple mechanisms of action suggest potential in treatment of various forms of cerebrovascular disease, head trauma and some types of brain aging. CDPc exhibits a neuroprotective effect in blood flow deficits to brain caused by trauma and stroke.**
- **In patients with head trauma, CDP-c accelerated post- traumatic coma recovery and restoration of walking. The CDP-treated group demonstrated better functional results and reduced hospital stays. In a study of patients with less-severe head trauma, CDP-c improved cognitive and memory deficits.**

## **Citicholine and Neuropsychological Training after TBI** (Leon-Carrion, et al, 2000)

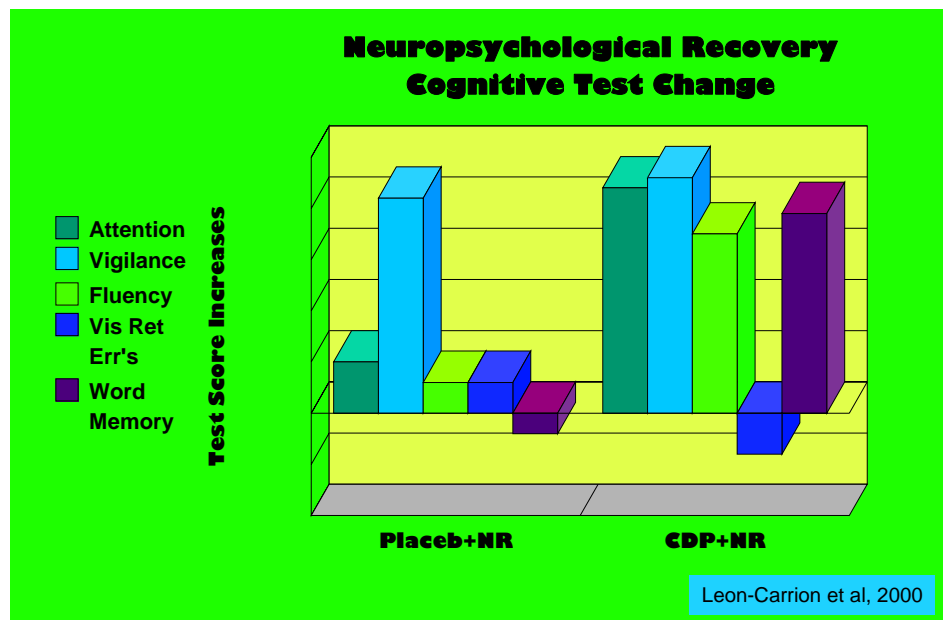
- **Experiment 1**
  - ▶ **Subjects: N=7 GCS<8; Post>6mos; Severe Memory Deficits (functional, testing)**
  - ▶ **Assessment:**
    - **Measured rCBF Pre, Post CDPcholine**
  - ▶ **Results:**
    - **Severe Hypoperfusion, Left Temporobasal, esp. infero-posterior**
    - **Specific rCBF Normalization post CDPc**



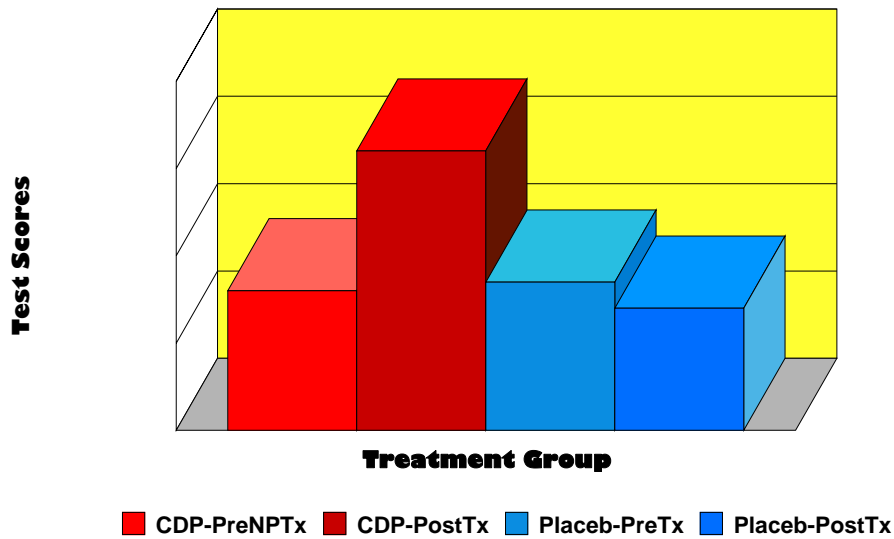
# Citicholine and Neuropsychological Training after TBI (Leon-Carrion, et al, 2000)

## ■ Experiment 2

- ▶ Subjects: N=10; GCS<8; Post>6mos; Severe Memory Deficits (functional, testing)
- ▶ Treatment
  - Group A: 3 Mos MemTX + Placebo
  - Group B: 3 Mos MemTX + CDPc
- ▶ Results: Only MemTraining + CDPc improved Memory
- ▶ Conclusion: Normalizing Blood Flow and then Exercising Memory Processes through Ecological Rehabilitation Will Improve Memory Function

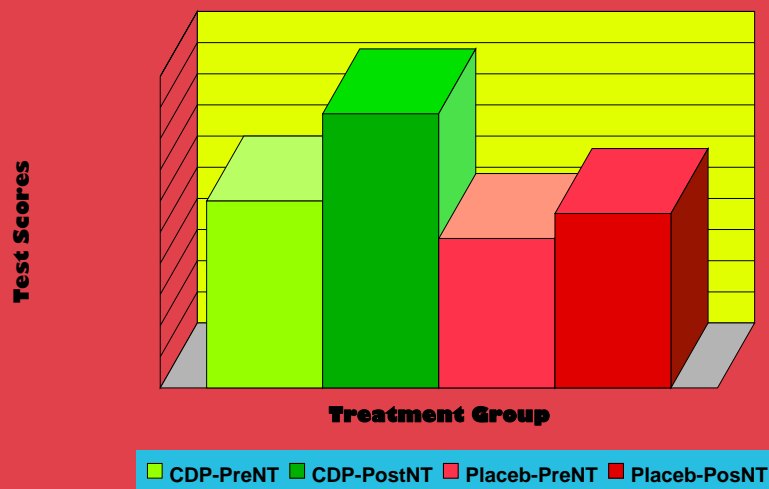


### Neuropsychological Recovery Word Memory



Leon-Carrion et al, 2000

### Neuropsychological Recovery Verbal Fluency



Leon-Carrion et al, 2000

## Citicholine and Neuropsychological Training after TBI (Leon-Carrion, et al, 2000)

### ■ Conclusions

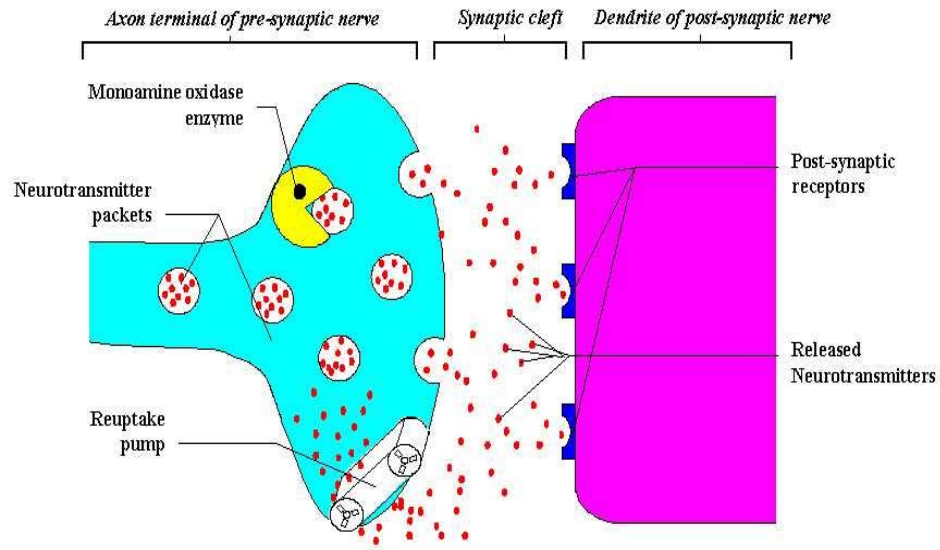
- ▶ **Severe Memory Disorders Post-TBI Associated with Severe Left Temporobasal Hypoperfusion**
  - CDP-c specifically Normalizes Left Temporobasal rCBF
  - CDP-C with Ecological Memory Training Improves Memory
- ▶ **To Rehabilitate Memory/ Functionally Recover, First Restore Blood Flow and then Apply Exercise / Training while Maintaining Blood Flow**
  - CDP-c appears to be a Cognitive Drug with Specific Use for Treatment of Organic Memory Disorders

## Citicholine and Neuropsychological Training after TBI (Leon-Carrion, et al, 2000)

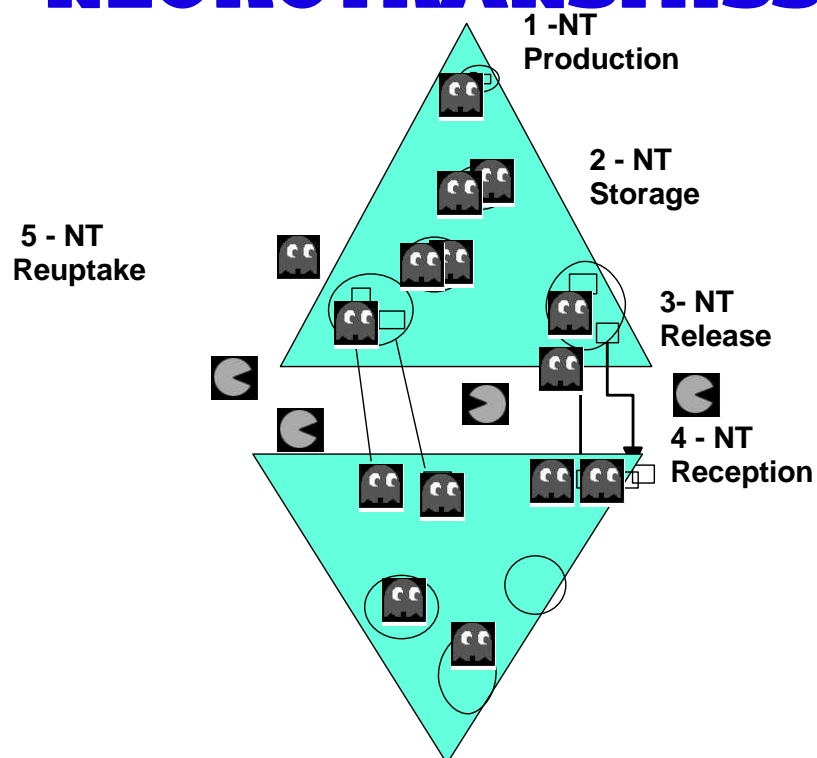
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# NEUROTRANSMISSION



# NEUROTRANSMISSION



# Conclusions

- **Holist Habit Rehabilitation (HHR) offers a Model & Methodology of Neurorehabilitation that:**
  - ▶ Integrates psychotherapy as Necessary to the Rehab Process
  - ▶ Reduces the complexity of psychotherapy
  - ▶ Simplifies the combined processes of accomplishing goals of psychotherapy and rehabilitation, and simplifies the methods
- **HHR Methodology Issues from:**
  - ▶ (a) the "automatic learning" and "errorless learning" and skills relearning after TBI literature;
  - ▶ (b) Task analytic method for designing skills retraining strategies
  - ▶ (c) Analysis of developmental, characterologic, organic and situational obstacles as part of strategy design and utilization
  - ▶ (d) Generation of techniques for promoting rehabilitative strategy use: i) adapting techniques to fit individual inherent & naturalistic reinforcers; ii) highlighting relationships to functional goals; iii) utilization of social networks; iv) use of individualized posters for simple & appealing ("catchy") cognitive and attitudinal procedures

