



DEFENSE CENTERS OF EXCELLENCE
For Psychological Health & Traumatic Brain Injury

Today's webinar is:

The Role of Integrative Medicine in the Treatment of TBI

Dec. 18, 2013, 1-2:30 p.m. (EST)

Presenter: Margaret MacDonald, M.D., B.C.N.

Senior Scientific Director, Defense and Veterans Brain Injury Center, Fort Carson, Colo.

Presenter: David F. Drake, M.D.

Director, Interventional Pain Clinic and Director, Integrative Medicine,
Department of Physical Medicine and Rehabilitation

VA Representative, Defense and Veterans Center for Integrative Pain Management
Hunter Holmes McGuire VA Medical Center, Richmond, Va.

Moderator: Jean-Louis Belard, M.D., Ph.D., M.Ac.

Research Advisor

Defense and Veterans Brain Injury Center



Webinar Details

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The Role of Integrative Medicine in the Treatment of TBI

Over the past 12 years, military health care providers have noted an increase in the incidence of mild traumatic brain injury (mTBI) during the provision of care to service members. Although common, mTBI is often challenging to delineate in its presentation due to co-occurring psychological health symptoms.

Integrative medicine synergistically combines conventional and alternative medicine treatments to achieve safe and effective care. In this webinar, we will examine evidence-based alternative and complementary medicine interventions for symptom management.

The role of integrative medicine in holistic, personalized, patient-centered care also will be discussed.

At the conclusion of this webinar, participants will be able to:

- Define the difference between conventional and integrative medicine
- Describe alternative and complementary medicine practices commonly employed in the military health system
- Discuss and explain how to create an integrative medicine clinic and/or program

Presenters

- **Margaret MacDonald, M.D., B.C.N.**
 - Senior Scientific Director, Defense and Veterans Brain Injury Center, Fort Carson, Colo.
- **David F. Drake, M.D.**
 - Director, Interventional Pain Clinic and Director, Integrative Medicine, Department of Physical Medicine and Rehabilitation
 - VA Representative, Defense and Veterans Center for Integrative Pain Management, Hunter Holmes McGuire VA Medical Center, Richmond, Va.

Presenter: Dr. Margaret MacDonald

- Senior Scientific Director, Defense and Veterans Brain Injury Center, Fort Carson, Colo.
 - Primary research focus on detection of physiological change after TBI and remediation of functional deficits by targeting neuroplastic responses in the brain
 - Contractor with The Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc.
 - Sub-investigator in the interactive metronome randomized clinical trial
 - Starting a pilot study at Fort Carson of a neurofeedback technique for persistent symptoms after TBI in soldiers
- Received her medical degree from Dalhousie University Medical School
- Began in family practice and spent several years working in a forensic psychiatric hospital in British Columbia; eventually branched into neurorehabilitation
- Certifications in neurofeedback and quantitative electroencephalography (EEG), in addition to clinical experience in biofeedback and mind-body medicine



Dr. Margaret MacDonald



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The Role of Integrative Medicine in the Treatment of TBI

Margaret MacDonald, M.D., B.C.N.

Senior Scientific Director

Defense and Veterans Brain Injury Center, Fort Carson, Colo.

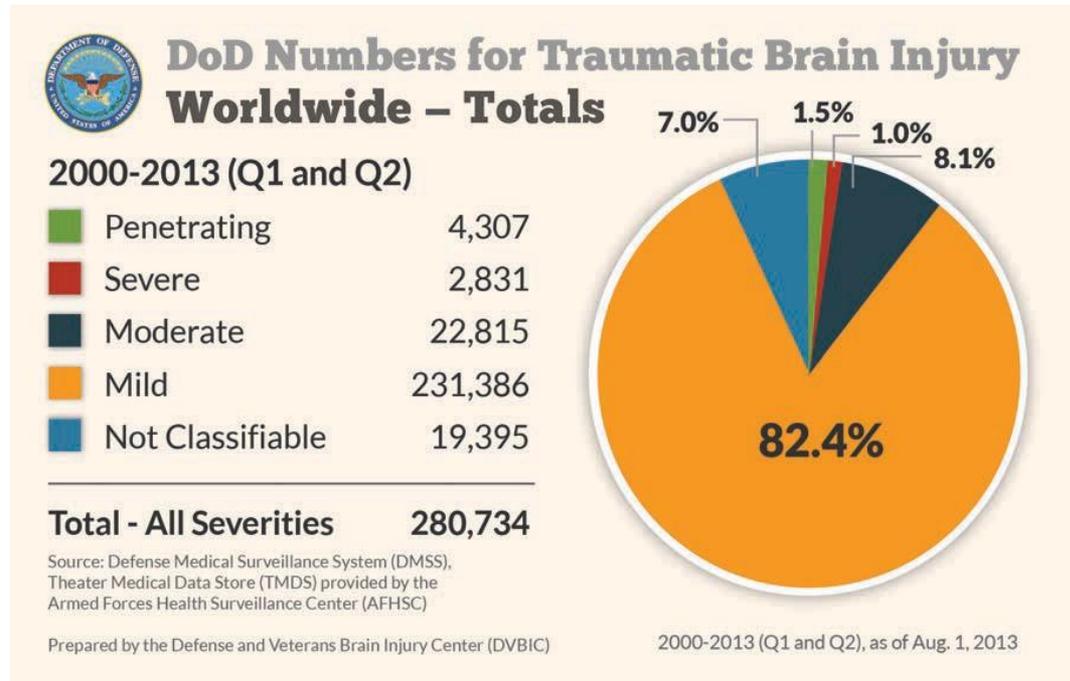


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- I have no relevant financial relationships and do not intend to discuss the off-label/ investigative (unapproved) use of medical products/devices
- The views, opinions and/or findings contained in this presentation are those of the author and should not be construed as an official Department of Defense or Veterans Affairs position, policy or decision unless so designated by other documentation
- This research was funded by the Defense and Veterans Brain Injury Center, in part, through contract support by The Henry M. Jackson Foundation for the Advancement of Military Medicine, Inc.
- In the conduct of research where humans are the subjects, the investigators adhered to the policies regarding the protection of human subjects as prescribed by Code of Federal Regulations (CFR) Title 45, Volume 1, Part 46; Title 32, Chapter 1, Part 219; and Title 21, Chapter 1, Part 50 (Protection of Human Subjects)

TBI: A Critical Health Issue

- In the United States, traumatic brain injury (TBI) is most common cause of death and disability in those < 45 years old
- 1.5 million cases/year – half seen in emergency room or intensive care unit (F. Foot, L. Schwartz, Explore Sept/Oct 2012, 282-290, Vol 8, No. 5)
- Signature injury of Operation Iraqi Freedom/Operation Enduring Freedom - approximately 15% of all deployed troops
- More recently, approximately 80% of TBI events occur in garrison
- Approximately 80% classified as mild



Source: dvbic.org

Defense Department Definition of TBI

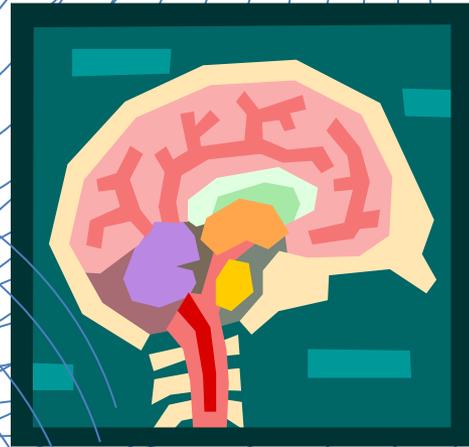
A traumatically induced structural injury and/or physiological disruption of brain function as a result of external force that is indicated by new onset or worsening of at least one of the following clinical signs, immediately following the event:

- Loss of consciousness or alteration of consciousness
- Post-traumatic amnesia
- Neurological deficits
- Intracranial lesion

Disintegration



DoD photo by Staff Sgt. E. Rutherford



Challenges

- No two mild TBIs are the same
- Co-morbidity common – post-traumatic stress disorder, depression, sleep problems, headaches, mood problems
- Pain conditions common
- Medication side effects/interactions
- Self-image, peer pressure, secondary gain issues
- Effects on family and relationships

Research to Date for TBI Treatment

- Defense and Veterans Brain Injury Center – 20 years of study
- National Institutes of Health – more than 75 TBI clinical trials
- Still no standard treatment, no magic pill
- Evidence for altered metabolic response to glucose acutely after TBI
- Evidence for altered hormonal responses
- Evidence for micro anatomic changes resulting in loss of efficient functional connectivity in the brain
- All of these can affect behavior
- Recommend focus on “holistic” care

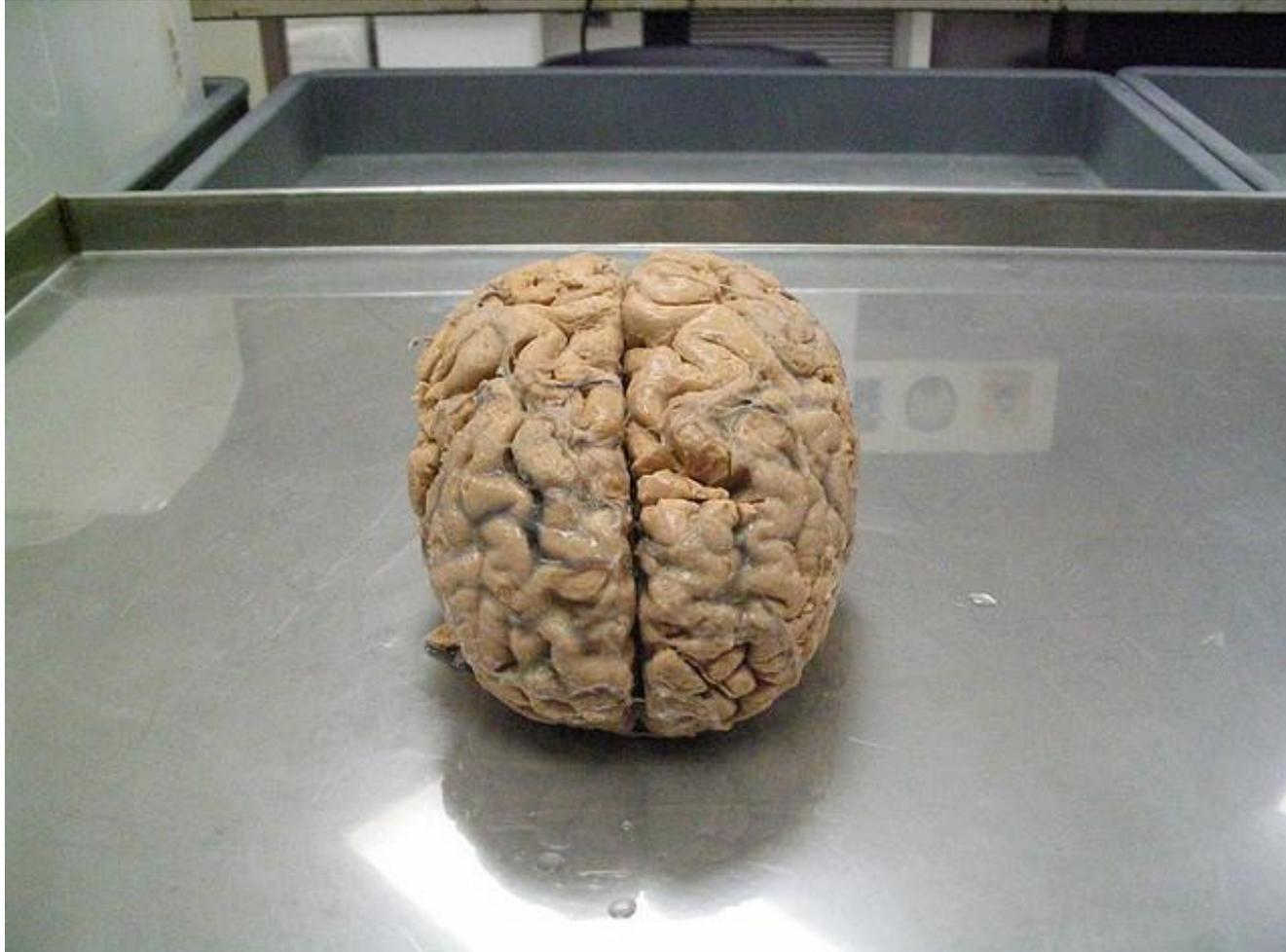
Standards of Care for Persisting TBI Symptoms

A	Good evidence + benefits outweigh harms	Early education, individualized psychotherapeutic treatment
B	Fair evidence + benefits outweigh harms	Neuropsychological evaluation - IF have a baseline; stress management, sleep education, relaxation, limit alcohol and caffeine
C	Fair evidence but benefits not greater than possible harms	Vestibular rehabilitation, cognitive rehabilitation, memory prosthetics
D	Evidence for ineffectiveness or harms definitely outweigh risks	No treatment at all???
I	Insufficient evidence	Any standard psychotherapeutic treatment, drugs

National Research Plan

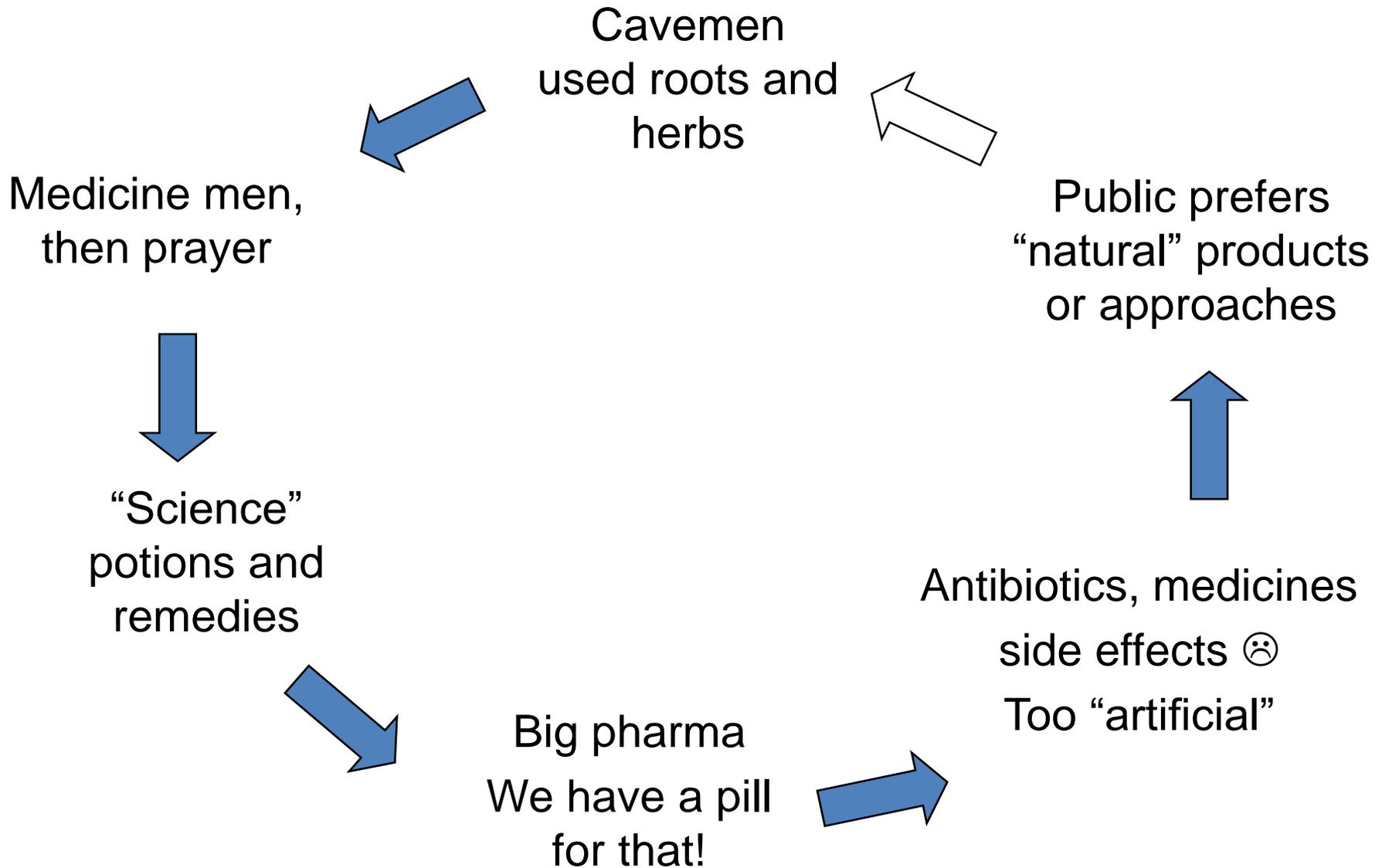
- Launching comprehensive program to identify, screen and treat TBI
- Ensure patient-centered, *integrated* care
- Address co-occurring conditions such as depression, substance abuse, chronic pain

Why Integrate?



Courtesy photo of karmaOWL via Creative Common License

The Cycle of Herbals



What is Integrative Medicine (IM)?

- Incorporates evidence-based complementary and alternative (CAM) practices into mainstream medical practice
- Integrates all aspects of approaching the patient's physiology, pathology, psychology, environment, spirituality, etc.
- Holistic, patient-centered care
- Healing oriented – treating the organism rather than just the symptoms

Why Provide Integrative Treatment?

- It is already happening
- Perceived benefit by patients and clinicians
- Makes sense to combine therapies that address all aspects of the person
- However, evidence base is limited
- Need more research!

Who Provides Integrative Medicine Care?

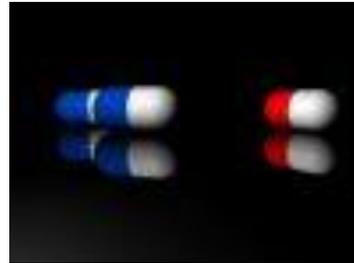
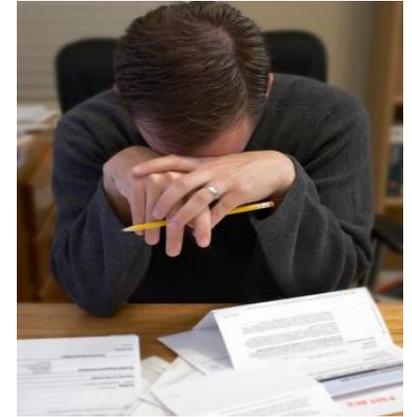
- Medical doctors, doctors of osteopathy, physician assistants, nurse practitioners at academic health centers surveyed
- Most common – breathing exercises, herbal medicine prescribing, meditation, functional medicine
- Referrals to other providers for acupuncture, massage, yoga, meditation

(Source: Ehrlich et al.: OA12.03. Integrative medicine at academic health centers: a survey of clinicians' educational backgrounds and practices. BMC Complementary and Alternative Medicine 2012 12(Suppl 1):O47.)

What is Complementary and Alternative Medicine (CAM)?

Whole Medical Systems	Separate from conventional medicine; complete systems of theory and practice	Homeopathy, naturopathy, Chinese medicine, Ayurveda
Biologically-based Practices	Use substances found in nature	Dietary supplements, herbal preparations, diet therapy
Mind-Body Medicine	Techniques to enhance the mind's ability to affect bodily function and symptoms	Meditation, yoga, prayer, mental healing, creative arts, biofeedback, hypnosis
Manipulative and Body-based Practices	Based on manipulation or prescribed movement	Chiropractic, massage, Feldenkrais
Energy Medicine	Use energy fields – either extant in body or by adding some form of electromagnetic (EM) energy	Therapeutic touch, Reiki, qi gong, pulsed EM field therapy, cranial electrotherapy stimulation, laser/light therapy, transcranial direct current stimulation (tDCS), repetitive transcranial magnetic stimulation (rTMS)

Trauma Spectrum Disorder



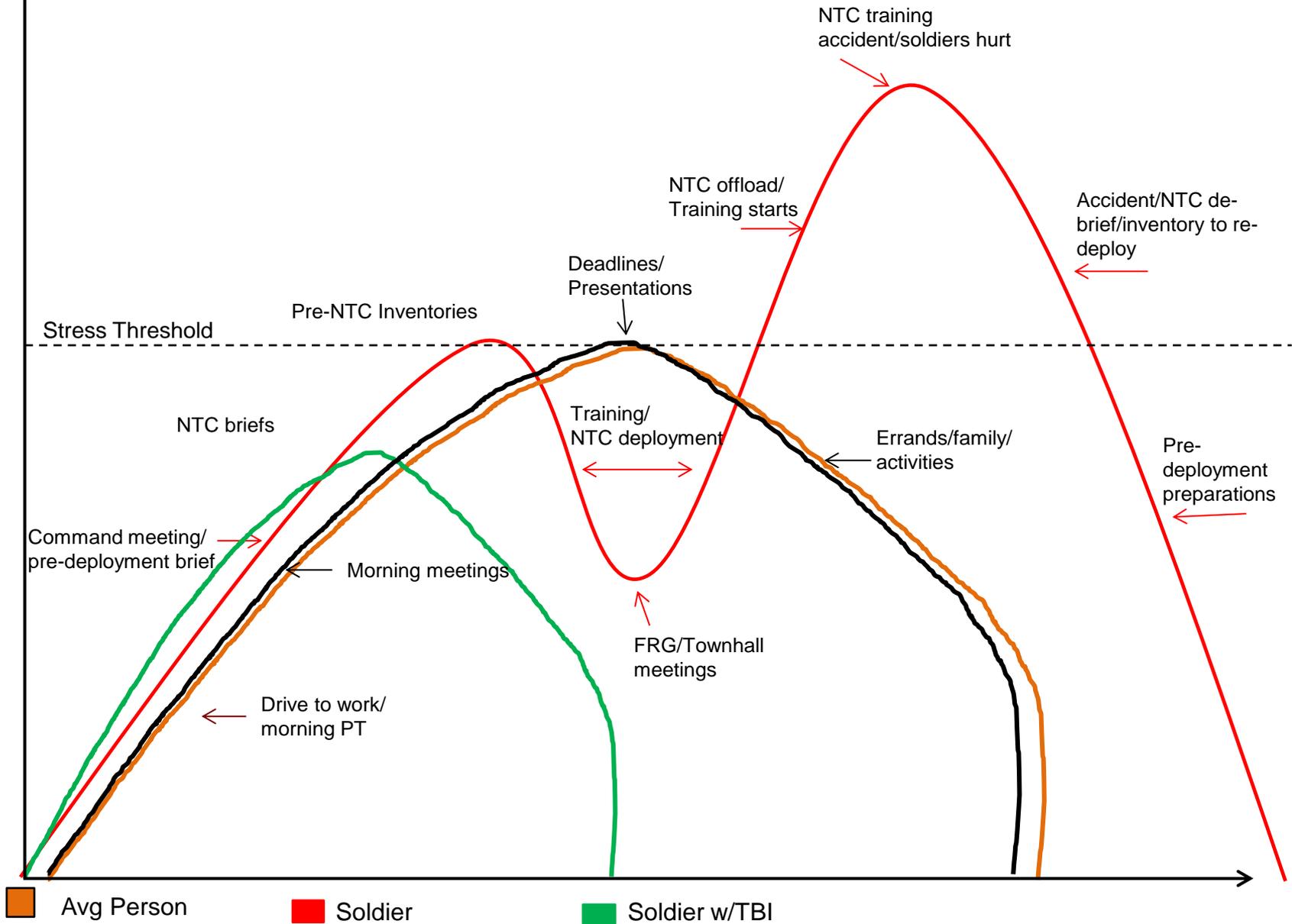
Courtesy photo(s) of Stock.Xchange

What Produces All Those Symptoms?

- Life is stressful – especially the life of a soldier
- Prichep et al 1993 – quantitative electroencephalogram (QEEG) evidence of injury long after a concussive event – leading to “organic mood disorder” after series of psychosocial stressors
- Various levels of “at risk” physiology may be differently affected by similar injury events
- Executive and emotional functioning develop a somewhat predictable performance curve

Stress/Arousal/Daily Demands

Performance



Neuroplasticity

Neurons that fire together wire together

- *POSITIVE* (building dendrites and connections) with cognitive activity, learning new things, exercise, sleep, good nutrition, social interaction
- *NEGATIVE* (trimming connections) with injury, illness, poor sleep, poor nutrition, substance abuse, depression, anxiety, lack of cognitively novel activities, stress, especially unremitting stress

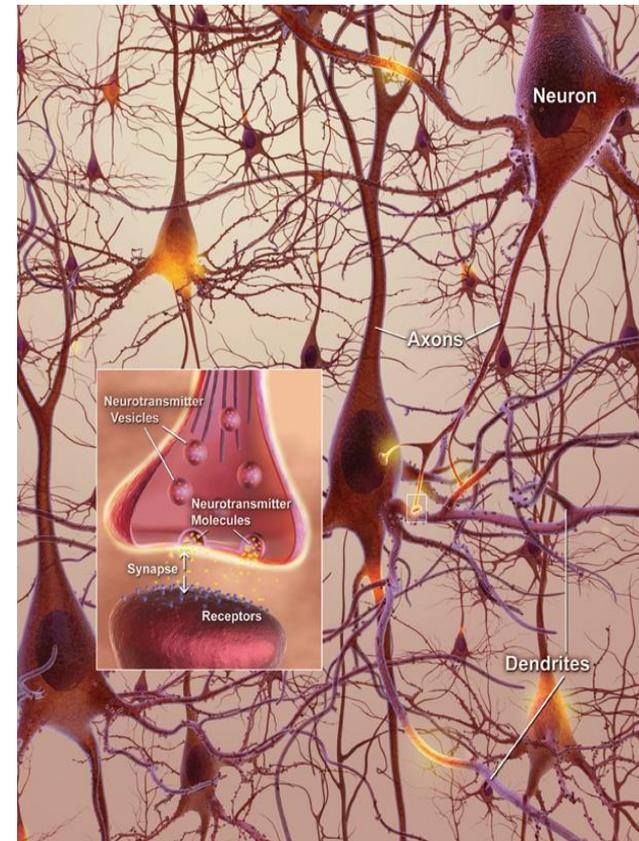


Photo courtesy of National Institutes of Health,
Department of Health and Human Services

Effects of Stress

ACUTE STRESS

- Various physiologic effects
- Fight or flight response
- Changes breathing rate, heart rate
- Muscles get tense
- Changes blood flow to the brain
- Peripheral temperature drops
- Palms get sweaty

CHRONIC STRESS

- Cumulative physiologic effects
- Immune system decline
- Cardiovascular effects
- Hippocampal atrophy
- Chronic effects of cortisol
- Decreased resilience

RECOVERY/RESILIENCE

- Even brief periods of relaxation can prevent cumulative effects
- Deep relaxation and rejuvenation can bring system back to baseline

Mind-Body Medicine

- Mindfulness-based techniques
- Meditation, stress management
- Mindful body movement – yoga, tai chi
- Biofeedback

Harnesses the connectedness between the mind/brain and the autonomic system/body to reduce effects of stress

Psychophysiological Assessment

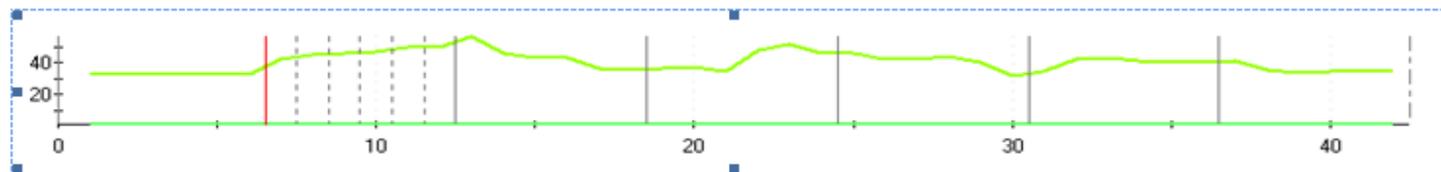
- Monitoring various autonomic processes during a series of rest and stressor states
- Holistic view of client and their internal as well as external environment – brings objectivity into an otherwise subjective experience
- Can inform/improve targeted therapeutic efforts
- **SHOWING** rather than telling; self-education
- Creates internal motivation for change

Physiologic Stress Evaluation

SCRIPT SESSION REPORT

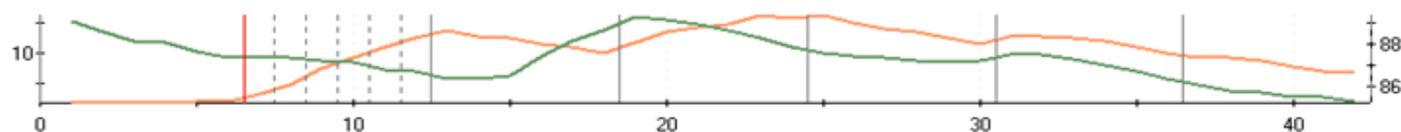
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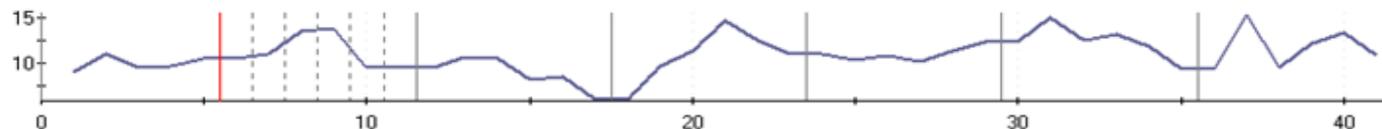
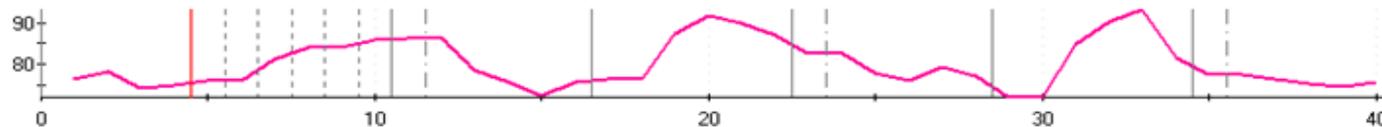
E: SC epoch mean (orange)

F: Temp epoch mean (green)



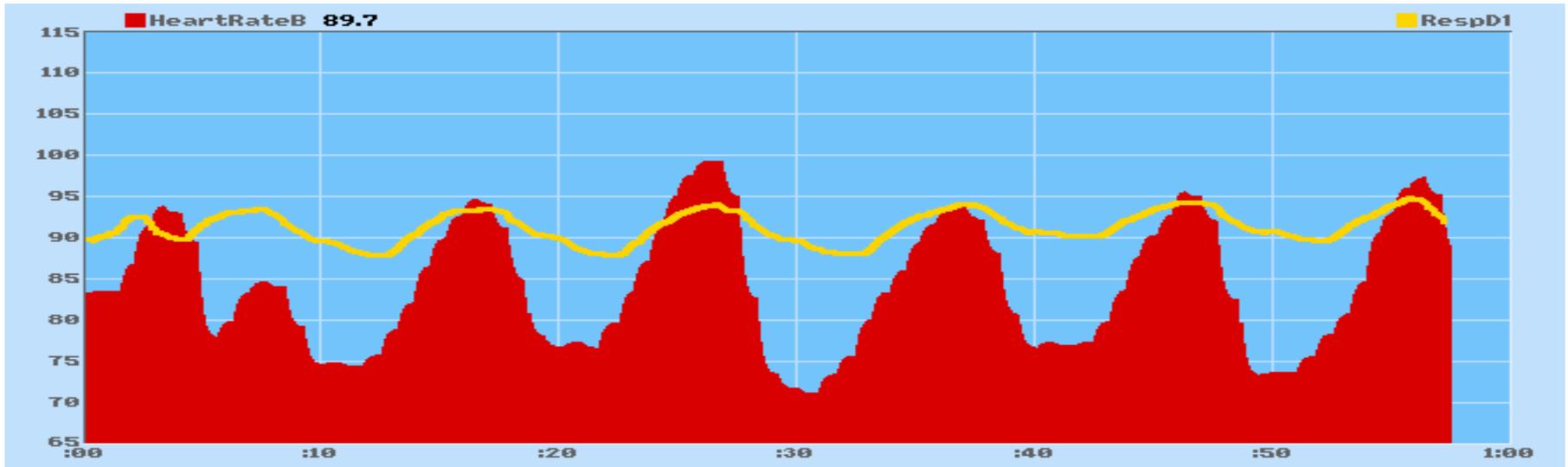
B: BVP HR epoch mean (pink)

G: Resp rate epoch mean (blue)



Baseline Stroop Recovery 1 Math Recovery 2 Event Recall Recov3

What is Heart Rate Variability?



Courtesy photo from Dr. Margaret MacDonald

- Heart rate variability (HRV) is the spontaneous change in heart rate with respiration, maximized with synchrony with normal blood pressure variations of approximately six cycles per minute
- In this case the variability is 20 bpm difference between inspiration and expiration phases; variability of > 10 bpm is healthy
- HRV is related to interaction between sympathetic and parasympathetic influences at sinoatrial node in the heart and in blood vessel baroreceptors
- Balance is disturbed in chronic stress

HRV Slow Breathing Can Reduce Slow Brain Waves and Improve Focus



Courtesy photo from Dr. Margaret MacDonald

The Value of Show and Tell

- Patient learns a lot about himself/herself during a stress evaluation
- Objective evidence of mind/body connection
- Can use biofeedback to learn to change these responses, and patient can understand why you would now want to do that
- Can reevaluate with these measures to show progress or change over time
- Learning to control autonomic function helps the brain/mind to improve its function and recover from effects of cumulative stress

Energy Medicine

- Adding energy to the system to influence physiology
- Heat – increased immune system function
- Cranial electrotherapy stimulation (CES)
- Repetitive transcranial magnetic stimulation (rTMS) – not considered CAM?
- Transcranial direct current stimulation (tDCS) – still experimental

CAM at National Intrepid Center of Excellence

- Acupuncture – for headaches, anxiety, posttraumatic stress disorder (PTSD), smoking
- Cupping and scraping – for myofascial pain
- Microcurrent – CES – for anxiety, insomnia, depression and pain
- Manual therapy – myofascial release, craniosacral therapy
- Mind-body skills – autogenic training, breathing, progressive muscle relaxation, mindfulness, guided imagery
- Biofeedback and psychophysiologic stress profiles
- Yoga and tai chi
- Nutritional supplements
- Reiki
- Expressive arts
- Animal-assisted therapies – the value of unconditional love

Alternative Care for Symptoms of TBI

A	Good evidence + benefits outweigh harms	Self-education and training (biofeedback), for stress, headaches and sleep; acupuncture for pain; omega-3s for anxiety/depression
B	Fair evidence + benefits outweigh harm	Stress management – biofeedback and mindfulness training for sleep, mood, cognition and PTSD; acupuncture for headaches; CES for headaches, insomnia, depression; magnesium for headaches; melatonin for insomnia
C	Fair evidence but benefits not greater than possible harm	St. John’s Wort for depression, other herbals
D	Evidence for ineffectiveness or harm definitely outweigh risks	
I	Insufficient evidence	Healing touch, Reiki, manipulative treatments

Presenter: Dr. David F. Drake

- Director, Interventional Pain Clinic and Director, Integrative Medicine, Department of Physical Medicine and Rehabilitation (PM&R), Hunter Holmes McGuire Veterans Affairs Medical Center, Richmond, Va.
- Received his medical degree from the University of Nevada, School of Medicine
- Completed his PM&R residency and his pain fellowship with the Virginia Commonwealth University Department of PM&R, where he is now an assistant professor
- Assistant Director of the Virginia Commonwealth University Department of PM&R's pain fellowship
- Has worked for the Departments of Veterans Affairs and Defense as a doctor for the Warrior Transition Unit and the medical evaluation board, as a pain fellowship director and pain consultant, and as an Army Reserve medical officer



Dr. David F. Drake

Complementary and Alternative Medicine and Integrative Medicine: An Experiential View

David F. Drake, M.D.

Director, Interventional Pain Clinic

H. H. McGuire VA Medical Center



H.H. McGuire VAMC Integrative
Medicine Program



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Objectives

- Describe Complementary and Alternative Medicine (CAM)
- Define Integrative Medicine (IM)
- Understand the elements of an IM program
- Understand the considerations when beginning a program



CAM Defined

- National Center for Complementary and Alternative Medicine defines CAM as:
 - Health care systems, practices, and products that are not generally considered part of conventional medicine
 - Conventional medicine (also called Western or allopathic medicine)
 - The boundaries between CAM and conventional medicine are not absolute
 - Specific CAM practices may, over time, become widely accepted



CAM Broken Down

- "Complementary medicine" refers to use of CAM together with conventional medicine, such as using acupuncture
 - Most use of CAM by Americans is complementary
- "Alternative medicine" refers to use of CAM in place of conventional medicine



What is CAM?

- Think complementary and integrative, not alternative
 - No longer an either/or situation
- Treatments/modalities
 - Acupuncture
 - Manual medicine /osteopathic manipulation
 - Massage – numerous different types
 - Reiki



What is CAM?

- Treatments/modalities (cont.)
 - Movement Therapies
 - Yoga
 - Tai chi
 - Qi gong
 - Continuum
 - Transitional Aquatics – water activities that are then moved to land
 - Mindfulness Activities – may be incorporated within movement therapies
 - Breathing, progressive relaxation, qi gong and tai chi



Integrative Medicine

- Combines conventional medicine and CAM
- So much more
 - Integrates
 - East and West
 - Patient and physician
 - Mind and body
 - Family
 - Is there anything that it doesn't?



Integrative Medicine

- Most important
 - It empowers the patient by
 - Educating them – key element
 - Teaching them
 - Including them
 - Creates independence
 - Breaks or prevents dependence



VA Office of Patient Centered Care and Cultural Transformation

- Veterans Hospital Administration created this Central Office in January 2011
- Current health care system must be transformed to a personalized, proactive, patient-driven approach which enables engagement with life in accordance with how an individual wants to live



VA Office of Patient Centered Care and Cultural Transformation

- Tracy Gaudet, M.D., Director
 - “In the past we asked, what can I fix? Today we say, how can I help what’s wrong with you? In the future, we need to say, how can I help you live your life fully?”
 - “The real opportunity for transformation of health care in this country,” explained Gaudet, “is that when we put the person and their life at the center, when we get the process right, we will get the outcomes and costs right.”
 - “Our Veterans are incredibly deserving and VA is committed to leading this transformation, both for our Veterans and our country.”



Our Experience

- Idea, was coincidence
 - Met other like-minded providers
 - Was introduced to more
 - Inquired about others
 - Discovered a host of providers with similar approaches and looked to coordinate those



The Providers

- Acupuncture – me
- Transitional Aquatics – Debbie Daimaru, RKT
- Tai chi – Elmer Ligh, PT
- Qi gong – Brian Reiner, PhD, Psychologist
- Continuum – Cory Blake
- Integrative health coaches



Program Schedule

- 12 weeks
 - Weekly for four weeks, then
 - Every two weeks for four more visits
 - Total of eight visits over 12 weeks, not inclusive of orientation
- Six-hour day
 - Each element is approximately an hour with dressing, etc.
 - One hour of education



Patient Selection

- Each patient was evaluated in the pain clinic
- A history and physical was obtained
- A working diagnosis or differential diagnosis was created
- Treatment options were provided including the IM program
- If they could commit to the schedule, they were listed for the program



Patient Selection

- Two weeks prior to the start of the program the participants were called
- Orientation
 - Spelled out the program as well as our expectation of the program and them



Patient Demographics

- Patients
 - 40% female; 60% males
 - Ages: 37 to 60
 - Employed
 - Disabled
 - Retired
 - Pathology
 - mTBI, PTSD, anxiety, depression, numerous pain complaints and other complaints (e.g., respiratory, low energy, erectile dysfunction)



Program

- Outcome measures obtained
 - Beck's Depression Inventory
 - Pain Disability Index
 - Tampa Scale for Kinesiophobia
 - West Haven-Yale Multidimensional Pain Inventory
- Functional measures obtained
 - Berg balance
 - Sit and reach
 - Wii fit



Program Overview

- Goal: To treat Veterans while educating and empowering them to take control of their pain
- Potential benefits: Fewer physician appointments, fewer emergency room visits, decreased medication dependence/usage, improved perceived quality of life/mood, decreased pain, improved function



	Acup	Aquatics	Tai chi	Continuum	Qi gong / meditation
8	Pt #1	Pt #2			
9	Pt #2	Pt #1			
10	Pt #3	Pt #4			
11	Pt #4	Pt #3			
12	LUNCH AND LEARN PROGRAM – Education Series				
1			All Pts		
1:30					
2				All Pts	
3					All Pts



“Lunch and Learn” Education Program

- Life’s a pain – what is pain?
- Sleep hygiene
- Nutrition, food and your pain
- Activity/exercise, gate control theory
- Mindfulness/meditation, mind over pain
- Over the counter, herbs and supplements, buyer beware
- Pain interventions, when and what
- Medications, good, bad and useless
- All participants keep a journal and have a binder to take notes and keep any educational information



Patient Education

- Patients were given tasks during the off time such as keeping the following and bringing them in for review and discussion
 - Sleep log
 - Food log
 - Activity log
- Patients were contacted weekly to remind them of their tasks and or what to expect in the next classes
- Patients were provided VA and community resources to encourage them to participate in activities on the off days/weeks



Outcomes

- Final outcome measures pending
- Measures (taken from VHA Pain Outcomes Toolkit) include:
 - Tampa Scale for Kinesiophobia
 - Pain Disability Index
 - Beck's Depression Inventory
 - West Haven-Yale Multidimensional Pain Inventory



Beck's Depression Inventory

This depression inventory can be self-scored. The scoring scale is at the end of the questionnaire.

1.
 - 0 I do not feel sad.
 - 1 I feel sad
 - 2 I am sad all the time and I can't snap out of it.
 - 3 I am so sad and unhappy that I can't stand it.
2.
 - 0 I am not particularly discouraged about the future.
 - 1 I feel discouraged about the future.
 - 2 I feel I have nothing to look forward to.
 - 3 I feel the future is hopeless and that things cannot improve.
3.
 - 0 I do not feel like a failure.
 - 1 I feel I have failed more than the average person.
 - 2 As I look back on my life, all I can see is a lot of failures.
 - 3 I feel I am a complete failure as a person.
4.
 - 0 I get as much satisfaction out of things as I used to.
 - 1 I don't enjoy things the way I used to.
 - 2 I don't get real satisfaction out of anything anymore.
 - 3 I am dissatisfied or bored with everything.
5.
 - 0 I don't feel particularly guilty
 - 1 I feel guilty a good part of the time.
 - 2 I feel quite guilty most of the time.
 - 3 I feel guilty all of the time.
6.
 - 0 I don't feel I am being punished.
 - 1 I feel I may be punished.
 - 2 I expect to be punished.
 - 3 I feel I am being punished.
7.
 - 0 I don't feel disappointed in myself.
 - 1 I am disappointed in myself.
 - 2 I am disgusted with myself.
 - 3 I hate myself.
8.
 - 0 I don't feel I am any worse than anybody else.
 - 1 I am critical of myself for my weaknesses or mistakes.
 - 2 I blame myself all the time for my faults.
 - 3 I blame myself for everything bad that happens.
9.
 - 0 I don't have any thoughts of killing myself.
 - 1 I have thoughts of killing myself, but I would not carry them out.
 - 2 I would like to kill myself.
 - 3 I would kill myself if I had the chance.
10.
 - 0 I don't cry any more than usual.
 - 1 I cry more now than I used to.
 - 2 I cry all the time now.
 - 3 I used to be able to cry, but now I can't cry even though I want to.



Pain Disability Index

Pain Disability Index: The rating scales below are designed to measure the degree to which aspects of your life are disrupted by chronic pain. In other words, we would like to know how much pain is preventing you from doing what you would normally do or from doing it as well as you normally would. Respond to each category indicating the overall impact of pain in your life, not just when pain is at its worst.

For each of the 7 categories of life activity listed, please circle the number on the scale that describes the level of disability you typically experience. A score of 0 means no disability at all, and a score of 10 signifies that all of the activities in which you would normally be involved have been totally disrupted or prevented by your pain.

Family/Home Responsibilities: This category refers to activities of the home or family. It includes chores or duties performed around the house (e.g. yard work) and errands or favors for other family members (e.g. driving the children to school).

No Disability 0__ 1__ 2__ 3__ 4__ 5__ 6__ 7__ 8__ 9__ 10__ Worst Disability

Recreation: This disability includes hobbies, sports, and other similar leisure time activities.

No Disability 0__ 1__ 2__ 3__ 4__ 5__ 6__ 7__ 8__ 9__ 10__ Worst Disability

Social Activity: This category refers to activities, which involve participation with friends and acquaintances other than family members. It includes parties, theater, concerts, dining out, and other social functions.

No Disability 0__ 1__ 2__ 3__ 4__ 5__ 6__ 7__ 8__ 9__ 10__ Worst Disability

Occupation: This category refers to activities that are part of or directly related to one's job. This includes non-paying jobs as well, such as that of a housewife or volunteer.

No Disability 0__ 1__ 2__ 3__ 4__ 5__ 6__ 7__ 8__ 9__ 10__ Worst Disability

Sexual Behavior: This category refers to the frequency and quality of one's sex life.

No Disability 0__ 1__ 2__ 3__ 4__ 5__ 6__ 7__ 8__ 9__ 10__ Worst Disability

Self Care: This category includes activities, which involve personal maintenance and independent daily living (e.g. taking a shower, driving, getting dressed, etc.)

No Disability 0__ 1__ 2__ 3__ 4__ 5__ 6__ 7__ 8__ 9__ 10__ Worst Disability

Life-Support Activities: This category refers to basic life supporting behaviors such as eating, sleeping and breathing.

No Disability 0__ 1__ 2__ 3__ 4__ 5__ 6__ 7__ 8__ 9__ 10__ Worst Disability

The Pain Disability Index (PDI)

Overview: The Pain Disability Index (PDI) a simple and rapid instrument for measuring the impact that pain has on the ability of a person to participate in essential life activities. This can be used to evaluate patients initially to monitor them over time and to judge the effectiveness of interventions. The index was developed at St. Louis University Medical Center.

Measures of disability related to pain:

- (1) family and home responsibilities: activities related to home and family
- (2) recreation: hobbies sports and other leisure time activities
- (3) social activity: participation with friends and acquaintances other than family members
- (4) occupation: activities partly or directly related to working including housework or volunteering
- (5) sexual behavior: frequency and quality of sex life
- (6) self care: personal maintenance and independent daily living (bathing dressing etc.)
- (7) life-support activity: basic life-supporting behaviors (eating sleeping breathing etc.)

Level of Disability	Points	My Terms (not from paper)
none	0	
	1	
	2	mild
	3	
	4	
	5	moderate
	6	
	7	
	8	severe
	9	
total	10	

References:

- Chibnall JT Tait RC. The Pain Disability Index: Factor Structure and Normative Data. Arch Phys Med Rehabil. 1994; 75: 1082-1086.
- Pollard CA. Preliminary validity study of the pain disability index. Perceptual and Motor Skills. 1984; 59: 974.
- Tait RC Chibnall JT Krause S. The pain disability index: psychometric properties. Pain. 1990; 40: 171-182.



Tampa Scale for Kinesiophobia
(Miller, Kori and Todd 1991)

- 1 = strongly disagree
2 = disagree
3 = agree
4 = strongly agree

1. I'm afraid that I might injury myself if I exercise	1	2	3	4
2. If I were to try to overcome it, my pain would increase	1	2	3	4
3. My body is telling me I have something dangerously wrong	1	2	3	4
4. My pain would probably be relieved if I were to exercise	1	2	3	4
5. People aren't taking my medical condition seriously enough	1	2	3	4
6. My accident has put my body at risk for the rest of my life	1	2	3	4
7. Pain always means I have injured my body	1	2	3	4
8. Just because something aggravates my pain does not mean it is dangerous	1	2	3	4
9. I am afraid that I might injure myself accidentally	1	2	3	4
10. Simply being careful that I do not make any unnecessary movements is the safest thing I can do to prevent my pain from worsening	1	2	3	4
11. I wouldn't have this much pain if there weren't something potentially dangerous going on in my body	1	2	3	4
12. Although my condition is painful, I would be better off if I were physically active	1	2	3	4
13. Pain lets me know when to stop exercising so that I don't injure myself	1	2	3	4
14. It's really not safe for a person with a condition like mine to be physically active	1	2	3	4
15. I can't do all the things normal people do because it's too easy for me to get injured	1	2	3	4
16. Even though something is causing me a lot of pain, I don't think it's actually dangerous	1	2	3	4
17. No one should have to exercise when he/she is in pain	1	2	3	4

Reprinted from:
Pain, Fear of movement/(re) injury in chronic low back pain and its relation to behavioral performance, 62, Vlaeyen, J., Kole-Snijders, A., Boeren R., van Eek H., 371.
Copyright (1995) with permission from International Association for the Study of Pain.



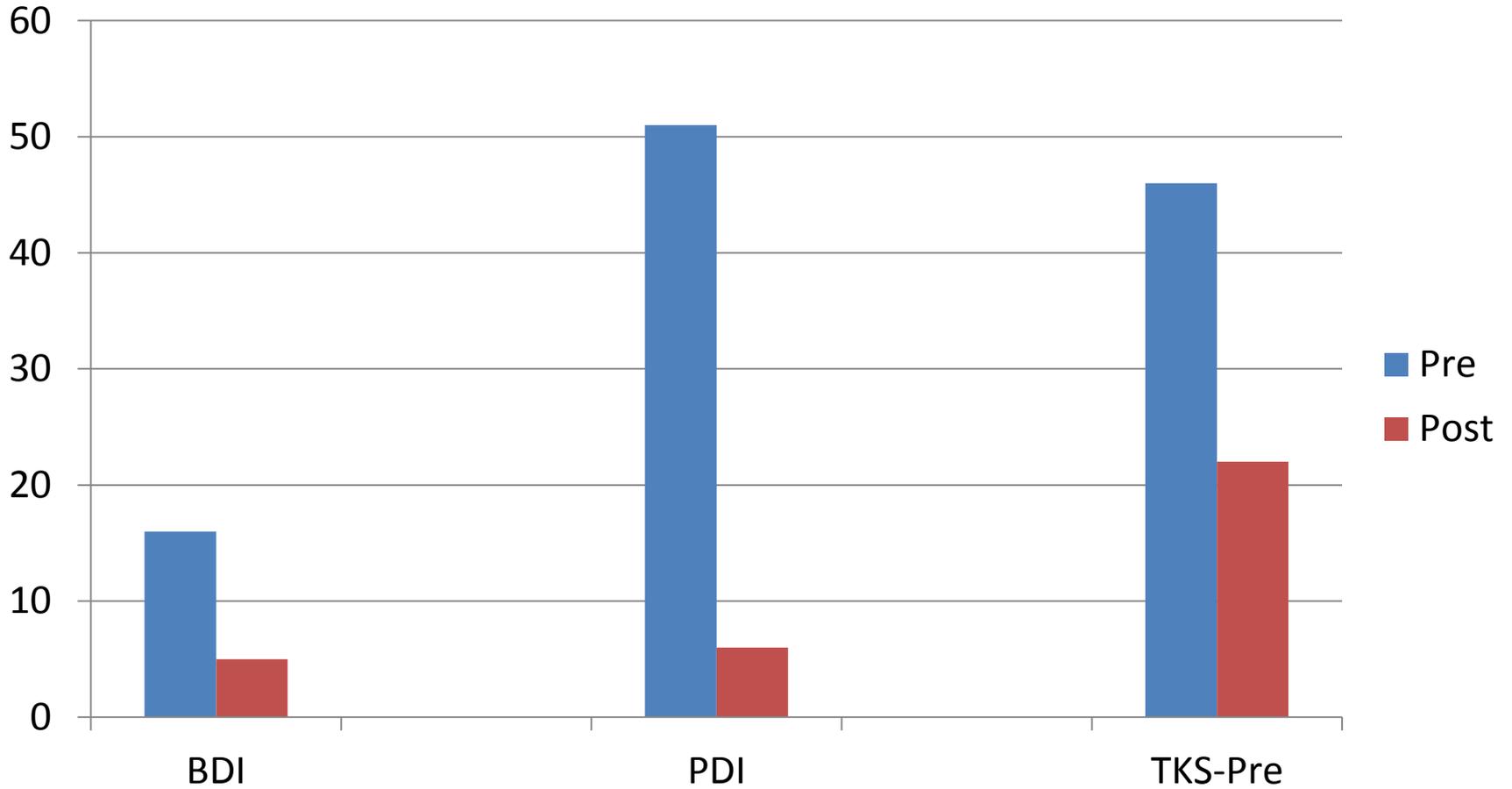
West Haven-Yale Multidimensional Pain Inventory (WHYMPI)

Kerns R, Turk D, Rudy T. *J Pain* 23(1985) 345-356

- Three Parts
 - Part I
 - Pain severity and suffering
 - Pain-related life interference (family, marriage, work..)
 - Dissatisfaction with present level of functioning
 - Support (family, spouse..)
 - Perceived life control
 - Affective distress (depression, mood, irritability, tension)
 - Part II
 - Evaluate patient's' perceptions of the range and frequency of responses by significant others to displays of pain and suffering
 - Part III
 - Common domestic activities, household chores, social activities and recreational activities



Example: Patient A



Example: Patient A

Pre

Part I:

- Interference: **5**
- Support: **2**
- Pain severity: **4.7**
- Life control: **4**
- Affective distress: **3.3**

Post

Part I:

- Interference: 1.7
- Support: 1
- Pain severity: 1
- Life control: 6
- Affective distress: 0.67

Example: Patient A

Pre

Part II:

- Negative responses: **2**
- Solicitous responses: **0.5**
- Distracting responses: **0**

Part III:

- Household chores: **5**
- Outdoor work: **0.8**
- Activities away from home: **3.5**
- Social activities: **1.3**
- General activity: **0.59**

Post

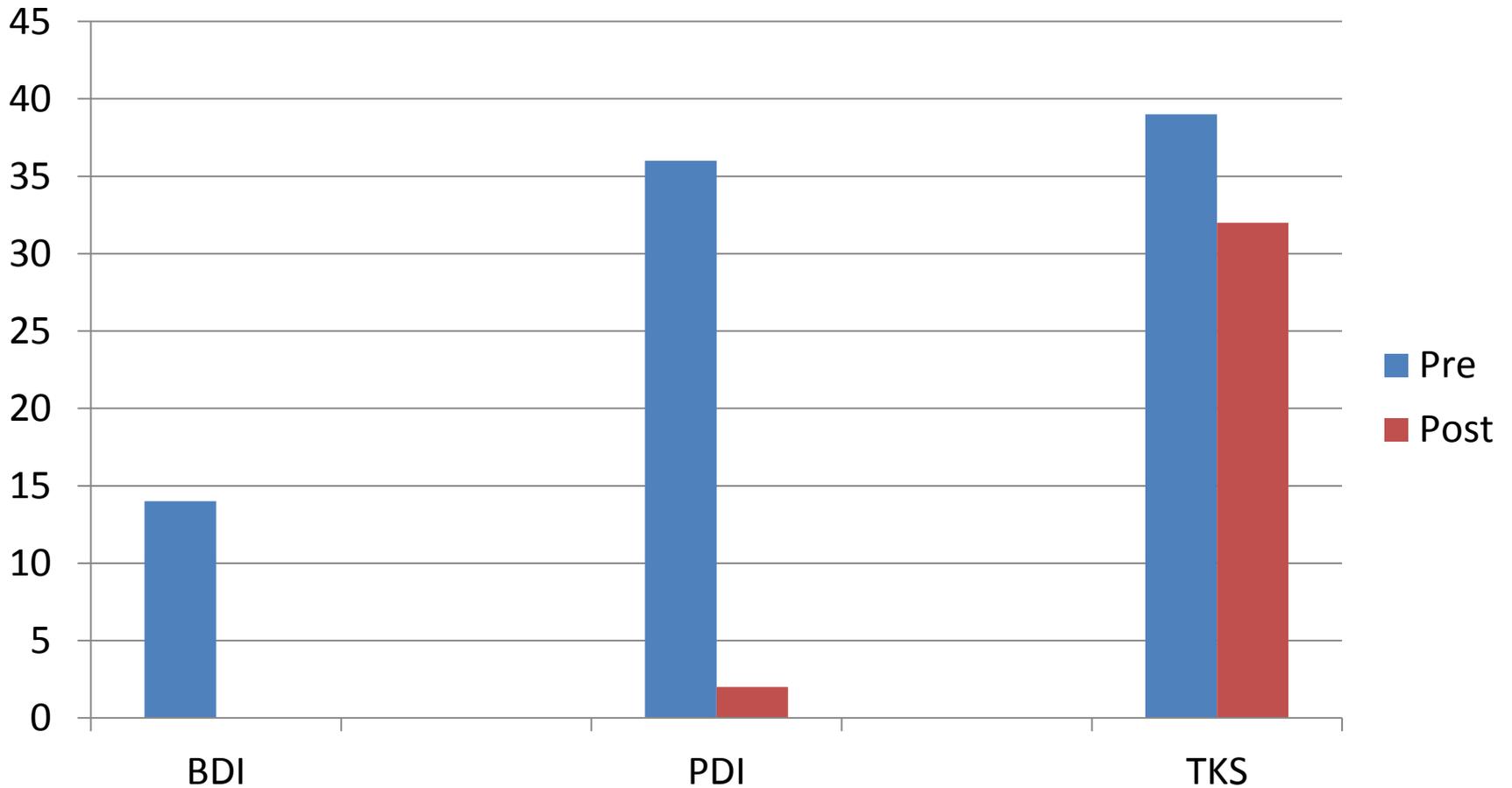
Part II:

- Negative responses: **0.75**
- Solicitous responses: **1.3**
- Distracting responses: **0**

Part III:

- Household chores: **5.8**
- Outdoor work: **1**
- Activities away from home: **3.8**
- Social activities: **4.8**
- General activity: **0.86**

Example: Patient B



Example: Patient B

Pre

Part I:

- Interference: **3.7**
- Support: **5.7**
- Pain severity: **3.7**
- Life control: **6**
- Affective distress: **4**

Post

Part I:

- Interference: **2.2**
- Support: **4.3**
- Pain severity: **0.67**
- Life control: **6**
- Affective distress: **0.33**

Example: Patient B

Pre

Part II:

- Negative responses: **1**
- Solicitous responses: **3.8**
- Distracting responses: **2.8**

Part III:

- Household chores: **5**
- Outdoor work: **5.2**
- Activities away from home: **2**
- Social activities: **3.3**
- General activity: **0.86**

Post

Part II:

- Negative responses: **0.75**
- Solicitous responses: **3**
- Distracting responses: **3.3**

Part III:

- Household chores: **5.4**
- Outdoor work: **5.8**
- Activities away from home: **5.3**
- Social activities: **4.8**
- General activity: **1.2**

Program Evaluation

- Multiple-area questionnaire – evaluated overall program and each individual element
- Evaluated if the program had an effect
 - If so, was it positive or negative
 - Allowed to comment
- Included areas of improvement



Program Evaluation

- Do you feel you got something of value or importance from taking IM?
 - Yes, no, not sure
 - All said yes
 - If yes, please state what you feel you got from IM
 - “The education and motivation to find other ways to deal with my pain.”
 - “I feel better when I attend the program and get the treatments offered.”
 - “Change of lifestyle – better understanding of pain and how to control it versus it controlling me. Learning great things to help decrease stress, reduce pain and how to manage it.”



Program Evaluation

- On the scale below please rate how important IM has been for you where 1 means “not important” and 10 means “very important”
 - All rated it a 9-10
- Have you made any changes in your lifestyle as a result of taking this IM program?
 - All said yes
 - If yes, please write down what they are:
 - “I am not falling as much now.”
 - “I sleep more, try to get a full eight hours. I try not to let the small things stress me out at work.”
 - “Sleep patterns – going to bed to sleep – not watching TV; stairs rather than the elevator, meditation, stretching/breathing exercises first thing in the a.m. and p.m. before bed; eating better; increased daily activities.”



Program Evaluation

- Would you recommend that other VA hospitals begin IM programs in their medical centers? Why or why not?
 - All said yes
 - “Yes, absolutely! This program gave me a greater understanding of pain and how to manage it. My activity level has greatly improved, which in turn has increased my mental state. I feel I can think clearer about more important things than focusing on pain.”
 - “Yes, I feel the VA should start IM programs in the medical centers because it helps your pain and helps you to deal with the pain.”
 - “Yes, the VA definitely needs to figure out why the Vet has pain and teach them to manage the pain. Giving the Vet drugs to numb the pain only makes it worse and may cause other issues with drug dependency.”



Program Evaluation

- What other changes, comments, or suggestions do you recommend?
 - “I would suggest to have the programs that teach stretching, movement and exercise be longer than an hour. The meditation and continuum classes are good at an hour. Provide more video and audio training.”
 - “Incorporating massage I think would be great, shortening the length of the program by making it a half-day instead of all day.”



New Program

- Veterans Integrative Pain (VIP) clinic
 - Psychologist
 - Doctor of Physical Therapy
 - Physical Medicine and Rehabilitation Physician (acupuncture/herbalist/functional medicine/manual medicine)
 - RN Specialist – qi gong instructor
 - Nurse Practitioner
 - Addictionologist – Psychiatrist
 - Pain Doctor of Pharmacy



Conclusion

- Your VA has resources
 - Get in touch with others with similar views
- Work with your supervisors to show them the value of an IM approach
- Then jump in – create a grassroots program, get the Veterans involved, be patient and persistent, then watch things grow



Questions?

- Submit questions via the Defense Connect Online question box located on the screen.
- The question box is monitored and questions will be forwarded to our presenter for response.
- We will respond to as many questions as time permits.



Webinar Evaluation/Feedback

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- Or send comments to usarmy.ncr.medcom-usamrmc-dcoe.mbx.dcoe-monthly@mail.mil

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DCoE Call Center
866-966-1020 (toll-free)

dcoe.mil

resources@dcoeoutreach.org